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INSTITUTE FOR DEFENSE ANALYSES

Independent Review of DoD's Readiness Reporting System

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PREFACE

The Institute for Defense Analyses prepared this document in fulfillment of the task order "Independent Study of Military Readiness Reporting System," sponsored by the Office of the Under Secretary of Defense (Personnel & Readiness).

The authors are fully accountable for the content of this report, but would like to thank the many people who assisted us in our efforts. Many experts from DoD, independent research associations, and private citizens made valuable input to this study. Most of those contributions were made in a collegial "non-attribution" atmosphere, but we have listed the over 400 people we had the good fortune to interview in an appendix to this report. We were deeply impressed by the professionalism and dedication of each service member and DoD civilian we worked with during our study.

We especially wish to thank Dr. Stanley Horowitz and Mr. James R. Locher III for their review of this document, and General Wesley Clark (USA, ret.), General Wayne Downing (USA, ret.), Admiral Harold W. Gehman (USN, ret.), and General Anthony C. Zinni (USMC, ret.) for their advice during the preparation of this report.

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EXECUTIVE SUMMARY

The Congress, in Section 361 of the National Defense Authorization Act for Fiscal Year 2000, directed the Secretary of Defense to provide for an independent study of the requirements for a comprehensive readiness reporting system (RRS) for the Department of Defense. The Institute for Defense Analyses was tasked to conduct that study, and this report documents our effort. As directed, the study considers the existing requirements for a readiness reporting system established by the United States Code, Title 10, Section 117, as well as other RRS characteristics and capabilities that could improve DoD's ability to measure the readiness of U.S. Armed Forces to carry out the National Security Strategy (NSS). Our findings and recommendations are summarized below.

A. READINESS REPORTING HAS IMPROVED IN RECENT YEARS

The current readiness reporting system (RRS) exhibits many positive aspects and has been improved significantly in recent years. The unit reporting system, GSORTS, helps unit commanders raise readiness issues up the chain of command. GSORTS also allows higher-level commanders to see the status of lower-level units. The Services and the Joint Staff have a number of improvement programs underway that will continue the process of gradual improvement that has characterized unit reporting over the years.

The joint reporting system, JMRR, represents a significant improvement in the readiness reporting system because it, for the first time, 1) enables a detailed assessment of a wide range of joint readiness issues identified by the CINCs, Services, and combat support agencies (CSAs), 2) provides a forum for dealing with deficiencies, and 3) focuses DoD leadership on key aspects of the military's capability to conduct a wide range of operational missions in support of the NSS.

B. READINESS REPORTING NEEDS FURTHER IMPROVEMENT

Despite these significant advances, our analysis has led us to conclude that further improvements in readiness reporting are needed to meet fully the Title 10 requirements established by Congress, and to ensure that DoD's leadership has sufficient information to

assess the readiness of U.S. forces to meet the demands of the NSS. As part of this analysis we identified a number of areas where improvements seem appropriate:

1. The readiness reporting system needs to measure the capability of the Armed Forces to carry out the full range of NSS requirements.

2. The coverage of the readiness reporting system should be expanded to include additional DoD elements that are essential to readiness.

3. Reports need to be more uniform across the Unified Commands (CINCs), Services, and Defense Agencies.

4. Sustainability reports need improvement.

5. The RRS needs new automated systems that will enhance the scope and depth of analysis.

6. The Secretary of Defense needs to provide comprehensive guidance to DoD components regarding their NSS missions and tasks.

7. Reports to Congress need to be redesigned to meet congressional requirements.

Taken together, these needs call for a number of changes in the readiness reporting system.

C. POTENTIAL IMPROVEMENTS

1. Vision of a New RRS

Readiness reporting today focuses on the readiness of battalions, ships, and squadrons and on other selected aspects of CINC, Service, and Defense Agency readiness. An improved readiness reporting system should provide the Secretary of Defense and Congress a *comprehensive* view of DoD readiness to perform the full range of missions identified in the National Security Strategy. This goal can be accomplished by adopting four major ideas:

- Supported CINCs should report their readiness to execute each of their NSS missions in terms of their CINC-level mission-essential tasks (METs).

- Supporting CINCs, Services, and Defense Agencies should report their readiness to execute the METs associated with their CINC-related missions.

- Modern information technology can enhance readiness reporting and can reduce the reporting workload.

- Most tasks are performed by systems or processes whose output, when compared with a requirement, can be taken as a measure of the readiness of the system or process to execute the assigned task.

Title 10 provides the basis for the vision of a future readiness reporting system. It makes the CINCs "directly responsible to the Secretary of Defense for the preparedness of their commands to carry out assigned missions." Title 10 also requires each Service Secretary to "carry out the functions of the department so as to fulfill (to the maximum extent practicable) the current and future operational requirements of the unified and specified combatant commands." This requirement provides a basis for requiring the Services to report readiness in terms of their preparedness to execute their Title 10 functional tasks.

The Chairman of the Joint Chiefs of Staff has established the basis on which it seems reasonable for the CINCs to report their readiness—the CINC-level METs associated with each Secretary of Defense-assigned mission that each CINC has already identified as part of the Joint Training System (JTS). The CJCS has stated, "The JTS is the principal tool to ensure DoD readiness to execute the NSS."

The envisioned readiness reporting system calls for DoD to collect, analyze, and report substantially more data. Expanded capabilities of Web-based information technology systems make such increased data handling possible. These capabilities allow DoD to capture large amounts of data from the lowest-level functional activities and make these data automatically available to the readiness reporting system. For example, personnel transactions entered into DoD personnel databases or maintenance transactions entered into a Service maintenance database can be captured by the readiness reporting system. Ultimately, all the status data included in GSORTS should be based on this form of unit-level transaction data. This capability holds the promise of significantly reducing the workload associated with the current readiness reporting system.

Modern management techniques support basing new readiness reports on the readiness of systems or processes. A modern readiness reporting system can be both comprehensive and comprehensible only if it reports the readiness of systems or processes that encompass the enormous amount of data collected by the DoD readiness reporting system.

2. Recommendations

This vision of a future RRS calls for a number of improvements to existing reporting systems. Most of these changes can be included in a new DoD directive and initiated immediately—even though full implementation may take some time. Other improvements must await the development of new information management systems. Here is a summary of the changes we think are necessary.

a. Recommended Readiness Reporting System Changes

1. Require CINCs, Services, and Defense Agencies to report their readiness in terms of their readiness to perform the mission essential tasks associated with the full range of their Secretary of Defense-assigned and Title 10 missions.

2. Expand the unit reporting system, GSORTS, to include all readiness-related units and entities under the control of the CINCs, the Services, and the Defense Agencies.

3. Create a Web-based readiness reporting system.

4. Identify the systems or processes that are responsible for performing mission-essential tasks and, ultimately, base readiness reporting on the readiness of those systems or processes.

b. Recommended Management Actions

1. Issue detailed instructions covering the development and final structure of an improved DoD Readiness Reporting System as called for in Title 10, Section 117.

2. Establish a readiness analysis center that will support the readiness-related activities of all DoD elements.

3. Develop the information technology systems and databases essential to comprehensive readiness reporting.

4. Expand the current Contingency Planning Guidance to include direction to the Services and Defense Agencies regarding their responsibilities to execute Title 10 functions and mission-essential tasks in support of the NSS and CINC plans.

5. Review Service and Defense Agency plans for supporting the execution of CINC plans.

c. Recommended Congressional Actions

1. Amend Title 10 to consolidate all readiness reporting requirements in one section of law.

2. Limit reporting requirements to summary reports of quarterly JMRR reports and periodic updates.

3. Should there be a need for more detailed data, require DoD to install a SIPRNET terminal in the House of Representatives and Senate to enable Members and appropriate staff access to the more detailed assessments available to the CINCs and Secretary of Defense.

3. Reporting the Readiness of Systems

The Defense Transportation System (DTS) exemplifies a system whose readiness is critical to overall readiness. The DTS involves all four Services, most CINCs and Defense Agencies, three types of transportation (ground, sea, and air), multiple nodes (installations, ports, and bases, both military and civilian, U.S. and foreign), and prepositioned equipment and supplies. All DTS pieces are known today and are modeled in programmatic studies. Most operational units in the DTS report in GSORTS. Most installations, ports, and other nodes do not report their readiness.

Today, no single CINC or Service has visibility over the DTS, and none is responsible for reporting the system's readiness. As a result, no one subordinate to the Secretary of Defense or the CJCS is responsible for knowing overall DTS readiness or even for ensuring efficient DTS operations. If DoD were to follow the example of the most modern businesses, it would include all DTS pieces in GSORTS and the Secretary of Defense would assign one senior commander to report the readiness of the entire DTS. Taking these two steps would place responsibility for reporting DTS readiness on a commander with the ability to affect the system's overall readiness and would relieve the Secretary of Defense and CJCS from having to draw conclusions about DTS readiness from multiple, generally uncoordinated reports.

Figure S-1 presents a view of the Defense Transportation System that could serve as the basis for a new report. Reporting responsibility might be given to CINC TRANSCOM, for example.
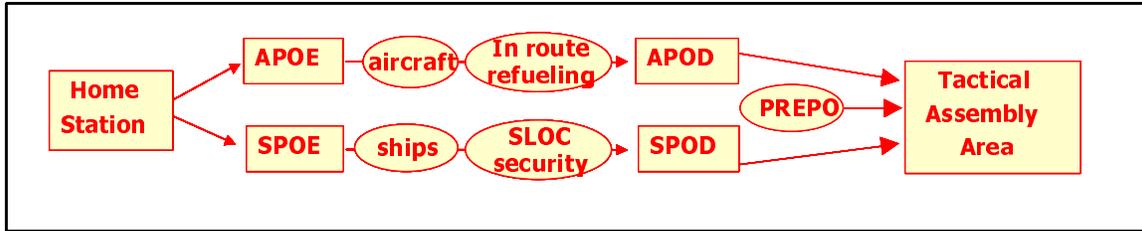
Figure S-1. CINCTRANS Reports the Readiness of the Defense Transportation System

If a single CINC were assigned responsibility for reporting DTS readiness, he could focus on the output of the system based on his assessment of the capability of the system to provide the required throughput of forces and materiel over time. In order to understand the system's readiness, the CINC would identify the tasks and output metrics for each entity in the system and assess the capability of each entity against the requirement. This approach would allow the CINC to report to the Secretary of Defense on his readiness to execute a mission-essential task, i.e., the DTS throughput capability, without having to report the readiness of each piece of the system.

This approach would also improve operational and resource allocation decisions. If the DTS were thought of as a chain that is no stronger than its weakest link, then the CINC would be able to identify the weakest link in the chain and take action to strengthen that link, e.g., expedite the flow through a bottleneck or allocate additional resources. In addition, if subordinate DTS commanders were able to see their units in the context of the entire transportation system, they would be more able to perform their duties with the output of DTS in mind. It is important to recognize that CINC TRANSCOM has already developed this DTS concept and is using it to determine his programmatic needs. He could use the same approach to report readiness.

The Services could also report their readiness to execute their Title 10 functional responsibilities using a systems approach. In many cases the Services have already developed systems for performing their Title 10 functional responsibilities. They have training systems, mobilization systems, supply systems, and manpower systems, for example.

Figure S-2 shows a view of the Navy supply system or supply chain, whose overall readiness is essential to the Navy's ability to sustain its forces in the context of both the Shape and Respond components of the NSS. Note that the Navy supply chain also includes entities belonging to the Defense Logistics Agency and the General Services Administration. In this case, as in the case of the DTS, the Navy would need to know the

readiness of each entity in its supply chain but would only need to report the overall readiness of the chain, in terms of its output, i.e., throughput over time. This report should be made available to the supported CINC and the Secretary of Defense.
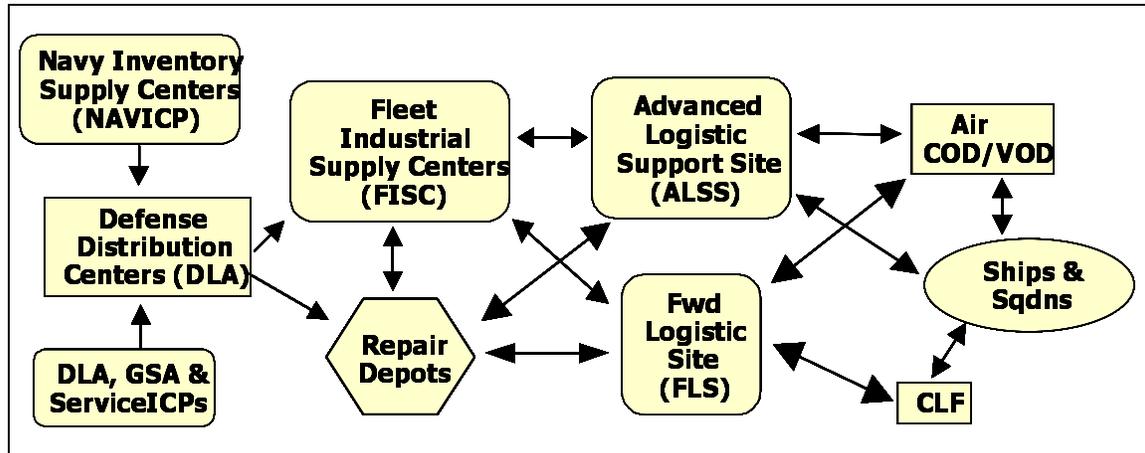
Figure S-2. Services Report the Readiness of Their Title 10 Systems, e.g., Sustainment

The Services are already using supply chain management techniques to manage their peacetime logistic processes. They need only apply these techniques to their wartime logistic needs and report their readiness on the basis of the readiness of their supply chain. The Services would likely have to identify the details of the systems that support each of their other Title 10 responsibilities, identify the output requirements of each entity, and base their readiness assessments on the overall capability of each system. This is what the Army is planning to do as it implements its own "Strategic Readiness System."

The supported CINCs would report their readiness to perform their METs based on the operational systems that will perform each MET. Figure S-3 shows one such system, the precision engagement system, which involves assets controlled by the CINC and his component commanders as well as assets controlled by others such as SPACECOM or DIA. If the CINC is to know his readiness to perform his precision engagement MET, he must know the readiness of this system. He must know how each entity fits into the system, its interoperability, and its readiness. The chain analogy remains appropriate for the precision engagement system. In this case, the readiness of the precision engagement system can be no better than the weakest link in the precision engagement chain. For example, if targeting information cannot get from the intelligence collection asset to the firing system, the system is not ready.
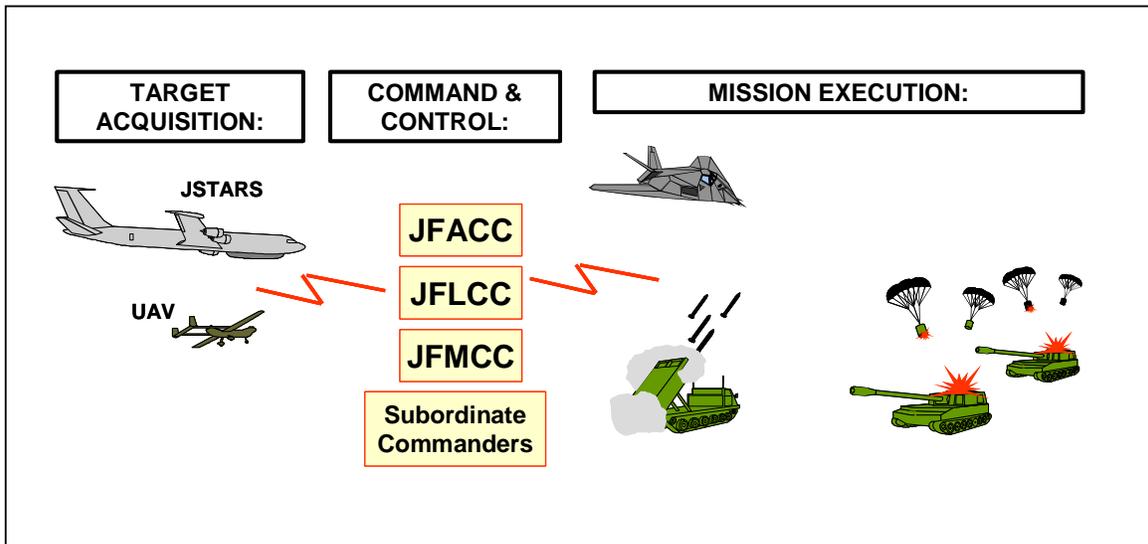
**Figure S-3. CINCs Report the Readiness of Their Operational Systems,
e.g., The Precision Engagement System**

Knowing the readiness of each of these large complex systems is based on knowing the readiness of the entities that make up each system. These entities include operational units as well as supporting entities—depots, ports, prepositioned supplies and equipment, communications nodes, hospitals, training centers, inventory control points, etc.—that are important to DoD readiness. Each entity must report its readiness to conduct its METs associated with its role in the system whose readiness is being reported. In the DTS, for example, an airlift squadron should report its readiness in terms of its readiness to perform its airlift MET. A port that is a node in the DTS should be measured in GSORTS and should report its readiness to execute its MET, which may be to move a certain amount of cargo through the port on a daily basis.

A new RRS based on the systems approach has the potential to enhance both deliberate and crisis planning as well as resource allocation. Deliberate planners will be able to see the systems that are required to perform each MET and will have a template they can use to ensure they are building a comprehensive plan and force list. Crisis planners will be able to identify units for a wide range of missions based on their readiness to perform specific mission-related tasks. They will be able to look at systems to identify bottlenecks and constraints that limit the output of the system and to find workarounds that will enhance system output. Resource managers will be able to look at unit readiness and identify the operating systems or input categories that are limiting the

readiness of their units. Resource managers will be able to identify the link in the chain that most needs reinforcing and, thereby, make more efficient allocation of resources, e.g., allocate resources to the weakest link and avoid directing resources to links that are already strong enough.

D. CONCLUSION

DoD's readiness reporting has been improved substantially in recent years, but further improvements are needed. These include providing comprehensive readiness reporting guidance; addressing the full range of NSS requirements; focusing on mission-essential tasks for both military operations and support; developing capabilities to evaluate overall system readiness; and developing better management information systems for collecting, processing and reporting relevant readiness data. These improvements collectively will provide the Secretary of Defense and the Congress much better understanding of DoD's readiness to execute all elements of the strategy.

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I. INTRODUCTION

The readiness of U.S. military forces to conduct combat operations has been a topic of intense, if sporadic, interest since the Republic was founded. Revolutionary and Civil War commanders were frequently vexed by the variable readiness of the forces that were assigned to them. The early days of World War II and the Korean War were tragically marred by the weak performance of the first U.S. units to engage the enemy. The post-Vietnam military was characterized by many as a "hollow force"—a direct reference to the resource-related readiness problems facing that force.

Most recently, the 10-year period since the fall of the Soviet Union has been characterized by a significant reduction in U.S. military force structure and manpower; a partial suspension of the procurement of new military equipment; an increase in the deployment of U.S. forces to deal with crises and contingencies short of major conflict; and serious recruiting problems resulting in part from the competition of the booming civil economy. Throughout this turbulent period arguments have been raised that the readiness of the remaining forces was not being maintained at the levels needed to execute the national strategy. Despite the victories in the Gulf War and Kosovo, the slow U.S. deployment rates to those theaters have been characterized by some as "readiness shortfalls." Despite the successful peacekeeping operations in the Balkans, the impact on the forces left behind has raised new concerns of "readiness shortfalls."

Considerable confusion and some heated debates pervade the public record on this topic. This is in part because neither the concept nor the goals of military readiness are as well defined or consistently reported as they might be. Despite its attempts to legislate a reporting system that would meet its needs, the Congress routinely receives widely disparate reports on the readiness of military units and the military as a whole.

In its latest effort to deal with this issue, the Congress, in Section 361 of the National Defense Authorization Act for Fiscal Year 2000, directed the Secretary of Defense to provide for an independent study of the requirements for a comprehensive readiness reporting system (RRS) for the Department of Defense. The study is to consider the "requirements for providing an objective, accurate, and timely readiness reporting system for the Department of Defense that has—(1) the characteristics and capabilities described in subsections (b) and (c) of Section 117 of Title 10, United States Code; and

(2) any other characteristics and capabilities that the organization determines appropriate to measure the capability of the Armed Forces to carry out the strategies and guidance described in subsection (a) of such section."

This report is the product of that study.

A.   The Congressional Mandate

The Congress, in Title 10, Section 117, directed the Secretary of Defense to establish a comprehensive readiness reporting system that will measure in an objective, accurate, and timely manner the capability of the armed forces to carry out the National Security Strategy, the National Military Strategy, and the Defense Planning Guidance. Section 117 specifies that this system be applied uniformly throughout the Department and be continually updated every 24 hours. (See Appendix A for a detailed discussion of the congressional mandate.)   In addition, Section 117 requires the system to be able to measure the following:

- On a monthly basis, the capability of units (both as elements of their respective armed force and as elements of joint forces) to conduct their assigned wartime missions

- On an annual basis, the capability of training establishments to provide trained and ready forces for wartime missions

- On an annual basis, the capability of defense installations and facilities and other elements of Department of Defense infrastructure, both in the United States and abroad, to provide appropriate support to forces in the conduct of their wartime missions

Section 117 further requires the Secretary of Defense to prescribe regulations for the RRS that will define the units that are subject to reporting in the RRS, the types of equipment subject to such reporting, and the elements of the training establishment and of the defense infrastructure that are subject to such reporting

After detailed examination of the congressional mandate, especially the requirement for a comprehensive readiness reporting system, we, the IDA study team, determined that our study should identify the full range of characteristics a RRS would need to comply with the letter and intent of the provisions of Section 117 as well as with other readiness-related Title 10 provisions.   The "intent" of Section 117 needs to be included because it makes no reference to the Secretary of Defense's highly classified Contingency Planning Guidance (CPG), the directive that most purposefully translates the

National Security Strategy into specific near-term missions (and associated timelines) that the Secretary of Defense assigns the CINCs, who in turn use them to establish the *assigned wartime missions* against which the specific military units are expected to report their current readiness.

More specifically, we defined the scope of the review as follows:

- Examine the history of readiness reporting and assessment to relearn lessons from earlier wars and periods of peace

- Review the National Security Strategy (NSS), National Military Strategy (NMS), the Defense Planning Guidance (DPG), and the Contingency Planning Guidance (CPG) to identify the full range of capabilities on which readiness might be reported

- Assess the adequacy of the procedures and assumptions employed by the OSD, Joint Staff, Military Services, Combat Support Agencies, and the CINCs in producing the Global Status of Resources and Training Report (GSORTS), the Joint Monthly Readiness Review (JMMR), and the Quarterly and Monthly Readiness Report to the Congress.

- Evaluate the manner in which the new logistics standards, required by Section 366 of the National Defense Authorization Act for FY 2000, are being established and incorporated into both unit reporting systems and DoD's comprehensive reporting system

- Review and assess the reporting improvements outlined in the *DoD Readiness Reporting Implementation Plan*, October 1999

- Propose a range of potential changes and improvements in the readiness reporting system

B. Study Methodology

The first step in reviewing the readiness reporting system was to assemble a study team consisting of analysts experienced in the readiness reporting systems of each of the Services, the Joint Staff and Unified Commands, and Defense Agencies. Appendix J lists the study team members and their areas of focus.

The second step was to review pertinent documents and visit a spectrum of units and headquarters from operating units in the field up through intermediate headquarters, to Major Command and Service headquarters, Unified command headquarters, the Joint Staff, and the Office of the Secretary of Defense. During this process the members of the

study team conducted interviews with over 400 individuals, including military personnel from sergeants and seamen to generals and admirals, and civilian employees from clerks to senior officials. See Appendix H for a list of interviewees.

In parallel with this effort we examined the history of readiness reporting in some detail. The lessons learned from previous studies of this topic have been of considerable use as we prepared this report. See Appendix G for a detailed review of the history of readiness reporting.

During the research phase, we first looked at the requirements of the law and then considered what else might be needed to evaluate readiness. We then looked at how readiness is being reported today. In this portion of the study we focused on two major questions:

- Is the current RRS in compliance with congressional requirements?
- Does the RRS provide the CINCs and the Secretary of Defense adequate information on DoD readiness to execute the NSS, NMS, and DPG/CPG?

In addressing these questions we found that the existing reporting system could be improved to meet the needs of the DoD leadership and the Congress more fully. Given our findings, we focused the next phase of our research on answering the following questions:

- *What to change*? What causes the problems we found in the readiness reporting system?
- *What to change to*? Are there changes that will resolve the problems?
- *How to make the changes*? What are the obstacles to changing the current readiness reporting system and what steps need to be taken to overcome the obstacles and achieve a solution?

In our search for causes and potential solutions we covered a broad range of topics. We looked to DoD transformation and management reform efforts for insights into other DoD initiatives that might have implications for readiness report improvements. We looked at new doctrine and concepts for the future such as those expressed in Joint Vision 2020. We looked at readiness-related initiatives underway throughout the DoD. We surveyed business literature in a search for a link between the most modern business practices and readiness reporting.

Once we developed a set of potential answers to our three basic questions we tested our answers on a range of DoD experts including recently retired CINCs, current CINC staffs, Service readiness staffs, and the Joint Staff. The report below represents the results

of these efforts. While we remain thankful for the helpful reviews we received from many DoD personnel, no one outside the study team should be held responsible for our findings and recommendations.

C. Organization of the Study Report

The balance of this report is presented as follows:

- Section II defines readiness and introduces the key concepts and terms applied in the study.

- Section III reviews the history of readiness reporting.

- Section IV describes the current readiness reporting system.

- Section V describes our findings.

- Section VI proposes changes to the readiness reporting system.

II. DEFINING READINESS

A. What is Readiness? The Official Definition

The Secretary of Defense has not formally defined "readiness" or established a readiness reporting system. In the absence of SECDEF directives in this area, the most official definition of readiness is as stated in the CJCS Instruction on the Chairman's Readiness System (CJCSI 3401.01B):

> Readiness is the ability of U.S. military forces to fight and meet the demands of the National Military Strategy. It is the synthesis of unit readiness and joint readiness. Unit readiness is the ability of the unit to provide capabilities required by the combatant commanders to execute their assigned missions and is derived from the ability of each unit to deliver the outputs *for which it was designed* (emphasis added). Joint readiness is the combatant commander's ability to integrate and synchronize ready combat and support forces to execute assigned missions.

We began our study with this definition in mind but soon came to the conclusion that it omits some important aspects of readiness. While logically sound, this definition does not provide a basis for a reporting system that will provide DoD leaders the

information they need to make decisions. Specifically, we found that the current definition needed improvement in four areas:

- It needs to include all of the DoD entities whose capabilities are important to the ability to meet the demands of the NSS, NMS, and DPG/CPG.

- It needs to address the readiness of a unit to meet a CINC's needs.

- It needs to include the full range of mission-essential tasks that the CINCs have to be ready to perform in order to accomplish their assigned missions.

- It needs to address the fact that a joint force can be no more ready than each of the major Service-provided subordinate units or the related supporting agencies on which a CINC depends.

B. An Expanded Definition

Our concern with the official definition of readiness led us to address the concept of readiness from the ground up. Accordingly, we addressed three basic issues as we sought to develop a more comprehensive definition of readiness:

- Who needs to know about readiness?

- At what levels should readiness be reported?

- Against which requirements should readiness be assessed? Ready for what?

With answers to these questions in hand, we developed a more comprehensive, working definition of "readiness" to serve as the basis for our study. Although we addressed these questions in parallel with our research into the existing system, our answers serve as the basis for our findings regarding the current system and our recommendations for a future system.

1. Who Needs to Know About Readiness?

Every commander or manager in DoD needs to know about the readiness of the entities for which he or she has some responsibility. The Secretary of Defense and the CJCS are responsible for reporting to the President and the Congress on DoD's readiness to execute the missions associated with the NSS, especially those falling under the core objective of "enhancing America's security." If the Secretary of Defense and the CJCS are to be able to report accurately, they must assign missions to the CINCs, Services, and Defense Agencies based on the requirements of the NSS and must receive readiness reports from the CINCs, Services, and Defense Agencies on their readiness to execute the tasks associated with these missions. Commanders and managers at each level of the

chain of command who have responsibilities derived from the NSS should be able to report their readiness to provide the capabilities necessary to carry out their strategy-related missions and tasks. This includes crew chiefs and team leaders at the bottom to senior military commanders and civilian officials at the top.

Knowledge of the condition and capabilities—strengths and weaknesses—of one's own organization is an essential element of management. This knowledge forms the basis for decisions on goals, strategies, tactics, and resource allocation. Managers at all levels need to know the capabilities of their organizations. This knowledge is particularly important for commanders of military organizations that exist to conduct military operations involving combat or the threat of combat with an enemy intent on inflicting lethal damage.

The importance of accurate and timely information on DoD capabilities is heightened by DoD's organization, which provides two chains of command—one for operations and another for support. Conduct of military operations is the responsibility of the President, Secretary of Defense, and the CINCs. Support of military operations is the responsibility of the Secretary of Defense, Secretaries of the Military Departments, Chief of Staff of the Army, Chief of Staff of the Air Force, Chief of Naval Operations, Commandant of the Marine Corps, and Directors of the Defense Agencies.

Only the Secretary of Defense is responsible for both operations and support. The Chairman of the Joint Chiefs of Staff, the Joint Staff, and the Office of the Secretary of Defense assist him in the execution of both of these responsibilities. The Secretary of Defense provides operational guidance to the CINCs in the Contingency Planning Guidance (CPG) but provides no specific operational guidance to the Services or DAs.

The operational chain of command establishes the demand for capabilities, and the administrative chain of command provides the units, headquarters, supplies, services, and systems that supply those capabilities. If the Secretary of Defense, with the assistance of his civilian and military staffs, is to be capable of allocating capabilities among the CINCs, and the Services and Defense Agencies are to be capable of providing the kinds and amounts of tailored capabilities the CINCs need, both chains of command have to have a common, accurate appreciation for the readiness of all elements of the DoD.

Another critical moment for readiness knowledge occurs during the Planning, Programming, and Budgeting System (PPBS) when decisions must be made about the allocation of resources between demands for programs that affect current readiness and

those that affect future readiness, i.e., modernization and force structure. In the resolution of this perpetual conflict the advocates of spending for future readiness often are able to describe future needs more clearly than the advocates of spending for current readiness are able to describe current needs. Likewise, the Services often appear better prepared to articulate their requirements for weapons systems associated with their historical core competencies than the CINCs are to describe the range of capabilities they require to execute their strategically defined missions. If resource managers are to be able to make good decisions to resolve these conflicts, they must have reliable reports about required capabilities and current readiness and they must be able to see clearly where to apply scarce resources to affect both readiness and future forces most effectively.

2. At What Level Should Readiness Be Reported?

The CJCS definition of readiness includes the concept of the "ability of U.S. military forces to fight" and then describes readiness as the synthesis of unit readiness and joint readiness. In practice we found that unit readiness reporting is almost entirely focused on the readiness of battalions, ships, and squadrons, as defined for Service, not joint warfighting, mission need criteria. These units are the basic building blocks of U.S. military forces, but there is an enormous gap between battalions, ships, and squadrons and the CINCs. The question we asked ourselves was whether it was possible for the CINCs and the Secretary of Defense to know the "ability of U.S. military forces to fight" if only the basic building blocks were reporting, and if they were reporting only to Service criteria. Our approach to this question was to use a theory of what makes up a military force. This theory begins with the concept of an entity.

An entity is a set of resources (people, equipment, supplies), training, and doctrine assembled to accomplish a mission by performing tasks. "Entity" is a general term for DoD and non-DoD military and civil organizations. DoD entities range from individuals, teams, sections, flights, companies, squadrons, battalions, ships, groups, wings, divisions, task groups, air forces, fleets, corps, expeditionary forces, armies, major commands, Services, defense agencies, and military departments, to the Department of Defense as a whole. Non-DoD entities are those civil organizations that contribute to the ability of DoD entities to accomplish their tasks. Each entity above the bottom layer is part of a larger entity and includes smaller entities. Readiness is a property of an entity.

Each entity has one or more missions, explicit or implicit, to prepare for, support, or participate in. It performs such missions on a day-to-day basis and on a contingency

basis when military operations are contemplated or executed. Each entity is supposed to be ready to accomplish specific tasks that are essential to the accomplishment of its mission. Thus, the readiness of each entity is a matter of interest for both operational commanders and resource managers.

By tradition, formal readiness reports are submitted on two kinds of entities: units and some intermediate organizations. Units in the context of the CJCS definition are organizational entities that have been identified as units in the existing joint reporting systems. There are three general kinds of units: combat units, support units, and headquarters. Combat units primarily include ships, squadrons, and battalions. Support units also include ships, squadrons, and battalions. Other essential support entities, not currently identified as units in the joint reporting system, include depots, hospitals, bases, and civilian organizations and contractors such as the commercial airlines and contractors providing overseas support to military operations. Headquarters provide intermediate command and control from the lowest levels, e.g., units, through brigades and battle group headquarters, through CINC and Service headquarters, to the Joint Staff and the Office of the Secretary of Defense. Like many support entities, many headquarters have not been identified as units in the joint reporting system even though the relevant commanders may have direct responsibility for managing the readiness of their subordinate units.

Intermediate organizations are sets of units or, for the larger intermediate organizations, sets of smaller organizations and units that are under a single headquarters. Intermediate operational organizations include, for example, Army brigades, divisions, and corps as well as Air Force groups, wings, and numbered air forces. Intermediate support organizations include, for example, Service logistic commands and Defense Agencies. An airline that provides cargo aircraft as part of the CRAF program is an intermediate organization.

A force is a set of units and intermediate organizations associated with a common mission. A force may be single Service, joint, or combined. It will usually fall under the command of a CINC. It may include both military and civilian units and intermediate organizations. When an operational mission is assigned or contemplated, a force is established to accomplish that mission. A combat force includes units and intermediate organizations that provide the output of the force, units and intermediate organizations that support the output units, and headquarters to provide intermediate levels of command to facilitate control during the operation. A support force includes support units and intermediate organizations and headquarters to provide intermediate levels of command.

A force typically includes a wide variety of units and intermediate organizations working together to accomplish the common mission that inspired the creation of the force. According to this definition, a force may include the facilities, installations, depots, hospitals, etc., that a Service employs in the execution of its Title 10 functions. In this case the force will be under Service command.

The readiness information that would be most useful to each of the CINCs and the Secretary of Defense is on the readiness of the forces—either operational or support—that are expected to conduct and support military operations, both routine and contingency, in each CINC's area of responsibility. This suggests that the level at which readiness should ultimately be reported is the force. If readiness is to be reported at the level of the force and the force is joint or combined, then the CINC is likely to be the lowest-level commander with the ability to determine the readiness of that force. If the force falls under the continued control of a Service even during a contingency, as in Service CONUS-based logistic or sustainability forces, and if that force includes intermediate organizations from Service Major Commands, e.g., Air Force Materiel Command, and Defense Agencies, then the Service is likely to be the lowest level with the ability to determine the readiness of that force.

The readiness of a force is based on the readiness of the component parts of the force acting collectively and synergistically to achieve a goal of the force. In other words, the readiness of a force to perform the missions it is assigned must be based on the readiness of subordinate or otherwise supporting units and intermediate organizations acting collectively to perform their assigned missions or tasks that are related to the mission of the force. For example, the readiness of an operational force to conduct a peacekeeping mission cannot be determined from knowledge of the readiness of the force's component parts to perform their combat missions. Nor can the readiness of a support force to support a combat operation, e.g., a second MTW, be determined from knowledge of the readiness of the force's component parts to perform their peacetime missions.

3. Ready for What? Against Which Requirements Should Readiness Be Assessed?

The 1997 National Security Strategy contains three elements for enhancing U.S. security:

- Shaping the international environment to deter or minimize conflict

- Responding to the full spectrum of threats and crises

- Preparing now for an uncertain future

The first two elements of the strategy are operational in nature and are the business of the CINCs with the support of the Services and Defense Agencies. The third element of the NSS, prepare now (which includes modernization to protect the long-term readiness of the force), is not operational in nature and therefore does not require readiness reporting.

The Commission on Roles and Missions defined "Shaping" as "actions and activities by the U.S. military which are designed to 'influence, reassure, or deter' foreign actors in order to create an international security environment favorable to U.S. national interests." DoD employs a variety of Shaping-related tools including: forces permanently stationed abroad; forces rotationally deployed overseas; forces deployed temporarily for exercises, combined training, military-to-military interactions, and humanitarian assistance; and programs such as security assistance, International Military Education and Training (IMET), and international arms cooperation. The Secretary of Defense has provided shaping guidance to the regional CINCs, who have developed Theater Engagement Plans that identify the tasks to be performed in the fulfillment of the requirements of the shaping strategy. It seems reasonable to require the CINCs to report their readiness to execute the tasks associated with their Theater Engagement Plans.

The NSS is by necessity a statement of broad national principles and goals and is of limited direct use to the military planning community. The major bridge from the NSS to the assignment of specific operational missions to specific existing forces and units is the Secretary of Defense's Contingency Planning Guidance. The Defense Planning Guidance is oriented to resource allocation decisions and provides guidance related to the organization, training, equipping, and sustaining of current forces. The CPG is aimed at the CINCs, while the DPG is aimed at the Services, DAs and CINCs. Both have important roles in establishing readiness requirements.

The NSS states the United States "must be able to respond to the full spectrum of threats and crises that may arise" both at home and abroad. This full spectrum can be described in three broad categories of activities (generally along a scale of required effort and expected/actual level of violence):

- Deterring aggression or coercion in crisis [includes escalation control]

- Conducting multiple, concurrent smaller-scale contingency operations

- Fighting and winning major theater wars

Smaller-scale contingencies (SSCs) include many different kinds and sizes of contingencies. The list includes:

- Humanitarian assistance/disaster relief in both permissive and non-permissive environments (e.g., Somalia, Rwanda, Provide Comfort, Hurricane Mitch)

- Consequence management operations to respond to terrorist acts involving WMD

- Peacekeeping operations (e.g., Sinai Observer mission)

- Information operations

- Show of force/crisis response (e.g., Taiwan Straits, Vigilant Warrior)

- Counterdrug operations

- Counterforce operations to neutralize WMD facilities

- Enforcement of exclusion/no-fly zones (e.g., Deny Flight, Southern Watch)

- Enforcement of sanctions/maritime intercept operations

- Noncombatant evacuations (NEO) (e.g., Liberia)

- Personnel recovery operations

- Counterterrorism operations (e.g., Sudan, Afghanistan)

- Peace enforcement operations (e.g., Bosnia, Haiti)

- Coercive campaigns

- Limited strikes/raids (e.g., Libya)

- Opposed interventions (e.g., Grenada, Panama)

- Homeland defense activities including military support to civil authorities (e.g., border control, disaster relief) and combating terrorist attacks, cyber attacks, or threats to critical infrastructure

The NMS establishes additional requirements against which it seems reasonable for DoD entities to report their readiness. These requirements are strategic agility and power projection. According to the NMS the Armed Forces must be capable of "the timely concentration, employment, and sustainment of U.S. military power anywhere at our own initiative, at a speed and tempo that our adversaries cannot match." A component of agility is the ability "to rapidly and effectively deploy and sustain U.S. forces in and from multiple, dispersed locations…assemble and move to, through, and between a variety of environments, often while reconfiguring to meet specific mission requirements."[1]

The current Defense Planning Guidance adds another critical set of capabilities to this list. According to the DPG, all units of the Armed Forces (both active and reserve) must be multimission capable—"they must be trained, equipped and managed with multiple missions in mind." Additionally, they must be capable of operating in the face of asymmetric challenges like terrorism, information operations, in urban operating environments, and in environments in which chemical or biological weapons are used. Finally, the DPG reiterates that the "ability to transition between peacetime operations [shaping activities/multiple SSCs] and warfighting effectively and in a timely manner remains a fundamental requirement of virtually every U.S. military unit."

The Secretary of Defense derives missions and program responsibilities from the Shape and Respond elements of the NSS and assigns them to DoD components in the CPG and the DPG. The CINCs can logically be called on to report their readiness to perform their CPG-assigned missions. The Services and DA's, having no CPG-assigned operational missions, can be called on to report their readiness to execute their DPG-assigned responsibilities and their Title 10 functions. In turn, all subordinate organizations can logically be called on to report their readiness to provide the capabilities necessary for meeting their related responsibilities.

4. What is Readiness? A Working Definition

After noting several shortcomings of the current definition of "readiness" through our research, we expanded the definition to include the aspects of readiness we identified

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[1]   1997 National Military Strategy, pp. 19–20.

in answering the preceding three questions. We have used this expanded definition as the basis for our assessment of DoD's readiness reporting system and our recommendations on ways to improve the readiness reporting system.

- Readiness is a measure of the ability of a unit or an entity to provide a capability.

- Capability is an output measure stated in terms of mission and tasks performed over time. We have established two categories of capability to serve as standards against which readiness is to be measured.

  - Designed operational capability (DOC) is a set of discrete tasks that a unit is designed to accomplish. The DOC sets a standard against which actual resources, current state of training, and capability can be measured.

  - Required operational capability (ROC) is a set of tasks that have to be accomplished by a unit to accomplish an assigned or contemplated mission. A ROC is situation specific and requires the unit to be able to accomplish a set of tasks determined by the gaining/owning CINC. The ROC may require a unit to perform tasks that differ significantly from its DOC tasks. For example, a field artillery battalion that leaves its weapons at home station and deploys to perform as a de facto military police battalion for a smaller-scale contingency would have a ROC that would be focused on peacekeeping instead of fire support.

- Status is an input measure of available resources and of training actually accomplished.

- A unit, organization, or force's readiness is a measure of the ability to perform the missions, functions, and tasks for which it was organized or designed (its DOC) or which it is assigned (its ROC).

- A CINC's readiness is a measure of his ability, with forces and resources assigned or allocated, to perform the tasks essential to the missions he has been assigned by the Secretary of Defense.

- DoD readiness is a measure of DoD's ability to provide the military capability required to execute the tasks associated with the missions assigned in the NSS, NMS, and DPG/CPG.

III. THE HISTORY OF READINESS REPORTING

During the early years of the Cold War some unit reporting systems were created in response to the need for close scrutiny of nuclear capable units and other units, such as the Army's Strategic Army Corps, that were maintained at higher than normal readiness. Broader unit readiness reporting systems were established in each of the Services in the

early 1960s in response to problems with unready units noted during the Berlin Crisis (1961) and the Cuban Missile Crisis (1962). These unit readiness reports were designed by each Service to match its own culture and form of warfare. They appear to have been tied more to operational issues than to resource issues.[2]

In 1968, a joint unit readiness report, called the Force Status and Identity Report (FORSTAT), was established under the aegis of the Joint Chiefs of Staff, and the Service systems were incorporated into that system. In 1979, FORSTAT was replaced by the Unit Status and Identity System (UNITREP), which in 1986 became the Status of Resources and Training System (SORTS), and in 1997 became Global SORTS (GSORTS). This evolving system for reporting unit status as a proxy for readiness appears to have been brought about primarily by successive Secretaries of Defense in an effort to obtain a better picture of the impact of resource decisions at the unit level.

These name changes reflect the reality that over the past 30 years there have been numerous modifications to the joint unit reporting system. These changes are of four general kinds.

Better Technology. As information technology advanced, the readiness reporting system changed along with it. Input changed from written reports, to punch cards, to message text. The report database became larger. Reports became more detailed, and they were made available more quickly to larger audiences. The goal now is to have near-real-time access for DoD-wide users to unit level readiness reports.

Greater Uniformity. The first joint readiness reporting system was little more than an amalgamation of the earlier Service reporting systems, which were quite different in content and methodologies. Each succeeding version sought greater uniformity in the formats and methods of reporting readiness among all the Services.

More Objectivity. The susceptibility of unit readiness reports to bias has been recognized from the start. To offset potential bias, the changes have sought to reduce the influence of subjective assessments, such as commander's comments, in favor of objective measures. These changes have led to the use of ever more complicated numerical formulas. The difficulty of finding the one right way to structure unit readiness reports is attested to by the frequency of the changes in formats and rules.

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[2] Appendix G summarizes the history of readiness reporting.

More comprehensive coverage. The first Service unit readiness reporting systems involved only a few units of special interest to higher commanders. Successive changes have brought more and more units into the reporting system. At present about 10,000 of the 56,000 units registered in GSORTS report their readiness in GSORTS.

Another major development in readiness reporting was the establishment of the Chairman's Readiness System (CRS) in 1994. The CRS was designed to address the readiness of the CINCs, Services, and Defense Agencies to carry out the NSS and NMS. This system appears to be primarily a product of Congressional interest in joint readiness that was expressed in the Goldwater-Nichols Defense Reorganization Act of 1986 and the passage of the l994 Defense Authorization Act. The Goldwater-Nichols Act called on the CJCS to establish a uniform system for evaluating the readiness of the CINCs to carry out their assigned missions. The l994 Defense Authorization Act required the CJCS to submit to Congress an assessment of the readiness and capability of the Armed Forces to carry out the full range of the missions assigned to the Armed Forces.

IV. THE CURRENT READINESS REPORTING SYSTEM

A. Overview of the Current RRS

The current DoD readiness reporting system is a collection of reports, most of which were established to comply with congressional requirements that have been imposed over the years. There is no overarching DoD directive or instruction establishing DoD policy on readiness, readiness assessment, or readiness reporting. There is no written DoD policy on how readiness fits into the other management systems of OSD, such as the PPBS or the acquisition system. Nor is there a written policy of how readiness reports are intended to improve readiness or modify missions and requirements. The current readiness reporting system includes these seven reports:

- Global Status of Resources and Training System (GSORTS)
- Chairman's Readiness System—the Joint Monthly Readiness Review (JMRR)
- Quarterly Readiness Report to Congress (QRRC)
- Monthly Readiness Report to Congress (MRRC)
- Institutional Training Readiness Report (ITRR)
- Installations Readiness Report (IRR)
- CJCS Report on CSA Readiness

The Senior Readiness Oversight Council (SROC) is the other key part of the readiness reporting system. The SROC is the highest-level recipient of readiness reports within the Department of Defense. It provides a forum for the Deputy Secretary of Defense, the Vice Chairman of the Joint Chiefs of Staff, the Service Chiefs, and the Under Secretaries of Defense and of the Services to address key readiness issues, to provide readiness-related recommendations to the Secretary of Defense, and to identify funding issues for consideration in the program review process. The SROC has the potential to be an important decision-making body for readiness-related decisions.

The SROC receives the JMRR reports from the CJCS and also addresses other readiness issues, especially those Service issues that are not routinely addressed in the GSORTS or JMRR. For example, in addition to routine addressal of Service readiness trends, the SROC has addressed such topics as counterproliferation, impact of Operation Allied Force on readiness, antiterrorism readiness, impact of operations tempo on readiness, and the impact of pilot attrition on readiness. The SROC's addressal of these special topics provides the opportunity for DoD leaders to gain important insights into important readiness issues that are not routinely addressed by normal readiness reports.

B. Global Status of Resources and Training System

Unit-level readiness reports are maintained in GSORTS.[3] Guidance for GSORTS is contained in two CJCS documents[4] that apply to the Joint Chiefs of Staff, unified commands, the Services, and DoD Combat Support Agencies (CSA) responsive to the Chairman.[5] GSORTS is designed to indicate the level of selected resources and training status at specified points in time compared with that required to undertake the mission(s) for which a unit was organized or designed by its parent Service (not necessarily its "assigned wartime missions," as previously discussed).

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[3] See Appendix C for a detailed discussion of GSORTS.

[4] These instructions are: Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3401.02, *Global Status of Resources and Training System* (20 October 1997); and Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3150.02, *Global Status of Resources and Training System (GSORTS)* (15 April 2000). Additionally, each of the Services supplements these CJCS documents with detailed guidance, both to reiterate the Chairman's guidance and to expand on areas unique to the respective Service. There is no DoD Directive or other Secretary of Defense-level guidance for GSORTS.

[5] The CSAs responsive to the Chairman include the Defense Intelligence Agency (DIA), Defense Information Systems Agency (DISA), Defense Logistics Agency (DLA), Defense Threat Reduction Agency (DTRA), National Imagery and Mapping Agency (NIMA) and National Security Administration (NSA).

The information available in GSORTS is intended to support, in priority order:[6]

1. Crisis response planning

2. Deliberate or peacetime planning

3. Management responsibilities to organize, train, and equip combat-ready forces for the unified commands

The GSORTS instruction defines as "measured units" those "Active, National Guard, and Reserve forces assigned to operations plans, operations plans in concept format (CONPLANs), the Single Integrated Operations Plan (SIOP), or other Service war planning documents," and it requires the Services to "register" all measured units in GSORTS. The Services may also register whatever additional units they consider necessary.[7] The Directors of the CSAs are required to register and report on selected agency organizations. The CINCs are required to register and report any joint organizations established by the CINC. There over 50,000 registered and about 10,000 measured units in GSORTS. The Army has 5,100 measured units. The Navy has 1,500 measured units. The Air Force has 2,600. And the Marine Corp has 360. In general, neither the CINCs nor the DAs report in GSORTS.

The GSORTS instruction requires each measured unit to report its overall readiness and the status of its personnel, equipment and supplies on hand, equipment condition, and training. Each measured unit is given a C-rating based on its status. These ratings are:

C-1. The unit possesses the required resources and is trained to undertake the full wartime mission(s) for which it is organized or designed.

C-2. The unit possesses the required resources and is trained to undertake most of the wartime mission(s) for which it is organized or designed.

C-3. The unit possesses the required resources and is trained to undertake many, but not all, portions of the wartime mission(s) for which it is organized or designed.

C-4. The unit requires additional resources or training to undertake its wartime mission(s), but it may be directed to undertake portions of its wartime mission(s) with resources on hand.

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[6] CJCSI 3401.02, Encl B, Para 1.a, b.

[7] CJCSM 3150.02, p. B-2–B-3.

C-5. The unit is undergoing a Service-directed resource action and is not prepared, at this time, to undertake the wartime mission(s) for which it is organized or designed.

C. Chairman's Readiness System

The Chairman's Readiness System (CRS) is the system established by the Chairman of the Joint Chiefs of Staff (CJCS) "to provide the DoD leadership a current, macro level assessment of the military's readiness to execute the National Military Strategy (NMS), as assessed by the CINCs, Services and Combat Support Agencies (CSAs)"[8] The CRS consists solely of the reports and processes associated with the Joint Monthly Readiness Review (JMRR).[9]

The CJCSI states that the JMRR will be conducted in the following four forums:

a. Full JMRR. The Full JMRR is the quarterly forum for Service, CINC, and CSA readiness reporting. It is a scenario-driven assessment of current readiness.

b. By-Exception JMRR. This review is conducted, as required, during the second month of each calendar quarter. Services, CINCs, and CSAs report to the J-3 [Director of Operations] any significant changes in readiness since the last full JMRR. The Joint Staff sometimes takes advantage of this off-month report to obtain a special readiness analysis. Reports on the impact of Kosovo and on DoD readiness of to deal with Y2K are recent examples of such special assessments.

c. Feedback JMRR. This brief covers the status of actions to address significant readiness deficiencies and concerns raised by the CINCs, CSAs, and Services during the Full and By-Exception JMRRs. This brief is also supposed to provide an overall assessment of the ability of the US Armed Forces to execute the NMS.

d. JMRR Deficiency Review. Conducted by J-3, and briefed by the J-codes in collaboration with the CINCs, CSAs, and Services, this semiannual review updates the status and validates the categorization of all deficiencies in the JMRR database.[10]

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[8] CJCSI 3401.01B, dated 1 July 1999, is the regulation that implements this system.

[9] The JMRR examines readiness in the context of current operational capability. In contrast, The Joint Warfighting Capabilities Assessment (JWCA) and the Joint Requirements Oversight Council (JROC) provide forums to discuss long-term readiness issues and modernization concerns.

[10] See Appendix D for a detailed discussion of the CRS and the JMRR.

D. Other Readiness Reports

In addition to the JMRR and GSORTS, there are five periodic reports to Congress that are required by various provisions of Title 10 USC. These reports are:

The Quarterly Readiness Report to Congress. Section 482 of Title 10 of the United States Code requires the Secretary of Defense to "submit to Congress a report regarding military readiness" on a quarterly basis, specifically "not later than 30 days after the end of each calendar-year quarter."[11] These quarterly reports are to describe: readiness problems and deficiencies, "planned remedial actions," and "the key indicators and other relevant information related to each identified problem and deficiency." The information to be included in the report "shall be based on readiness assessments that are provided during that quarter … to any council, committee, or other body of the Department of Defense" with readiness oversight responsibility; "by senior civilian and military officers of the military departments and the commanders of the unified and specified commands; and … as part of any regularly established process of periodic readiness reviews for the Department of Defense as a whole."

The Monthly Readiness Report to Congress. Section 117 of Title 10 requires the Secretary of Defense to submit a monthly report to Congress "containing the results of the most recent joint readiness review or monthly review." The MRRC uses GSORTS as the basis to inform Congress of the current readiness of the Services' major combat units. It may also address matters raised at the most recent Senior Readiness Oversight Council (SROC), or any other significant issues raised since the last QRRC.

Installation Readiness Report. Section 117 of Title 10 requires the Secretary of Defense to submit an annual report to Congress on "the capability of defense installations and facilities and other elements of Department of Defense infrastructure, both in the United States and abroad, to provide appropriate support to forces in the conduct of their wartime missions."

Institutional Training Readiness Report. Section 117 of Title 10 requires the Secretary of Defense to submit an annual report to Congress on "the capability of training establishments to provide trained and ready forces for wartime missions" and on "critical warfighting deficiencies in training establishments and defense infrastructure."

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[11] This deadline was extended to "45 days after the end of each calendar-year quarter" by Pub.L. 106-65, Div. A, Title III, § 361(e), Oct. 5, 1999, 113 Stat. 575.

The Combat Support Agency Review. Section 193 of Title 10 requires the CJCS to report to the Secretary of Defense on "the responsiveness and readiness of each such agency to support operating forces in the event of war or threat to national security." Section 193 also states that "the Chairman shall develop, in consultation with the director of each combat support agency, a uniform system for reporting to the Secretary of Defense, the commanders of the unified and specified combatant commands, and the Secretaries of the military departments concerning the readiness of each such agency to perform with respect to a war or threat to national security."

E. Sustainability Report

Section 366 of the National Defense Authorization Act (NDAA) for fiscal year 2000 directs the Secretary of each Military Department to develop logistic standards for sustained military operations for deployable units under the jurisdiction of the Secretary. The basis of the standards is "the unit's wartime mission as reflected in the warfighting plans of the relevant CINCs, requirement(s) for sustained operations under each warfighting plan, and likely requirements for that unit to conduct sustained operations in an austere environment while drawing on its own internal logistic capabilities." The standards to be established by the Secretary of each Military Department is to reflect those "*spare parts and similar logistic capabilities* that the Secretary considers sufficient for the units of each of the armed forces under the Secretary's jurisdiction to successfully execute their missions." Section 366 also requires that the standards "be taken into account in designing a comprehensive readiness reporting system as required by Section 117 of Title 10 United States Code and shall be an element in determining unit readiness."

It is clear that Section 366 calls on the Service Secretaries to report on the status of spare parts required to sustain the units in the execution of their missions. At issue in meeting the intent of Section 366 is how to define logistic support and similar logistic needs to meet "a unit's wartime mission requirement for sustained operations, especially in an austere environment." This requirement would appear to require other DoD components and supporting organizations to report on their readiness to meet the intent of Section 366. For example, the Defense Logistics Agency (DLA) is responsible for the supply of Class I operational rations, Class III bulk fuels, and nearly all of the DoD-required consumable items including spare parts for weapons systems for

sustainment. The Army has single management responsibility for conventional ammunition. All of these responsibilities seem to fall under the requirements of Section 366.

When coupled with the requirement in Section 117 of Title 10 USC, it appears that the congressional intent represented by Section 366 of the FY 2000 NDAA is for the CINCs, Services, and CSAs to develop logistic standards for sustaining units under each warfighting plan. In this context, sustainment means the ability to support operational requirements for a full continuum of operational requirements including the duration of a two-MTW war or any other type of crisis. This latter perspective also agrees with the DoD definition of "sustainment."[12] For sustainment or supply and other logistic requirements, a crisis below an MTW is easier to deal with logistically but still can be a problem, e.g., the lack of prepositioned engineering equipment and supplies, aircraft spare and repair parts, and precision munitions concerns experienced in Operation Allied Force.[13] If this is the case, then to meet the intent of Section 117 of Title 10 of the USC and Section 366 of the FY 2000 NDAA the readiness reporting system will need to include the entire DoD logistic system and the supporting systems that are necessary to sustain troops for the duration of the operation. See appendix E for a more detailed explanation of the readiness aspects of sustainability.

V. PRINCIPAL FINDINGS

During the course of our study we found many positive aspects of the current readiness reporting system. With regard to GSORTS, the unit reporting system, we found the process to be generally useful for unit commanders attempting to raise readiness status issues up the chain of command. We also found that GSORTS allows higher-level commanders to get visibility to the lowest levels. We found that the DoD is instituting changes to improve the value of GSORTS. These include new training and equipment metrics; methods to measure readiness against current deployed/employed SSC missions; metrics to provide better visibility into the status of key combat crews; and introduction of improved software for submitting and analyzing reports. Wherever we traveled we found

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[12] JCS Pub 1-02 – sustainability – The ability to maintain the necessary level and duration of operational activity to achieve military objectives. Sustainability is the function of providing for and maintaining those levels of ready forces, materiel, and consumables necessary to support military effort.

[13] Report to Congress, Kosovo/Operation Allied Force After-Action Report, 31 January 2000.

that the people involved in reporting into the GSORTS database were conscientious and trying their best to follow the written and implied guidance.

We also found a number of positive aspects of the CRS and the JMRR, the joint reporting system.

1. *The CRS and the JMMR represent a significant improvement in the DoD readiness reporting system.*

For the first time the CINCs, Services, and Combat Support Agencies (CSAs) are required to make a quarterly assessment of major aspects of their readiness and to report that assessment to the Vice Chairman of the Joint Chiefs of Staff (VJCS), who passes the assessment on to the Senior Readiness Oversight Council (SROC), which consists of the Deputy Secretary of Defense, the VJCS, the Under Secretaries of Defense, the Vice Chiefs of the Services and the Deputy Service Secretaries. This process means that important readiness issues are raised to the highest levels of the DoD and are considered in a special forum that is able to deal with both policy and programmatic issues.

2. *The CRS provides a detailed assessment of a wide range of readiness issues identified by the CINCs, Services, and CSAs.*

Each of the reporting elements of the CRS—the CINCs, the Services, and the CSAs—are required to report on a broad spectrum of important readiness and sustainability issues. The CINCs and CSAs report their readiness in eight functional areas that cover a broad range of readiness issues. The Services are required to report the status of their major combat, combat support, and combat service support forces as well as the readiness of their important enablers.

3. *The CRS provides a forum for dealing with readiness deficiencies.*

In addition to providing a forum for the CINCs, Services, and CSAs to report their readiness, the CRS provides a specific process for dealing with readiness deficiencies that are identified in the quarterly report. This focus on specific readiness deficiencies provides a way for DoD to address and correct deficiencies.

4. *The CRS focuses DoD leadership attention on key aspects of the Respond strategy.*

The CRS serves to focus DoD leadership attention on key Respond Strategy issues, especially those issues regarding DoD readiness to execute the two-MTW part of the

strategy. Were the CRS to disappear, multiple day-to-day management responsibilities would likely absorb DoD leadership attention and DoD readiness would suffer.

We focused our research primarily on determining the value of GSORTS and the JMRR to DoD's efforts to assess readiness and to DoD efforts to conform to the readiness reporting requirements of Title 10. In that context, we found a number of areas that could be improved. Recommended improvements are detailed in appendices C and D. The most important areas for improvement are described below.

1. *The readiness reporting system needs to measure the capability of the armed forces to carry out the full spectrum of missions identified in the NSS, NMS, and DPG/CPG.*

Although the NSS may require units to perform a variety of tasks assigned by the CINCs, the focus of GSORTS is on tasks for which a unit was organized or designed by its parent Service. With the exception of the Navy, the GSORTS report is not specific as to the tasks a unit is ready to perform. As a result, there is no way to determine what tasks most units are actually ready to perform. For example, when a unit is rated at less than C-1, the planner only knows that there are some "wartime missions for which it is organized or designed" that it is incapable of performing. The planner has no way of knowing from the GSORTS report what those tasks are or what other tasks the unit might be ready to perform. As a result, a CINC, looking at a GSORTS report, has no way of determining if a unit is ready to perform a task he wants it to perform.

The JMRR focuses almost exclusively on the capability to carry out theater CINC plans for MTWs—either a single MTW or two nearly simultaneous MTWs.[14] It does not directly address the wide range of smaller-scale contingencies identified in the respond portion of the strategy and assigned to the CINCs in the CPG. In general, only ongoing SSCs are considered in the JMRR.

In addition, the assessment of current readiness that is conducted by every CINC for every JMRR needs to be placed in the larger context of the CINC's readiness to carry out his responsibilities associated with his Theater Engagement Plan (TEP), his plan for executing his peacetime engagement tasks. Although the CINCs make an assessment of

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[14] Although most JMRR assessments are done in the context of an ongoing SSC such as the war in Kosovo in l999, the focus of the assessment is on the readiness to conduct an MTW while the SSC is going on.

their current and +12 month readiness, our research revealed a focus on ongoing events rather than on the requirements of their TEP. If there were readiness issues related to a CINC's TEP, they were not obvious because of the JMRR focus on functional areas rather than missions and tasks. This lack of focus on the shaping aspect of the strategy is important because shaping-related activities claim a major portion of the day-to-day efforts of CINC staffs and are the basis for the expenditure of a large portion of current operational funding. In addition, when the Services discuss the need for additional force structure or operating funds, it is often because of perceived needs to support the shaping portion of the strategy and the CINC TEPs.

Finally, the JMRR needs to expand beyond its focus on functional stovepipes that prevent DoD reporting organizations from seeing the bigger picture. For example, each CINC looks at his piece of the Defense Transportation System and attempts to make it as ready as possible without understanding how his piece of the system fits into the overall transportation system. This practice also leads to the use of inappropriate metrics resulting in suboptimization and micromanagement, e.g., metrics based on achieving local goals rather than on achieving goals of the entire system. The JMRR focus on deficiencies has a similar impact and seems to result in staff efforts to optimize specific bits and pieces of readiness rather than to maximize overall readiness. This may be because functional staff officers are unable to see the entire system. Most of the reporting organizations we visited do not seem to recognize that their organizations consist of processes or systems and, in general, they do not appear to have anyone in charge of or responsible for ensuring the readiness of these processes or systems. The focus on functional areas and enablers is a manifestation of the failure to recognize the importance or role of these systems or processes. This is particularly true in the context of readiness to conduct operational tasks such as precision engagement. Successful execution of these operational tasks requires the integration of multiple functions across Service lines. By virtue of its exclusion of operational tasks, the JMRR does not address this aspect of readiness.[15]

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[15] See Appendix D for a detailed discussion of the systems approach to readiness reporting.

2. *The RRS needs to be more comprehensive. Many elements of the DoD that are essential to understanding DoD readiness need to be included as measured units in GSORTS and addressed in the JMRR.*

GSORTS should include all DoD readiness-essential entities in its list of measured units. Among the most important of these entities are the following:

- Higher headquarters, whether combat or administrative, joint or Service-specific

- Large operational organizations, such as Army corps and CS and CSS brigades; Navy carriers with their embarked air wings or battle groups; and Air Force Air Expeditionary Forces

- Defense Agency and Combat Support Agency entities e.g., distribution depots, inventory control points, financial centers, communications nodes, that do not report

- Joint units such as the Joint Intelligence Centers (JICs)

- Installations such as bases, air and seaports, training establishments, power projection platforms, Service repair depots

- Training units with potential combat capability

The JMRR needs to address the full spectrum of tasks and functions assigned to CINCs, Services, and Defense Agencies. The CRS requires the CINCs to report their readiness in eight functional areas that generally correspond to major staff areas of responsibility. Missing from the reporting requirements, however, is an assessment by the CINCs of their readiness to execute the operational tasks associated with the missions assigned the command by the Secretary of Defense as required by Title 10, Section 164.[16]

The Service reports need to be more comprehensive. Although the CJCSI calls for the Services to report the status of major combat, combat support, and combat service support units, the current Service JMRR reports focus primarily on the status of major combat units. In addition, although the Services have readiness-related responsibilities associated with their Title 10 functions, the CJCSI only tasks them to report on 6 enablers—theater mobility support, engineers, health services, sustainability, security, and field services—that are essentially subsets of some of their 12 functional responsibilities. We believe that the omission of Service headquarters and support entities, e.g., repair

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[16] In the context of Joint Vision 2020, operational tasks include dominant maneuver, precision engagement, full dimensional protection, and information operations.

depots and training installations, from GSORTS and the incomplete reports in the JMRR are a principal explanation for the readiness "surprises" that have frequently disturbed both the Congress and the Secretary of Defense.

The reports of the Defense Agencies (DAs) also need to be more comprehensive. There are 15 Defense Agencies within the DoD. Six of these Defense Agencies are Combat Support Agencies (CSAs)—DAs with specific responsibilities for providing operational support to CINCs and Services. Five of the six CSAs report in the JMRR. Our review of the DAs suggests that there is at least one DA that is not a CSA but which, nevertheless, has important readiness responsibilities. The Defense Finance and Accounting Service (DFAS) is responsible for providing financial support throughout the DoD during war. In the combat theater, DFAS is responsible for providing funds to support CINC and Service contracting efforts that are critical to successful theater operations. All DAs with readiness-related responsibilities should report in the JMRR.

We reviewed the JMRR reports and the methodology for developing these reports for DISA, DLA, and NIMA. The JMRR briefs we reviewed did not provide detailed and meaningful reporting by the CSAs. For example, the Defense Logistics Agency reports itself at a high readiness level even though its ground, sea, and air inventory management centers do not contribute to the JMRR report, nor did the report include the availability of consumable spares and repair parts for weapons systems. In addition, DLA does not report on its readiness to provide combat rations, clothing, chemical protective garments, bulk POL, or medical supplies for which it has sole responsibility. Finally, none of the entities belonging to the DAs—the headquarters, the depots, the inventory control centers, the communications sites, the intelligence analysis sites—report in GSORTS. These omissions need to be corrected.

3. *Reports need to be more uniform across the CINCs, Services, and DAs/CSAs.*

Section 117 specifies: "In establishing the readiness reporting system, the Secretary shall ensure that the readiness reporting system is applied uniformly throughout the Department of Defense." Our research into GSORTS revealed significant differences both among and within the Services in the way personnel, equipment, equipment condition, and training ratings are determined. Here are a few examples: 1) some Services include critical skills in personnel ratings and some do not; 2) the scope of equipment considered combat essential varies from Service to Service; 3) reporting on training readiness or on the availability of supplies varies from Service to Service and even within

a single Service; 4) the design tasks against which a unit's readiness is reported may differ from one command to another. These differences mean that the same numerical rating can mean quite different things from one unit to another. They arise because the GSORTS guidance allows the Services significant autonomy and discretion in how they measure and report their status. Accurate, cross-service views of either status or readiness at the DoD level will require a more uniform reporting system.

In our visits to the CINCs, Services, and CSAs, regarding the JMRR we found that staff officers lacked guidance on exactly how to report. Although the CJCSI contains an impressive amount of guidance on the nature of the JMRR, it still leaves a great deal of room for each reporting CINC, Service, and CSA to make its own interpretation of what should be reported.

Reporting by the CSAs is inconsistent. This is due not only to a lack of guidance, but also to the fact that the JMRR functional areas, which the CSAs are required to use, are more applicable to the CINCs than to the CSAs. The CSAs each have a unique function and a fairly narrow set of readiness issues when compared with the CINCs and Services they support. Their reporting would be more meaningful if the JMRR process provided them a method to focus on those unique missions.

4. *Service and CSA reporting needs to be better coordinated with CINC reporting.*

The CINCs report in eight functional *support* categories that correspond to the functional areas of responsibility within the Joint Staff. These areas are assumed to reflect CINC readiness to integrate and synchronize forces. The CINCs assume they will receive the major units they require and that those units will be ready to execute CINC tasks. In short, in the absence of evidence to the contrary, the CINCs assume the Services and DAs will provide them the support they need.

The Services are required to report their ability to flow ready combat, combat support, and combat service support forces in accordance with existing OPLANS. In fact, the Services focus their JMRR reports on the GSORTS status of major combat units. They provide limited analysis of the readiness of support units essential to the war fight. They need to address the readiness of many of the first to arrive support units, particularly those in the Reserve and National Guard that are important enablers to the successful execution of the war plans. More significantly, the Services need to report their readiness

to provide the CINCs the full range of support for which they have Title 10 responsibility especially their readiness to sustain their forces for the duration of the war.

Because the CSAs report their readiness in terms of the same functional areas as the CINCs, their reporting fails to focus on the details of the unique support they exist to provide to the CINCs and Services, e.g., maps, intelligence, and strategic communications. The DAs need to report on their readiness to perform their specific NSS-related tasks.

5. *GSORTS and the JMRR need to improve sustainability reports.*

Although GSORTS has a category called Equipment and Supplies, and the JMRR calls for all participants to report on the functional area or enabler called "logistics" or "sustainability," and the Congress, in Section 366 of the FY 2000 NDAA, calls for expanded reports of DoD readiness to sustain its forces in each of the war fighting plans, we concluded that the current readiness reporting system does not adequately address the ability of the DoD to sustain its forces in the execution of an MTW or an SSC. Our research reveals a number of areas where sustainability reports need improvement:

- GSORTS should expand reporting on all classes of supplies for all measured units. Other types of equipment and supplies needed for initial and follow-up sustainment (e.g., prepositioned weapons systems, support equipment and supplies, war reserve materiel, peacetime operating stocks, and unit-held accompanying supplies) need to be addressed in Service GSORTS reports.

- CINCs need visibility into sustainability issues if they are to report effectively on these important elements of combat capability.

- Services need to report in the JMRR on their ability to sustain their units for the duration of two MTWs. They need to report all of the classes of supplies including those prepositioned equipment, supplies, and war reserve materiel they would need for initial operations and to sustain those operations. The Army is the only Service that calculates its war reserve requirements for two MTWs. The other Services need to make these calculations.

- DLA needs to report on its ability to meet its responsibilities to provide Class I, subsistence; Class II, clothing and textiles; Class III, Bulk POL; Class IV, construction and barrier materiel; Class VIII, medical supplies; and Class IX, spares.

- The other DAs/CSAs needs to report on their ability to provide supplies and services necessary to sustain their operations for the duration of two MTWs.

- The DoD response to the requirements of Section 366 needs to focus on the much broader definition of sustainability contained in the congressional language.

6. The *Secretary of Defense needs to provide comprehensive operational guidance to the Services and Defense Agencies.*

The Secretary of Defense provides guidance to the DoD in the Contingency Planning Guidance and the Defense Planning Guidance. He provides operational guidance to the CINCs in the Contingency Planning Guidance. This guidance addresses the missions the Secretary of Defense wants the CINCs to be ready to perform in the context of the Shape and Respond strategies. The CJCS supplements the CPG with the Joint Strategic Capabilities Plan (JSCP), whose principal additional role is to apportion major combat forces and strategic lift among the CINCs for the execution of their assigned missions. Neither the CPG nor the JSCP is addressed to the Services or DAs.

The Secretary provides program guidance to the CINCs, Services, and DAs in the Defense Planning Guidance. This guidance addresses the Secretary's desires regarding the defense program. The DPG contains guidance regarding Service Title 10 functional responsibilities, e.g., training, equipping, and supply, which are to be included in their programs. It does not contain specific operational guidance to the Services with regard to their responsibilities to provide functional support to the CINCs in the execution of CINC plans. This is also true with regard to the Defense Agencies in the execution of their mission essential tasks. In other words, there is no official operational guidance to the Services or DAs regarding their responsibilities to support the CINCs in the execution of their operational responsibilities. This lack of SECDEF guidance, when combined with the CINC's inability to tell the Services and Defense Agencies what to do, means that the Services and DAs do not have effective DoD guidance on the execution of their functional responsibilities in support of the CINCs.

Although the Secretary reviews and approves CINC OPLANs based on the CPG, he does not review or approve Service and DA supporting plans. This omission is further compounded by limited Joint Staff review of these plans and inadequate coverage in the DA JMRR.

These omissions appear to be inconsistent with the requirements of Title 10, which requires the Secretary of Defense to "prepare written policy guidance for the preparation

and review of contingency plans."[17] This congressional guidance appears to be applicable to the entire DoD rather than just the CINCs. Given the omission of the Services and the DAs from the CPG, it is not surprising to find that the Services do not report on their readiness to "carry out the functions of the department so as to fulfill (to the maximum extent practicable) the current and future operational requirements of the unified and specified combatant commands,"[18] and that the Secretary of Defense does not review Service and DA supporting plans at the same time he reviews CINC OPLANs. Inclusion of the Services and DAs in the CPG and the OPLAN review would fulfill this requirement and lead to more comprehensive and thorough planning.

7. *Additional resources need to be committed to readiness reporting.*

In most units, commands, or organizations, readiness reporting is a collateral duty. Personnel assigned the responsibility have other significant day-to-day duties that consume the bulk of their time. CINC JMRR personnel do not have the time to devote to a fresh and detailed analysis of a given scenario or the status of a particular functional area.

The Joint Staff has little or no opportunity to conduct a strategic analysis of the inputs or to integrate them into a coherent picture of strategic readiness. The resulting presentation thus becomes a segmented view of staff functional areas viewed through the perspective of those who are linked via functional stovepipes, rather than a comprehensive view of DoD's ability to execute the National Military Strategy.

Although the offices in the Joint Staff and the Office of the Secretary of Defense that are responsible for managing and overseeing the overall readiness reporting system have this as their primary function, they have limited personnel and suffer from the effects of turbulence. The office in the Joint Staff responsible for managing the CRS and putting together each JMRR report has a total of nine officers assigned. The OSD staff devoted to both oversight of the readiness reporting to Secretary of Defense and to reporting to Congress has only eight personnel assigned. This relatively small number compares unfavorably with the relatively large number of people in the OSD associated with the oversight of acquisition activities, for example.

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[17] Title 10, Section 113 (g).

[18] Title 10, Section 3013, 5013, 8013.

8. *GSORTS and JMRR need new automated systems that will enhance the scope and depth of analysis.*

We found the lack of joint automated management information systems to be a major factor limiting the potential for more timely and accurate readiness reporting. It also exacerbates the labor-intensive nature of the current RRS. This lack of automation also means that the readiness reporting system cannot take effective advantage of the numerous management and reporting systems used by the Services, CINCS, and Agencies. We also found that the products of many of these potentially useful systems are not used to shed light on related readiness issues in the joint arena. To some extent this may be due to a natural tendency to want to keep those outside the organizations from becoming involved in internal management and budgeting processes. While one can appreciate the desire to avoid the pitfalls of micro-management, it would nonetheless appear useful to make available all relevant readiness information to the military and civilian leaders responsible for setting policy, allocating resources, and executing the NSS and NMS.

9. *Reports to Congress need to be redesigned to meet the intent of the Congress.*

The Quarterly and Monthly Readiness Reports to Congress provide an enormous amount of information derived from GSORTS, the JMRR, the SROC reports, and Service manpower and logistic systems. Both reports, especially the annexes, need to be redesigned to make them more accessible to members of Congress and congressional staff.

The Installation Readiness Report is based on Service reports that address the maintenance condition of facilities and provides limited information on the readiness of installations to "provide appropriate support to forces in the conduct of their wartime missions." This report needs to be expanded to include status information on readiness to perform assigned missions and tasks.

The Institutional Training Readiness Report addresses the ability of the Service institutional training systems to produce the graduates the Services require to meet their peacetime requirements. It needs to address the overall capability of the DoD training establishments "to provide trained and ready forces for wartime missions." It needs to address unit and collective training. It needs to address the Service combat training centers such as the Army's National Training Center. It also needs to address the

readiness of the overall DoD collective training establishments, including those of the Joint Forces Command, which is specifically charged with responsibility for joint training in preparation for assigned missions.

The Combat Support Agency Review reflects a review of each CSA's peacetime operations. These reviews, conducted by teams of military personnel and civilian contractors working for the J-8, are not as effective as they need to be in meeting the Title 10 requirement to report on, "the responsiveness and readiness of each such agency to support operating forces in the event of war or threat to national security." We found that CSA participation in the JMRR might be seen as meeting the Title 10 requirement for reporting CSA readiness. Unfortunately, we found that the actual CSA JMRR reports need significant improvement if they are to meet the congressional requirement. In general, these reports seem to focus on peacetime readiness rather than on readiness to perform the tasks associated with the Shaping and Respond strategies.

VI. POTENTIAL IMPROVEMENTS TO THE DOD READINESS REPORTING SYSTEM

This section outlines our conclusions on the design of a new RRS as well as guiding principles for our recommendations to make the DoD RRS consistent with the Congressional mandate. We also note the major changes that seem appropriate. We begin with a vision of what the future RRS might be and how it might work. This section is followed with recommendations for specific changes in the GSORTS and JMRR system that are tied to the vision of a new RRS. Most of these changes can be initiated immediately and implemented in the near term. Others depend on the development of automated tools.

Based on our review of the congressional requirements in Title 10 and of the responsibilities of the Secretary of Defense and other DoD leaders, we concluded that the readiness reporting system should meet the following goals:

- Be responsive to congressional readiness concerns[19]

- Provide readiness information necessary to assist

    - The Secretary of Defense in the performance of his duties

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[19] See table A-1-1 for a detailed comparison of our recommendations with the requirements of Section 117.

- The CJCS in the performance of his duties[20]

- The warfighting CINC's and the Defense Agencies in the performance of their peacetime and wartime missions[21]

- The Services in the performance of their Title 10 functions[22]

In addition to these goals, we established guiding principles for developing our recommendations. We believe a future RRS should:

- Recognize that readiness reporting is an appropriate responsibility of the chain of command from the lowest squad leader through the Secretary of Defense

- Adopt and standardize CINC & Service "best" practices and concepts whenever possible

- Take advantage of information technology

- Do no harm to units and individuals

A. A Vision of A Future RRS

There are four major aspects to our vision of what a future readiness reporting system should be based on:

- Supported CINCs should report to SECDEF their readiness to execute each of their NSS missions in terms of their CINC-level mission essential tasks.

- Supporting CINCs, Services, and DAs should report to the supported CINC their readiness to execute the tasks associated with their CINC-related missions.

- Most tasks are performed by systems or processes whose output, when compared to a requirement, can be taken as a measure of the readiness of the system or process to execute the assigned task.

- The DoD should employ modern information technology to enhance readiness reporting and to reduce the workload of reporting units.

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[20] The CJCS is responsible for "advising the Secretary on critical deficiencies and strengths in force capabilities." USC, Title 10, Section 153.

[21] A CINC "is directly responsible to the Secretary for the preparedness of the command to carry out missions assigned to the command." USC, Title 10, Section 164.

[22] Service Secretaries are responsible for "carrying out the functions of the Department of the Army, Navy, Air Force so as to fulfill (to the maximum extent practicable) the current and future operational requirements of the unified and specified combatant commands." USC, Title 10, Sections 3013, 5013, and 8013.

Title 10 provides the basis for our vision of a future readiness reporting system. Chapter 6 of Title 10 lays out the responsibilities of the Combatant Commanders and makes them "directly responsible to the Secretary of Defense for the preparedness of the command to carry out missions assigned to the command." Given this clear responsibility and the recognition that the Combatant Commanders are responsible for executing the missions established by the Shape and Respond portions of the NSS and NMS assigned to them by the Secretary of Defense, we conclude that the central aspect of a future readiness reporting system should be based on reports from each CINC of his readiness to execute each of his assigned missions. Title 10 also includes the requirement for each Service Secretary to "carry out the functions of the department so as to fulfill (to the maximum extent practicable) the current and future operational requirements of the unified and specified combatant commands."[23] This requirement would seem to establish a reasonable basis on which the Services might report their readiness, i.e., in terms of their readiness to execute their functional tasks in support of CINC requirements.

The Chairman of the Joint Chiefs of Staff has established the basis on which it seems reasonable for the CINCs to report their readiness—in terms of their CINC-level mission-essential tasks (METs). These METs are associated with each assigned mission that each CINC has already identified as part of the Joint Training System (JTS). The CJCS has stated that "the JTS is the principal tool to ensure DoD readiness to execute the NSS." The JTS establishes a number of policy aspects with regard to training that can be expanded to readiness reporting. These policies and the readiness reporting policies that can be derived from them are listed in Table 1.[24]

If they are called on to report their readiness to execute their assigned missions based on their readiness to execute their mission essential tasks as implied by our analysis of the implications of the JTS, then each CINC might address his readiness to execute an assigned mission in a manner similar to that portrayed in Figure 1. In this example, if the mission is to defend South Korea, then the CINC might report his readiness in terms of his readiness to execute his support tasks and his operational tasks. He would rely on reports from the forces assigned or allocated to him and from the supporting CINCs, Services, and DAs to determine his readiness to execute both his supporting and his operational tasks.

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[23] USC, Title 10, Sections 3013, 5013, and 8013.

[24] CJCSI 3500.01B, 31 December 1999.

Table 1. The JTS Provides a Basis for a Future RRS

Existing JTS policies and practices	Derivative RRS Policies and Practices
Commanders derive training requirements from their analysis of the requirements of the NMS	CINCs derive their mission-essential tasks from their analysis of the missions they are assigned by the Secretary of Defense and assign, or at least identify, appropriate missions to supporting CINCs, Services, and Defense Agencies. Supporting CINCs, Services, and Defense Agencies build their METL based on missions assigned or identified by the supported CINCs
Commanders determine tasks to be trained based on the list of tasks contained in the Universal Joint Task List (UJTL)	CINCs, Services, and DAs select their tasks from the UJTL or associated Service task lists
Commanders determine the training status of their command	Commanders determine the readiness of their command
CINCs direct subordinate commands and forces to carry out CINC missions	Services are responsible for preparing their forces to perform tasks required by CINC missions. DAs are responsible for preparing to perform tasks associated with CINC missions
Services carry out Title 10 functions (including training) to fulfill CINC operational needs	Services report their readiness to execute their Title 10 functions to support CINC needs
Services and CINCs are responsible for training forces to face the spectrum of conflict addressed in the NSS/NMS	Supporting CINCs, Services, and DAs report their readiness to meet the needs of the supported CINCs across the Shape and Respond Spectrum
CINC Joint Forces Command is responsible for providing and training joint forces as well as JTF and CINC headquarters	CINC Joint Forces Command reports his readiness to train and provide joint forces as well as JTF and CINC headquarters
Supported CINCs are responsible for providing their JMETL and training plan to supporting commanders (including Service commanders), DAs, and Joint Forces Command	Supported CINCs are responsible for assigning missions and tasks to supporting commanders (including Service commanders), DAs, and Joint Forces Command
Supporting commanders and joint organizations (including DAs) are responsible for providing their METL to supported CINCs	Supporting commanders and joint organizations (including DAs) are responsible for reporting their readiness to supported CINCs
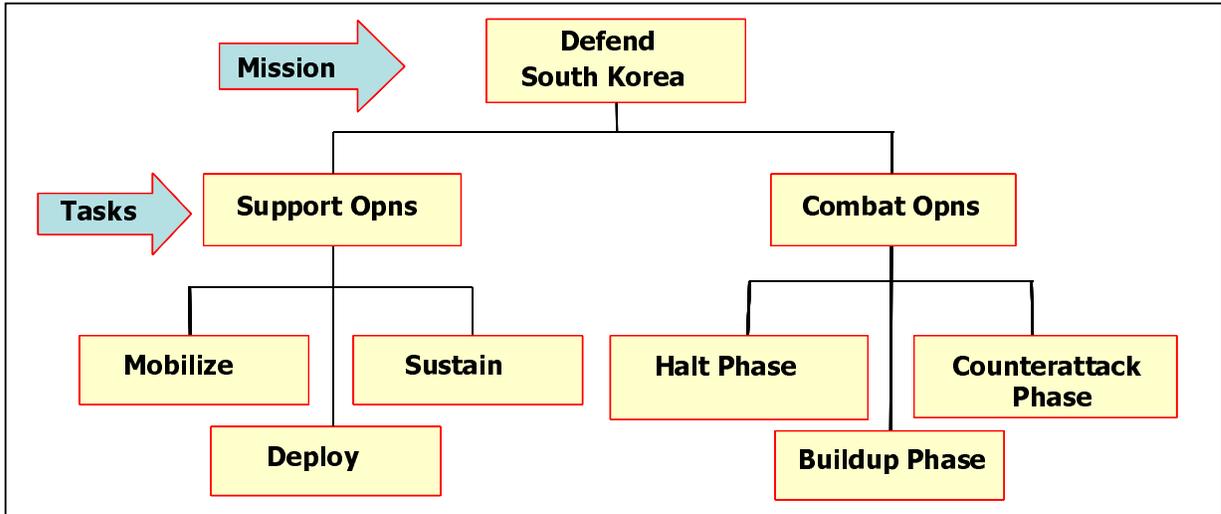
Figure 1. CINC Reports His Mission Readiness in Terms of His Mission-Essential Tasks

Our review of modern management techniques provides the basis for our recommendation that the new readiness reporting system be based on the readiness of systems or processes rather than on functional areas and enablers. Here is a summary of those insights:[25]

- *The problem.* Organizations today consist of functional silos, or stovepipes—vertical structures built on narrow pieces of a process. Most organizations continue to manage their enterprise by managing individual departments. This management style prevents those departments and the entire organization from seeing the bigger picture of the role of the organization as a whole. It also leads to the use of inappropriate metrics and, as a result, suboptimization and micromanagement. As a result, most organizations focus on maximizing local goals rather than global or organization-wide goals. Organizations generally do not recognize their internal processes or systems and do not have anyone in charge of or responsible for them.

- *The solution.* Organizations must redefine the scope of management to include the entire process or system, e.g., the entire supply chain. Organizations must reengineer their business process to ensure these processes are managed to serve the customer rather than to meet the suboptimal goals of functional managers. There are a few key leverage points in any system that determine the overall performance of any organization. These constraints or

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[25] Appendix D, Annex 2, summarizes our findings. The bibliography lists the management texts we reviewed.

bottlenecks can be identified and managed. Most constraints are not physical limitations but are limitations created by the beliefs, assumptions, and policies that are built into the organization.

This review of the literature led us to conclude that a modernized readiness reporting system should be based on a systems or process approach. We concluded that a modern readiness reporting system could be both comprehensive and comprehensible only if it reports on key DoD systems or processes that encompass the enormous amount of data collected by GSORTS and during the JMRR process.

The systems approach holds out the potential for solving other problems. First, a systems approach provides the participants in the system an overview of the entire system and how their actions affect the capability of the whole. Given this ability to see the entire system, participants can make decisions with the capability of the whole system in mind and need no longer focus on the bits and pieces of readiness, which may not effect the ultimate outcome.

The systems approach also provides help in resolving resource allocation issues. If the CINCs, Services, and Secretary of Defense are able to see an entire system, e.g., the Defense Transportation System described below, they may be able to identify elements of the system that can be improved in the near term to enhance current readiness. They may also be able to identify elements of the system that can only be improved in the longer term with a modernization or force structure program. The visibility into these potential resource tradeoffs may allow participants to make better choices about readiness today verses readiness tomorrow.

The basic steps in a systems approach are as follows: 1) identify the systems whose readiness is important to the CINC's ability to execute his assigned missions; 2) collect the additional data necessary; 3) organize that data into a comprehensible package, i.e., a system or process; and 4) require the responsible CINC or Service/Defense Agency chief to report on the readiness of the system for which he is responsible.

The Defense Transportation System (DTS) is an example of a DoD system whose readiness is critical to overall DoD readiness. The DTS is recognized as a system that involves all four Services, most CINCs and Defense Agencies, three types of transportation (ground, sea, and air), multiple nodes (installations, ports, and bases, both military and civilian, U.S. and foreign), and prepositioned equipment and supplies. All of the pieces of the DTS are known today and are modeled in programmatic studies. Many of the units involved report in GSORTS. Most of the installations, ports, and other nodes in the system do not report their readiness. Today, no single CINC or Service has

visibility over the DTS and none is responsible for reporting its readiness. As a result, no one subordinate to the Secretary of Defense or the CJCS is responsible for knowing the readiness of the DTS. If the DoD is to follow the example of the most modern businesses as discussed above, it would appear appropriate for all of the pieces of the DTS to report in GSORTS and for the DoD to assign one senior commander to report the readiness of the entire DTS. Taking these two steps would place responsibility for reporting the readiness of the DTS on a commander with the ability to affect the system's overall readiness and would relieve the Secretary of Defense and the CJCS from having to draw conclusions about DTS readiness from multiple reports on separate elements of the system.

Figure 2 presents a view of the Defense Transportation System that could serve as the basis for such a report. Reporting responsibility might be given to CINC TRANSCOM, for example.
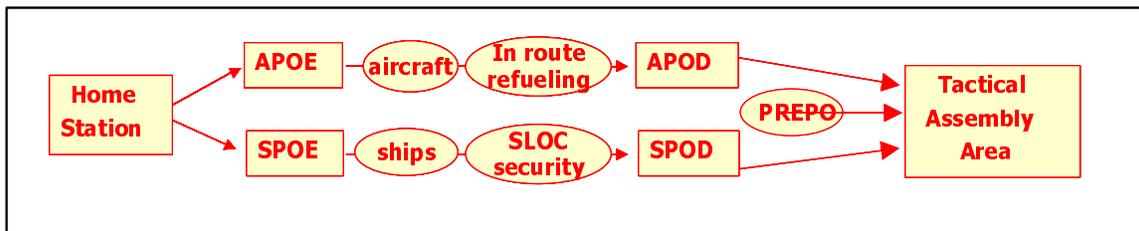
Figure 2. A CINC Reports the Readiness of the Defense Transportation System

If a CINC were to be responsible for reporting the readiness of the Defense Transportation System (DTS), he could focus on the output of the system based on his assessment of the overall capability of the system to provide the OPLAN-required throughput of forces and materiel over time. In order to understand the system's readiness, the CINC would identify tasks and output metrics for each entity in the system and compare the capability of each entity against the requirement. This approach would allow the CINC to report to the Secretary of Defense on his readiness to execute his primary MET without having to report the readiness of each entity of the system. This approach has another benefit for both operational and resource allocation considerations. If the DTS is thought of as a chain that is no stronger than its weakest link, then the CINC would be able to identify the weakest link in the chain and take action to strengthen that link. The CINC would enhance his ability to manage the DTS effectively and to identify the links in the chain most in need of additional resources. In addition, if the subordinate commanders in the DTS were able to see themselves in the context of the entire transportation system, they would be more able to perform their duties with the output of

the entire DTS in mind. In fact, CINC TRANSCOM has already developed this concept of the DTS and is using it to determine his programmatic needs. He could use the same approach to report his readiness.

The Services could also report their readiness to execute their Title 10 responsibilities to support the CINCs in the context of a system. Each Service has a system or process for performing its Title 10 functions. Each Service has a manpower system, a system for both individual and collective training, a supply system, and a mobilization system and a deployment system, for example. These systems can be used to report the readiness of their Title 10 functions.

Figure 3 shows a view of the Navy supply chain, whose overall readiness is essential to the Navy's ability to sustain its forces in the context of both the Shape and Respond strategies. Note that the Navy supply chain also includes entities belonging to the Defense Logistics Agency and the General Services Administration. In this case, as in the case of the DTS and CINC TRANSCOM, the Navy would need to *know* the readiness of each entity in its supply chain but would only need to report the overall readiness of the chain, in terms of throughput over time. This report should be made available to the supported CINC and the Secretary of Defense.
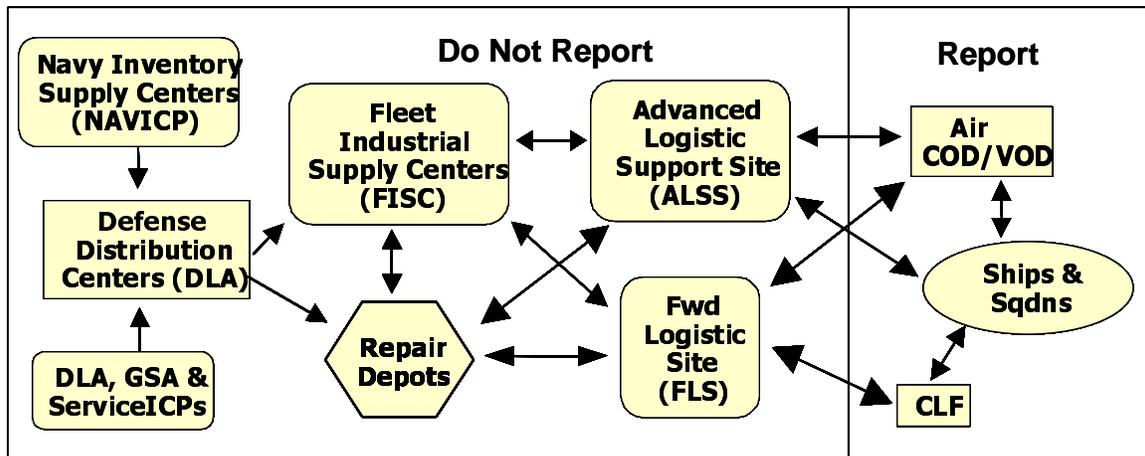
Figure 3. The Navy Reports the Readiness of the Sustainment System

It is important to recognize that the Services are already using supply chain management techniques to manage their peacetime logistic processes.[26] They need only apply these techniques to their wartime logistic needs and to report their readiness on the basis of the readiness of their supply chain. The Services would have to identify the

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[26] The Army process is called Velocity Management.

details of the systems that support each of their other Title 10 responsibilities, identify the output requirements of each entity, and base their readiness assessments on the overall capability of each system. This is also the approach being considered by the Army for its "Strategic Readiness System" based on the use of a process analysis tool called Activity Based Costing/Management/Budgeting. This same tool, ABC/M/B, has been selected by the USD (A&T) as a tool for improving cost management and is in the process of being integrated into the DoD management process throughout the Department of Defense.[27]

Although the supported CINC will certainly be interested in knowing Service readiness to perform some Title 10 functions, e.g., supply, he is not likely to be as interested in knowing Service readiness to perform other Title 10 functions, e.g., redeployment. The Secretary of Defense, on the other hand, is responsible for oversight of all Service Title 10 functions.

In addition to reporting their readiness based on reports from supporting CINCs, Services, and DAs, the supported CINCs would report their readiness to perform their METs based on the operational systems that will executes each MET. Figure 4 shows one such system, the precision engagement system, which involves assets controlled by the CINC and his component commanders as well as assets controlled by others such as SPACECOM or DIA. If the CINC is to know his readiness to perform his precision engagement MET, he must know the readiness of this system. He must know how each entity fits into the system, its interoperability, and he must know the entity's readiness. The chain analogy remains appropriate for the precision engagement system. In this case, the readiness of the precision engagement system can be no better than the weakest link in the precision engagement chain. For example, if the parts of the system are not interoperable and if timely targeting information cannot get from the ISR asset to the firing system, the system is not ready.[28]

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27 USD(A&T) Memorandum, subject: Defense Wide Implementation of Activity Based Management, July l999.

28 This is precisely the problem identified by GEN John Jumper, the commander of the Air Force Air Combat Command and commander of U.S. Air Force Europe during the air war over Kosovo. GEN Jumper described the problem as a problem of "horizontal integration," but he was talking about the inability of the precision engagement system to move information effectively from the target acquisition node through the command and control node to the mission execution node.
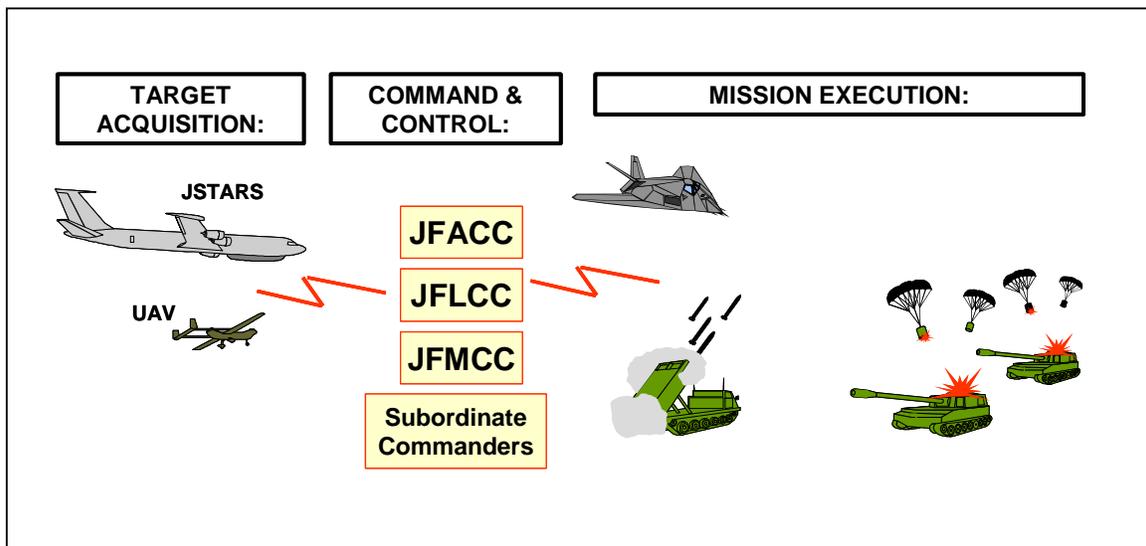
Figure 4. The Precision Engagement System

Knowing the readiness of each of these large complex systems is based on knowing the readiness of the entities that make up each system. These entities include operational units as well as supporting entities—depots, ports, prepositioned supplies and equipment, communications nodes, hospitals, training centers, inventory control points, etc.—that are important to DoD readiness. Each entity must report its readiness to conduct its mission-essential tasks (METs) associated with its role in the system whose readiness is being reported. These reports can be provided in GSORTS. For example, a port that is a node in the DTS is itself a system whose readiness can be measured and reported in GSORTS. In this example a port reports its readiness to execute its MET, which is to move a certain amount of cargo through the port on a daily basis. Other supporting entities are also systems. A hospital is a patient care system. A depot may be an engine repair system. A training center is a unit training system. A communications node is a data transmission system.

Operational units can also be viewed as systems. The Army evaluates training readiness of its operational units in terms of a unit's Battlefield Operating Systems (BOS), which include fires, maneuver, command and control, intelligence, logistics, air defense, and mobility/countermobility. Each operational unit has a similar mix of systems that are collectively engaged in the execution of each of a unit's METs. Navy ships report in GSORTS on the basis of Primary Mission Areas that are systems, e.g., the ASW system and the AAW system.

Every readiness-related DoD entity can report its readiness in GSORTS in terms of its ability to execute its METs based on an assessment of the ability of the entities'

systems to provide the output associated with a MET. Figure 5 shows an infantry battalion example. The battalion headquarters, including the battalion staff officers and any C3 systems, comprise the command and control system. The scout platoon provides the intelligence system. The three maneuver companies provide the maneuver system. The three maneuver companies and the mortar platoon provide the fires system. The support platoon, maintenance platoon, and the medical section comprise the logistic system. The battalion GSORTS report would be based on a comparison of the required level of personnel, equipment, supplies, and training with the actual level for each of the battalion's mission-essential tasks. A higher headquarters would establish the requirement for each system and for the whole unit as the Navy does today. The unit's status could be reported by the unit as done today. Ultimately the GSORTS database should draw that data automatically from other databases.
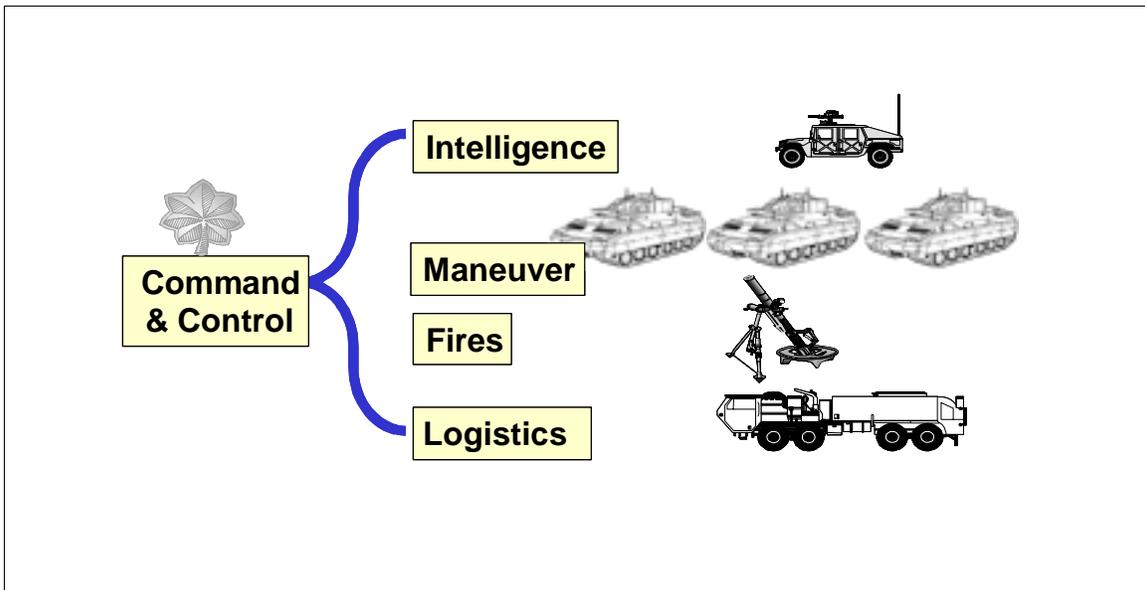
Figure 5. A Mechanized Infantry Battalion Reports Its Readiness as a System of Systems

The vision of the future readiness reporting system just described calls for the DoD to collect and manipulate more data than the current RRS handles. This increase in data handling is possible because of the increased capabilities inherent in information technology. Web-based capabilities allow the DoD to collect and manipulate large amounts of data as well as to collect data automatically from other DoD management systems. This capability holds the promise of significantly reducing the workload associated with the current readiness reporting system, even though the amount of data collected increases.

Appendix F provides a detailed description of how information technologies can be applied to the future RRS. In simple terms, the future RRS would be based primarily on a system in which reporting entities only keep track of those elements of their status that are not maintained on a centralized data base maintained for other purposes. For example, personnel data would be automatically taken from the personnel database.[29] Equipment, equipment condition, and supply data would be automatically taken from the Service and DA databases that keep track of these elements. The reporting entities would only be required to keep track of their training status to the extent that they do not report that status as part of another DoD database designed to keep track of training, e.g., some Services keep track of aviator training in centralized databases. Commanders of reporting entities would be responsible for providing their professional judgment on the actual capability of their unit if it differed from that determined automatically. They would also be responsible for predicting changes in their readiness based on information available to them, e.g., an anticipated training event that will increase overall training readiness. This information would constitute the new GSORTS database.

We recognize that increased reliance on existing management information systems, automated databases, and automated analysis thereof to report critical command readiness information may be viewed with some skepticism—particularly by commanders who have reason to doubt the validity of the underlying data. However, we expect that such usage would have the salutary effect of radically improving the accuracy of such databases, based on the long-standing commercial observation that officials manage what is measured and reported to their leadership.

CINC, Service, and DA systems would be represented on the SIPRNET with each node in the system being an entity reporting in GSORTS. Each node in the system would be automatically updated with each change in GSORTS. In this way the CINCs, Services, and DAs could keep track of the readiness of their systems on a near-real-time basis and would be able to inform the supported CINC and the Secretary of Defense of their readiness as required.

A new RRS based on the systems approach has the potential to enhance both deliberate and crisis planning as well as resource allocation. Deliberate planners would be able to see the systems that are required to perform each MET and would have a template they could use to ensure they are building a comprehensive plan and force list. Crisis

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[29] DoD is in the process of creating a DoD-wide personnel database that could provide this data.

planners will be able to identify units for a wide range of missions based on their readiness to perform specific mission-related tasks. They will be able to look at systems to identify bottlenecks and constraints that limit the output of the system and to find workarounds that will enhance system output. Resource managers will be able to look at unit readiness and identify the operating systems or input categories that are limiting the readiness of their units. Resource managers will be able to identify the link in the chain that most needs reinforcing and, thereby, make more efficient allocation of resources, e.g., allocate resources to the weakest link and avoid directing resources to links that are already strong enough.

This vision of a future RRS does not require that DoD throw out the existing reporting systems. It does call for a number of changes in these systems. The specific changes are discussed in detail in Appendixes C, D, and E. Here is a summary of the changes we think are necessary.

B.   Summary of GSORTS Recommendations

1. *Expand the GSORTS database to include all readiness-related units and organizations.*

CINCs, Services, and Defense Agencies should identify all the entities under their control that contribute to their ability to perform their METs or their Title 10 functional tasks and should register them as measured units in GSORTS.

2. *Require parent organizations, e.g., brigades, and divisions, battle groups, wings, to report separately the readiness of their headquarters and of their entire organization.*

Senior DoD commanders need to know the resource and training status of individual units so that they can allocate resources effectively and ensure the overall readiness of the force. Knowledge of individual unit readiness does not translate effectively into knowledge of the operational readiness of larger organizations. It is appropriate to ask the commanders of these larger organizations to report on the readiness of their organizations as a whole and of the headquarters for which they are directly responsible. GSORTS should give them such a capability.

3. *Separate "supply" reporting into a separate category.*

Supplies must be in the hands of units who will use them if they are to be of any value. Knowing the status of unit supplies is essential to knowing the readiness of a unit and is the first step in knowing the ability to sustain that unit.

4. *Base training readiness on training events accomplished to standard.*

All of the Services know the training events and standards that are required for a unit or organization to be effectively trained in a task. Most aviation and naval units report their training readiness on this basis. All units can and should report on this basis, to include the entities that are added to GSORTS.

5. *Enhance GSORTS to allow all reporting entities to report their readiness to perform their mission-essential tasks and to allow the automatic collection of data from CINC, Service, and DA databases maintained for other purposes.*

Key to reporting the readiness of systems is understanding the readiness of each unit in the system to perform the tasks the system requires. GSORTS should be modified to allow all measured units to report their readiness in terms of their METs. This includes the METs for which they have been designed (their DOC) and their CINC-assigned METs (their ROC). GSORTS should also be modified to automatically draw data from other databases, e.g., personnel, maintenance, supply, and training, to enhance GSORTS currency and accuracy and to reduce the workload on reporting units.

C. Summary of JMRR Recommendations

1. *Report readiness to execute the full range of scenarios and tasks covered by the NSS, NMS, and DPG/CPG.*

Given the congressional mandate to report DoD readiness to execute the NSS, the NMS, and the DPG and the need for DoD managers to have an understanding of DoD readiness to execute the full range of activities the DoD might be called upon to perform, it seems appropriate to include analysis of the full range of scenarios and taskings that the President's NSS, Chairman's NMS, and Secretary's DPG/CPG specify or imply.

2. *Report readiness to execute mission essential tasks.*

The CINCs should report their readiness in terms of the METs associated with their Shaping responsibilities and with their scenario-related MTW and lesser contingency responsibilities, instead of in terms of the eight functional areas as they

currently do. This requires the CINCs to report on the readiness of not just their own headquarters, but of the aggregated force and support structure that has been identified to execute their plans. The Services should report their readiness to support CINC needs in terms of their Title 10 functional tasks and the DAs should report in terms of their METs.

3. *Conduct scenario-specific analyses.*

Since the two-MTW scenario is the most demanding of the conventional scenarios in the NSS against which it is necessary to measure DoD readiness, and since CINC responsibilities vary significantly depending on which MTW occurs first, it seems appropriate that this scenario be the primary basis for the JMRR. One change in the analysis of the two-MTW scenario the Secretary of Defense might consider is to investigate the readiness implications of different assumptions regarding separation time between the two MTWs. Our investigations revealed that every two-MTW JMRR used the DPG planning assumption that serves as the basis for the illustrative planning scenario. While this may be appropriate for program planning, it seems reasonable to consider different alternatives in the JMRR process e.g., two truly simultaneous MTWs. In addition, analysis of the two-MTW scenario should specifically include consideration of the requirements for deterring the second MTW and the requirements for swinging forces from one theater to the other.

4. *Conduct JMRR analyses of single MTWs, CONPLANs, and other SSCs twice a year.*

If the JMRR considers the two-MTW scenario twice a year and continues on its quarterly schedule, that leaves two JMRRs that can be devoted to other elements of the strategy. We believe the JMRR should address DoD readiness for the full range of contingencies covered in the DPG/CPG.

5. *Conduct each JMRR sequentially over a 3- to 6-month period.*

One of the problems we identified in our review of the JMRR was the simultaneous nature of the reporting. Staffs that were dependent on information from other staffs did always not get the information in time to influence their own report (or did not get it at all because they did not have time or authority to ask). Issues that would be dealt with sequentially in the normal course of events had to be dealt with simultaneously. Accordingly, it seems appropriate to develop a sequential approach to building the JMRR. This approach would parallel the approach used in deliberate and crisis response planning.

6. *Establish uniform metrics as the basis of reporting.*

We believe the solution to the lack of metrics is to adopt the systems approach described above. This approach allows the basic readiness metrics to be the output of the systems whose readiness we are measuring. For example, the readiness metric of the transportation system is the throughput the system is ready to provide in the context of a JMRR scenario. The readiness metric of an entity is based on the role that entity plays in the output of the system of which it is a part. To continue the above example, the readiness metric of a port would likely be based on the port's throughput requirement as part of the transportation system, and the readiness metric of a strategic airlift squadron would likely be based on the required capability of the squadron in terms, perhaps, of ton-miles or sorties per day.

7. *Include the time factor in all scenario reporting.*

JMRR reports should also include a time factor based on the expected duration of the event against which readiness is being assessed. For example, in a two-MTW JMRR, CINC TRANSCOM should report on his readiness to provide transportation support for the entire duration of both wars, i.e., the capability of the transportation system to move the units and materiel each CINC requires to execute his mission. Each Service should report on its readiness to sustain its forces for the duration of the war. The CSAs should report their ability to sustain operations and support the Services and CINCs for the duration of the war. The supported CINC, in reporting his readiness to execute his mission-essential tasks, e.g., his capability to execute the operational tasks that are a part of his OPLAN, should include a time factor in his assessment. One way for a CINC to do this in the case of MTWs would be to address his readiness to execute the phases of his OPLAN.

8. *Consolidate efforts to develop automated reporting systems.*

The joint staff and the Services, as well as other organizations, have a variety of programs underway to develop automated readiness or readiness-related reporting systems. Unfortunately, full development of these complex systems, many of which appear to have excellent potential, are languishing because of a lack of funding and the limited pool of qualified technology workers. We recommend that the Secretary of Defense take charge of an effort to develop a DoD-wide readiness reporting system that

takes advantage of promising developments to date, makes accessible to all involved in readiness reporting the myriad databases currently existing, and captures the funding and pool of technology talent that is currently spread throughout the department.

9. *Invite senior members of the CINC staffs and CSA staffs to participate in JMRR briefs.*

When a JMRR focuses on an issue of interest to a particular CINC or CSA, we recommend that that command or organization provide, when real world operations permit, a senior officer or civilian official to brief the issue in question. This would promote a dialogue and establish a balance in the forum between the Services, the CSAs, and the CINCs they are required to support.

D. Information Technology Recommendations

Information technology capabilities are improving at great speed in the commercial world and in the DoD. The ability to collect, store, distribute, analyze, and report vast amounts of data with ease and at dramatically lower costs will continue to grow. These changes will facilitate significant improvements in DoD management tools. DoD is working on several management information systems that use Web-based technologies to facilitate the integration of existing databases and applications into multifunctional and multipurpose information systems that can support DoD analytical and operational requirements. The Global Command and Control System (GCCS) and the Global Combat Support System (GCSS) are prime examples of this new management information technology. The Joint Training Information Management System (JTIMS) is another example of a DoD program that utilizes this same type of technology. DISA is currently adapting the GSORTS database to these same applications. We recommend that similar techniques be used as the basis for the new Readiness Reporting System—both for GSORTS and for the systems approach to the JMRR. See appendix F for a detailed discussion of these recommendations.

Ultimately the RRS should become nearly automatic. Virtual databases will automatically provide most of the data required for every GSORTS report. Commanders will be responsible primarily for reviewing their data to ensure accuracy and for reporting command assessments when those assessments differ from the objectively obtained assessments. There will be permanent SIPRNET applications representing most of the systems the CINCs, Services, and DAs depend on to execute their METs. These applications will be automatically updated with the most current GSORTS data.

Intelligent agents will continuously sweep these databases to identify readiness problems and bottlenecks and even to identify potential workarounds. Planners will identify tasks to be performed for both deliberate and crisis response plans and will select units by task. Planners will populate MET oriented systems with unit identifications and will receive near real time readiness assessments in return. CINCs, Service and Defense Agency chiefs, and the Secretary of Defense will have a coherent and comprehensive basis on which to discuss both operational readiness and resource allocation issues.

E. Recommendations for Action by the Secretary of Defense

DoD has traditionally identified readiness and sustainability as the top priority for the allocation of defense funding in the DoD program. Included in this definition of readiness and sustainability is the requirement to "meet objectives for operations, training, and maintenance and to ensure that U.S. forces are capable of decisively executing future missions."[30] President Bush has described his administration's defense review as leading to "a new defense agenda and a new strategic vision (that) will be the basis for allocating our defense resources."[31] Knowing DoD readiness to execute new missions is central to establishing a path for achieving this new strategic vision and for allocating resources effectively. Our analysis has led us to conclude that the current readiness reporting system does not provide the kind of information the Secretary of Defense needs to ensure that the Department meets either requirement. Our recommendations are designed to provide a basis for a readiness reporting system that will provide the information on DoD readiness the Secretary of Defense needs to have as a basis for making the critical decisions about where the Department should go. We recommend the Secretary of Defense take the following actions to ensure he has the information he needs to guide the DoD toward the new strategic vision.

1. The Secretary of Defense should issue detailed instructions covering the development and final structure of an improved DoD Readiness Reporting System that has the characteristics described in the GSORTS and JMRR recommendations above and as called for in Section 117. These instructions should be tied to the DPG and the CPG.

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[30] Defense Planning Guidance Update FY 2002–2007, p. 5.

[31] President George W. Bush, speech at Joint Forces Command, Norfolk, VA, 13 February 2001.

They should be designed to ensure the reporting system meets the needs of the Secretary of Defense in his oversight and operational roles. They should be issued as soon as possible.

2. The Secretary of Defense should establish a readiness analysis center as a small agency or support function. Such a center would provide critical readiness information that is not available today. Trained analysts and information technology technicians would apply the most advanced information technology to ensure the Secretary of Defense has the information he needs about overall DoD readiness to execute these new missions. Such a center could provide the analytical talent, the automated systems, the time for analysis, and the continuity and corporate knowledge that are essential to understanding DoD readiness.

3. The Secretary of Defense should provide the resources needed to ensure the development and implementation of the information technology systems and databases essential to comprehensive readiness reporting. These resources would allow the readiness reporting system to become a full partner in President Bush's effort to, "harness new technologies that will support a new strategy."[32] Given the initiatives underway in each of the Services and elsewhere in DoD, a consolidated approach might meet the needs of the new system at minimum cost.

4. Although the focus of this study and these recommendations is on the DoD Readiness Reporting Systems, there are two aspects of the role of the Secretary of Defense and the CJCS in issuing guidance and reviewing plans that we feel are important to our recommendations and are central to developing an RRS that meets the demands of the Congress. In this regard, we recommend that the Secretary of Defense provide guidance to the Services and DAs in the CPG regarding their responsibilities to execute their Title 10 functions and their METs in support of CINC OPLANs. We also recommend that the Secretary of Defense and CJCS, who currently review and approve CINC OPLANs, also review and approve Service and DA plans for supporting the execution of those CINC OPLANs.

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[32] Ibid.

VII. CONGRESSIONAL READINESS REPORTING REQUIREMENTS

Although our research focused on Section 117 of Title 10 pursuant to the requirements of Section 361 of the FY 2000 Defense Authorization Bill, we discovered other Title 10 readiness reporting requirements that required our attention. As described in detail in Appendix A, Section 482 requires the Secretary of Defense to "submit to Congress a report regarding military readiness" on a quarterly basis, and Section 193 requires the Chairman of the Joint Chiefs of Staff to submit a report on the responsiveness and readiness combat support agencies.

These multiple requirements lead to a profusion of reports and a vast amount of data that, we believe, are beyond the ability of any Member of Congress or Professional Staff Member to be able to analyze effectively in the execution of their legislative duties. Accordingly, we recommend that the Congress amend Title 10 to consolidate all readiness reporting requirements in one section of the law. We also suggest that the Congress limit its reporting requirements to reports based on summaries of the quarterly JMRR reports and the periodic updates, which, with the recommendations made above, should provide a more comprehensive and comprehensible report than the Congress currently receives. Should there be a need for more detailed data, we recommend that Congress require the DoD to install a SIPRNET terminal in both the House of Representatives and the Senate to allow Members and appropriate staff access to the more detailed assessments available to the CINCs and the Secretary of Defense.

Appendix A
CONGRESS AND THE READINESS REPORTING SYSTEM

Matthew N. Diascro

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CONGRESS AND THE READINESS REPORTING SYSTEM

INDEPENDENT STUDY OF MILITARY READINESS REPORTING SYSTEM

(Pub.L. 106-65, Div. A, Title III, § 361, October 5, 1999, 113 Stat. 574,
National Defense Authorization Act for Fiscal Year 2000)

Section 361 of the National Defense Authorization Act for Fiscal Year 2000 specifies that the "Secretary of Defense shall provide for an independent study of requirements for a comprehensive readiness reporting system for the Department of Defense, as required by Section 117 of Title 10, United States Code." The Secretary is instructed to commission a study to "consider the requirements for providing an objective, accurate, and timely readiness reporting system for the Department of Defense that has— (1) the characteristics and capabilities described in subsections (b) and (c) of Section 117 of Title 10, United States Code; and (2) any other characteristics and capabilities that the organization determines appropriate to measure the capability of the Armed Forces to carry out the strategies and guidance described in subsection (a) of such section."

The Secretary is further instructed to require the organization conducting the study "to submit to the Secretary a report on the study not later than March 1, 2000. The organization shall include in the report its findings and conclusions concerning each of the matters specified in subsection (b)"—i.e., "the requirements for providing an objective, accurate, and timely readiness reporting system" as described in Section 117 of Title 10, United States Code. The Secretary is required to submit the organization's report, together with the Secretary's comments on the report, to Congress not later than April 1, 2000.

Subsections (d) and (e) of Section 361 are provisions to amend portions of the United States Code dealing with aspects of the readiness reporting system. These slight modifications affect the following portions of the United States Code: Section 117 of Title 10, United States Code; Section 373 of the Strom Thurmond National Defense

Authorization Act for Fiscal Year 1999 (Public Law 105-261; 112 Stat. 1992); and Section 482 of Title 10, United States Code.[1]

The House Committee on Armed Services introduced this provision requiring an independent study of the readiness reporting system because it became concerned by the Department of Defense's delays in implementing provisions of the law. It felt that there was "a need for an independent study to provide a benchmark against which to measure the Department of Defense's efforts at reform of the readiness reporting system."[2] The committee argued that as indicators of declining readiness increased, the urgency for an improved readiness reporting system, capable of measuring the complex variety of factors that affect unit readiness, also had increased. Moreover, the committee had become "discouraged to learn that bureaucratic intransigence, opposition to reform, and the persistence of outmoded practices [had placed] … the prospects for improving the readiness reporting system in doubt."[3] The independent study was an attempt to measure the efforts made by the Department of Defense to reform the readiness reporting process in response to Section 117 of Title 10 of the U.S. Code.

TITLE 10, U.S. CODE SECTIONS RELATED TO READINESS REPORTING

Section 117, Title 10 U.S.C.

(Added Pub.L. 105-261, Div. A, Title III, § 373(a)(1), Oct. 17, 1998, 112 Stat. 1990; and amended Pub.L. 106-65, Div. A, Title III, § 361(d)(1), Title X, § 1067(1), Oct. 5, 1999, 113 Stat. 575, 774.)

Section 117 of the United States Code instructs the Secretary of Defense to "establish a comprehensive readiness reporting system for the Department of Defense" that "shall measure in an objective, accurate, and timely manner the capability of the armed forces to carry out—(1) the National Security Strategy prescribed by the President … (2) the defense planning guidance provided by the Secretary of Defense … and (3) the National Military Strategy prescribed by the Chairman of the Joint Chiefs of Staff."

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[1] These sections are outlined below in their revised formats.

[2] U.S. Congress, House, Committee on Armed Services, *National Defense Authorization Act for Fiscal Year 2000, Report on H.R. 1401*, Report 106-162, 106th Congress, 1st Session, May 24, 1999, p. 335.

[3] U.S. Congress, House Report 106-162, p. 335.

It is further specified that "in establishing the readiness reporting system, the Secretary shall ensure (1) that the readiness reporting system is applied uniformly throughout the Department of Defense; (2) that information in the readiness reporting system is continually updated, with (A) any change in the overall readiness status of a unit that is required to be reported as part of the readiness reporting system being reported within 24 hours of the event necessitating the change in readiness status, and (B) any change in the overall readiness status of an element of the training establishment or an element of defense infrastructure that is required to be reported as part of the readiness reporting system being reported within 72 hours of the event necessitating the change in readiness status; and (3) that sufficient resources are provided to establish and maintain the system so as to allow reporting of changes in readiness status as required by this section."

Section 117 provides that the readiness reporting system shall measure such factors relating to readiness as the Secretary prescribes, except that the system shall include the capability to do each of the following:[4]

Measure, on a monthly basis:

1) the capability of units (both as elements of their respective armed force and as elements of joint forces) to conduct their assigned wartime missions;

2) critical warfighting deficiencies in unit capability;

3) the level of current risk based upon the readiness reporting system relative to the capability of forces to carry out their wartime missions.

Measure, on an annual basis:

1) the capability of training establishments to provide trained and ready forces for wartime missions;

2) the capability of defense installations and facilities and other elements of Department of Defense infrastructure, both in the United States and abroad, to provide appropriate support to forces in the conduct of their wartime missions

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[4] See the annex to this appendix for a look at Section 117 requirements, IDA findings, and IDA recommendations.

3) critical warfighting deficiencies in training establishments and defense infrastructure.

Based on the characteristics and capabilities of such a comprehensive readiness reporting system, as prescribed by the subsections described above, Section 117 requires that the Chairman of the Joint Chiefs of Staff "shall—(A) on a quarterly basis, conduct, a joint readiness review; and (B) on a monthly basis, review any changes that have been reported in readiness since the previous joint readiness review." The Chairman is instructed to incorporate into both the joint readiness review and the monthly review "the current information derived from the readiness reporting system and shall assess the capability of the armed forces to execute their wartime missions based upon their posture at the time the review is conducted." The Chairman shall submit the results of each monthly and quarterly review to the Secretary of Defense.

The Secretary is then required each month to submit to the Armed Services and Appropriations Committees of both the House of Representatives and the Senate "a report in writing containing the results of the most recent joint readiness review or monthly review conducted … including the current information derived from the readiness reporting system." Each such report is to be submitted in unclassified form and may, as determined by the Secretary, also be submitted in classified form.

Finally, Section 117 provides the Secretary with discretion to "prescribe regulations to carry out this section." Further, "in those regulations, the Secretary shall prescribe the units that are subject to reporting in the readiness reporting system, what type of equipment is subject to such reporting, and the elements of the training establishment and of defense infrastructure that are subject to such reporting."

Legislative History

Public Law 105-261, the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999, amended Chapter 2 of Title 10, United States Code, to establish Section 117, "Readiness reporting system: establishment; reporting to congressional committees."[5] In addition, Public Law 105-261 instructed that the Secretary of Defense "establish and implement the readiness reporting system required by Section 117 of Title 10, United States Code … so as to ensure that the capabilities required .. of that section are attained not later than January 15, 2000." This deadline for establishing and implementing the

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[5]   Pub.L. 105-261, Div. A, Title III, § 373(a)(1), Oct. 17, 1998, 112 Stat. 1990.

readiness reporting system was later extended to April 1, 2000.[6] Public Law 105-261 further instructed that, "Not later that March 1, 1999, the Secretary of Defense shall submit to Congress a report setting forth the Secretary's plan for implementation of Section 117."

Public Law 106-65, the National Defense Authorization Act for Fiscal Year 2000, amended the language of Section 117. Previously, the Secretary was required to ensure that any change in the overall readiness status of a unit, an element of the training establishment, or an element of defense infrastructure that is required to be reported in the readiness reporting system was reported within 24 hours of the event necessitating the change in readiness status. As a result of the amendments made by Public Law 106-65, the readiness reporting system is still required to have the ability to report any change in overall readiness status of a unit within 24 hours, while changes in the readiness status of an element of the training establishment or an element of defense infrastructure need only be reported within 72 hours of the event necessitating a change in readiness status.

Further, prior to Public Law 106-65, the readiness reporting system was required to include the capability to measure, on a quarterly basis: the capability of training establishments to provide trained and ready forces for wartime missions; the capability of defense installations and facilities and other elements of Department of Defense infrastructure, both in the United States and abroad, to provide appropriate support to forces in the conduct of their wartime missions; and critical warfighting deficiencies in training establishments and defense infrastructure. Public Law 106-65 broadened the time frame of these requirements to an annual basis.

Committee History

The origins of Section 117 lie with the House Committee on National Security—now the Committee on Armed Services. Committee members became "increasingly frustrated by the contradictions between assessments of military unit readiness as reflected in official reports and the observations made by military personnel in the field."[7] While official reports portrayed the overall readiness of U.S. armed forces as high, servicemen increasingly indicated that their units were falling below past standards; many suggested that the readiness reporting system was inaccurate. In addition, in testimony before the

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6   Pub.L. 106-65, Div. A, Title III, § 361(d)(2), Oct. 5, 1999, 113 Stat. 575.

7   U.S. Congress, House, Committee on National Security, *National Defense Authorization Act for Fiscal Year 1999, Report on H.R. 3616*, Report 105-532, 105th Congress, 2nd Session, May 12, 1998, p. 281.

committee, servicemen reported that a number of factors increasingly affecting readiness, including operations tempo, increased deployments, morale, peacekeeping operations, and the use of training funds for other purposes, were not accounted for by the readiness reporting system.

This disconnect between official readiness reports and information obtained through field hearings and congressional testimony prompted the Committee to require the Department of Defense "to develop a more comprehensive readiness measurement system reflective of today's operational realities."[8] While praising the efforts made to enhance joint assessments through the Joint Monthly Readiness Review, to establish the Senior Readiness Oversight Council, and to develop a Readiness Baseline, the committee argued that none of the actions undertaken by the Office of the Secretary of Defense, the Joint Chiefs of Staff, nor the services had resulted in a readiness measurement system capable of timely and accurate reporting. Section 117 was thus an effort to force DoD to remedy the shortfalls of the current system by creating a more complete and accurate readiness reporting system.

In order to overcome these deficiencies, the committee argues that an improved and comprehensive readiness reporting system would consist of four basic components: (1) a unit status report, measuring the readiness of service units; (2) a training establishment status report, measuring the condition of service training institutions; (3) a defense infrastructure status report, measuring the ability of service and other defense facilities to deploy, sustain, and reconstitute forces from the US and abroad; and (4) a joint forces status report, which would measure the ability of the Department of Defense to successfully conduct the two major theater wars as called for in the Defense Planning Guidance and on the timelines specified by the relevant theater commanders-in-chief.

In designing an improved unit status report, the committee stated that three fundamental tasks should be accomplished: "objectively capture current conditions as of the date of reporting, separately report commander's readiness estimates and risk assessments, and highlight deficiencies so that programmatic adjustments can be made."[9] As executed, the unit status reports reflected the complexity, incompleteness, and inaccuracies of the readiness reporting system. The Services were tasked to eliminate loopholes, exceptions, inconsistencies, and inappropriate subjective assessments. The

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8   U.S. Congress, House Report 105-532, p. 282.

9   U.S. Congress, House Report 105-532, p. 282.

committee stressed that reports should include what personnel and equipment are available and what training has been accomplished *as of the date of the report*, and these figures should be measured *against wartime requirements alone* (emphasis added).

The committee provided specific instructions regarding how the appropriate resource data was to be provided. Unit status reports should measure: personnel available for duty, number of available "skill-qualified" personnel, availability of officers and senior enlisted personnel, and percentage of these personnel who are available for duty when calculated against the unit's wartime requirements—not against the budgeted level of unit fill. Loopholes and waivers, such as those that allow units to consider personnel available even when they are temporarily deployed, should be eliminated.

In terms of equipment, unit readiness should measure equipment that is both on hand and rated as mission capable. The Services too frequently rated the percentage of on-hand equipment against the level of equipment authorized, and the level of serviceable equipment compared to that on hand. The committee urged the Secretary of Defense to enforce a departmentwide standard establishing the percentage of equipment both on hand and mission capable as the only acceptable measure of equipment readiness.

Finally, the committee instructed DoD to improve the objectivity, consistency, and credibility of the unit readiness reporting system by improving the training measures. The committee argued that "it is of the highest importance that the Department of Defense establish a set of objective criteria for judging training readiness, and to develop an automated system for weighing warfighting training priorities."[10] The committee was encouraged by current Army efforts to develop a set of algorithms that would make training readiness calculations much simpler. Importantly, "this objective training reporting system must be keyed to the unit's wartime mission and identified tasks associated with that mission."[11] Further, when units are deployed on temporary duty they should not only report their readiness to conduct this assigned mission but continue to report their core readiness rating related to the wartime requirement.

While the committee was primarily concerned with raising the level of objectivity in readiness reporting, it acknowledged there was an important role to be played by unit commanders in assessing overall readiness. The commander's subjective assessment can prove relevant with regard to two salient factors: the overall ability of the unit to

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[10] U.S. Congress, House Report 105-532, p. 283.

[11] U.S. Congress, House Report 105-532, p. 284.

accomplish its assigned wartime mission and the level of risk associated with conduct of that mission based upon the unit's current status. Though such judgments are currently an element in the Department's readiness assessments, the committee argued that these judgments should be part of a regular and formal process and conducted at all levels of command.

The second essential component of an improved, comprehensive readiness reporting system must be an assessment of the institutional training establishments that are responsible for sustained unit readiness over time. The committee was concerned by reports and testimony suggesting the training establishments had become increasingly deprived of resources, equipment, and personnel in order to provide for the needs of deploying operational units. Similarly, the committee heard repeated testimony that defense infrastructure, including such factors as the quantity and quality of child care, medical care, and housing, has become a major concern as the pace of operations increases. Training establishments and defense infrastructure have an important, though indirect, impact on readiness, and reports on their status should be included in an improved, comprehensive readiness reporting system.

Finally, the committee was supportive of the efforts of the Chairman of the Joint Chiefs of Staff and senior military leaders of all Services to develop the Joint Monthly Readiness Report. The JMRR was viewed as "a very good basis for monitoring the readiness of joint U.S. armed forces to support the National Military Strategy, and the committee applauds the explicit requirement to assess the risk to that strategy resulting from the pace of current operations."[12]   While pleased by the creation of the JMRR process and the effort to consider risk, the committee was nevertheless concerned at how senior military leaders currently assess that risk.

Overall, in designing Section 117 the committee was interested in establishing a readiness reporting system that was as objective and widely disseminated as possible. The committee's primary criticisms of the current system were that "past assessments and discussions of readiness have suffered from the Department's inability to create and implement objective and consistent readiness reporting criteria, especially with respect to training assessments, that are capable of providing a clear picture to senior uniformed

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[12]   U.S. Congress, House Report 105-532, p. 285.

leaders, senior defense civilians, and the Congress."[13] Section 117 was an effort to force the Department of Defense to enact reforms in the readiness reporting system.

Following the advice of the Committee on National Security, the House version of the 1999 Defense Authorization Act contained the provision to amend Title 10 to include Section 117. In the House bill, Section 117 required the Secretary of Defense each month to submit to the congressional defense committees a report containing the results of the monthly joint readiness review conducted by the Chairman of the Joint Chiefs of Staff and submitted to the Secretary. This report would replace the quarterly readiness reports that were currently provided by the Department of Defense to the Congress under Section 482 of Title 10. Section 482 was accordingly repealed by the 1999 Defense Authorization Act.

The Senate bill contained no similar provision. The Senate receded with an amendment that delayed the implementation date of the provision, clarified that the Secretary of Defense was not required to submit the complete documentation of each joint monthly readiness review to the Congress, and made other technical changes. In conference, House and Senate members recognized that "stable requirements for measuring and reporting readiness are essential in order for the Department of Defense to develop an effective readiness reporting system that is capable of making valid comparisons over time." Further, the conferees urged the Secretary "to retain in the new reports required by this section those elements of the expanded Quarterly Readiness Report to the Congress that are believed to be effective in informing the Congress on the readiness of our armed forces."[14]

Section 482, Title 10 U.S.C.

(Added as § 452, Pub.L. 104-106, Div. A, Title III, § 361(a)(1), Feb. 10, 1996, 110 Stat. 272; renumbered § 482, Pub.L. 104-201, Div. A., Title XI, § 1121(a), Sept. 23, 1996, 110 Stat 2687; and amended Pub.L. 105-85, Div. A, Title III, § 322(a)(1), Nov. 18, 1997, 111 Stat. 1673; Pub.L. 105-261, Div. A, Title III, § 373(d)(2)(A), Oct. 17, 1998, 112 Stat. 1992; Pub.L. 106-65, Div. A, Title III, § 361(d)(3), (e), Oct. 5, 1999, 113 Stat. 575.)

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[13] U.S. Congress, House Report 105-532, p. 285.

[14] U.S. Congress, House, Conference Report, *Strom Thurmond National Defense Authorization Act for Fiscal Year 1999, Conference Report to Accompany H.R. 3616*, Report 105-736, 105th Congress, 2nd Session, September 22, 1998, p. 645.

Section 482 of Title 10 of the United States Code requires the Secretary of Defense to "submit to Congress a report regarding military readiness" on a quarterly basis, specifically "not later than 30 days after the end of each calendar-year quarter."[15] These quarterly reports shall specifically describe: "each readiness problem and deficiency identified using the assessments" outlined later in this section; "planned remedial actions;" and "the key indicators and other relevant information related to each identified problem and deficiency." The information to be included in the report "shall be based on readiness assessments that are provided during that quarter … to any council, committee, or other body of the Department of Defense" with readiness oversight responsibility; "by senior civilian and military officers of the military departments and the commanders of the unified and specified commands; and … as part of any regularly established process of periodic readiness reviews for the Department of Defense as a whole."

The contents of each report shall include "information regarding each of the Active components of the armed forces (and an evaluation of such information) with respect to each of the following readiness indicators:" personnel strength, "including the extent to which members of the armed forces are serving in positions outside of their military occupational specialty"; personnel turbulence, such as recruit quality, borrowed manpower, and personnel stability; other personnel matters, such as morale and recruiting status; training, including training unit readiness and proficiency, operations tempo, training funding, and training commitments and deployments; and logistics matters, including equipment fill (i.e., deployed equipment, equipment availability, equipment that is not mission capable, age of equipment, and condition of nonpacing items), equipment maintenance backlog, and logistics supply (i.e., availability of ordnance and spares and status of prepositioned equipment).

In addition to these comprehensive readiness indicators, "each report shall also include information regarding the readiness of each Active component unit of the armed forces at the battalion, squadron, or an equivalent level (or a higher level) that received a readiness rating of C-3 (or below) for any month of the calendar-year quarter covered by the report." The information to be provided regarding these C-3/4 units is to include: "the unit designation and level of organization," "the overall readiness rating for the unit for the quarter and each month of the quarter," the resource area or areas (personnel, equipment

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[15] This deadline was extended to "45 days after the end of each calendar-year quarter" by Pub.L. 106-65, Div. A, Title III, § 361(e), Oct. 5, 1999, 113 Stat. 575.

and supplies on hand, equipment condition, or training) that adversely affected the unit's readiness rating for the quarter," and "the reasons why the unit received a readiness rating of C-3 (or below)."

Though these quarterly readiness reports are to be submitted in unclassified form, with the discretion of the Secretary of Defense, the report may also be submitted in classified form. Each quarterly report shall be submitted to Congress not later than 45 days after the end of each calendar-year quarter.

Legislative History

Public Law 104-106, the National Defense Authorization Act for Fiscal Year 1996, signed into law on February 10, 1996, amended Title 10, United States Code, to include Section 452, "Quarterly readiness reports."[16] This initial version of the quarterly readiness report requirement was less specific about the necessary components of the report. It merely instructed the Secretary of Defense to submit a quarterly report that would "specifically describe identified readiness problems of deficiencies and planned remedial actions," as well as "include the key indicators and other relevant data related to the identified problem or deficiency."

Public Law 104-201, the National Defense Authorization Act for Fiscal Year 1997, signed into law on September 23, 1996, amended Chapter 23 of Title 10, United States Code, and redesignated Section 452 as 482.[17]

Public Law 105-85, the National Defense Authorization Act for Fiscal Year 1998, signed into law on November 18, 1997, expanded the reporting requirements of Section 482.[18] In addition to describing readiness problems and deficiencies, planned remedial actions, and key indicators related to identified problems and deficiencies, reports submitted to satisfy Section 482 were required to "include information regarding each of the active components of the armed forces (and an evaluation of such information) with respect to" a number of "readiness indicators." These comprehensive readiness indicators were designed to include information regarding personnel strength and turbulence, training, and logistics. In addition, the quarterly readiness reports were now required to include specific information about units of the armed services that received a readiness

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[16] Pub.L. 104-106, Div. A, Title III, § 361(a)(1), Feb. 10, 1996, 110 Stat. 272.

[17] Pub.L. 104-201, Div. A, Title XI, § 1121(a), Sept. 23, 1996, 110 Stat 2687.

[18] Pub.L. 105-85, Div. A, Title III, § 322(a)(1), Nov. 18, 1997, 111 Stat. 1673.

rating of C-3 or below for any month covered by the quarterly report. In addition to identifying the specific unit, the amended section of the code required an explanation of why the unit was rated C-3 or below and what specific resource area or areas (i.e., personnel, equipment and supplies, equipment condition, or training) had adversely affected the unit's readiness. Finally, Public Law 105-85 also changed the name of Section 482 from "Quarterly readiness reports" to "Quarterly reports: personnel and unit readiness."

In addition to amending Section 482, Public Law 105-85 also included a provision for an "Implementation plan to examine readiness indicators."[19] This requirement stated, "Not later than January 15, 1998, the Secretary of Defense shall submit to the congressional defense committees a plan—(1) specifying the manner in which the Secretary will implement the additional reporting requirement of subsection (d) of Section 482 of Title 10, United States Code, as added by this section;[20] and (2) specifying the criteria proposed to be used to evaluate the readiness indicators identified in such subsection (d). Further, such was Congress' desire for a concrete plan outlining how the Secretary of Defense intended to implement the new requirements that to hasten compliance the law included a subsection entitled, "Limitation Pending Receipt of Implementation Plan." This subsection stated, "Of the amount available for fiscal year 1998 for operation and support activities of the Office of the Secretary of Defense, 10 percent may not be obligated until after the date on which the implementation plan" is submitted.

With the establishment of Section 117 of Title 10 of the United States Code, Congress appeared to view Section 482 as redundant, and so Public Law 105-261, the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999, which established Section 117, repealed the quarterly readiness report requirement. The law stated, "Effective January 15, 2000, or the date on which the first report of the Secretary of Defense is submitted under Section 117(e) of Title 10, United States Code, as added by subsection (a),[21] whichever is later, the Secretary of Defense shall cease to submit reports

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[19] Pub.L. 105-85, Div. A, Title III, § 322(b), Nov. 18, 1997, 111 Stat. 1675.

[20] i.e., the "Comprehensive Readiness Indicators for Active Components."

[21] Pub.L. 105-261, Div. A, Title III, § 373(a)(1), Oct. 17, 1998, 112 Stat. 1990, which inserted Section 117, "Readiness reporting system: establishment; reporting to congressional committees," into Title 10, United States Code.

under Section 482 of Title 10, United States Code." Further, "Effective June 1, 2001—(A) Section 482 of Title 10, United States Code, is repealed."

The repeal of Section 482 was never executed, however. Public Law 106-65, the National Defense Authorization Act for Fiscal Year 2000, repealed the subsection of Public Law 105-261 that called for the repeal of Section 482 of Title 10, United States Code. Thus, as far as Title 10, United State Code, is currently concerned, the Secretary of Defense is required to submit both a monthly report based on the requirements of Section 117, as well as a quarterly report based on the requirements of Section 482. The former is required to contain information based on "the results of the most recent joint readiness review or monthly review," while the latter is required to include information "regarding military readiness" as specifically outlined in the section.

Committee History

The House Committee on National Security (now the Committee on Armed Services) added Section 482 (originally 452) to the National Defense Authorization Act for Fiscal Year 1996. Through various studies, hearings, and analysis, the committee determined that the readiness problems experienced by the services in fiscal year 1994 "were the inevitable result of declining defense budgets, a significantly reduced force structure, and an increased pace of contingency operations."[22] The committee became concerned that during 1994, training was canceled or deferred; planned and funded maintenance of weapons, equipment, and real property was not accomplished; purchases of critical spare parts stopped; and the quality of life for Service members suffered. As a result of these developments, a number of Army divisions reported lower readiness levels, several Navy and Marine Corps aviation squadrons had to be grounded, and a significant number of Air Force crews exceeded standard levels for temporary duty.

The committee acknowledged that accurately measuring readiness is a complex task. When assessing overall readiness, a number of factors other than traditional measures must be considered including personnel tempo, maintenance backlogs, troop morale, quality of life programs, base operations support, equipment modernization, recruiting and retention. In light of the complexity of addressing these challenges, the committee proposed a five-part strategy for maintaining readiness: 1) provide the

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[22] U.S. Congress, House, Committee on National Security, *National Defense Authorization Act for Fiscal Year 1996, Report on H.R. 1530*, Report 104-131, 104th Congress, 1st Session, June 1, 1995, p. 147.

necessary resources to ensure the problems of 1994 were not repeated; 2) greater scrutiny over the disposition of those funds; 3) increased oversight on force readiness assessments; 4) improved mechanisms for funding contingency operations so funds are not diverted from critical readiness accounts; and 5) reform infrastructure to free additional resources for critical readiness activities and force modernization—the key to future readiness.

The committee became concerned about the readiness reporting system as three Army divisions reported low readiness conditions, while a senior DoD official had declared only weeks before that the readiness of the forces was as high as they had ever been—in fact higher than prior to the Gulf war. Thus, the committee concluded, "the traditional system for measuring readiness is inadequate. It is narrowly focused, too subjective and inconsistently applied. More importantly, it represents only a snapshot in time, providing no predictive value of future force readiness. What is needed is a comprehensive readiness assessment system based on relevant and reliable indicators that measure force readiness today and provide early warning of future readiness problems."[23] The committee was thus encouraged that a number of DoD initiatives were underway to improve readiness assessments. The committee directed the Secretary of Defense to respond to the conclusions and recommendations of an October 1994 General Accounting Office report entitled, "Military Readiness: DoD Needs to Develop a More Comprehensive Measurement System."

Based on these concerns and recommendations, the committee recommended a provision to Title 10 of the United States Code—Section 452—that directs the Secretary of Defense to report quarterly to the congressional defense committees on force readiness based on regularized readiness briefings provided to senior DoD military and civilian leadership as part of their readiness oversight responsibility. These briefings include the monthly readiness briefings provided to the Senior Readiness Oversight Council and as part of the Joint Monthly Readiness Review. The reports should focus specifically on identified problems or deficiencies and planned remedial actions, and should include the key indicators and other relevant data related to the identified problem area or deficiency.

House bill H.R. 1530 included Section 452. The Senate version had no such provision and it receded in conference. The final bill was passed by both the House and Senate but was subsequently vetoed by the President on December 28, 1995. The House failed to override the President's veto on January 3, 1996. The text of H.R. 1530,

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23 U.S. Congress, House Report 104-131, p. 148.

including the amendment establishing Section 452, was inserted into S. 1124 as passed by the House on January 5, 1996. In conference, the Senate once again receded to the House. Following conference, S. 1124 was passed by both congressional bodies, was signed by the President on February 10, 1996, and became Public Law 104-106.

Section 193, Title 10, U.S.C.

(Added Pub.L. 99-433, Title III, § 301(a)(2), Oct. 1, 1986, 100 Stat. 1020; and amended Pub.L. 104-201, Div. A, Title XI, § 1112(c), Sept. 23, 1986, 110 Stat. 2683; Pub.L. 105-85, Div. A, Title X, § 1073(a)(5), Nov. 18, 1997, 111 Stat. 1900.)

Section 193 of Title 10, United States Code, provides authority for oversight of the various combat support agencies. In particular, Section 193 requires that "periodically (and not less often than every 2 years), the Chairman of the Joint Chiefs of Staff shall submit to the Secretary of Defense a report on the combat support agencies." Each report shall include: "a determination with respect to the responsiveness and readiness of each such agency to support operating forces in the event of war or threat to national security," as well as "any recommendations that the Chairman considers appropriate." Further, "in preparing each such report, the Chairman shall review the plans of each such agency with respect to its support of operating forces in the event of a war or threat to national security." Based on consultation with the Secretaries of the military departments and the commanders of the unified and specified combatant commands, the Chairman may, with the approval of the Secretary of Defense, "take steps to provide for any revision of those plans that the Chairman considers appropriate."

In addition to these periodic reports, "the Chairman shall develop, in consultation with the director of each combat support agency, a uniform system for reporting to the Secretary of Defense, the commanders of the unified and specified combatant commands, and the Secretaries of the military departments concerning the readiness of each such agency to perform with respect to a war or threat to national security."

HISTORICAL CONGRESSIONAL REQUIREMENTS FOR READINESS REPORTING

Prior Section 117

(Pub.L. 97-295, § 1(2)(A), Oct. 12, 1982, 96 Stat. 1287, § 133a, requiring an annual report on North Atlantic Treaty Organization readiness; renumbered § 117 and

amended Pub.L. 99-433, Title I, §§ 101(a)(2), 110(d)(3), Oct. 1, 1986, 100 Stat. 994, 1002; and repealed by Pub.L. 101-510, Div. A, Title XIII, § 1301(1), Nov. 5, 1990, 104 Stat. 1668.)

Public Law 97-295, "Technical Amendments to 10, 14, 37, and 38 U.S.C.A.," amended Title 10 of the United States Code to insert Section 133a, entitled, "Secretary of Defense: annual report on North Atlantic Treaty Organization readiness." Section 133a required the Secretary of Defense to "assess and make findings each year with respect to the readiness status of the military forces of" NATO and "submit a report of the assessment and findings to the Committees on Armed Services and on Appropriations of the Senate and House of Representatives."

The report was to include an assessment and findings of the secretary with respect to "deficiencies in the readiness of the North Atlantic Treaty Organization (including an analysis of deficiencies in each member of the organization)"; "planned corrections in the identified readiness deficiencies of the United States with respect to the Organization"; and "commitments made by other members of the organization to correct their own readiness deficiencies." In constructing the report, the Secretary of Defense was to assess deficiencies in the readiness of NATO related to "war reserve stocks; command, control, and communications systems (including the susceptibility of those systems to degradation by potential overt activities of the Warsaw Pact); electronic warfare capabilities; chemical warfare capabilities; air defense capabilities … ; armor and anti-armor capabilities; firepower capabilities; forward deployed units and the proximity of those units to assigned general defensive positions; the availability of ammunition; the availability, responsiveness, and overall effectiveness of reserve forces; airlift capabilities; the ability to protect, cross-service, and stage air assets from allied airfields; the maritime force capabilities … ; logistical support arrangements (including the availability of ports, airfields, transportation, and host nation support); training (including the availability of the facilities and equipment needed to conduct realistic operational exercises); and the compatibility of operational doctrine and procedures among military forces of the member nations."

Public Law 99-433, the Goldwater-Nichols Department of Defense Reorganization Act of 1986, renumbered and amended Section 133a to Section 117,

"Annual report on North Atlantic Treaty Organization readiness." Section 117 was subsequently repealed by Public Law 101-510, the National Defense Authorization Act for Fiscal Year 1991.[24]

Section 376 of Public Law 103-160

The National Defense Authorization Act for Fiscal Year 1994 included a provision for an "Annual Assessment of Force Readiness." Section 376 of Public Law 103-160 required that "not later than March 1 of each of 1994, 1995, and 1996, the Chairman of the Joint Chiefs of Staff shall submit to Congress an assessment of—(1) the readiness and capability of the Armed Forces to carry out the full range of the missions assigned to the Armed Forces; and (2) the associated level or degree of risk for the Armed Forces in responding to current and anticipated threats to national security interests of the United States." The assessment was to include "information for the fiscal year in which the assessment is submitted, the three preceding fiscal years, and projections for the subsequent fiscal year." Also, should there be "a significant change in the projected readiness or capability of the Armed Forces from the readiness or capability projected in the most recent annual assessment, the Chairman shall submit to the Congress a revised assessment that reflects each such significant change."

In terms of content, each assessment was to include a "description of the current and projected readiness and capability of the Armed Forces taking into consideration each of the following areas: (A) Personnel, (B) Training and exercises, (C) Logistics, including equipment maintenance and supply availability, (D) Equipment modernization, (E) Installations, real property, and facilities, (F) Munitions, (G) Mobility, (H) Wartime sustainability." In addition, each annual report was to include "the personal assessment of the Chairman of the Joint Chiefs of Staff regarding the readiness and capabilities of the Armed Forces, together with the Chairman's personal judgment on whether there are significant problems or risks regarding the readiness and capabilities of the Armed Forces." Finally, the assessment was to note "any factors that the Chairman or any other member of the Joint Chiefs of Staff believes may lead to a decrease in force readiness or a degradation in the overall capability of the Armed Forces," as well as include "any recommended actions" and "any classified annexes" that the Chairman considers appropriate.

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[24] Pub.L. 101-510, Div. A, Title XIII, § 1301(1), Nov. 5, 1990, 104 Stat. 1668.

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Annex
INDEPENDENT REVIEW OF THE READINESS REPORTING SYSTEM – INSTITUTE FOR DEFENSE ANALYSES

USC Title 10, Sec 117 Statutory Requirements	IDA Study Findings	IDA Study Recommendations

Sec. 117. Readiness reporting system: establishment; reporting to congressional committees
 	
(a) Required Readiness Reporting System. - The Secretary of Defense shall establish a **comprehensive** readiness reporting system for the Department of Defense. The readiness reporting system shall measure in an **objective**, **accurate**, and **timely** manner the capability of the armed forces to carry out –
 	
  (1) the **National Security Strategy**
 	
  (2) the **defense planning guidance**
 	
  (3) the **National Military Strategy**
	Comprehensive.
	• Does not include:
	  ➢ Higher HQs (combat or admin, joint or Service)
	  ➢ Many large operational organizations, such as Army corps
	  ➢ Navy carriers with their embarked air wings or battle groups
	  ➢ Most Air Force wings and groups
	  ➢ Organizational entities of Defense Agencies, e.g. distribution depots, inventory control points, financial centers, and communications nodes.
	  ➢ Joint units such as the JICs and JCSE
	  ➢ Installations and training establishments
	  ➢ Service repair depots.
	  ➢ Supplies Services would need for initial operations and to sustain that operation.
	  ➢ Training units with potential combat capability
	• Only requires the CINCs to report on 8 functional areas that generally correspond to major staff areas of responsibility. All other operational tasks are ignored (JV 2020: dominant maneuver, precision engagement, and full dimensional protection)
	• Other important tasks such as information operations and coalition operations are also missing.
	• The Service JMRR only reports status of major combat units
	• The Services only report on 6 enablers that are essentially subsets of the Title 10 functional areas.
	• Sustainability reports focus only on spares for the first few days
	• Defense Agency reports are not comprehensive
	  ➢ Only 5 of the 15 Defense Agencies report in JMRR. Other DAs have readiness-related responsibilities.
	  ➢ CSA Reports are not comprehensive. Example: DLA reports do not include ground, sea, and air inventory management centers and does not include consumable spare and repair parts for weapons system support in JMRR.
	  ➢ None of the entities belonging to the DAs—HQs, depots, inventory control centers, comms sites, intel analysis sites—report.
		Comprehensive.
		• Expand to include all readiness related units & organizations.
		• Require parent organizations to report separately on both HQ and entire organization.
		• Require the Reserves to report same as active-duty units
		• Design DOCs and ROCs for units and organizations.
		• Require commanders to report unit ability to accomplish DOC and ROC missions and overall unit readiness.
		• Require commanders to forecast C-level changes
		• Report against entire list of DOCs
		• Require all fwd deployed reporting entities or units tasked for a contingency to report against both DOC and ROC.
		• Adopt procedures in which each mission (mission area/task) is assessed, and reported on, separately
		• Change the 5 inputs of GSORTS to personnel (P), training (T), equipment (E), equipment condition (EC), and supplies (S).
		  ➢ Base training assessment on events accomplished to standard.
		  ➢ Report personnel by numbers of total and critical personnel
		  ➢ Include a Supplies metric
		  ➢ Track "Stability indicators."
		  ➢ Add a secondary, subjective C-level report that takes allows commander's to apply their experience and professional judgment.

USC Title 10, Sec 117 Statutory Requirements	IDA Study Findings	IDA Study Recommendations

Continued:
 	
Sec. 117. Readiness reporting system: establishment; reporting to congressional committees
 	
(a) Required Readiness Reporting System. - The **Secretary of Defense** shall establish a **comprehensive** readiness reporting system for the Department of Defense. The readiness reporting system shall measure in an **objective**, **accurate**, and **timely** manner the capability of the armed forces to carry out –
 	
(1) the **National Security Strategy**
 	
(2) the **defense planning guidance**
 	
(3) the **National Military Strategy**
	Objectivity/Accuracy:
	• Some GSORTS reports are "deflated" in attempts to indicate resource needs.
	• Some are "inflated" (Report card phenomenon)
	• Some believe it useless to report an "unfixable" problem
	
	Timeliness:
	• GSORTS is a static status of resources that exist in a complex, dynamic environment.
	• Data is dated as soon as it is entered into the system.
	• Higher echelon commanders or planners cannot look at a GSORTS report and know what the unit's status is "today."
	
	NSS/DPG/NMS:
	• Does not provide planners enough information:
	  ➢ Less than C-1 ratings do not indicate which wartime missions unit is incapable of performing.
	  ➢ No visibility on readiness to perform non-traditional tasks
	  ➢ Does not help planners determine the ability of a unit to meet its deployment timeline.
	• Does not provide enough information on the status of Reserve component units
	• Units assigned a new mission (i.e. peacekeeping) do not report readiness to conduct the new mission until actually conducting it.
	• The full range of the NMS is not considered. JMRR focuses almost exclusively on MTW scenario.
		Objectivity/Accuracy:
		• Require commanders to report unit's objectively derived readiness to accomplish DOC and ROC.
		• Create an additional, secondary reporting category for "C-level" available for the commander to modify/mitigate the objectively derived C-level based on judgment
		• Revive the historic role of inspection as a means of validation
		
		Timeliness:
		• Leverage existing databases that already collect GSORTS-type data (e.g. Army ULLS and SIDPERS) to push data into the GSORTS database.
		
		NSS/DPG/NMS:
		• Base JMRR assessment on a CINC's, a Service's, or a DA's readiness to execute its primary missions or Title 10 functions.
		  ➢ Include a time factor based on the expected duration of the event.
		• Include full range of specified or implied NSS, NMS, and DPG tasks and missions, including:
		  ➢ "No plan" SSCs
		  ➢ CINC Shaping activities (Theater Engagement Plans, etc)
		  ➢ Full range of CINC responsibilities in the Contingency Planning Guidance and the JSCP.
		  ➢ Full range of Service Title 10 functional responsibilities
		  ➢ All CSA and DA missions and functions that support a CINC or Service.
		• Conduct scenario-specific analysis.
		  ➢ Consider different alternatives in the JMRR process, including a two-MTW scenario that occurs on a more challenging time schedule.
		  ➢ Consider deterring the second MTW and swinging forces from one theater to the other.
		• Conduct each JMRR sequentially over a three-six month period
		  ➢ Conduct JMRR analyses of single MTWs, CONPLANs, and other SSCs twice a year.
		• Design mission statements (DOCs and ROCs) for units and organizations in terms of specific capability as a function of time as appropriate

USC Title 10, Sec 117 Statutory Requirements	IDA Study Findings	IDA Study Recommendations
(b) Readiness Reporting System Characteristics. - In establishing the readiness reporting system, the Secretary shall ensure – (1) that the readiness reporting system is **applied uniformly** throughout the Department of Defense;	**Uniformity**: • Significant differences both among and within the Services in the way ratings are determined due to Services flexibility allowed by the regulations. • In the JMRR, there are no metrics except those developed independently by the reporting organization.	**Uniformity** • See multiple metric recommendations & discussions above • Require Reserve Component to report like active-duty units.
(2) that information in the readiness reporting system is **continually updated**, with (A) any change in the overall readiness status of a unit that is required to be reported as part of the readiness reporting system being reported **within 24 hours** of the event necessitating the change in readiness status, and (B) any change in the overall readiness status of an element of the training establishment or an element of defense infrastructure that is required to be reported as part of the readiness reporting system being reported **within 72 hours** of the event necessitating the change in readiness status; and (3) that **sufficient resources** are provided to establish and maintain the system so as to allow reporting of changes in readiness status as required by this section.	**Updated within 24/72 hours** • Capability exists but only the Navy has an automated system. **Sufficient Resources** • Antiquated Management Information System in use by USA, USAF, and USMC.	**Updated within 24/72 hours** • Develop a comprehensive software solution that automatically accepts unit inputs and updates and posts results immediately. **Sufficient Resources** • Develop a modern MIS.

(c) **Capabilities**. - The readiness reporting system shall measure such factors relating to readiness as the Secretary prescribes, except that the system shall include the capability to do each of the following:
 	
(1) Measure, on a monthly basis, the capability of units (both as elements of their respective armed force and as elements of joint forces) to conduct their **assigned wartime missions**.
 	
(2) Measure, on an annual basis, the capability of **training establishments** to provide trained and ready forces for wartime missions
 	
(3) Measure, on an annual basis, the capability of **defense installations and facilities** and other elements of Department of Defense infrastructure, both in the United States and abroad, to provide appropriate support to forces in the conduct of their wartime missions.
 	
(4) Measure, on a monthly basis, **critical warfighting deficiencies** in unit capability.
 	
(5) Measure, on an annual basis, **critical warfighting deficiencies in**
	Assigned Wartime Missions
	• Does not provide planners enough information. Unclear what capability resides in less than C-1 rated units (see above).
	• Does not require report of the status of accompanying supplies for deploying troops
	  ➢ Not reported: supplies Services would need for initial operations and to sustain that operation.
	  ➢ Not reported: other types of equipment and supplies needed for initial and follow up sustainment
	• Does not help planners determine the ability of a unit to meet its deployment timeline. For instance, TRANSCOM planners base readiness assessments on design capabilities of air & sealift forces, not actual readiness status.
	• Does not provide information on the tasks a unit is capable of performing, beyond basic tasks "for which it is organized or designed."
	• Does not report readiness of a unit to participate in a small-scale contingency (or other, non-traditional missions).
	• No joint or large-scale units report.
	• No reports from components on the readiness to execute the CINCs OPLAN tasks
		Assigned Wartime Missions
		• Apply a "systems" approach. Supported CINC should base his report on METL.
		• Require component commanders or Services to report on their readiness to execute their assigned tasks associated with the CINC's mission.
		• Report against entire list of unit DOCs (see above).
		• Require all fwd deployed reporting entities or units tasked for a contingency to report against both DOC and ROC.
		• Conduct scenario-specific analysis (see above)

USC Title 10, Sec 117 Statutory Requirements	IDA Study Findings	IDA Study Recommendations
training establishments and defense infrastructure. (6) Measure, on a monthly basis, the level of **current risk** based upon the readiness reporting system relative to the capability of forces to carry out their wartime missions	**Training Establishments** • Current system only addresses the institutional training system. • Annual reporting inadequate.	**Training Establishments** • Require training establishments -- both institutional and collective – to report status in GSORTS. This would include both "peacetime" training centers and those important to preparing units for deployment, such as the Army combat training centers and the Naval Strike and Air Warfare Center. • Require Services to report on the readiness of the system to execute its requirements in the JMRR.
	Defense Installations • Current system does not fully address all components of readiness. • Annual reporting inadequate	**Defense Installations** • Require Installations and bases/ports that are power projection platforms and ports of embarkation/debarkation (including foreign ports and other nodes in the transportation system) to report status as part of GSORTS. • Require Services to report on the readiness of the system to execute its requirements in the JMRR.
	Unit Critical Warfighting Deficiencies • The system is not comprehensive. See discussion above. • Does not require report of the status of accompanying supplies for deploying troops	**Unit Critical Warfighting Deficiencies** • See recommendations for increasing comprehensiveness.
	Critical Warfighting Deficiencies in Installations and Infrastructure • CRS does not satisfy this requirement fully because it is not comprehensive. See discussion about Comprehensiveness above • Current report is only a maintenance status report. • It does not address the readiness to execute specific tasks	**Critical Warfighting Deficiencies in Installations and Infrastructure** • See recommendations for increasing comprehensiveness.
	Current Risk • No way to fully understand and report risk due to lack of comprehensiveness (see above). • Current system does not provide planners enough information. Less than C-1 ratings only indicate that there are some "wartime missions for which it is organized or designed" that it is incapable of performing.	**Current Risk** • See recommendations for increasing comprehensiveness.

USC Title 10, Sec 117 Statutory Requirements	IDA Study Findings	IDA Study Recommendations
(d) Quarterly and Monthly Joint Readiness Reviews. – (1) The **Chairman of the Joint Chiefs** of Staff shall - (A) on a quarterly basis, conduct a joint readiness review; and (B) on a monthly basis, review any changes that have been reported in readiness since the previous joint readiness review. (2) The **Chairman** shall incorporate into both the **joint readiness review** required under paragraph (1)(A) and the **monthly review** required under paragraph (1)(B) the current information derived from the readiness reporting system and shall **assess the capability of the armed forces to execute their wartime missions** based upon their posture at the time the review is conducted. The Chairman shall submit to the Secretary of Defense the results of each review under paragraph (1), including the deficiencies in readiness	• Both reports provide information on bits and pieces of the readiness of the force, but they do not address the overall readiness to execute the NSS missions.	• Proposed system will allow for a comprehensive view of the overall DoD readiness.

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Appendix B

READY FOR WHAT: THE REQUIRED CAPABILITY OF DoD

Lawrence B. Morton

CONTENTS

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READY FOR WHAT: THE REQUIRED CAPABILITY OF DoD

The "readiness" of the Armed Forces cannot be measured either in a vacuum or as an end in itself. Readiness assessment and reporting must occur in the context of answering the question, "Ready for what?"

In a general sense, we can state that each component of the Defense Department (DoD) and the Armed Forces should be ready to conduct the mission it was either designed for or assigned by its higher-echelon headquarters. Thus, for any particular organization the answer to our question depends on the organization's level in the DoD hierarchy. At the highest level, the answer is relatively straightforward—ready to fulfill the requirements (both direct and implied) by the President's National Security Strategy. The guidance for reporting DoD readiness is explicit in Section 117 of Title 10, United States Code: "…the Secretary of Defense…shall measure…the capability of the armed forces to carry out—(1) the National Security Strategy prescribed by the President … (2) the defense planning guidance provided by the Secretary of Defense … and (3) the National Military Strategy prescribed by the Chairman of the Joint Chiefs of Staff." However, before we could conduct a valid review and critique of the current readiness reporting system, we needed to break down this generalized description into something more usable at lower levels of the DoD. This section presents the context and our answer to "Ready for what?" and presents our view of the capabilities the readiness reporting system needs to assess and report if it is to meet the requirements specified in Title 10.

CONTEXT

The President's 1999 national security strategy (NSS), *A National Security Strategy for a New Century,* explicitly states (as did the 1997 NSS) that the core objectives of U.S. security strategy are to "enhance America's security; bolster America's economic prosperity; and promote democracy and human rights abroad."[1] Central to achieving these goals is the President's strategy of "Engagement"—a strategy "founded on continued U.S. engagement and leadership abroad." In setting this strategy, the President states, "The

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[1] William J. Clinton, *A National Security Strategy for a New Century*, December 1999, p. 3. (Hereafter the NSS)

United States must lead abroad if we are to be secure at home." At the same time he acknowledges, "American engagement must be tempered by recognition that there are limits to America's involvement in the world, and that decisions to commit resources must be weighed against the need to sustain our engagement over the long term."[2]

How this strategy was to be operationalized by the Department of Defense was mentioned in the 1997 NSS but was laid out most succinctly in the 1997 *Report of the Quadrennial Defense Review*: "In order to support this national security strategy [in particular, the core objective of enhancing American security at home and abroad], the U.S. military and the Department of Defense must be able to help shape the international security environment in ways favorable to U.S. interests, respond to the full spectrum of crises when directed, and prepare now to meet the challenges of an uncertain future."[3]

These three elements were mirrored and expanded upon in the 1997 National Military Strategy (NMS). "Shape" is the current, proactive element whereby the military helps to promote stability, prevent or reduce conflicts or threats, and deter aggression and coercion on a day-to-day basis. "Respond" is the current, reactive element whereby the Armed Forces execute the full spectrum of military operations, from deterring an adversary's aggression or coercion in a crisis and conducting smaller-scale contingency operations, to fighting and winning major theater wars. "Prepare Now" is the future, proactive element whereby the military and the DoD conduct those efforts necessary to "transform U.S. combat capabilities and support structures to be able to shape and respond effectively in the face of future challenges."[4]

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[2] *A National Security Strategy for a New Century*, December 1999, p. 3.

[3] William J. Clinton, *Report of the Quadrennial Defense Review*, May 1997, p. 9.

[4] In truth, the United States has long followed a general strategy of engagement, and the Armed Forces have in actuality long conducted activities to help shape the international environment, have responded to crises when called upon, and have prepared for the future. Two things were new in the 1997 formulation. One, "shaping" and "preparing" were, in essence, elevated in stature to be coequal elements of the overall strategy, along with the respond element. Second, the emphasis on the need to "prepare now" acknowledges that DoD can neither do its mission today at the expense of the future nor ignore today and concentrate solely on the future—DoD must shape and respond today, while at the same time preparing today in order to be able to shape and respond tomorrow.

SHAPE

What is Shaping?

The Commission on Roles and Missions provided a useful definition of "shaping"; that is, actions and activities by the U.S. military that are designed to "influence, reassure, or deter" foreign actors in order to create an international security environment favorable to U.S. national interests.

How Is This Done?

According to the 1997 QDR, "To do so [shape], the Department employs a wide variety of means including: forces permanently stationed abroad; forces rotationally deployed overseas; forces deployed temporarily for exercises, combined training, or military-to-military interactions; and programs such as security assistance, International Military Education and Training (IMET) programs, and international arms cooperation."[5]

Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3113.0, Theater Engagement Planning (TEP), defines "shaping" as "actions in which the U.S. Armed Forces helps to shape the security environment through deterrence, peacetime engagement activities, and active participation and leadership on alliances."[6]

Using these two descriptions together, "shaping" can be seen as having two supporting elements, a CONUS element and an overseas element. The CONUS element is made up of those parts of the Armed Forces based in the United States. The mere fact that the United States maintains a ready and combat capable force (both conventional and nuclear) contributes heavily to shaping's stated purposes of influencing, reassuring, or deterring. The foreign element of shaping consists of overseas presence and peacetime engagement activities.

The first of these two components, overseas presence, is described as follows in the 1997 NMS: "the visible posture of U.S. forces and infrastructure strategically positioned forward, in and near key regions." As such, it is "one of the 'strategic concepts' that govern the use of our forces to meet the demands of the strategic environment" and includes "those permanently stationed and those rotationally or

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5   Report of the *Quadrennial Defense Review*, May 1997, p. 9.

6   CJCSM 3113.0, "Theater Engagement Planning" (August 1999), p. GL-6.

temporarily deployed."[7] This posture is critical to our ability to respond as it helps ensure access to critical regions, secure essential overseas infrastructure, and reduce the requirement for logistical sustainment from CONUS.

The second component, peacetime engagement activities are defined in a general sense in the 1997 NMS as: "all military activities involving other nations intended to shape the security environment in peacetime."[8] CJCSM 3113.01 provides a categorization of engagement activities: combined exercises, security assistance, combined training, combined education, military contacts, humanitarian assistance, operational activities, and other activities.

RESPOND

Respond to What?

The NSS states the United States "must be able to respond to the full spectrum of threats and crises that may arise" both at home and abroad. This full spectrum can be described in three broad categories of activities (generally along a scale of required effort and expected/actual level of violence):

- Deterring aggression or coercion in crisis [includes escalation control]
- Conducting multiple, concurrent smaller-scale contingency operations
- Fighting and winning major theater wars

According to the NSS, "efforts to deter an adversary…can become the leading edge of crisis response." In this regard, deterrence "straddles the line" between the elements of shape and respond. As a response, deterrence generally involves signaling U.S. commitment by enhancing combat potential in a theater; making declaratory statements reinforcing the potential costs of aggression/coercion; or perhaps actual employment of U.S. forces to "underline the message and deter further adventurism."

The category called "smaller-scale contingencies" (SSC) includes perhaps the largest number of activities in the respond spectrum. In other contexts, these mission

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[7] John M. Shalikashvili, National Military Strategy of the United States of America, p. 19. (Hereafter the NMS)

[8] Ibid., p. 7.

types are often referred to as "military operations other than war" (MOOTW) and are fairly well defined in Joint Pub 3-07. The list includes:

- Humanitarian assistance/disaster relief in both permissive and non-permissive environments (e.g., Rwanda, Provide Comfort, migrant operations)

- Consequence management operations to mitigate the effects of nuclear, biological, and chemical (NBC) weapons

- Peacekeeping (e.g., Sinai Observer mission)

- Information operations

- Show of force/crisis response (e.g., Taiwan Straits, Vigilant Warrior)

- Counterdrug

- Counterforce operations to neutralize NBC facilities

- Enforcement of exclusion/no-fly zones (e.g., Deny Flight, Southern Watch)

- Enforcement of sanctions/maritime intercept operations (e.g., Sharp Guard, Maritime Interception Operation (MIO)

- Noncombatant evacuations (NEO) (e.g., Liberia)

- Personnel recovery operations

- Counterterrorism (e.g., Sudan, Afghanistan)

- Peace enforcement (e.g., Bosnia, Haiti)

- Coercive campaigns

- Limited strike/raid (e.g., Libya)

- Opposed intervention (e.g., Grenada, Panama)

SSCs can also occur within the context of homeland security, such as military support to civil authorities (e.g., border control, disaster relief) or in combating NBC attacks, cyber attacks, or threats to critical infrastructure.

At the high end of the respond spectrum as characterized in the NSS and NMS is major theater war. This mission is "the most stressing requirement for the U.S. military."

The capability for deterring and defeating aggression in more than one theater "is the sine qua non of a superpower and is essential to the credibility of our overall national security strategy."[9]

At the farthest end of the spectrum (and in order to make the list complete) is strategic nuclear war.

PREPARE NOW

Ensuring that the U.S. Armed Forces can continue to shape and respond in a complex future security environment is the goal of the third element of the security strategy. This element includes modernization to protect the long-term readiness of the force, as well as the transformation of current, unparalleled capabilities and support structures in order to retain dominance in an uncertain world. According to the NSS, while modernization is important to "maintain our technological superiority and replace Cold War-era equipment with new systems and platforms," the transformation of the U.S. military "extends well beyond the acquisition of new military systems" and is "critical." The transformation process seeks to "leverage technological, doctrinal, operational and organizational innovations to give U.S. forces greater capabilities and flexibility." This includes taking steps to ensure the ability to effectively counter significant future threats, particularly asymmetric, as well as working with "Allies and coalition partners to help improve their defense capabilities and interoperability with our forces…"[10]

ANSWERING THE QUESTION "READY FOR WHAT?"

At the beginning of this appendix we pointed out the SecDef's answer to the question "Ready for what?" is fairly straightforward—fulfill the direct and implied requirements as stated by the president in the national security strategy. Taking advice from the Chairman, Joint Chiefs of Staff, in the form of the National Military Strategy, the Secretary of Defense provides guidance to the DoD in two documents. He provides operational guidance to the CINCs in the Contingency Planning Guidance (CPG). This document addresses the missions the Secretary of Defense wants the CINCs to be ready to perform in the context of the Shape and Respond Strategies. The CJCS supplements the CPG with the Joint Strategic Capabilities Plan (JSCP), whose principal additional role is

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9   *Report of the Quadrennial Defense Review*, p. 12.

10   1999 NSS, p. 21.

to apportion forces (primarily combat forces) among the CINCs for the execution of assigned missions. Neither the CPG nor the JSCP is addressed to the Services or the DAs.

The Secretary provides program guidance to the CINCs, Services, and Defense Agencies in the Defense Planning Guidance (DPG). This guidance addresses the Secretary's desires regarding the defense program. The DPG contains guidance regarding Service Title 10 functional responsibilities, e.g., training and supply, which are to be included in their programs.

The numerous activities and missions discussed in relation to "shape" and "respond" suggest the answer to the question for the Armed Forces in total, particularly from the viewpoint of the unified commanders. To paraphrase a recently retired Army general: "The [Armed Forces] exist to fight and win the nation's wars. But, as anyone who reads the papers regularly is aware, the [Armed Forces] have accrued many other missions in recent years, from providing assistance during disaster-relief operations to enforcing peace in war-torn nations to conducting military exercises with former Warsaw Pact countries. The national security strategy expects the [Armed Forces] to excel in all these tasks and to enhance U.S. security at home and overseas."[11] For organizations further down the chain of command, the answer derives from the CINCs' missions—each organization must be ready to provide those capabilities required by the CINC to achieve the mission objectives. A careful review of the NSS, the NMS, the CPG, and the DPG illuminate the myriad capabilities the Armed Forces are required to maintain; by extension, the readiness to provide all of these capabilities should be formally assessed and reported.

Capabilities

In order to be able to respond to these many mission types, certain capabilities must be resident in the U.S. Armed Forces. In a broad sense, these are partially captured by the "strategic concepts" described in the 1997 NMS—strategic agility, power projection, overseas presence, and decisive force. Of these, the first two are of special interest here and imply a multitude of discrete capabilities. In order to effectively respond when the National Command Authority (NCA) determines it necessary, the Armed Forces

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[11] Maj. Gen. David L. Grange, USA, "Ready For What?," *Armed Forces Journal International*, December 1999.

must be agile, achieving "the timely concentration, employment, and sustainment of U.S. military power anywhere at our own initiative, at a speed and tempo that our adversaries cannot match." A component of agility is the ability to project power: "rapidly and effectively deploy and sustain U.S. forces in and from multiple, dispersed locations…assemble and move to, through, and between a variety of environments, often while reconfiguring to meet specific mission requirements…If necessary, it means fighting our way into a theater or creating and protecting forward operating bases."[12]

The current Defense Planning Guidance adds another critical set of capabilities to this list. According to the DPG: "While the United States will retain the capability to act unilaterally when necessary, the security strategy [NSS] emphasizes coalition operations.…Therefore, it is imperative that the United States strive to build close, cooperative relations with the world's most influential countries…[Coalition operations] presents significant challenges, from policy coordination at the strategic level to interoperability at the tactical level. U.S. forces must plan, train, and prepare to respond to the full spectrum of crises in coalition with the forces of other nations." Additionally, the Department must be able to "work effectively with other U.S. government agencies, nongovernmental organizations, and private voluntary organizations."

The DPG goes on to require the Armed Forces (both Active and Reserve components) to be "trained, equipped and managed with multiple missions in mind." Additionally, they must be capable of operating effectively in the face of asymmetric challenges like terrorism, information operations, and urban operating environments, as well as in an environment in which chemical or biological weapons are used. Finally, the DPG reiterates that the "ability to transition between peacetime operations [shaping activities/multiple SSCs] and warfighting effectively and in a timely manner remains a fundamental requirement of virtually every U.S. military unit."

Specifically in regard to fighting and wining two major theater wars, the DPG states: "Toward this end, the United States must have forces trained and *ready* [emphasis added] for joint and combined operations that can deploy quickly from a posture of global engagement—across great distances to supplement forward-stationed and deployed troop

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[12] The NMS, p. 19.

U.S. forces—to assist a threatened nation, rapidly stop enemy aggression, and defeat an aggressor, even in an environment in which NBC weapons are threatened or used."[13] Three additional requirements are specifically highlighted:[14]

- Rapidly defeat initial enemy advances—short of the achievement of enemy objectives—in two theaters in close succession, one followed almost immediately by the other

- Be able to operate in a chemical/biological environment

- Be able to transition to fighting a major theater war from a posture of global engagement—that is, from substantial levels of peacetime engagement overseas as well as multiple concurrent SSC operations

Joint Vision 2020

Joint Vision 2020 provides the conceptual framework for how U.S. forces will fight in the future and describes U.S. military goals for the future. Joint Vision 2020 defines the overall transformation goal as "the creation of a force that is dominant across the full spectrum of military operations." JV 2020 identifies numerous capabilities that can provide a basis for designing a future readiness reporting system. Following are concepts identified in JV2020 against which we believe it might be reasonable to measure readiness:

- "Full spectrum dominance—achieved through the interdependent application of dominant maneuver, precision engagement, focused logistics, and full dimensional protection."

- The need for a force that is "fully joint: intellectually, operationally, organizationally, doctrinally, and technically."

- "The joint force must be able to take advantage of superior information converted to superior knowledge to achieve 'decision superiority.'"

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[13] William S. Cohen, Defense Planning Guide 2002–2007, p. 30.

[14] Ibid., pp. 30–31.

- "Interoperability—the ability of systems, units, or forces to provide services to and accept services from other systems, units, or forces and to use the services so exchanged to enable them to operate effectively together."

- "Information operations are essential to achieving full spectrum dominance."

- "Joint command and control is the exercise of authority and direction over the joint force. It is necessary for the integration of the Services' core competencies into effective joint operations."

JV2020 provides a context for determining against what basis or benchmark readiness should be measured. Our review of JV2020 suggests that, in order to understand DoD readiness to execute the multiple missions assigned as part of the NSS and NMS, the future readiness reporting system (RRS) might address, for each mission assigned, DoD readiness to execute the full range of tasks identified in JV2020. This includes the full range of tasks associated with dominant maneuver, precision engagement, focused logistics, and full dimensional protection.

OSD

It is important to point out that the Office of the Secretary of Defense (OSD) also has myriad capabilities and tasks that it must be ready to perform. OSD's primary mission is to oversee the entire range of defense establishment activities. An important part of this mission is highlighted in the DPG: "The Department must prioritize its peacetime activities to ensure its efforts are focused on those that are of the greatest importance, without sacrificing warfighting capability."[15] Additionally, OSD needs to ensure that the entire range of necessary capabilities and resources exists within the establishment. For example, *before* the onset of a crisis, deployment, or wartime operation, the CINC would need and expect to have *ready* [emphasis added] such critical resources as:

- Weapon systems

- Specialized support equipment

- Personnel

- War reserve material

- Transportation assets

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15 DPG, p. 49.

- Communications capabilities

- Intelligence

- Installations and facilities

- Host-nation support

- Access rights

- Spares and maintenance capabilities

- Chemical and biological defense items

- Troop support items.[16]

CONCLUSION

This discussion has highlighted the fact that the Department of Defense and the Armed Forces have a large number of activities and missions that they must be ready to accomplish, as well as a wide range of capabilities that must be resident in order to successfully accomplish these missions. Answering the question "Ready for what?" is not a simple task with one single answer; as stated in the DPG: "the United States must maintain ready and versatile forces capable of conducting a wide range of military activities and operations…"[17] Much depends on where one is within the chain of command: At higher levels, organizations must be ready to perform missions; at lower levels, organizations must be ready to provide the capabilities required to perform missions.

Obviously, most of this discussion applies to the higher levels of the chain of command. To effectively answer the question at lower levels requires senior leaders to break the above lists down from the strategic and operational level to the tactical level. The resulting sets of required capabilities form the basis for individual units to answer the question from their perspective. In order to meet the intent of congressional language concerning readiness reporting, every organization at each level of the DoD hierarchy must assess and report readiness against its entire list.

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16 John Tillson "OSD Duties in the Respond Strategy", IDA Paper P-3407, January l999, p. II-14.

17 DPG 2002-2007, p. 24.

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Appendix C
THE GLOBAL STATUS OF RESOURCES AND TRAINING SYSTEM (GSORTS)

Lawrence B. Morton

Mark R. Lewis

John R. Brinkerhoff

CONTENTS

FIGURES

PART I: GSORTS TODAY – AN OVERVIEW

PURPOSE

Unit-level readiness reports are maintained in a database operated by the Defense Information Systems Agency (DISA) called the "Global Status of Resources and Training System" (GSORTS). Guidance for GSORTS is contained in two CJCS documents that apply to the Joint Chiefs of Staff, unified commands, the Services, and DoD Combat Support Agencies (CSA) responsive to the Chairman.[1] Basic policy, procedures, and criteria are outlined in Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3401.02, Global Status of Resources and Training System (20 October 1997). Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3150.02, Global Status of Resources and Training System (GSORTS) (15 April 2000), provides detailed implementation guidance. Additionally, each of the Services supplements these CJCS documents with detailed guidance, both to reiterate the Chairman's guidance and to expand on Service-unique areas.[2]

GSORTS indicates the level of selected resources and the training status of units at specified points in time that are required to undertake the wartime mission(s) for which a unit was organized or designed. The principal purposes and functions of GSORTS are to serve as:

- The single automated reporting system within the Department of Defense that functions as the central registry of all operational units of the U.S. Armed Forces and certain foreign organizations

- An internal management tool for use by the CJCS, Joint Staff, Services, unified commands and CSAs

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[1] There is no DoD Directive or other Secretary of Defense-level guidance for GSORTS. The CSAs responsive to the Chairman include the Defense Intelligence Agency (DIA), Defense Information Systems Agency (DISA), Defense Logistics Agency (DLA), Defense Threat Reduction Agency (DTRA), National Imagery and Mapping Agency (NIMA) and National Security Agency (NSA).

[2] These Service regulations are: Army Regulation (AR) 220-1, *Unit Status Reporting* (September 1997); Naval Warfare Publication (NWP) 1-03.3, *Status of Resources and Training System (SORTS)* (September 1987, with Urgent Change Two, April 2000); Air Force Instruction (AFI) 10-201, S*tatus of Resources and Training System* (March 2000); and Marine Corps Order (MCO) 3000.*13C, Marine Corps Status of Resources and Training System (SORTS) Standard Operating Procedures* (July 1998).

The information available in GSORTS is intended to support, in priority order,

1. Crisis response planning

2. Deliberate or peacetime planning

3. Management responsibilities to organize, train, and equip combat-ready forces for the unified commands[3]

GSORTS IN RELATION TO THE JMRR

There is an important distinction between GSORTS and the Joint Monthly Readiness Review (JMRR). GSORTS is a status report, taken as a "snapshot in time." It offers a micro-level perspective of readiness by reporting on the status of specific units as individual entities. It is designed to indicate "the level of selected resources and training required to undertake the mission(s) for which a *unit* (emphasis added) was organized or designed."[4] As a status report rather than a report of a demonstrated capability, GSORTS can only provide an indirect inference of a unit's readiness to undertake the missions for which it is organized or designed. GSORTS does not provide a measure of a unit's capability to perform other missions a unit might be tasked to perform, nor does it provide a measure of the readiness of a larger force that is made up of a number of subordinate units.

Conversely, the JMRR "is a current, macro-level assessment of the military's readiness to execute the National Military Strategy (NMS) as assessed by the CINCs, Services, and CSAs."[5] The JMRR includes a Service summary of the current readiness of "significant combat, combat support, and combat service support units" which is "generally derived from GSORTS reports."[6]

DATABASE UNITS

Registered Units

The CJCS GSORTS instruction requires Service headquarters to *register* all Active, National Guard, and Reserve forces assigned to operations plans, operations plans

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[3]   CJCSI 3401.02, Encl B, Para 1.a, b.

[4]   CJCSI 3401.02, Encl A, Para b.

[5]   CJCSI 3401.01B, Encl A, Para 2.

[6]   CJCSI 3401.01B, p. D-1.

in concept format (CONPLANS), the single integrated operations plan (SIOP), or other Service war planning documents. The Navy will register the Coast Guard, and the Joint Staff, unified commands, and combat support agencies will register units not otherwise covered by the Services. In addition, the Services may register whatever units they consider necessary.[7]

Measured Units

The instruction defines as "measured units" those "Active, National Guard, and Reserve Forces assigned to operations plans, operations plans in concept format (CONPLANs), the Single Integrated Operations Plan (SIOP), or other Service war planning documents," and it requires the Services to register all measured units in GSORTS.[8] Additionally, the Directors of the CSAs, and the CINCs, are required to report on selected agency organizations, and any joint organizations established by the CINC, respectively.

There are roughly 10,000 measured units and about 56,000 registered units in the GSORTS database. Examples of measured units include:[9]

(a) Army -- Divisions, separate brigades or regiments, special forces groups, special operations aviation regiments, ranger regiments, civil affairs commands, and psychological operations groups; divisional brigades operating separately; armored cavalry and aviation regiments; battalions; squadrons; and separate companies, batteries, or detachments.

(b) Navy -- Individual ships, submarines, aircraft squadrons, separate detachments, platoons, teams, special boat units, and staff; and major combat support and combat service support units.

(c) Air Force -- Fleet (i.e., airlift and tanker), wing, group, squadron, and separate detachments or flights.

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[7] CJCSM 3150.02, p. B-2.

[8] CJCSM 3150.02, p. B-3.

[9] CJCSI 3401.02, p. B-2. In addition to the four Services, the Coast Guard reports on high-endurance cutters, medium-endurance cutters, 110-foot patrol boats, polar icebreakers, ocean-going buoy tenders, and port security units and some joint units report as specified by the Joint Staff, unified commands, joint task force HQs, and selected CSAs. For purposes of this study, however, we focused on the Services.

(d) Marine Corps -- MAGTFs (MEF, MEU); MAGTF elements (CE, GCE, ACE, CSSE); battalions; squadrons; and separate companies, batteries, or detachments.

REPORTED AREAS

The GSORTS instruction requires each measured unit to report its overall readiness ("C-level"), and the status of its personnel ("P-level"), equipment and supplies on hand ("S-level"), equipment condition ("R-level"), and training ("T-level"). The standards for each resource area are more fully described below.

SERVICE OVERVIEW

Army

Army Regulation 220-1, Unit Status Reporting, provides Army units their guidance for participating in GSORTS. The Army uses the Unit Status Report (USR) to report on the GSORTS measured units. The Army GSORTS database is an inventory of all the entities the Army owns. If an entity has a location, equipment, or personnel, it is *registered* in the GSORTS database. The Army has registered well over 30,000 units. But of those, only 5,100 are *measured* units that report readiness using the USR.

A unit uses either its Modified Table of Organization and Equipment (MTOE) or Table of Distribution and Allowances (TDA) as the standard against which the four status areas are assessed. Training requirements are derived from each unit's Mission Essential Task List (METL). Army Field Manual 25-101, Battle Focused Training, describes the METL as "an unconstrained statement of tasks required to accomplish wartime missions" and addresses METL development in detail. Commanders determine their unit's METL by analyzing the unit mission and identifying the critical tasks the unit must accomplish in order for its higher headquarters to successfully accomplish their METL. Thus, METLs are "nested" in each echelon up the chain of command. The training events and standards that a unit must meet are laid out in the Army's Combined Arms Training Strategies (CATS) and the Standards in Weapons Training Pamphlet (STRAC Manual).

Navy

The governing document for the Navy is Naval Warfare Publication (NWP) 1-03.3, Status of Resources and Training System (SORTS). The Navy is currently revising this publication but it will likely not be implemented prior to the middle of 2001. There are nearly 1,500 *measured* units and roughly 9,400 *registered* Navy units in the GSORTS database.

The basis for Navy reporting is the concept of primary mission areas (PRMARs). There are 17 naval warfare mission areas, which are defined in OPNAVINST C3501.2 (31 May 1996), Naval Warfare Mission Areas and Required Operational Capability/Projected Operational Environment (ROC/POE) Statements. Mission areas include both combat and combat support areas such as strike warfare, antiair warfare, and logistics and functional areas such as command, control, and communications and mobility. This instruction defines the specific operational and suboperational capabilities that comprise each PRMAR. The same instruction lists the specific primary and secondary PRMARs for which each unit is responsible. Units report only their status in their primary PRMARs in SORTS.

The Chief of Naval Operations (CNO) and the Type Commanders provide additional reporting guidance. Of specific interest, a CNO letter (latest letter is Ser N311ND/4U622948 dated 05 DEC 1994) identifies which personnel ratings and Navy Enlisted Classification Codes (NECs) are essential (and therefore measured) for each PRMAR, and the Type Commanders provide detailed criteria for reporting training readiness in each PRMAR.

Each unit evaluates its readiness in each PRMAR for which it is responsible by assessing its personnel, equipment, and training readiness relative to that particular PRMAR. The unit then employs an algorithm that combines readiness in both its resource areas (personnel, equipment, and training) and its PRMARs to produce an evaluation of overall unit readiness.

Air Force

Air Force Instruction 10-201, Status of Resources and Training System, is the basic guidance document for SORTS. This document provides Air Force procedures for those areas listed in CJCSI 3401.02 and CJCSM 3150.02 GSORTS. All major

commands, field operating agencies, Air National Guard, AF Reserve, and direct reporting units must follow the procedures outlined in the instruction and may issue supplemental instructions.

Air Force units use their Designed Operational Capability (DOC) statement as the baseline against which they compare the status of each of the measured areas. The DOC's purpose is to "provide a summary of the mission for which a unit is organized or designed," and specifies the required resources and certain individual and collective training requirements.[10] It also lists the reference documents containing the training standards. Major Commands, the Air National Guard, and Field Operating Agencies/Direct Reporting Units write DOC statements for each of their subordinate measured units. There are 2,654 *measured* units and nearly 10,500 *registered* Air Force units in the GSORTS database.

Marine Corps

Marine Corps Order P3000.13C implements GSORTS as the principal Marine Corps readiness reporting system. All deployable Active and Reserve component units report. There are approximately 1,200 *registered* units, of which 360 *measure* and report their readiness. All but one of the measured units are within the three active Marine Expeditionary Forces (MEFs) and the reserve establishment (4th Marine Division, 4th Marine Air Wing, and 4th Force Service Support Group). The Marine barracks at Guantanamo Bay, Cuba, also reports.

Each unit from battalion/squadron level up to MEF develops its METL based on specific operational requirements laid out in OPLANs and other taskings from higher headquarters. The METLs are expected to support the METLs of those higher headquarters; they are submitted to the next level up the chain of command for review and approval.

Every unit has a comprehensive set of generic tasks it is designed to accomplish. These tasks are described in the unit's Mission Performance Standards (MPSs). METLs are normally a subset of a unit's MPS. The MPSs are listed in the Training and Readiness Manual (T&R) for each type and size of unit. The T&R manuals also describe the training events a unit must undergo in order to be considered trained in its specific tasks. The quantitative standard for each of these generic tasks is listed in the Marine Corps

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10 AFI 10-201, Attachment 2, p. 148. This is the governing Air Force instruction for DOC development.

Combat Readiness Evaluation System (MCCRES) directive for each unit. MCCRES is the formal program by which units are tested under operational conditions. MPSs, METLs, and the results of MCCRES evaluations are not used directly in determining a unit's training readiness as reported into GSORTS. They are, however, considered informally and subjectively by commanders when they assess overall readiness.

MEASURED RESOURCE AREA - PERSONNEL

The personnel resource area provides for three measures of personnel readiness: total personnel strength, critical specialty strength, and critical grade strength. For each of these measures, a P-rating is assigned based on the ratio of available strength to structured strength. The following definitions from CJCSI 3401.2 apply:[11]

Structured Strength is the "wartime manpower requirements for an organization shown on Service manpower documents." It is also called the "required strength." This strength represents the number, grades, and skills of personnel the unit needs to deliver the capability intended by its designers. For the Army and Marine Corps, this is the wartime-required strength in the TOE or TDA. For the Navy, this is the structured strength (M+1) as reflected in the ship or squadron manning document. For the Air Force, this is the strength associated with the DOC and stated in the Unit Manning Document (UMD).

Assigned Strength is the "number of personnel assigned to the organization whether present or not." This is the personnel on the books of the unit and for which the unit is accountable.

Available Strength is the number of personnel who "are assigned to a reporting unit, are physically present or can be present within the prescribed response time, and are not restricted from deploying or employing with the unit for any reason." This kind of strength is also called "operational strength" or "deployable strength." Available strength is normally less than assigned strength because personnel are absent from their units for a variety of reasons including leave of absence or attendance at school.

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[11] CJCSI 3401.02, 20 October 1997.

Total Personnel P-Level

CJCSI 3150.02 Requirement:[12] A unit's "P" rating is determined by dividing total available strength by structured strength. Once a percentage is determined, the unit's P-rating is determined as follows:

P-1	P-2	P-3	P-4
≥90%	≥80%	≥70%	<70%

Service Actions: All four Services generally follow the instruction.

Critical Specialty P-Level

CJCSI 3150.02 Requirement: Each Service is directed to determine the number of critical specialty positions required, using Service-unique criteria. The critical specialty rating is determined by dividing available personnel with critical skills by structured strength for these same skills. Once a percentage is determined, the unit's P-rating is determined as follows:

P-1	P-2	P-3	P-4
≥85%	≥75%	≥65%	<65%

Service Actions: The Army and the Air Force follow the instruction as written. The Navy uses the prescribed percentages, but it measures availability of critical personnel for each PRMAR rather than for the unit as a whole. The USMC does not distinguish between critical and non-critical skills and does not use this portion of the instruction.

Critical Grade Fill P-Level

CJCSI 3150.02 Requirement: The instruction gives each Service the option to use this rating. Each Service opting to use this measure determines the number and grades E-5 and above that are critical, using Service-unique criteria. The critical grade fill rating

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[12] See CJCSI 3150.02, Appendix N, for a complete discussion on all readiness ratings requirements and methods of calculation.

is determined by dividing available personnel with critical grades by the structured strength for these same grades. Once a percentage is determined, the unit's P-rating is determined as follows:

P-1	P-2	P-3	P-4
≥85%	≥75%	≥65%	<65%

Service Actions: The Army follows the instruction, although nothing indicates training or qualifications of these grades, only their availability. The Navy calculates critical grade fill for each PRMAR. The Air Force and Marine Corps have opted not to use this measurement.

Selecting the Overall Unit P-Level

CJCSI 3150.02 Requirement: The Army, Air Force, and USMC are required to select the lowest P-level from the separate levels calculated (total personnel P-level, critical specialty P-level, and the critical grade fill P-level) as the overall unit P-level. The Navy's computations are a bit more complex. Navy units determine personnel status for each primary mission area as well as numbers of total officers and total enlisted personnel. The categories "total officer" and "total enlisted" are considered PRMARs for the purpose of calculating personnel readiness. They then use the worst level if more than one primary mission area is degraded. If only one primary mission area is degraded, the unit reports one level better than the worst calculated, degraded primary mission area.

Service Actions: The Services follow the instruction.

Reserve Component P-Level Rating

Available strength includes only those personnel who are legally qualified for deployment by virtue of having completed initial entry training. This is true for active component units also, but it is particularly important for National Guard and Reserve component units that very often have a significant number of assigned personnel who have not yet completed initial entry training.

Service Actions: Several of the DOD's six Reserve components reports the strength of their units somewhat differently.

Air National Guard units report *available* strength for the P-Rating. Personnel are not counted in SORTS until after they complete 12 weeks of active duty and receive basic training or equivalent. The unavailable personnel are considered students or trainees. Commanders may insert a remark stating the number of unqualified personnel assigned to the unit.

Air Force Reserve units report *available* strength for the P-Rating. Personnel are not counted in SORTS until after they complete basic training. The number of unavailable personnel is tracked in the personnel system, and the units are aware of their status. If the unit has a C-3 or below rating due to a shortage of trained personnel, the commander may insert a remark to that effect.

Naval Reserve unit reporting differs according to the kind of reserve unit. Commissioned units that have a full set of equipment and operate as intact units report in SORTS. Although the presence of non-deployable personnel is a "huge problem," the Navy has no policy on which strength is reported for the P-Rating. The decision as to whether to include non-deployable personnel in the total strength reported in SORTS is the "commander's call." Augmentation units that provide additional personnel to active units upon mobilization submit feeder reports to the units to be augmented, which, in turn, include the reserve data in their own SORTS reports. The Navy does not "capture augmentee readiness in SORTS."[13]

Marine Corps Reserve units report *available* strength for the P-Rating. Non-deployable personnel are noted in a remark.

MEASURED RESOURCE AREA - EQUIPMENT AND SUPPLIES ON HAND

The equipment and supplies resource area provides for two measures: Combat-Essential Equipment and Other End Item and Support Equipment. The definition of the equipment items to be reported on in these two categories is left to the Services. There is no separate measure established for supplies, but some supplies are included in the Other End Item and Support Equipment Measure.

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[13] Interview with CDR Keith Kowalski, OPNAV, 14 September 2000.

Calculating a Combat-Essential Equipment S-Level

CJCSI 3150.02 Requirement: Each Service will identify the type of combat-essential equipment for each unit and then compare the number possessed with the number required. Once a percentage is derived, it is compared with the table below to determine S level.

S-1	S-2	S-3	S-4
≥ 90%	>_ 80%	>_ 65%	<65%

Service Actions: The Army uses a unit's MTOE or TDA as the source document to determine what equipment to report. Units will report on equipment with the readiness code ERC A (principal weapons and equipment) and ERC P (pacing items), or for TDA units without ERC codes, that equipment designated in AR 700-138, Appendix B. Units then calculate the S-level in accordance with the CJCSI.

The Navy calculates the availability of combat-essential equipment for each PRMAR. Combat-essential equipment is defined to include aircraft, ordnance, aerial missile targets, fixed undersea equipment, combatant craft, and certain vehicles, medical units and aviation ordnance handling equipment.

An Air Force unit's DOC statement lists the mission-essential equipment and supplies to be measured. Although the Air Force generally follows the instruction, there are variations on what is tracked within units. For example, since Air Combat Command (ACC) reports are based on aircraft squadron, and squadrons own engines (and other major supply parts), engine deficiencies show up in squadron SORTS reports. In Air Mobility Command (AMC), however, all strategic airlift engines are reported into SORTS by "fleet" (by HQ AMC), rather than by individual unit. Unless this is understood, the data can be misleading. The logic behind this variation in reporting parameters is based on the anticipated employment of each unit. ACC squadrons generally deploy as packages, while AMC assets (particularly airlifters) deploy and travel the world singularly. They must therefore have access to engines at a number of locations around the world.

USMC ground equipment is divided into mission-essential equipment (MEE) and principal end items (PEI). These equate roughly to the Combat Essential Equipment and Support Equipment categories in Joint GSORTS instruction. Readiness of each category is calculated as Total Possessed divided by Wartime Requirement. The lower of the two

calculations determines the overall unit S-level. Aviation units calculate readiness on the basis of Total Aircraft Possessed divided by Wartime Requirement. All aircraft are considered to be mission-essential equipment. Only aircraft are considered; no calculation is made for other equipment.

Calculating an Other End-Item and Support Equipment S-Level

CJCSI 3150.02 Requirement: Services are required to identify other end-item and support equipment for each type of measured unit and to specify which source documents to use to rate availability against the standard chart below.

S-1	S-2	S-3	S-4
$\geq$ 90%	>_ 80%	>_ 65%	<65%

Service Actions: The Army, Air Force, and the USMC follow this instruction. The Navy is not specific with its listing of other end-item and support equipment, but indicates they are platform specific and include consumables, fuel, repair parts, test equipment, fleet issue loads, weapons support equipment, ground support equipment, ancillary armament equipment, individual material readiness list (IMRL) items, special vans, and packup supplies. All of these are required to be reported for each PRMAR.

Selecting a Unit S-Level

CJCSI 3150.02 Requirement: The overall S-level is determined by the lowest rating from the combat essential equipment S-level and the other end-item and support equipment S-level.

Service Actions: The Army uses only the S-level of combat essential equipment (pacing items, etc.) to determine the overall S-level, even though they do calculate and report nonessential equipment readiness. U.S. Navy units determine equipment and supplies on hand status for each primary mission area assigned, and then reflect the worst-calculated level if more than one mission area is degraded. If only one primary mission area is degraded, the unit reports one level better than the worst calculated degraded primary mission area. The Navy uses the prescribed percentages, except that aviation units use 60% instead of 65% as the breakpoint between S-3 and S-4 when calculating the availability of aircraft and aerial missile targets. The other Services follow the

instruction as it was intended. It is significant that while the title of this measured resource area includes "Supplies," the instruction fails to address what supplies to include and how to rate them. The Services also omit supply status.[14]

MEASURED RESOURCE AREA - EQUIPMENT CONDITION

The equipment condition resource area provides two measures: Combat-Essential Equipment, and Other End-Item and Support Equipment.

Calculating a Combat-Essential Equipment R-Level

CJCSI 3150.02 Requirement: With the exception of the Air Force, each Service is required to determine the combat-essential equipment for each type of measured unit and then compare the number of operationally ready and available systems with the number assigned. U.S. Air Force units calculate the number based upon items possessed (vice assigned).

	R-1	R-2	R-3	R-4
Combat Essential Equipment	≥ 90%	>_ 70%	>_ 60%	<60%
Aircraft	≥ 75%	>_ 60%	>_ 50%	<50%

Service Actions: The Army and the Navy follow the instruction as written, as does the Air Force. However, because the instruction allows the Air Force (and only the Air Force) to use the number of items possessed instead of assigned, it can generate a misleading readiness level if the unit is underequipped. The Marine Corps follows the instruction, but some important equipment is not categorized as essential or support and is not tracked (e.g., equipment other than aircraft in flying units).

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14   The Navy does include fuel and ordnance in the calculation of an S-rating. In fact, ordnance tends to dominate reporting by the Navy in this area.

Calculating an Other End-Item and Support Equipment R-Level

CJCSI 3150.02 Requirement: The Services identify the end-items and support equipment for each type of measured unit, and then compare that to the number assigned.

R-1	R-2	R-3	R-4
≥ 90%	>_ 70%	>_ 60%	<60%

Service Actions: Each Service follows this instruction, except that the Navy instruction appears to confuse the reporting requirements for aviation units regarding combat-essential equipment and major end items.

Selecting a Unit R-Level

CJCSI 3150.02 Requirement: The Army, Air Force, and Marines select the lowest R-level from the combat essential equipment R-level and the other end-item and support equipment R-level as the unit R-level. U.S. Navy units determine equipment and supplies on hand status for each primary mission area assigned, and then reflect the worst-calculated level if more than one mission area is degraded. If only one primary mission area is degraded, the unit reports one level better than the worst calculated degraded primary mission area.

Service Actions: All the Services generally follow the instruction as written. However, as noted above, because the Air Force is only required to report against equipment "possessed" instead of the number assigned, it is possible that misleading results are generated. For example, the S-level for an aircraft unit authorized 18 aircraft with 15 possessed is at 83%(S-2). If nine are mission ready, the unit can report 60% (R-2), since the nine aircraft are measured against the number possessed. This then means that the unit could report C-2 overall, although in actuality it has only half of its required aircraft mission ready. (As partial relief for this problem, there is a new field in the GSORTS database reflecting available mission ready equipment as a percentage of equipment required.)

Navy reporting for aircraft squadrons follows the CJCSI methodology, but reporting for ships and submarines is actually tied to the CASREP (Casualty Report) system. Whenever a piece of shipboard equipment is degraded or out of commission, the ship determines the impact on each PRMAR, using guidance provided by the Type

Commander. Based on this determination, the ship or submarine assigns a C-rating to the CASREP and corresponding R-rating to the various PRMARs. Thus, Navy equipment condition reporting is based on the impact of specific equipment casualties, rather than on the percentage of operationally ready equipment. In short, the Navy instruction follows the CJCSI, but then adds a paragraph that supersedes everything else and makes CASREP reporting the basis for R-level reporting in SORTS. Any equipment casualty that precludes a unit from meeting its assigned commitments requires the unit to report R-4 and C-4 overall.[15]

MEASURED RESOURCE AREA - TRAINING

The Training Resource Area provides the Services with three methods of determining training readiness: Days of Training; Operationally Ready and Available Crews, and Percentage of Mission Essential Tasks Trained to Standard.

Method 1 - Days of Training

CJCSI 3150.02 Requirement: The unit commander assigns a training level based on an estimate of the time needed to overcome training shortfalls so that the unit is fully trained in its mission-essential tasks. In making the estimate the commander takes into consideration a variety of factors, including the results of recent external evaluations, the personnel available, equipment present for training, training resources available, and similar inputs.   The commander may also consider recent training conducted and the availability and quality of training areas.

T-1	T-2	T-3	T-4
$\leq$ 14 days	>14 $\leq$ 28 days	>28 $\leq$ 42 days	>42 days

Service Actions: The Army uses days-to-train as an essential   assessment factor in its T-level methodology. The Navy uses this method for "other reporting units"; surface, subsurface, and aviation units use a different method. The Air Force does not measure days to train. The Marine Corps uses it for noncrew served weapons units.

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[15] NWP 1-03.3 p 5-28.

[16] As of 7 September 2000, the Army has postponed indefinitely fully implementing the new training metrics to provide for further study of their usefulness.

Method 2 - Operationally Ready and Available Crews

CJCSI 3150.02 Requirement: Each Service determines the number of crews assigned, using internal documents, and then compares that number with the number of crews with operationally ready and available members for all of the positions.[17]

T-1	T-2	T-3	T-4
≥ 85%	>_ 70%	>_ 55%	<55%

Service Actions: The Army has elaborated on this method, developing categories for Fully Manned and Qualified (FMQ) crews and Combat Capable Crews. This will be reported in the commander's comments section as general information; it is not included in the determination of the unit's overall T-rating.

The Air Force uses this method for aviation units, and the USMC follows this instruction for both aircrews and ground crew-served weapons systems.

The Navy instruction requires aviation units to report based on the percentage of aircrews that are combat ready and available measured against aircrews assigned. (NWP 1-03.3, p. 5-46) In fact, based on Type Commander Instructions, aviation squadrons report based on the number of aircrews that are combat ready in each PRMAR measured against the allowed number of aircrews. In other words, regardless of the number of aircrews assigned to a squadron, there is a fixed number of aircrews that it must have, based on its PAA (planned authorized aircraft), to be T-1, T-2, and T-3 in each PRMAR.

Method 3 - Percentage of Mission-Essential Tasks Trained to Standard

CJCSI 3150.02 Requirement: Each Service must determine what mission-essential tasks for each assigned individual must be trained to standard, evaluate the training status of their personnel, and then determine the percentage of tasks for which those personnel are trained properly.

T-1	T-2	T-3	T-4
≥ 85%	>_ 70%	>_ 55%	<55%

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[17] The Army has modified the equation, comparing operationally ready crews with "required" crews.

Service Actions: The Army requires a commander to rate the unit's proficiency in each MET, and then weight and score those ratings to produce the unit's overall T-METL level.

The Navy uses this method for surface ships and submarines, though it does not use the term METL. As with all other Navy readiness reporting, training readiness is linked to PRMARs. Surface ships are required to conduct training events in each PRMAR at specified intervals. Their T-rating in each PRMAR reflects the percentage of training events in which they have maintained currency.   Submarines report a T-rating based on the percentage of a small number of inspections they have successfully completed. The list of inspections includes the subjective judgment of the squadron commander. While aircraft squadrons report on the basis of "operationally ready and available crews," calculations of crew readiness are based on mission-essential tasks trained to standard in each PRMAR.

In the Air Force, the majority of ground units use this method. They derive their training requirements from the unit DOC statement.

Marine Corps units generally consider the unit's Mission Performance Standards and Mission-Essential Task List, but they do not use the data directly in determining readiness levels of the unit.

Although the CJCSI implies "individual training" the Army, Navy, and Marine Corps measure "collective" training using this method.

Selecting a Unit T-Level

CJCSI 3150.02 Requirement: Services will use one of the above methods to calculate the overall T-level.

Service Actions: The Army uses the lower (worst case) rating of either the METL proficiency or days-to-train method as the overall T-level rating, with the evaluation of unit METL proficiency the most important aspect of determining a unit's training readiness.

The Navy uses a combination of all three methods. Aviation units use a fixed number of aircrews based on PAA, surface and subsurface units use percentage of mission-essential tasks trained to standard, and "other units" use the days-to-train measurement. As with the other status areas, the reported T-level status reflects the level of the worst calculated primary mission area if more than one mission area is degraded. If

only one primary mission area is degraded, the unit reports one level better than the worst calculated degraded primary mission area.

The Air Force calculates T-level based on unit type. Noncombat aviation, missile, and space operations units primarily use the crew training standard. The majority of the ground units, as well as Combat Air Forces aviation units and reconnaissance UAV units, use a modified form of METL proficiency.[18]

The Marine Corps uses days-to-train for noncrew-served ground units, the lower of days-to-train and crew readiness for ground crew-served weapons units, and the percentage of ready aircrews for aviation units.

OVERALL C-RATING AND THE COMMANDERS UPGRADE/DOWNGRADE

Generally, for each Service, the overall rating reflects the lowest of the four measured area ratings.[19] In most circumstances, each Service gives the commander the option of upgrading or downgrading the overall rating if, in the commander's judgment, the current rating does not accurately represent the unit's capabilities.[20] A commander who exercises this option must provide clarifying remarks.[21] The Navy does not allow its commanders to subjectively upgrade. And a commander may not upgrade or downgrade the objective rating of a measured area.[22]

CJCSI 3401.02 defines the overall C-ratings as follows:

C-1. The unit possesses the required resources and is trained to undertake the full wartime mission(s) for which it is organized or designed. The resource and training area status will neither limit flexibility in methods for

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[18] The majority of Air Force units consider only the training of flight crew status when determining a T-rating; they generally do not track support (maintenance) personnel training for this rating.

[19] The Navy, in addition to considering the PSRT ratings, also factors in the individual M-ratings (PRMAR); the lowest of these ratings determines the overall C-rating.

[20] Army commanders subjectively determine a Mission Accomplishment Estimate (MAE)—a numerical estimation of the percentage of wartime missions the commander judges the unit could accomplish if alerted within 72 hours of the "as of" date of the report. Army Regulation 220-1 recommends that a commander consider upgrading or downgrading if the MAE does not correspond to the overall C-level objectively determined.

[21] Subjective upgrades and downgrades appear to occur generally on the margin. For example, over the past 5 years, the percentage of Air Force commanders who subjectively modified the C-level was only 10% to 12% of the total AF reports each month.

[22] The Navy makes an exception to this by allowing commanders to subjectively downgrade the P-rating. (NWP 1-03.3 p 5-15).

mission accomplishment nor increase vulnerability of unit personnel and equipment. The unit does not require any compensation for deficiencies.

C-2. The unit possesses the required resources and is trained to undertake most of the wartime mission(s) for which it is organized or designed. The resource and training area status may cause isolated decreases in flexibility in methods for mission accomplishment, but will not increase vulnerability of the unit under most envisioned operational scenarios. The unit would require little, if any, compensation for deficiencies.

C-3. The unit possesses the required resources and is trained to undertake many, but not all, portions of the wartime mission(s) for which it is organized or designed. The resource or training area status will result in significant decreases in flexibility for mission accomplishment and will increase vulnerability of the unit under many, but not all, envisioned operational scenarios. The unit would require significant compensation for deficiencies.

C-4. The unit requires additional resources or training to undertake its wartime mission(s), but it may be directed to undertake portions of its wartime mission(s) with resources on hand.

C-5. The unit is undergoing a Service-directed resource action and is not prepared, at this time, to undertake the wartime mission(s) for which it is organized or designed.

ROLE OF THE CHAIN OF COMMAND

CJCSM 3150.02 tasks the CINCs to "monitor GSORTS data for accuracy, timeliness, and validity...and initiate corrective actions as required."[23] The Service Chiefs task their staffs and commanders with the administrative responsibilities of establishing the reporting system and monitoring reports for timeliness, quality, accuracy and format. They also assign responsibilities to address issues highlighted in GSORTS reporting and to take corrective actions as required. Higher commanders may add clarifying remarks or additional information if they desire, either with the report itself or by separate communication (depending on echelon), but they may not alter the report in any way.

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[23] CJCSM 3150.02, page A-12.

PART II: FINDINGS

During the course of our study we found a number of positive aspects of the current GSORTS process. We found the process to be generally useful for unit commanders attempting to raise readiness status issues up the chain of command. We also found that GSORTS allows higher-level commanders to get visibility to lowest levels. We found that the Joint Staff and the Services are instituting changes to improve the value of GSORTS. These include new training, equipment and supply metrics; methods to measure readiness against current deployed/employed SSC missions; metrics to provide better visibility into the status of key combat crews; and introduction of improved software for submitting and analyzing reports. Wherever we traveled, we found that the people involved in reporting into the GSORTS database were conscientious and trying their best to follow the written and implied guidance.

The focus of our effort was on the question of the value of GSORTS as a major part of the DoD readiness reporting system and a major contributor to DoD efforts to conform to the requirements of Title 10. Specifically, we sought to determine whether GSORTS is objective, accurate, and timely, whether GSORTS is comprehensive, whether the system is applied uniformly throughout the DoD, and whether sufficient resources are provided to establish and maintain the system. In that context, we found a number of shortfalls. Some of these shortfalls are a result of the manner in which higher-level guidance is implemented, some follow from the manner in which unit-level readiness reporting has evolved over time, and others can be attributed to problems with the guidance itself.

SHORTFALLS[24]

> 1. *GSORTS is not comprehensive. Many elements of the DoD that are essential to understanding DoD readiness are not included as measured units in GSORTS.*

Section 117 of Title 10, United States Code, instructs the Secretary of Defense to "establish a comprehensive readiness reporting system for the Department of Defense." As stated earlier, CJCS policy states that all combat, combat support, and combat service support units, including Active, National Guard, or Reserve units, sourced to an operations plan (OPLAN), contingency plan (CONPLAN), the Single Integrated Operations Plan (SIOP) {see JOPES/JSCP}, or a Service war planning document are designated measured units and must report in GSORTS. This leaves tremendous gaps in coverage of the multitude of DoD units and organizations that are integral to DoD's mission but "do not deploy" (i.e., are not listed in plans).[25] Among the most important of these entities are the following:

- Higher headquarters, whether combat or administrative, joint or Service-specific, are not included in the database, although they are essential to DoD's mission.

- Many large operational organizations, such as Army corps, most CS and CSS brigades, Navy carriers together with their embarked air wings, Navy battle groups, and most Air Force wings and groups.

- The Defense Agencies and Combat Support Agencies have many important organizational entities, e.g., distribution depots, inventory control points, financial centers, communications nodes, that do not report.

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[24] Several of the systemwide shortfalls we discuss here were detailed in a recent report by a congressional staffer: "Senate Budget Committee Staff Trip Report: 10th Mountain Division, Ready or Not?," 26 September 2000. The report's primary conclusion summarizes our bottom line—that the current system does not accurately portray the readiness of the Armed Forces. As stated in the report: "Beneath the favorable overall readiness rating…the 10th Mountain is today experiencing multiple, serious shortages of people and material resources, training deficiencies, and other impediments to readiness…" (p. 3).

[25] This does not necessarily mean the DoD has no information on the readiness of many of these organizations or entities. There are other forums for reporting readiness formally (such as the Joint Monthly Readiness Review, Monthly and Quarterly Readiness Reports to Congress, and the Combat Support Agency Readiness Team reports) and informally (normal command or functional channels). Our point is that many organizations are absent from the readiness database. Also, some units report data into the database but do not formally report their readiness level. According to CJCSM 3150.02, Enclosure O, registered units that are not "measured" (i.e., have no tasking in plans) but that have "major equipment" report the status of that equipment and associated personnel into the database but do not assign a C-rating. Categories of equipment types are listed in the CJCSM.

- Joint units such as the Joint Intelligence Centers (JICs), which provide deployed support to JTFs and other joint headquarters, do not submit SORTS reports.

- Installations such as bases, air and seaports, and training establishments (such as the Army's National Training Center) required to train or deploy forces or to operate as power projection platforms do not report; neither do Service repair depots.[26]

- Training units with significant assets and potential combat capability.[27]

2. *Reports are not uniform across the Services; reporting criteria are not standardized. GSORTS guidance is not clear and concise. Guidance and reporting requirements exist in numerous forms and forums.*

Section 117 specifies: "In establishing the readiness reporting system, the Secretary shall ensure—(1) that the readiness reporting system is applied uniformly throughout the Department of Defense." Our research revealed significant differences both among and within the Services in the way personnel, equipment, equipment condition and training ratings are determined. This means that the same numerical rating can mean quite different things from one unit to another.

This lack of uniformity arises because the Chairman's guidance documents allow the Services great flexibility in reporting their status. Since the Services are allowed to report in many different ways, it is difficult to develop accurate, cross-Service views of either status or readiness at the DoD level.

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[26] The recent (spring 2000) situation at Fort Campbell, KY is an example of the potential discontent between the readiness of the installation and their ability to support GSORTS reporting units. There, the Multi-purpose Range Complex (MPRC) was closed because of unexploded ordinance in the training area. This is not a measured resource area in GSORTS, but it could have a direct impact on reporting units.

[27] For example, in Air Combat Command, readiness in terms of C-level is not reported by 5 of 33 active-duty fighter squadrons and 1 of its 11 bomber squadrons. None of Air Education Training Command's units measure their readiness (this includes: 6 of 11 F-16 squadrons; both KC-135 air refueling squadrons; and all five airlift squadrons (1xC-5; 1xC-17; 1xC-141; 2xC-130). Nor do many Air National Guard units measure readiness, including the 162 FW, 149 FW & 114 FS (F-16), and 189 AW (C-130). Almost 300 (Active and Reserve component) of the roughly 1,300 F-16 aircraft possessed by the USAF are not "measured" in GSORTS; their owning units do not report C-status. We acknowledge the primary reason why these units do not report—they are generally training units—but offer that there is additional combat capability in the USAF (should it become necessary to call upon that capability).

3. *Although the CJCSI calls for a report on the status of "equipment and supplies on hand," there is no provision for units to report the status of supplies on hand.*

GSORTS does not require the systematic report of the status of accompanying supplies for deploying troops; it only requires a report on the status of weapons systems, major support equipment, and other end-items.[28] While some of the Services do report on the status of some accompanying supplies in their individual SORTS reporting systems, there is no uniform system for reporting supply readiness across the Services, and none of the Services report all of the supplies they would need for initial operations and to sustain that operation. Other types of equipment and supplies needed for initial and follow-up sustainment (e.g., war reserve materiel, peacetime operating stocks, prepositioned weapons systems, and support equipment and unit-held accompanying supplies) are generally not included in Service SORTS reports.

4. *GSORTS is of limited utility to the supported CINCs or the supporting CINCs.*

Only Joint Forces Command and European Command appear to make regular use of GSORTS – JFC as a screening device; EUCOM for tracking readiness of units permanently stationed in Europe. The staffs at CENTCOM, PACOM, and Combined Forces Command in Korea told us that they do not refer to GSORTS reports from CONUS units because they have no way to influence unit status and because they expect the Services to fix existing readiness problems before the units arrive in the theater. TRANSCOM staffers told us that they do not use GSORTS because they base their readiness assessments on the design capabilities of the air and sealift forces, rather than on actual readiness status. Another reason GSORTS is of limited value to the CINCs is that it does not provide information on the tasks a unit is capable of performing, beyond the basic tasks "for which it is organized or designed." Unless the user of the readiness report is intimately familiar with the unit type, it is extremely difficult to answer the question, Ready for what? Except for navy ships, even the most knowledgeable planner cannot tell what missions a "less than C-1" unit is capable of performing. Additionally, since units measure against their "wartime" tasks, there is little information of value (unless one

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[28]   CJCSI 3401.02, Encl. C, Para. 2 (b).

makes inferences, which may or may not be valid) for assessing the readiness of a unit to participate in a small-scale contingency or other, nontraditional missions.[29]

5. *GSORTS C-ratings do not provide the amount of information that DoD planners need.*

When a unit is rated at less than C-1, the planner only knows that there are some "wartime missions for which it is organized or designed" that it is incapable of performing.[30] A unit that may not be able to execute a portion of its combat missions may be fully capable of executing the rest of its missions to standard. Planners who know that can task the unit accordingly. GSORTS does not provide planners information on readiness or status with regard to tasks that units may be called upon to perform even though they are not tasks for which the unit has been organized or designed. Planners must directly contact the unit in order to determine what range of tasks it can execute, and at what level of capability. Planners also cannot rely on the GSORTS rating to determine the ability of a unit to meet its deployment timeline.

Units assigned a new mission (generally temporary in nature, such as an Army unit preparing for a peacekeeping mission) do not report their readiness to conduct the new mission until they are actually conducting it. Neither senior commanders nor resource managers have direct visibility into the changing status, or potential stumbling blocks, as the unit prepares for its mission.

6. *Some reporting is inaccurate.*

Discussions with members in all Services reveal concerns about misleading reports, about pressures on commanders to "alter" their reports, and about the impact of

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[29] The deployment of Task Force Hawk (the Apache helicopters and support package) to Albania in the opening days of the war in Kosovo is an example of that type of SSC force. GEN Meigs, Commanding General of U.S. Army Europe, described that deployment as "totally unprecedented" in the July 2000 edition of *Aerospace World News*. The CINC had identified a requirement, but there was no standing organization that could provide the kind of capability he needed. Meigs was forced to build an ad hoc task force and deploy it as rapidly as possible. GSORTS does not provide the kind of task-oriented information a planner needs to build a task force of the kind. This problem would be especially acute for a joint task force.

[30] Reasons for the shortfall are submitted along with the report, but the planner still has to infer what mission task(s) are affected. Except for the Navy, where a particular PRMAR's M-rating is reported, it is difficult to readily determine the impact a particular shortfall has on the capabilities of the reporting unit. Planners we interviewed said this issue is surmountable—it simply requires making myriad telephone calls direct to units to ascertain actual status and available capabilities. The fact that this is done as extensively as it is indicates a basic problem with GSORTS, ultimately calling into question whether the time and money dedicated to GSORTS is even worthwhile.

those concerns on junior officers.[31] Some GSORTS reports are deflated in attempts to indicate resource needs; other reports are inflated. Some commanders view GSORTS as a "report card" on their ability to lead, manage, and train, or fear that a report of low readiness will prevent them from being selected for the next operation. [32] Others know the fix they need is unlikely to be forthcoming and therefore believe it useless to report the problem.[33] We gathered anecdotal evidence that the problem is not as serious as it perhaps once was; nevertheless, it remains a cause for concern, if for no other reason than that there is no way to tell accurate reports from inaccurate reports. The knowledge that some reports are inaccurate reduces confidence in GSORTS overall.

7. *GSORTS as a "snapshot" in time precludes maintaining an accurate picture of current posture and is of little value in forecasting status.*

GSORTS renders a static status of resources that exist in a complex, dynamic environment. The data is dated as soon as it is entered into the system. With the exception of the Navy, higher echelon commanders or planners cannot look at a GSORTS report and know what the unit's status is "today." Add to that the fact that, because the data collection is extremely difficult and time-consuming, many units put early internal suspense dates on reportable data and "cut-off" dates well before the official reporting deadlines to ensure that the report is properly formatted administratively. In many cases, each echelon requires at least 1-day lead-time on data collection before it sends it up the chain of command. This means that the data is often a week old or older before it gets to Service Headquarters.

Furthermore, since a GSORTS report is only a snapshot of unit status, it provides limited insights regarding future readiness. For instance, the readiness effect of employing forces to fight forest fires cannot be quantified until *after* they've been committed and

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31 Such pressures on Army commanders are a serious morale factor and a continuing problem, as pointed out in two Army War College surveys taken over 20 years apart (l976 and l999) and in a set of survey responses from Army Command and General Staff College students that recently circulated on the Internet.

32 In the December 1999 edition of *Armed Forces Journal International*, MG David L. Grange, former commander of the First Infantry Division, summarized this concern by saying, "One clear shortcoming of the Army's current readiness system is evident in the Service's cultural bias against reporting anything below a C-2 rating, a mark that indicates a unit has both the resources and training to perform its wartime mission. The inclination to report back no lower than C-2 often overrides the realities of operational deployments and resource challenges that units face."

33 For example, the CO of one Navy ship indicated he did not make an effort to reflect personnel shortfalls during the inter-deployment training cycle (IDTC) because he knew he wouldn't obtain relief in the short term, although he was confident he would be manned appropriately prior to deployment.

then reported; therefore, the Services are forced to react to readiness concerns, as opposed to being proactive in the way they program resources.

8. *GSORTS personnel and training indicators often mask underlying problems.*

The absence of measurement criteria reflecting turbulence means that personnel reporting can be inaccurate. For example, it is possible for an Army division to be rated ready, even though "in the latest year, Division turnover totaled 85.3% for the 12 months listed; in the previous year it was 98.5%" [34] Additionally, the fact that "deployable" personnel may have just returned from a deployment and thus might be administratively "nondeployable" (to allow them time to recover) is not reflected in the report. The lack of a turbulence indicator means that, at least theoretically, a fully trained unit can replace 100% of its personnel overnight and still be considered fully ready. The only way the system provides to indicate the impact of turbulence is in the commander's comments.

Instead of using published Service regulations as the means to determine qualification, some Services still use local training requirements and commanders' judgment to determine qualification. Clearly this produces an uneven measure of readiness across like skill-sets or organizations.

We found several examples of disconnects concerning crew and unit qualification. For example, the new training standard for Army infantry squad qualification does not include any collective training (i.e., battle drill certification), and commanders may count infantry soldiers filling in noninfantry positions towards the number of squads on hand.[35] Infantrymen serving on postwide details, as supply sergeants or truck drivers in the support platoon, or within the staff sections of the battalion headquarters, may be combined together under a random "qualified squad leader" to count as a "squad."

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[34] Senate Budget Committee Staff Trip Report: 10th Mountain Division, p. 9.

[35] Although the Army has established certain crew qualification standards under the new training metric, currently scheduled for possible implementation in 2001, it will still allow local commanders to determine Squad Leader qualifications. That individual's qualification, combined with minimum manning requirements, determines the squad's qualification. The new metric does not specify a collective task-training requirement to determine a qualified squad, but other Army regulations do. Department of the Army Pamphlet 350-38 contains specific guidance on how to determine squad qualification: "All Infantry squads, alone or as part of a larger unit, will have successfully participated in a dismounted LFX to standard (ARTEP 7-8-MTP/7-7J-MTP FM 23-1) within the past six months." While this is the Army standard to determine a squad's training qualification, it is *not* the standard the Army proposes to use for determining squad readiness.

Although this makes a unit seem more "combat capable," it hides the deeper manning problems of multiple personnel taskings, poor collective training opportunities, and low-density MOS shortages.[36]

Similarly, crew and unit stability is often not considered. It is useless to measure qualification without considering the effect that such turbulence has upon the unit. If a crew qualifies, but later is largely disbanded due to promotions or transfers, clearly its personnel ought not to be counted as qualified any longer. Yet some Services do not adequately consider this factor in determining crew qualification.[37]

9. *Purpose and process are not well understood.*

A general impression from our conversations with many military and civilian personnel is that many of the people involved in preparing, processing, and evaluating the unit readiness reports do not understand the purpose of the reports and do not know the details of how the reports are supposed to be filled out. Many field-grade officers and civilians responsible for receiving the reports and aggregating them appear to be going through the motions without really understanding the purpose or content of the GSORTS reports. There appear to be two major causes of this problem. First, military personnel are rotated so frequently that they never become fully trained on the intricacies of reporting or develop a corporate memory. Second, the lack of feedback leads people to conclude their reporting efforts are ignored.

10. *GSORTS reporting is a laborious, cumbersome process that overburdens reporting units.*

The resounding theme throughout our interviews was that GSORTS reporting is a complex process that requires enormous administrative effort on the part of the reporting

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[36] "The missing people are not AWOL; they are on a plethora of temporary (in some cases semi-permanent) assignments elsewhere. Some were working on base operations: as lifeguards at the post pool, handing out towels at the gym, driving buses to deliver some of the over 800 personnel who live in off-base family housing, or maintaining training ranges. About 92–95 uniformed personnel were reassigned from their units on one day of the visit and performing base operations activities described here, but they were still carried on their units' rosters and missing training…While the borrowed military personnel were performing tasks that contributed to the quality of life for personnel in the Division, they were also not receiving training for their combat missions, and they were not integrating with the units they would face the stress of combat with." Senate Budget Committee Staff Trip Report: 10th Mountain Division, p. 6.

[37] In the Navy, there are requirements to report a reduced training level of crews such as those employed in Naval gunfire support and Tomahawk employment if there is personnel turnover without retraining. However, the requirements are not contained in a single document, so there is a question as to the degree of compliance, simply because of the complexity of the system.

units. Several staffs have personnel dedicated to full-time GSORTS preparation or personnel who are consumed by GSORTS for 2 weeks or more per month as they surge to complete the report. This is often in addition to their normal duties.

Much of the data required by GSORTS is already reported through other systems. For example, GSORTS personnel reporting duplicates what is already gathered by the Army's automated personnel accounting system (SIDPERS-3). Similarly, the Army's Unit Level Logistics System (ULLS) is the repository for exactly the same type of information on equipment on hand and serviceability, and it contains far more current data. Nevertheless, ULLS does not feed into the Army GSORTS reporting system directly.

The technology of reporting GSORTS is a limiting factor. The Army's software platform, PC/ASORTS, is obsolete and unstable; it crashes frequently at the installation level during unit submission. This is time-consuming. It is DOS-based and the operators have a hard time navigating through it. One personnel expert commented that it takes 2 months to be fully trained on PC/ASORTS.

The Marine Corps has implemented an automated system called the "Global On-line Marine Edit and Reporting System" (GOMERS), which feeds data into the central GSORTS database, and efforts are underway to feed data automatically into GOMERS from the basic systems used to track personnel and equipment, for example the Marine Integrated Maintenance Management System (MIMMS). Until such automated interfaces are created, however, the process of "hand-jamming" data from the basic reporting systems into GOMERS, and GSORTS reporting overall, is likely to remain a laborious, manpower-intensive process. It is so time-consuming, in fact, that many unit commanders argue that it is actually counterproductive to readiness—the man-hours spent on the mechanics of reporting would be far better spent doing things that contribute directly to readiness, such as training and fixing equipment.

The Navy has an automated personnel information system, LOOMIS, and an automated aircraft material reporting system, NALCOMIS, but neither is tied to SORTS.[38]

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[38] The Navy does have a very useful automated system called the "Type Commander Readiness Management System" (TRMS) that facilitates SORTS reporting. It has a personnel component (not tied to LOOMIS) that makes the necessary calculations to allow inputting personnel readiness directly to SORTS and a training component that allows transferring training and readiness matrix information for surface ships directly into the training section of SORTS. It will also interface CASREP data to the SORTS module.

11. *GSORTS reporting on Reserve component units does not provide active duty commanders and planners the data they require.*

The major Reserve component (RC) challenge is with the assessment of training readiness.[39]   Reserve units train only 39 or 40 days a year, compared with active-duty units that have the potential of training for 240 days or more annually. This means that Guard and Reserve units ordinarily require additional training after mobilization before they can meet standards for deployment. There is a wide variation in the time needed for postmobilization training. Many support units and most aviation units are able to reach active component standards within a few days after entry on duty. Large organizations may take weeks or months to be fully trained. The length of time a Guard or Reserve unit needs to be ready to deploy depends on the state of training when mobilized, the additional training events needed to meet active component standards, and the availability of training facilities, training support personnel, and consumables, such as training ammunition. This information is not available in GSORTS.

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[39]   Army Regulation 220-1, Unit Status Reporting, 1 September 1997, currently requires commanders of RC units to report the training level of their units based on their war-fight requirements in accordance with the CJCSI/SJCSM and also to report a second premobilization training level that is measured against the premobilization level of training focus determined by the MACOM, such as platoon level. This premobilization training level is an RC-unique reporting requirement that was added by the Army in order to portray the training accomplished by Army RC units in light of the resources provided to them.   However, effective application has been hampered by widespread confusion and misunderstandings.

PART III: RECOMMENDATIONS

PRINCIPLES FOR IMPROVING GSORTS

We used these guiding principles in proposing a change to the current process for measuring and reporting unit-level readiness.

1. Satisfy the congressional requirements for a comprehensive and uniform readiness reporting system.

2. Use good current Service practices and concepts as a basis for recommendations whenever possible.

3. Conduct readiness reporting as a command responsibility at every level of command. Commanders at all levels should be responsible for reporting both the status of the resources entrusted to them and the capability of their units or organizations to accomplish their mission(s).

4. Structure the database so as to enable higher-level commanders the means to make accurate reports about the readiness of their larger organizations that are made up of multiple GSORTS-reporting units and organizations.

5. "Do no harm." We not only considered the purpose for gathering "readiness" data, who needs the data, and what they need, but also discussed the "collection process" itself: What factors make up readiness and therefore should be measured and reported? What burdens can and should be placed on commanders? What burdens can be removed?

A PARALLEL STUDY

The Army War College recently completed an in-depth look at the Army's readiness reporting requirements and processes. Interestingly, many of their findings, while independently developed, track quite closely with our findings reported here.

Here is a list of the major recommendations from that War College Study:[40]

1. Develop mission-focused reporting requirements for the functional forces that reflect readiness to perform METL.

2. Develop reporting requirements for all functional forces.

3. Develop requirements for Brigade Combat Teams, Divisions, and Corps and consider reporting requirements at the Army Service Component Command level.

4. Develop and implement a predictive readiness assessment tool.

5. Implement DCSOPS objective training metrics to reduce subjectivity in training readiness.

6. Develop a Web-based system that can be accessed by commanders at all levels. Include existing reporting systems (ULLS, SIDPERS, etc.) Automate METL assessment for inclusion.

GOALS OF A READINESS DATABASE

GSORTS as currently configured contains two types of information on measured units: (1) the status of various inputs (unit personnel, equipment, equipment readiness, and training) and (2) an assessment of the unit's readiness to undertake the missions for which it is organized and designed—its C-rating.[41]

Based on our review of Title 10 and the National Security Strategy, National Military Strategy, and Defense Planning Guidance, we concluded that a readiness database, which we term (for working purposes) *Expanded GSORTS* (E-GSORTS),

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40 U.S. Army War College Study Readiness Committee Final Report, 2000, p. iii.

41 On the one hand, the categories of personnel, equipment, equipment condition, and training are *inputs* that directly affect a unit's ability to do its mission. In most cases, the PSRT ratings are based on quantifiable metrics that show the status of these inputs. On the other hand, the C-rating is designed to reflect the readiness (capability) of a unit to do its mission(s)/task(s) (unit *output*). By its nature, this rating is not directly measurable. To do that, i.e., directly measure a unit's readiness to provide a capability (its output), requires an operational context, either actual employment or, for example, an Operational Readiness Inspection (ORI), a JTFEX, or a rotation at the National Training Center. Since these tend to be few and far between, GSORTS is based on the assumption that some "aggregation" of the inputs, along with a subjective assessment by the unit commander, provides a sufficient surrogate measure of a unit's potential output—its readiness.

should be designed to meet five goals, each tied to a particular "user." Built correctly, the database can satisfy all five of these goals. The five primary goals are:

1. Provide a tool for commanders at all levels to report the status of the units or organizations for which they are responsible.

2. Provide crisis planners a central registry of accurate and current information on the readiness of units to provide required capabilities. This "shopping list" would help crisis planners to easily and quickly source units to meet a CINC or JTF commander's immediate contingency operation requirements.[42]

3. Provide Service decision makers and commanders at all levels information upon which to base resource allocation decisions more efficiently and effectively, both near and long term.

4. Provide information for higher-level commanders that will allow them to assess the readiness of the organization or "system" for which they are responsible.[43]

5. Provide deliberate and crisis planners information necessary to construct plans. Among other things, deliberate and crisis planners need to know the approximate time required for a unit currently at a degraded readiness level to achieve a higher required level, so that such units can be integrated into an operation at the appropriate time.[44]

If one accepts the five goals outlined above, then determining what should be reported into the database is fairly straightforward. The database needs to contain information on each reporting entity's readiness to do its mission(s)/task(s) (its *output*), as well as, information on the status of those *inputs* each entity requires to accomplish its mission(s)/task(s).

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[42] According to a crisis action planner at TRANSCOM, sourcing of units for a contingency is the "long-pole" in the tent for crisis TPFDD development; the system lacks the ability to quickly source a contingency with ready units. We applaud the ongoing collaborative efforts of USTC and JFC to develop a "72-hr TPFDD" process, and also a "Forces Catalog" to help decision makers quickly determine ready units to source a contingency.

[43] This information is vitally important as commanders make their assessments during the JMRR process as described in Appendix D.

[44] For example, a planner wishing to employ a Reserve component unit that, by design, maintains a low peacetime readiness status needs to know if appropriate readiness can be achieved by a certain time period after mobilization. Without this knowledge, the planner has no idea of when to integrate the unit into the TPFDD and the operation itself.

Both sets of information are required because of the several users of the database. Crisis planners are less interested in the status of the inputs; their primary concern is in the readiness assessment, i.e., which units are ready now to execute their mission(s) and how long will it take other, less ready units to be ready to execute their mission? The crisis planner will use this information to decide which units can be sourced to the current contingency. Similarly, higher-level commanders who have systemic responsibilities (for example, CINCTRANSCOM for the Defense Transportation System or a battle group commander overseeing the battle group's antisubmarine warfare (ASW) system), focus on the readiness of their respective system's component parts; the status of these parts is of lesser concern.

Resource managers, on the other hand, are more focused on the input status, i.e., Where should additional dollars be spent to make a unit (or a system) more capable of accomplishing its mission?

Deliberate planners, arguably, are concerned neither with status of inputs nor with current output. They need to know the planned or projected readiness of units (i.e., how long it would take units deliberately maintained at reduced readiness to achieve the necessary readiness level) so that the "plan" employs these units in an appropriate timeframe.

To be of maximum utility to all users, the E-GSORTS database *must* have certain characteristics. It must be accurate and current; misleading or out-of-date information is of no value to crisis planners or resource managers. Second, it must be comprehensive in its coverage; without information on all the units and organizations that make up a "system," higher-level commanders cannot evaluate the ability of their "systems" to accomplish a mission.[45] The database must allow reporting entities to predict future readiness, both for deliberate planners and for those making resource allocation decisions. The ability to forecast readiness also allows decision-makers to be proactive instead of reactive; many readiness "deficiencies" can be alleviated if advance notice of an impending degradation is available. Fourth, the database, or rather, the rules for gathering, measuring, and reporting data, must be uniform across the Department, both for ease of input, and more importantly, for ease of interpretation, especially by joint commanders and the Secretary of Defense. Finally, information reported into the

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[45] See Appendix D for a discussion of the systems approach to readiness reporting.

database *must* reflect a unit's/organization's mission(s) or task(s); information *must* reflect the answer to the question "Ready for what?" (This last characteristic is explained in greater detail later in this paper.)

Now that we've identified the purpose of an E-GSORTS database and, at least in a general sense, what information it should contain, we can turn to the question, Who should submit reports on 'status of inputs' and 'readiness to provide an output'?

WHO SHOULD SUBMIT REPORTS?

Current policy guidance requires only those units "apportioned to or deployed in support of an operations plan, a CONPLAN, the SIOP, or a Service war planning document" to report in GSORTS.[46] As outlined in Part II, this policy leaves large gaps in coverage of the units, organizations, and entities essential to the Defense Department's ability to accomplish the missions/tasks derived from the National Security Strategy (NSS). Clearly, mission success is a function of more than those parts of DoD that "deploy." Mission success is dependent on units at home station that support deployment; units that prepare (or train) the deployers; organizations that sustain the deployers; organizations that command and control the deployers—ultimately, on organizations responsible for the organizing, training and equipping of everyone.[47] Therefore, we recommend that, in order to fulfill all five purposes described earlier, and meet the congressional requirement for "comprehensiveness," the database should be expanded to include all units and organizations that contribute to DoD's capability to execute the NSS.

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[46] CJCSI 3401.02, Encl B, Para 2.b. (1).

[47] We discovered a clear example of just how important installation garrisons are in preparing, moving, and supporting the deployment and combat operations of military forces by studying the deployment of the 10th Mountain Division to Haiti. The 10th Mountain Division could not have prepared, trained, and moved to the ports without extensive support from the Fort Drum Garrison. Even after the division was in Haiti, Fort Drum continued to provide essential support for the troops in Haiti and for their families at Fort Drum. Certainly, the division could not supply itself, train itself, or move itself with only its own organic resources. See John Brinkerhoff, *Readiness Implications of Selected Aspects of Operation Uphold Democracy in Haiti*, IDA Document D-2459, Institute for Defense Analyses, June 2000, Draft Final.

A comprehensive E-GSORTS must include all entities implied above.[48]   We recommend E-GSORTS contain reports on status and readiness of the following entities:

- Battalions, ships, and squadrons (At the lowest command level (tactical), we accept the current convention of including these entities along with other entities such as detachments, flights, certain aircraft fleets, strategic airlift wings, air expeditionary wings, separate companies, etc., when appropriate. These are the basic building blocks of all "systems".)

- The headquarters at all higher command echelons (intermediate organizations), from brigades to divisions to corps, from groups to wings to numbered air forces, from battle groups to fleets, from regiments and MEBs to MEFs, and including the component commands of the unified commands. Headquarters with a responsibility to act as a JTF headquarters should report JTF readiness.

- Intermediate organizations, e.g., divisions, battle groups, wings, MEFs, report as a single entity

- Unified command (CINC) headquarters

- Any existing Joint Task Force (JTF) headquarters

- The Joint Staff, Service staffs, Departmental Headquarters, and the Office of the Secretary of Defense

- Defense agency entities such as nodes in the defense communications system and DFAS, not only combat support agencies

- Training establishments—both institutional and collective. This would include both "peacetime" training centers and those important to preparing units for deployment, such as the Army combat training centers and the Naval Strike and Air Warfare Center

- Installations and bases/ports that serve as power projection platforms and ports of embarkation/debarkation (including foreign ports and other nodes in the transportation system)[49]

- Joint organizations such as Joint Intelligence Centers

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[48] Expansion of the database as we propose would also eliminate the need for DoD to submit separate reports on the Institutional Training Readiness System (ITRS), the Installations Readiness System (IRS), or the CJCS Report on CSA readiness.

[49] In a December 1999 article in *Armed Forces Journal International*, MG David L. Grange, USA, writes: "Readiness in operational units must be tied to installation readiness, since facilities are essential to units' training, deploying, and sustaining operations and soldier family well-being."

- Critical components of the logistic support infrastructure, such as the Service maintenance depots, inventory control points (ICP), the Defense Distribution System, and civilian industrial activities that have important readiness roles[50]

- Entities responsible for prepositioned weapons systems and support equipment should report (For example, the readiness of Army prepositioned sets and operational projects, Navy Advanced Logistic Support Sites, Air Force Bare Base (Harvest Falcon and Harvest Eagle), land-based and afloat inventories of munitions and other prepositioned support equipment and supplies, and Marine Corps units in the Maritime Prepositioning Force (MPF) should be included in the database.)

- Essential components of the Defense medical system to include non-DoD hospitals

Providing an exhaustive list is beyond the scope of this paper. Suffice to say, all entities that can be identified as having a role in efforts to accomplish DoD missions should report both status and readiness.[51] DoD should consider the required frequency of these reports. Although each report is important to an overall understanding of DoD readiness, it may be that many entities need not report on a monthly basis or report changes in their status on a daily basis.

In addition to the obvious expansion in breadth of coverage, E-GSORTS would differ in another aspect from the current database in the manner in which higher-level organizations report. Currently, a few of these organizations report into GSORTS, most notably Army divisions, and Marine Corps MEFs. However, these reports are some form of composite of their respective subordinate units—either an average of the reports of subordinate units or the commander's subjective estimate. We recommend that in E-GSORTS, higher-level organizations (below the component command level) that have a defined, wartime operational mission and a relatively fixed structure would submit two separate reports. One report would be the readiness of the headquarters itself. The other

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[50] Civilian industry is responsible for approximately 50%of depot maintenance work and also provides extensive logistic support services and supplies.

[51] One might assume from this discussion that we propose E-GSORTS to include *all* DoD entities. Although it would perhaps make for simpler rules, inclusion of some entities (such as ROTC detachments, test & evaluation and R&D organizations, and recruiting units) has no obvious readiness-related value added. Nevertheless, it should be readily apparent that E-GSORTS would be a much broader and more comprehensive database than it currently is.

report would reflect the readiness of the total command as a single entity.[52] For example, an Army division would submit one report on the status and readiness of the division headquarters staff and a second report on the readiness of the division as a whole. This second report would allow both commanders and planners to see the collective readiness of the division without having to infer it from over 30 individual subordinate reports.

The recently instituted Air Force AEF (air expeditionary force) concept presents another reporting challenge. Traditionally, the Air Force manages its organizations above the unit (squadron) level differently from the other Services. In general, peacetime wings and numbered air forces (NAFs) do not have operational missions; the Air Force draws pieces of units from across the force to construct "provisional" units when the need for contingency employment arises. Despite the fact that the Air Force war mobilization plan contains a specific plan for how the Air Force would organize itself in the context of an OPLAN, the Air Force has not reported the readiness of these larger provisional organizations. Institution of the AEF concept provides an opportunity to report the readiness of larger organizations. Although the AEF is an administrative rather than a command grouping, we feel it is important for CINCs and other high-level decision makers to understand the status and readiness of an AEW or AEF, at least just prior to and during the time period it is "in the box" and is subject to being committed to support a combatant CINC. We believe the Air Staff, the ACC commander, or the commander of the "lead wing" of each AEF should be able to consolidate the individual reports of each of the units assigned to the particular AEF and provide a report as to the overall readiness of that AEF to conduct the full range of missions and tasks associated with its CINC support responsibilities.[53] Indeed, the Air Force may decide to train the disparate, unrelated AEF units and subunits (and AEF supporting units) in some of their most likely collective tasks in order to ensure they are ready if called upon.

WHAT SHOULD BE REPORTED?

Perhaps the main component of the proposed system is the direct and formalized definition of what should be reported—the answer to the basic question, Ready for what? Today's GSORTS does this by implication: The CJCSI describes GSORTS as providing

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[52] Service component commanders and CINCs would submit into E-GSORTS only a report regarding their headquarters/staff. Readiness reports concerning the composite capability of these commanders to fulfill their assigned missions would be made during the revised JMRR process as described in Appendix D.

[53] Gen John Jumper, ACC Commander, told us that he is in the process of instituting such procedures already. He feels that it is incumbent on him to "certify" the readiness of each AEF to CINCJFC.

information on a unit's readiness. There is an inherent conflict in the definition of unit readiness and the way readiness is reported. Unit readiness is defined as "the ability to provide capabilities required by the combatant commanders to execute their assigned missions…derived from the ability of each unit to deliver the outputs for which it was designed."[54] Currently, the readiness reporting system does not measure readiness in these terms. What it does is simply compare the current status of the measured factors against the way the unit was designed by the Service. It does not translate those measurements into an "ability to provide capabilities" that the CINCS require. In this way, it is Service oriented, not CINC oriented. Reconciling this conflict provides the basis for our recommendations.

The Services do try to meet the instruction's intent by assessing readiness against a Mission-Essential Task List (METL) and/or Mission Performance Standards (MPS) (Army and Marine Corps); against the missions outlined in Designed Operational Capability (DOC) statements (Air Force); and in terms of primary mission areas (PRMARs) (Navy).

We do not propose to alter the basic principle of reporting against tasks, but we suggest that reporting units report their status against both CINC-defined requirements and Service-developed designs.

All units and organizations in the Department of Defense have missions or a list of tasks they are organized or designed to be capable of accomplishing. Each Service has a different name for this list of unit tasks. Currently, only Navy ships report their readiness against this list. All other reporting units assess their readiness against some other set of missions/tasks. In general, this is a smaller set of missions/tasks than the total set for which a unit is organized or designed. We believe the DoD standard against which units (Active component, Reserve component, and civilian) should assess their readiness is the complete list of missions/tasks they were organized or designed to accomplish. For conceptual ease, we term the combined set of missions/mission areas/tasks a "designed operational capability," or DOC.

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54   CJCSI 3401.01b, Encl G, Page GL-5.

The Joint Training System, which includes the Universal Joint Task List (UJTL) and the Service task lists, can provide the basis for constructing these mission area statements.[55] The Services, CINCs, and Defense Agencies should identify all organizational entities that contribute to DoD readiness and, using the UJTL or the Service-linked task lists, should update, revalidate, or in some cases create DOC statements for all these entities. Every unit or organization in DoD would thus have a DOC consisting of one or more primary missions (as determined by the Services, CINCs, and Defense Agencies and derived from the mission set of a unit's next-higher-level organization) for which the unit was organized or designed.

The current unit readiness reporting system does not take into account the dynamic aspects of units whose peacetime readiness is deliberately degraded with the understanding that the readiness of these units will be improved to wartime standards after they are alerted for participation in a military operation. National Guard and Reserve units are the largest group in this category. Other units whose readiness is limited by reduced authorizations may also fall into this category, including ships in overhaul, units changing equipment, or units to which tiered readiness has been applied.

The major difference between Active component units and National Guard and Reserve units is in the amount of training time available in peacetime. National Guard and Reserve unit personnel are required to train 39 or 40 days per year, and most RC units are unable to do much more than that. Active component units train as much as 240 days per year. For this reason, very few National Guard or Reserve units can achieve the wartime required training status in peacetime. They will require additional training after they are mobilized and brought to active duty before they qualify for deployment or employment. The amount of time required for post-mobilization training depends on the size and type of unit and the peacetime level of training it achieves during its limited training time. Each unit has a pre-mobilization training plan that establishes the training status to be achieved prior to mobilization. Units that meet this pre-mobilization training goal are doing what they are supposed to do. At present these units are required to compute their training readiness rating (T-rating) by comparing their actual training status to their wartime status. This has two disadvantages. First, it conveys the impression that these National Guard and Reserve units are inefficient because they are not ready to go to war

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[55] CJCSM 3500.03, "Joint Training Manual for the Armed Forces of the United States." In fact, the Air Force has already made progress in this regard. As stated in AFI 10-201, the mission tasking narrative for a DOC statement should describe "the unit's wartime mission in plain English using missions in AFDD 1-1."

immediately. Second, it fails to inform higher commanders about the times and resources these units require after mobilization to train to wartime standards.

When a unit is mobilized, the part-timers become full-timers, and additional training is needed to bring the unit up to the training status required for deployment. Pre-mobilization and post-mobilization training for RC units is a continuum. The pre-mobilization training provides the basis for the post-mobilization training. Each RC unit has a training program for peacetime training that establishes its desired state of training prior to mobilization. Each RC unit commander has to try to achieve this peacetime training status, not the "full" training status to be achieved X days after the unit is mobilized. If the unit commander does his job properly, the unit is fully "ready" to be mobilized. We recommend, therefore, that one of the tasks RC commanders report on is their "capability to receive mobilization augmentation/be prepared to mobilize." Reporting against this mission would highlight that the low C-ratings for the operational missions/tasks are "planned" as a peacetime, pre-mobilization readiness state. The Services would determine the pre-mobilization standard each RC unit would be required to meet, as well as set the approximate post-mobilization time the unit would require to attain the acceptable full C-level.

A similar mission/task is applicable to active units. Some units are designed to deploy and some are in-place support units (i.e., support the deployers); both types may be designed to accept personnel or equipment augmentation along with receipt of an operational mission. These units should have as one of their DOC missions "ready to deploy," "ready for anticipated surge workload," or "ready to receive augmentees," as appropriate.

In addition to reporting against DOCs, certain units—those alerted in a warning or deployment order for employment in an actual contingency, as well as forward deployed units, such as those in the EUCOM or PACOM AOR—would also report against a second set of mission requirements. We call this second set of requirements a "required operational capability" (ROC). A ROC would state the actual missions/tasks envisioned by the gaining/owning CINC.[56] All DoD units and entities would have a DOC; those

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[56] The concept of reporting against both a DOC and a ROC is a major departure from the current system and fills a significant gap in readiness reporting. A unit identified and given a warning order to participate in a contingency would begin reporting its status and readiness against that "new" mission upon receipt. The receiving CINC and the unit's parent Service should develop the new mission/task list jointly. Reporting against both a DOC and ROC would keep both senior commanders and resource managers directly apprised of the changing status, and potential stumbling blocks, as the unit prepares

tasked for an actual contingency or forward deployed would pick up an additional reporting requirement against a ROC. For contingency-tasked units, reporting against the ROC would continue for the duration of the employment.[57] By requiring alerted, employed, and forward deployed units to report against both a DOC and a ROC, the database would provide a much more accurate picture of both a unit's capabilities vis-à-vis its designed mission and its current employment.[58]

As DOC/ROC statements are defined, it is critical that they be phrased in terms of output capability.[59] Defining DOC statements in this way is critical to making the readiness-reporting database both viable and valuable. Combat units, on the one hand, might be measured in terms of their readiness to conduct certain kinds of operations: A fighter squadron might assess its readiness in terms of the number of air-to-air sorties it is capable of flying per day. An artillery unit might assess its ability to conduct a certain number of fire missions per period of time. An infantry battalion or a tank battalion might report on its readiness to conduct a standard type of attack or to defend a standard width of terrain. Combat support or combat service support units, on the other hand, may be able to express their capability in direct output terms. For example, an airlift squadron might assess its readiness in terms of a specific airlift or airdrop capability per period of time. A communications unit might report in terms of the number of circuits it can

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for contingency participation. In this instance, the unit would be double reporting, both against its designed mission and against its "new" mission.

[57] Currently, CJCSM 3150.02, p. J-4, states: "Measured units will provide a subjective assessment of the unit's ability to execute the currently assigned mission." Reports are in terms of 1, 2, 3, or 4, using the standard C-level definitions. However, "PCTEF will not necessarily correlate with the unit's overall C-level. If, for example, the currently assigned mission is nontraditional (peacekeeping, humanitarian relief, counterdrug, etc.), PCTEF will capture a subjective assessment against this mission while the overall C-level will continue to assess the unit's ability to execute its wartime task(s)." Reporting against a ROC would essentially supplant this field.

[58] Adding a requirement for units to report against both a DOC and a ROC will not necessarily impose an additional burden on the commander to gather information. In practice, most ROCs would be similar (if not the same) as the DOC – generally, units have the same mission set in contingencies (ROC) that they were organized and designed for (DOC). Differences do arise, however, especially in regard to SSCs. A basic Army infantry unit is not "designed" for peace operations; a basic Marine unit is not "designed" for firefighting. When employed in these types of SSCs, a unit's DOC and ROC would be somewhat (if not mostly) different. One would expect, and accept, a relative degradation in the readiness for the designed mission as the readiness for the "new" mission increases and employment in the "new" mission lengthens.

[59] Air Force DOC statements do this to a large degree today. For example, the 314 Transportation Squadron has a wartime mission to: "Provide transportation support for a 24-hour base operation at a deployed location having 18 fighter, 12 refueling, or 6 bomber primary aircraft authorized (or any equivalent combination)…Support a base population of approximately 1000 personnel."

operate. A repair depot might report its readiness to repair a specific number of engines in a specified period of time. In general, the vast majority of units should be able to define their DOC or ROC in output terms.

In attempting to determine how a unit might best report its readiness to execute a mission-essential task (MET), we investigated approaches in use by the Services and a new approach under development by the Joint Staff. These approaches are the Army Battlefield Operating System (BOS), the Navy Primary Mission Area (PRMAR), and the Joint Staff Joint Mission Area (JMA). The Army uses BOS as the basis for evaluating the training readiness of units undergoing training. The Navy uses PRMAR as the basis for reporting readiness in GSORTS. The Joint Staff developed JMA in the context of developing a concept of Joint Operational Architecture—an approach to understanding joint operations.

We looked at each of these approaches in parallel with our efforts to understand and apply new management techniques employed by successful American corporations. These new management techniques suggest that the best way to understand unit readiness is to apply a systems or a process approach that focuses on the output of the systems within a unit. This is precisely what the Army BOS approach is designed to do. Although the Army does not currently use BOS to assess unit readiness in the Army's GSORTS report, we believe they would work well for measuring all aspects of readiness. The Navy PRMAR and Joint Staff JMA approaches are more tied to functional stovepipes and are not as useful for our purposes.[60] Therefore, we decided that the model for E-GSORTS should be the Army BOS approach, with we refer to simply as "operating systems."

Accordingly, we concluded that a unit's readiness to accomplish an individual mission or task is dependent on the readiness of the operating systems within the organization. These operating systems can either be operational or support. They can be standardized across the spectrum of all operations, regardless of task or type of organization involved. Using the Army BOS as a guide, we recommend the following operating systems as the DoD standard: the unit's "primary" operating system plus the supporting systems, command and control, intelligence, logistics, force protection, and maneuver and mobility. This approach provides a common, DoD-wide method for

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[60] The Navy PRMAR and the Joint Staff JMA approaches contain a mix of mission-essential tasks, e.g., ASW, and systems, e.g., command and control, that, because they are addressed in isolation, can best be seen as functional stovepipes not effectively reflecting the ability of the unit to provide the output required in the DOC or the ROC.

determining readiness on the basis of operating systems common to all organizations. The value of this approach is that it provides a common structure against which to evaluate (measure) all tasks.

In E-GSORTS, command and control, intelligence, logistics, force protection, and maneuver and mobility operating systems remain constant, regardless of unit type. The "primary operating system" reflects the purpose of the specific type of unit rated. For example, "employ fires" is the primary operating system of a specific type of Army combat unit, as "patient care" might be for a hospital or "handle funds" for a finance unit. Although the nomenclature could vary, DoD could develop a list of primary operating systems for different major types of units, and the readiness matrix would be adjusted accordingly. The important thing is that the list of operating systems includes all support and operational systems that every organization uses in the course of its activity.

The systems approach to readiness can be applied at each level of a military hierarchy with subordinate units being incorporated into the systems of the higher-level unit. For example, a battalion fits into the systems of a brigade and a brigade fits into the systems of a division. The systems approach can also be applied to the tasks against which a unit measures its readiness. For example, a Navy battle group that has the task of conducting antisubmarine warfare (ASW) has a system for conducting ASW that includes the ships, submarines, and aircraft squadrons that are part of the battle group. The battle group's readiness to conduct ASW operations is a function of the readiness of the parts of the ASW system. The system approach holds for the battle group's component parts as well. In this case, the ships, submarines, and aircraft squadrons are composed of systems that must work together to allow the ASW system on the ship, submarine, or aircraft squadron to work effectively.

Figure C-1 shows the operating systems that might be considered for an infantry battalion. The battalion headquarters, including the battalion staff officers and any C3 systems, comprise the command and control OS. The scout platoon provides the intelligence OS. The three maneuver companies provide the maneuver OS. The three maneuver companies and the mortar platoon provide the fires OS. The support platoon, maintenance platoon and the medical section comprise the logistic OS.
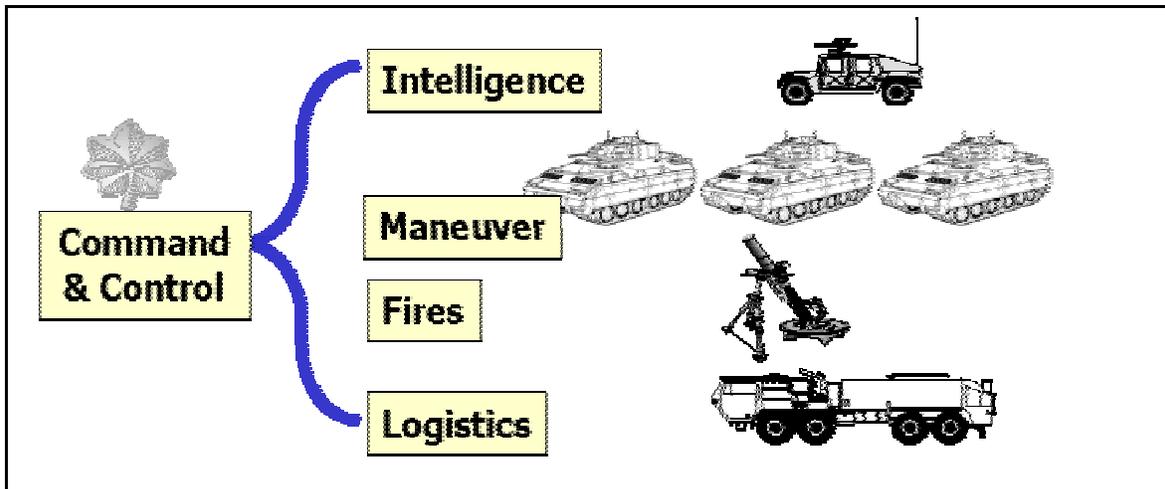
Figure C-1. A Mechanized Infantry Battalion as a System of Systems

Figure C-2, illustrates conceptually how a unit's readiness matrix containing its DOC/ROC, operating systems, and input factors intersect to give a view of a unit's requirements and, when those requirements are compared with its status, to give a view of the unit's readiness. A higher-level commander would build each unit's matrix. In the Navy, for example, the Navy Type Commander determines the PRMAR for every ship. That higher commander, perhaps the commander responsible for designing the unit, would identify each DOC task, would identify the operating systems involved in performing that task, and would identify the standards each unit must meet in order to be given a C-Rating for each task. Each of the Services have already accomplished much of this job. The Army already knows a unit's design tasks and has identified its BOS associated with those tasks. The Navy has identified its unit's PRMARs. The Air Force has identified the unit type codes associated with their unit DOCs. The Marine Corps has developed T&R manuals for most of its units. The DAs will have to build readiness matrices for their units and this may prove difficult for units that have never reported in GSORTS. Nevertheless, we believe it is very important for every readiness-related unit to know what its mission essential tasks are, to know what resources and training it should have in order to be ready and to be able to assess its readiness in comparison to that standard.

	SPECIFIED UNIT											
	DOC/ROC											
	Task 1						Task 2					
Operating System	C	P	T	E	EC	S	C	P	T	E	EC	S
Primary Operations												
Command & Control												
Maneuver & Mobility												
Intelligence												
Logistics												
Force Protection												
Overall												

P=Personnel T=Training E=Equipment
EC=Equipment Condition S=Supplies

Figure C-2. E-GSORTS Readiness Matrix

Each readiness matrix would contain a separate P, T, E, EC, and S rating, aggregated across operating systems, for each mission-essential task assigned in the DOC/ROC (to be more fully described below). Most of the actual data would be automatically drawn from other databases maintained by the Services and DAs to support their normal management duties. See appendix F for a discussion of how this Web-based system might work.

The value of the readiness matrix is that it provides a clearer understanding of the status of a unit, both in terms of its operating systems, and in light of its ability to provide the output associated with its DOC and ROC tasks. The matrix lends a greater degree of discipline to readiness reporting because it forces commanders to consider all the input variables that may affect that unit's ability to execute a task. The matrix can identify more precisely than the present method the location of the "weak link" in interdependent components of a system. Understanding exactly where this weak link lies enables a commander to make a more precise judgment about his unit's readiness to execute a task. By pinpointing weaknesses and highlighting strengths, this approach provides a better understanding of readiness and facilitates more exact and efficient fixes.

Furthermore, the matrix will identify readiness-related performance trends throughout the depth of an organization. If one operating system, for example, is the basis for degraded readiness across a spectrum of tasks, the commander has a better understanding of the nature of the problem and the best way to apply resources to improve readiness status.

REPORTING INPUT STATUS

There are five primary inputs that need to be included in the database.[61] The five inputs are personnel (P), training (T), equipment (E), equipment condition (EC), and supplies (S). All reporting entities, whether combat units, headquarters staffs, or support agencies, can be measured against these five factors using the methodology and metrics, described below. Currently there are some units where reporting all five input areas is not appropriate. Individual adjustments (and a report of "not applicable") can be made in those cases when the Service/parent organization deems it appropriate.

Breaking out a unit's personnel, equipment, and training by operating system and by mission essential task will result in double counting to some degree.[62] An aircraft carrier obviously uses the same platform and deck crew personnel for all types of flight operations, but uses very specific aircraft (SH-60) and aircrew members for antisubmarine operations, and a completely different set for fleet counterair (F-14, F/A-18, E-2). Also, there is overlap between some functional tasks (e.g., command and control) and operational tasks (with a C2 component of their own). This is acceptable, as it can highlight shortfalls in key functional areas separate from the larger operational mission context.

The value of this approach, i.e., not only tying the measurement of a unit's status and readiness assessment to individual and separate mission essential tasks, but also reporting in the same manner, is threefold. First, it would provide the joint commander the task-specific information he needs about the capability of the units assigned or apportioned to him without requiring him to have committed to memory the DOCs or ROCs of a large number of units not of his Service. Second, it would provide the fidelity crisis planners need for sourcing units, without having to make endless telephone calls or

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[61] Addition of a fifth reporting category (from the four currently reported into GSORTS) comes from the recognition that GSORTS generally does not contain reports regarding either accompanying supplies for deploying troops or supplies that would be needed for initial operational capability or sustainment, in spite of the fact that CJCSI 3401.02 labels the S-level "Equipment and Supplies on Hand." (See Part II, Finding 3).

[62] As mentioned earlier, this should not pose any additional burden on the commander, both because the matrix is designed by his higher commander and because the matrix is automatically filled out from other databases. Additionally, the Navy has already identified the equipment (and by implication, the associated personnel and supplies) by mission area for each class of ship. Flow charts such as those in COMNAVSURFPACINST 3501.2g/COMNAAVSURFLANT 3500.7D *SORTS Readiness Reporting* that provide explicit guidelines for assigning ratings based on specific pieces of degraded equipment could be devised for all units regarding all input factors. This would ease the commander's decisionmaking burden and would standardize ratings among like units experiencing the same degradation.

guesses as to what a unit is actually capable of doing. It also provides planners more flexibility. Today, a unit reporting C-3 (e.g., a fighter squadron) may be deemed unacceptable for employment in an operation simply on that basis and without further analysis when, in fact, it may be C-3 in only one of its METs (e.g., cannot conduct ground attack due to missing LANTIRN pods) while it is C-1 in another (fully capable of conducting air-to-air operations). In short, this approach would allow planners both to see what capabilities exist currently in theater and to match "troops-to-task" more accurately and appropriately. Third, it would allow decisionmakers who must allocate scarce resources to make a much more informed decision when they can easily see exactly what ordnance or what personnel skills, for example, units lack.[63]

In sum, we recommend that DoD adopt a modified version of the current Navy system whereby every unit or organization reports its status and its readiness to accomplish each of its mission essential tasks (as stated in its DOC, and if appropriate, ROC). This means that a unit with several METs would report on its readiness to execute each of these METs (essentially the way a ship reports various "M-levels" today).[64] For example, a USAF fighter squadron with both counterair and ground-attack missions would report the following: 1) the status of resources and training required and the unit's readiness to conduct air-to-air operations; *and* 2) the status of resources and training required, and the unit's readiness to conduct air-to-ground operations.

As mentioned earlier, intermediate commanders should report the readiness both of their headquarters and of their organization as a single entity. This second report differs from the procedures that apply to basic units. Commanders at intermediate levels, divisions, wings, battlegroups, etc., need not concern themselves with the individual input factors (resources and training) of their subordinate units. Rather, their concern is with how, and to what degree, each subordinate entity contributes to the overall readiness of the parent organization. CINCLANTFLT has already developed such a system for a limited

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[63] For example, two ships report C2. Under the current system, a commander cannot tell what is the best use of a finite resource that "buys" the most "readiness return." Under the recommended system, a commander would have more information to answer the question "Where do the next five sonar operators I get into my command go?" or "Where does the next widget go?" Without this insight, the commander may opt to put it on a ship that still couldn't make C1 when he could have put in on the ship that only needs that one thing to cross the threshold into C1 status.

[64] Air Force use of unit type codes (UTCs) for managing and employing assets presents a different challenge to developing mission sets. For most Air Force units, individual UTCs are directly relatable to one or more of the missions delineated in a unit's DOC statement, and the required personnel, equipment, and training are already specified. The connection would only need to be more clearly defined and formalized.

number (carrier battlegroups and amphibious ready groups) of warfare systems termed "Mission Capability Assessment System" (MCAS). A similar system could be developed for all intermediate organizations.

We leave open the question of whether the readiness matrix should include a summary measure, or simply report the status of a unit by task and operating system. We feel it is a policy decision best left to the Department. A summary measure could very well lead to the same problems that the current system suffers from—it may provide too little detail to be useful, or important information may get lost in the aggregation of data. In any case, should such a measure be required, E-GSORTS, as an automated system, will easily be able to provide it. In fact, it may be configured to deliver that data in any of several methods; it could be based on the lowest task rating, it could be derived from a weighted average, or any combination, depending on the wishes of the user.

Personnel

As mentioned, E-GSORTS would streamline personnel status reporting considerably. First it would require all Services, CINCs, and Defense Agencies (DAs) to report on the same basis. Then, with uniform data across those organizations, E-GSORTS would be linked to the personnel reporting systems already in use by the Services and with the Defense Integrated Military Human Resources System (DIMHRS) when it is implemented.

The current practice is to report the total number of personnel available compared with total number required by the Service, CINC, or DA guidelines. This information is necessary for the personnel managers of the Services, but by itself, is not useful when determining readiness. What is required is an understanding of which people are available within each operating system to perform a specific set of tasks. For example, on the surface, a mechanized infantry battalion rated at 97% total personnel seems "ready" until one understands that the missing 3% comprise an operating system without which the unit cannot function.

Therefore, what E-GSORTS will do is query the existing personnel database against a specific set of requirements for each cross-section of tasks and operating systems. When assessing a unit's personnel readiness in the logistics operating system, for example, the database will look for the fill of a *target population* of available personnel in

a *specific set of billets* corresponding to the *skills* and *grades* required.[65] The readiness matrix would identify the target population required. The level of detail could be aggregated (all logistic personnel assigned) or might be DOC and ROC specific. A combat-oriented DOC may demand turret mechanics, for example, whereas a peacekeeping ROC may require more truck drivers and fuel handlers. In any case, since personnel reporting is a daily requirement and E-GSORTS would automatically search for and report a set of predetermined population requirements, this portion of readiness reporting would happen automatically, although the commander would retain the ability to insert his own judgment about the status of his unit.

The uniform reporting by all entities of personnel status—total personnel, by skill, and by grade—provides several benefits. It primarily addresses the lack of consideration we perceive in the current system for both personal and unit "experience." Additionally, it takes into account the role of critical skills (currently specifically missing in Army reports) and the role of leaders in contributing to a unit's capability.

An important personnel factor that is not uniformly addressed in the current GSORTS is the extent of personnel turbulence and turnover in units. This factor is important because units that have high levels of turbulence and turnover have difficulty attaining the high levels of training readiness that is increasingly important as units are placed in increasingly demanding situations or are expected to be ready to deploy to a combat situation with very little warning.[66] Rather than measure turbulence and turnover—two factors with negative implications—it appears feasible to report the level of stability in a unit or organization. "Stability indicators" should be designed to reflect the movement of personnel from job to job within the reporting unit and from reporting unit to reporting unit. We believe E-GSORTS should report the percentage of available personnel that hold the same *position* as they did 90 days previously (turbulence), as well as the percentage of personnel that were in the *unit* 90 days earlier (turnover). Percentages could be determined for the unit as a whole, by each mission area, by critical positions, by operating system, or by a combination of these.[67]

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65 Reserve component units would only count as available those personnel who meet the minimum legal requirements for "deployment."

66 GEN Don Starry, U.S. Army (ret), former Commander of the Army's Training and Doctrine Command, made the following statement when asked about the impact of turbulence: "When turbulence and turnover exceed 20% per quarter, all training—no, make that all *learning—*stops."

67 We have not identified a precise way for the stability indicators to be used in determining the P-level. Nevertheless, we are convinced they would be a powerful tool for a commander to help determine whether the unit is either more or less ready than the normal measures would indicate. Additionally,

Training

Most criticisms of the current GSORTS database focus on training readiness, underscoring the point that the inability to portray training readiness in a uniform (standardized) and widely accepted manner is a major weakness of GSORTS. Developing a satisfactory training readiness metric common to all Services, CINCs, and DAs would help to satisfy many critics. The problem of devising meaningful, objective assessments of training readiness is among the most serious issues plaguing readiness reporting. Accordingly, clearer thinking about a standard operational definition for training readiness is required.

We believe the common DoD standard for measuring training status should be the percentage of required training accomplished to standard by the personnel, teams, crews, and operational systems actually assigned and available to a reporting entity. What follows is an example of how an entity's training status should be measured. This example is designed to be applicable to any DoD entity.

The proposed operational definition for training readiness should include several individual components—one macro measure of unitwide collective training for each mission essential task, and micro measures of dimensions of training within each MET's operating systems. Standards would be established by the chain of command and would be maintained no lower than the next higher headquarters at all levels. Standards integrity would be accomplished through periodic evaluations and training inspections. Units would be expected to conduct all training to established standards even if most training must be self-evaluated. This concept is based on the current Navy techniques for measuring training readiness. It also captures the intent of the Army proposed T-METL metric without its subjectivity since events would be prescribed rather than determined by the unit commander. Additionally, this concept also would accommodate the realities of limitations on training time for Reserve component units prior to mobilization.

We discussed the concept of "stability indicators" in the previous section. We believe that stability is also important when assessing training readiness and recommend that a "*stability penalty*" be built into the micrometrics. It is widely understood that turnover and turbulence degrade crew/squad/team training levels. Provisions to account

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turnover and turbulence among the unit's leadership should be especially highlighted. Reporting only a unit's overall average could hide cases where all or most of the leadership is "green." Current DoD data systems do not provide information on job-to-job movement within a unit, and the inclusion of such a measure in GSORTS could provide important data for future research into this issue.

for stability have been incorporated into some training metrics. For example, Army metrics for tank crews require commander and gunner to qualify together as a crew; DoD-wide metrics for aviation units require that pilots be certified in their new unit before they can be counted as trained; and Navy instructions require that retraining be conducted to retain certification when key members of naval gunfire support teams and Tomahawk launch teams depart. Each crew/team metric should include standards for acceptable turnover and requirements for compensatory training for new crewmembers.

We illustrate the following discussion of training metrics with an Army mechanized infantry battalion. One of its DOC METs is "attack." Contributing to the attack task are several operating systems, one of which is "fires" (the unit's "primary" operating system). This operating system in turn consists of 44 Bradley crews, divided into platoons and companies. Each Bradley is manned by a crew of 3 people—vehicle commander, gunner and driver.

The proposed metrics are:

Percentage of each operating system's required personnel that are fully qualified in their assigned position

The percentage would be determined by dividing the number of available personnel in an operating system that have accomplished and met the Service/CINC/Defense Agency training standards for both initial and continuation training by the *required* number as prescribed in the unit's readiness matrix. In our example, the unit's report would reflect the individual training status of the Bradley crewmembers.

Percentage of the unit's required (within each mission area) individual squads/crews/ teams that are fully manned and qualified

This micrometric would be calculated for each squad, crew, and team within each operating system. The three crewmembers in each Bradley in our example must operate together as a team; training in this regard would be assessed here. Training standards should be event based and should take stability into account. A percentage of *assigned* combat support squads and crews fully manned and qualified would also be computed.

Percentage of the unit's required (within each mission area) higher-echelon teams that have completed prescribed collective training

This micrometric would be calculated for each team within each operating system. In our example, 42 of the 44 Bradleys form higher-echelon teams—9 platoons of 4 vehicles each, and a second echelon of 3 companies with 3 platoons each. The collective

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training of each of these teams should have training standards that are event based and that take stability into account.

> *Percentage of operating systemwide (within each mission area) collective training completed*

This micrometric would be calculated for each operating system as a single entity. It would reflect the reality that an operating system may have several disparate type squads/crews/teams that must operate together to accomplish a task. In our example this would include the training status of the mortar squads in the battalion's mortar platoon plus combat service support teams.

> *Percentage of prescribed unitwide collective training completed*

This macrometric would be based entirely on event-based unit collective training accomplished to standard for the mission area being assessed. In order to accomplish a mission, each of the operating systems must work together in some manner. This metric reflects the collective training of the entire set of operating systems in regards to the mission.[70] In our example, unitwide collective training would be a function of training events that encompass the combined performance of fires, command and control, maneuver, etc. (all operating systems).

Having calculated the percentage of training accomplished to standard for each of the micrometrics and the macro metric as appropriate to unit composition and operating system, the overall unit training level, *T-level*, for each mission essential task might be the lowest of the metrics or it might be some weighted average.

There are several implications for establishing a T-rating for Reserve component (RC) units. Actual training status should be reported in GSORTS in the same manner for RC units as for AC units. However, the CINCs who will receive RC units as part of their forces need to know how long they will have to wait before these units will be available to deploy. Accordingly, a days-to-train estimate after they are mobilized is important for reserve component units (see discussion on "Forecasting Readiness," below). RC unit commanders should report the time it will take them to accomplish all of the training

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[70] All of the Services already have identified collective training events that units are required to pursue. Joint Forces Command has developed a training program for joint and unified staffs. Defense Agencies and other organizations without such training programs would have to develop them.

events they need to accomplish after mobilization.[71] We would caution, however, that the days-to-train estimate couldn't be used as anything more than a benchmark to compare the readiness of like units. It is not really a useful planning tool to indicate the ability of a unit to actually deploy because it does not consider the impact that outside limitations and constraints have on the deployment timeline.[72]

Equipment and Equipment Condition

E-GSORTS would approach equipment status with the same philosophy that it deals with personnel. As with personnel reporting, the readiness matrix would identify the target set of equipment required for each cross-section of tasks and operating systems. Units have a record of what equipment they have on hand in their unit property book, and these books are already automated. E-GSORTS would conduct a simple query of that property book data and compare it with the unit's readiness matrix to determine what the unit has on hand versus what is required. E-GSORTS could then cross reference that data with the logistics requisition system to determine the maintenance status of each piece of on-hand equipment. The point is, since units already update the property book upon any equipment gain or loss, and since units must maintain an accurate maintenance status on each piece of equipment to request parts and schedule services, E-GSORTS could automatically populate the equipment and equipment status fields of the readiness matrix with the data it mines from these existing information systems.

Supplies

E-GSORTS will create a "supplies" category and a requirement to report on the status of both on-hand and sustainment supplies. Most units and organizational entities need to keep some level of supplies on hand or have them immediately available if they are

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[71] As described in appendix D, the Services would report on their readiness to provide forces to meet supported CINC needs. Therefore, it is incumbent on the Services to report in the JMRR their own estimates of the availability of all AC and RC units based on current status, training events to accomplish, and training support resources available.

[72] The potential flaw in this portion of the commander's estimate is that he makes it in a near vacuum, without regard to other units that may require the same type of resources simultaneously. For example, if infantry or armor battalion commanders determine that their units must conduct crew and platoon qualification as part of their days-to-train estimate to achieve METL proficiency, the estimate does not consider two very real limitations: range throughput and available transportation. If all infantry and armor battalions need to fire at about the same time in the deployment sequence, that would create a sizable bottleneck at the ranges as units wait for their turn to fire. Furthermore, if all maneuver and fire support battalions generally assume the same basic timeline to train, there may well be limitations in the rail or truck transportation available to move heavy equipment to the range complexes nearly simultaneously to meet those commanders' estimated schedules.

to be ready to respond to a contingency. These supplies include the following types of materiel: 1) secondary consumable and repairable items, 2) munitions, and 3) medical items, 4) fuel, and 5) food. Materiel for initial sustainment of deploying troops may include accompanying supplies that are on hand in the units or held at the base or installation level. It may include prepositioned equipment and supplies and war reserve material that the deploying units will use to establish initial operational capability and for initial sustainment. The Services also rely on DLA, in-place industry agreements, and third-party logistic support agreements to provide critical secondary consumable items including operational rations, individual equipment and clothing, bulk fuel, construction and barrier materiel, medical items, and almost all of the consumable spare parts used in weapons systems and end items.

As mentioned earlier, GSORTS does not currently require the systematic reporting of the status of most of these categories of supplies. Because each Service has a different concept of logistic support with different time lines for sustainment using initial stocks, it is impossible to apply the same reporting guidelines to all.[73] More uniform reporting standards might be developed as part of the Joint Total Asset Visibility (JTAV) system. In the meantime, a unit's S-level might be based on the following examples.[74]

1) *Unit and other types of accompanying supplies used for initial sustainment.* A unit's S-level may be determined by comparing on-hand supplies with both the range and

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[73] There are other sustainment supply and logistic support capabilities that should be included in the Department's readiness reporting system that do not lend themselves to a reporting structure such as the GSORTS or do not necessarily need to be reported with the same frequency as unit status reports. For example, the Bulk Petroleum Capabilities Report is part of the Joint Chiefs of Staff Joint Reporting System (JRS) and is prepared on an annual basis. This report provides an assessment of the readiness of the civil/military petroleum system to meet DoD petroleum demands. Given DoD's increasing dependence on other types of support from private industry and allied nations, DoD should consider establishing other periodic JRS reports to address other critical readiness issues such as the readiness of the civil/military industrial base to meet DoD needs for war reserve materiel and repair parts. These assessments might be based on such indicators as depot maintenance backlogs, customer wait times, peacetime operation inventory levels versus authorized levels, and percentage of munitions inventories that need to be reinspected before issue.

[74] The reader must not assume that the listed examples are all-inclusive. A definitive listing is outside the scope and expertise of this study. The guiding principle for Service logistics experts as they define the items to be included in E-GSORTS reporting is: If it is important to the capability of a unit to perform a mission/task, then its status and readiness should be reported.

depth of authorized levels of supplies. A unit's S-level should be based on the availability of the following categories of supplies:[75]

- Air Force – Mobility Readiness Spares Packages (MRSP); Standard Air Munitions Packages (STAMP) and Standard Tanks, Racks, Adapters, Pylons Packages (STRAPP); and In-Place Readiness Spares Packages (IRSP)

- Navy and Marine Air – Aviation Consolidated Allowance Lists (AVCAL)

- Navy Fleet – Consolidated Ship Allowance List (COSAL)

- Army – Prescribed Load List (PLL) and Authorized Allowance List (AAL)

- Marine Corps (ground) – Sustainment stock levels for all supply classes including prepositioned and unit held stocks

- Inventory levels of chemical and biological defense equipment, medical items and supplies

- Inventory levels of special individual troop equipment not normally issued to troops (e.g., cold weather gear, body armor, theater-specific troop support equipment and clothing).

2) *Prepositioned assets (ashore and afloat) and war reserve materiel, starter and swing stocks located in CONUS and OCONUS.*

Prepositioned stocks of weapons systems and support equipment should be reported as units in E-GSORTS. A prepositioned unit report would address primarily unit equipment—level of fill versus authorized levels and the condition of the equipment and supplies. Reports should address the specific tasks the prepositioned units are designed to accomplish, e.g., LOTS, materiel handling, and petroleum distribution. War reserve items and supplies should be reported by level of fill versus authorized levels and a measure of capability (e.g., days of supply). Examples:

- Army – brigade sets, operational projects, and secondary item war reserves

- Navy – Advanced Logistic Support Sites equipment and supplies

- Air Force – Bare Base (Harvest Falcon and Harvest Eagle), inventories of munitions afloat and other prepositioned support equipment and supplies

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[75] As a minimum, all unit accompanying supplies, Service and DLA war reserve materiel, and other prepositioned materiel for initial sustainment should be reported for the near term. As the ability to acquire total asset visibility, e.g., for the availability of other materiel in the retail and wholesale systems, becomes available this should also be included in the Service and DLA readiness reports.

- Marine Corps – prepositioned equipment, munitions, and other secondary items on the Maritime Prepositioning Force (MPF), LFORM and in Marine Corps units and under inventory materiel manager control in Marine Corps/DLA installations

COMMANDER'S READINESS ESTIMATE

The preceding section described how E-GSORTS should objectively measure and report a unit's status of resources and training and how that status was a proxy for the unit's readiness to provide the output required by the unit's DOC or its ROC.

At first glance, one may be concerned by the seemingly overwhelming chore of aggregating the results of the readiness matrix up through the echelons. This is not as complex as it may seem when one understands that the operating systems of a unit at any level are generally relevant only in how they contribute to the unit's ability to perform the task the next echelon needs it to do. A parent unit needs to know each subordinate unit's readiness to execute the task that enables the parent to execute its task. Raw resource and training data is generally not required. E-GSORTS will be able to aggregate data by task and by operating system. It could be configured to deliver a readiness report based on that data in any of several methods; it could be based on the lowest task rating, it could be derived from a weighted average, or any combination, depending on the needs of the user.

Regardless of the method of aggregation, it is important that unit readiness reports be based on as little subjectivity as possible. Nevertheless, we believe that assessing readiness should not be a purely objective exercise—a function of adding or subtracting numbers and reporting the final result. Today, commanders are relatively free to adjust the "objective" C-level up or down, as they deem appropriate. Commanders at all levels have experience and professional judgment that a readiness reporting system would be foolish to ignore. They are the best judges because they can directly influence readiness through such measures as reallocating resources among subordinate units or substituting one means of achieving a desired effect for another. The commander is in the best position to take account of the intangibles that are not or cannot be directly measured in the categories of personnel, training, equipment, equipment condition, and supplies. The

readiness matrix is a more exact tool to help him do that efficiently. Some of these factors include (not intended to be exhaustive):[76]

- Personnel factors
    - Availability of personnel able to accomplish mission tasks but who don't have required specialty codes or skill levels
    - Unusually high or low formal education level, morale, or unit cohesion/esprit de corps
    - Availability of personnel with certain occupational specialties that have a larger effect than indicated by total personnel or critical personnel fill rates
- Equipment and Supplies factors
    - Availability of items having a larger effect than indicated by equipment fill rate
    - Availability of older items able to substitute functionally and interoperate with required items
    - Availability of spare parts and other material that have been classified as Diminishing Manufacturing Sources (DMS) and Materiel Shortages (MS) items
    - Status of plans to move resources from peacetime temporary locations to wartime locations
    - The availability of special equipment that may be used to increase the chance for success under adverse conditions or add flexibility to mission accomplishment
- Equipment condition subjective factors
    - Demonstrated ability to meet customer wait time (CWT) goals and surge maintenance during exercises, inspections, or operations
    - Programmed depot maintenance status and unscheduled depot maintenance probability
    - Modification programs status and the impact of modifications on day-to-day operations
    - Mission-capable rates

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[76] Extracted from CJCSI 3150.02, page N-6.

- Training subjective factors

  − Availability of qualified training personnel (rated and non-rated), availability of equipment and/or facilities, and the availability of areas, ranges, and flying hours

  − Time lapses between major training events

  − Completion of any specialized training that increases the chances for mission accomplishment

- Other Factors

  − Another unit's readiness rating when more than one unit is required for a specific mission

  − Host or tenant mission requirements

  − Ability of contractors to provide contracted supply and service(s) in contingencies or wartime

Therefore, we recommend an additional, secondary reporting category be made available for the commander to modify/mitigate the objectively derived ratings based on judgment, taking into account subjective factors such as those listed above. This secondary rating would not supplant the objective rating, but its inclusion would be of added value for highlighting the "actual" readiness of those units that are not adequately reflected by the objective measurements.

FORECASTING READINESS

As already noted, a commander should be proactive instead of merely reactive to future readiness concerns. From his vantage point the unit commander can see events downstream and can use that knowledge to predict changes in readiness. Current procedures require a forecast "whenever the overall C-level is not "1"; a change of C-level is predicted; or the forecasted date of change expires."[77] Using current Air Force practice, we recommend that all reporting unit commanders forecast what rating the unit will change to, whether up or down, and the date that change will occur when "concrete indications of an impending change in the unit's [rating] exists."[78]

For example, a unit is currently reporting S-3 in one task due to a lack of required supplies. Based on established firm due-in/due-out dates, the commander anticipates

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[77] CJCSI 3150.02, p. N-21.

[78] Air Force Instruction 10-201, 1 March 2000, page 31.

S-2 in 2 months; the unit would forecast S-2 and an improvement date 60 days from the report date. Alternatively, a commander currently reporting P-1 for a task foresees a degradation in 3 months based on knowing that a significant portion of unit personnel are scheduled to PCS and replacements cannot be immediately trained—a P-3 forecast. This practice would assist training management as well. For example, a commander who has not been resourced to conduct required training, or who is scheduled to participate in an upcoming peacekeeping mission, would be able to forecast the impact of these circumstances and highlight the anticipated training degradation. This "forecast" (based on *concrete* evidence) would be useful in helping decisionmakers perhaps forestall (or at least understand the implications of) the actual occurrence of a readiness shortfall.[79]

A second method that could provide valuable information to higher-level officials would be for reporting unit commanders to estimate the amount of time necessary to upgrade the unit rating in a specific task. Providing such an estimate would be valuable to planners and senior decision makers, allowing them to make informed decisions as to when a particular unit could be sourced to an operation. It would be particularly helpful for many Reserve component units that are staffed in peacetime primarily with part-time servicemembers and for training units that normally are not expected to deploy (but could if given the appropriate resources and training), as well as for all other units of intentional or de facto tiered readiness. The chain of command should provide unit commanders with a specific set of assumptions to use in making this estimate, for example, access to training facilities, personnel fills, and provision of equipment.

We recommend, therefore, that commanders at all levels be asked to predict changes in their readiness status by task, based on information available to them. When units are less than fully ready, commanders should estimate the time necessary to raise the readiness level. In requiring this prediction, the DoD must recognize and accept that these reports are what they are—informed guesses—and not declarations of fact. Also, and especially in regard to the time estimation, DoD must understand that unit commanders are highly dependent on certain assumptions over which they personally often have no control.

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[79] Another example of "concrete evidence" is assignment of a ROC. Knowing that a certain portion of unit assets are, or will be, dedicated to a different mission set for some period of time allows a commander to highlight this fact well in advance of the event.

SUMMARY OF SPECIFIC RECOMMENDATIONS

We have discussed a number of changes we believe should be made to the current GSORTS process to make it more useful and to better bring it into line with Congressional requirements.

1) Expand the GSORTS database to include all readiness-related units and organizations.

2) Require parent organizations, e.g., brigades, and divisions, battlegroups, wings to report separately the readiness of their headquarters *and* of their entire organization.

3) Require the Reserve component to report in the same manner as Active component units.

4) Separate "supply" reporting into a separate category.

5) Base training readiness on training events accomplished to standard.

6) Require all reporting entities to report their readiness to perform their mission-essential tasks that are stated in their DOC and ROC.

7) Design mission statements for units and organizations based on the Universal Joint Task List and Service-linked task lists, in terms of specific capability and as a function of time.

8) Create a readiness matrix for every measured unit that provides the standard against which the unit's readiness is measured.

9) Require unit commanders to forecast the readiness level their unit will change to when concrete indications of an impending change in a unit's readiness exist.

10) Allow commander's to apply their experience and professional judgment to report their estimates of their unit's readiness when their estimates differ from the objectively derived ratings.

11) Institute tracking of "Stability indicators."

12) Leverage existing databases that already collect GSORTS-type data (e.g., Army ULLS and SIDPERS)[80] to push data into the GSORTS database, and make future systems such as DIMHRS E-GSORTS compatible.

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[80] From the Army SIDPERS-3 Proponent Web site: "SIDPERS-3 features include a greatly expanded database…and the primary input source for the Department of the Army Total Army Personnel Database (TAPDB)…. Unit updates constantly refresh the installation database and provides the basis for updates to TAPDB…. In addition to TAPDB, SIDPERS-3 interfaces with seven other major Army automated systems." One cannot help but wonder why GSORTS is not one of these "other major systems."

Appendix D
THE JOINT MONTHLY READINESS REVIEW (JMRR)

William Burns

CONTENTS

FIGURES

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THE JOINT MONTHLY READINESS REVIEW

I. PURPOSE OF THE CHAIRMAN'S READINESS SYSTEM

The Chairman's Readiness System (CRS) was established by the Chairman of the Joint Chiefs of Staff (CJCS) "to provide the DoD leadership a current, macro-level assessment of the military's readiness to execute the National Military Strategy (NMS), as assessed by the Commanders in Chief (CINCs), Services, and Combat Support Agencies (CSAs)."[1] The CRS consists of the reports and processes associated with the Joint Monthly Readiness Review (JMRR). The JMRR is a cyclical process involving four forums. The Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3401.01B, dated 1 July 1999, implements this system.

II. THE LAW

The U.S. Code, Title 10, Section 117 (d), tasks the CJCS with establishing readiness reviews:

> *117(d) Quarterly and Monthly Joint Readiness Reviews. –*
>
> *(1) The Chairman of the Joint Chiefs of Staff shall –*
>
> *(A) on a quarterly basis, conduct a joint readiness review; and*
>
> *(B) on a monthly basis, review any changes that have been reported in readiness since the previous joint readiness review.*
>
> *(2) The Chairman shall incorporate into both the joint readiness review required under paragraph (1)(A) and the monthly review required under paragraph (1)(B) the current information derived from the readiness reporting system and shall assess the capability of the armed forces to execute their wartime missions based upon their posture at the time the review is conducted. The Chairman shall submit to the Secretary of Defense the results of each review under paragraph (1), including the deficiencies in readiness identified during that review.*

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[1] CJCSI 3401.01B, Enclosure A, paragraph 2. The JMRR examines readiness in the context of current operational capability. In contrast, the Joint Warfighting Capabilities Assessment (JWCA) and the Joint Requirements Oversight Council (JROC) provide forums to discuss long-term readiness issues and modernization concerns.

Section 117(a) of the law gives the Secretary of Defense responsibility for establishing the readiness reporting system referred to in Section 117(d) and describes its purpose.

117(a) Required Readiness Reporting System. - The Secretary of Defense shall establish a comprehensive readiness reporting system for the Department of Defense. The readiness reporting system shall measure in an objective, accurate, and timely manner the capability of the armed forces to carry out -

(1) the National Security Strategy prescribed by the President in the most recent annual national security strategy report under section 108 of the National Security Act of 1947 (50 U.S.C. 404a);

(2) the defense planning guidance provided by the Secretary of Defense pursuant to section 113(g) of this title; and

(3) the National Military Strategy prescribed by the Chairman of the Joint Chiefs of Staff.

Section 117(b) describes the required characteristics of the mandated readiness reporting system, and section 117(c) spells out the minimum requirements for what the system must measure.

117(b) Readiness Reporting System Characteristics. - In establishing the readiness reporting system, the Secretary shall ensure -

(1) that the readiness reporting system is applied uniformly throughout the Department of Defense;

(2) that information in the readiness reporting system is continually updated, with (A) any change in the overall readiness status of a unit that is required to be reported as part of the readiness reporting system being reported within 24 hours of the event necessitating the change in readiness status, and (B) any change in the overall readiness status of an element of the training establishment or an element of defense infrastructure that is required to be reported as part of the readiness reporting system being reported within 72 hours of the event necessitating the change in readiness status; and

(3) that sufficient resources are provided to establish and maintain the system so as to allow reporting of changes in readiness status as required by this section.

117(c) Capabilities. - The readiness reporting system shall measure such factors relating to readiness as the Secretary prescribes, except that the system shall include the capability to do each of the following:

(1) Measure, on a monthly basis, the capability of units (both as elements of their respective armed force and as elements of joint forces) to conduct their assigned wartime missions.

(2) Measure, on an annual basis, the capability of training establishments to provide trained and ready forces for wartime missions.

(3) Measure, on an annual basis, the capability of defense installations and facilities and other elements of Department of Defense infrastructure, both in the United States and abroad, to provide appropriate support to forces in the conduct of their wartime missions.

(4) Measure, on a monthly basis, critical warfighting deficiencies in unit capability.

(5) Measure, on an annual basis, critical warfighting deficiencies in training establishments and defense infrastructure.

(6) Measure, on a monthly basis, the level of current risk based upon the readiness reporting system relative to the capability of forces to carry out their wartime missions.

III. HOW THE JMRR WORKS

The following is a brief description of the JMRR process. See Annex 1 for a more detailed synopsis of the CJCSI that implements the JMRR.

JMRR reporting is conducted on a 3-month cycle. In the first month of each calendar quarter, a Full JMRR is prepared. The Joint Staff (J-38) prepares a brief based upon message inputs from the CINCs and CSAs and briefs submitted by the Services and USSOCOM. This brief consists of two main parts. The first describes the current readiness status of the forces and projects their readiness status 12 months into the future. The second part of the brief depicts the readiness of the military to respond to a particular scenario. The scenarios generally consist of two major theater wars (MTWs) or one MTW and a lesser, ongoing contingency.

In the second month of the quarter, a By-Exception JMRR may be held at the discretion of VCJCS upon recommendation of one or more CINC. The By-Exception JMMR serves as the means by which the Services, CINCs, and CSAs report any

significant changes in readiness since the Full JMRR. Also during the second month of the cycle, the Joint Staff addresses particular readiness concerns by focusing scrutiny on a specific area of current concern, such as the military's readiness for Y2K or the impact of ongoing operations in Kosovo.

The Joint Staff prepares a Feedback JMRR in the third quarter. This brief reports on the status of actions taken to address significant readiness deficiencies and concerns raised by the CINCs, CSAs, and Services during the previous Full and By-Exception JMRRs. The brief further provides an overall assessment of the ability of the U.S. Armed Forces to execute the National Military Strategy.

On a semiannual basis (February and August), the Joint Staff, in conjunction with the CINCs, CSAs, and Services, reviews and updates the status and validates the categorization of all deficiencies in the JMRR database.

The CJCSI requires the Vice Chairman to chair and serve as approval authority for the Full JMRR and Feedback JMRR. It further prescribes that the Service OpsDeps present the unit readiness brief for each Service during Full and Feedback JMRRs. The Joint Staff Directors are tasked to present the status of deficiencies in their functional areas during the Feedback JMRR. The CINCs are normally represented at the JMRRs by their Washington liaison officers, who are Colonels or Navy Captains. The Deputy Under Secretary of Defense for Readiness (DUSD(R)) may represent the Office of the Secretary of Defense.

The CINCs and CSAs report readiness in eight functional areas that generally conform to the organizational divisions within the Joint Staff: Joint Personnel (J1), Intelligence, Surveillance, & Reconnaissance (J2), etc. The only reporting in the J3 area occurs in the functional area of special operations. The CINCs are required to report on the adequacy of CSA support. The Services depict: the location and readiness of significant combat, combat support, and combat service support units; the status and trends in the broad areas of personnel, equipment, and training; and an assessment of their support force capability in six areas (theater mobility support, engineers, health services, sustainability, security-AT/FP, and field services). The Services are also required to provide a summary of current tempo and its impact on readiness.

The CINCs and CSAs identify deficiencies according to explicit rules established in the CJCSI. Deficiencies must be quantifiable and tied to approved planning

documents, and they may not reflect future requirements. The CINCs and CSAs also report their top two readiness concerns. The Services do not identify deficiencies but are tasked to describe their top three readiness concerns.

Considerable effort is expended in managing deficiencies. Initially, the Joint Staff works with the Services and Defense Agencies to achieve fixes or workarounds. Deficiencies that appear to warrant programmatic action are referred to the Joint Warfighting Capability Assessment (JWCA) groups for study. All deficiencies remain open and subject to periodic review until actual implementation of a fix.

JMRR results are publicized in a number of ways. The JMRR database is made available to the Service, CINC, and CSA staffs. Following each Feedback JMRR, the Chairman provides a "personal for" message to the CINCs, Services, and CSA directors that summarizes the results of the quarterly JMRR and Senior Readiness Oversight Council (SROC) cycle. Finally, JMRR assessments are summarized in monthly and quarterly reports to the Congress.

IV. FINDINGS

A. Benefits of the JMRR

Prior to 1994, no formal system for addressing joint readiness concern existed. Thus, the Joint Monthly Readiness Review represents a significant improvement in monitoring readiness. For the first time, the CINCs, Services, and CSAs are required to make a quarterly assessment of major readiness indicators and to report that assessment to the Vice-Chairman of the Joint Chiefs of Staff (VCJCS). The VCJCS conveys the JMMR assessment to the SROC, which consists of the Deputy Secretary of Defense, the VCJCS, the Under Secretaries of Defense, the Vice-Chiefs of the Services, and the deputy Service secretaries. As a forum at the highest level of the DoD, the SROC has the ability to deal with both policy and programmatic issues. The CRS accomplishes the following tasks.

1. *Provides a detailed assessment of a wide range of readiness issues identified by the CINCs, Services, and CSAs.*

Each of the reporting elements of the CRS—the CINCs, the Services, and the CSAs—are required to report on a broad spectrum of critical readiness and sustainability issues. The CINCs and CSAs are required to report their readiness in eight functional

areas that cover a broad range of readiness issues. The Services must report the status of their major combat forces, combat support forces, and combat service support forces as well as the readiness of their important enablers.

2. *Provides a forum for dealing with readiness deficiencies.*

Beyond serving as a forum for the CINCs, Services, and CSAs to report their readiness, the CRS provides a specific process for dealing with readiness deficiencies that are identified in the quarterly report. This focus on specific readiness deficiencies provides a way for DoD to address and correct deficiencies. Indeed, a number of specific readiness deficiencies appear to have been corrected by means of the JMRR process.

3. *Provides important information to the SROC.*

In 1994, the Secretary of Defense created the Senior Readiness Oversight Council and directed that it meet monthly to discuss important readiness issues. The JMRR is one of the principal tools the SROC employs to understand DoD readiness. The quarterly JMRR summaries and the periodic JMRR deficiency reviews serve to communicate major readiness issues and warfighting risks to senior DoD leaders.

4. *Focuses DoD leadership's attention on key aspects of the Respond strategy.*

The CRS serves to focus the attention of the DoD leadership on key Respond strategy issues, especially those issues regarding DoD readiness to execute the two-MTW strategy. The CRS highlights readiness issues that might otherwise be overlooked in the course of day-to-day management of the DoD.

5. *Provides a mechanism for the CINCs (especially the two CINCs responsible for the MTWs) to require the Services and CSAs to respond to CINC readiness concerns.*

The JMRR process creates a reporting linkage between the warfighters, on the one hand, and the force providers and other supporting agencies, on the other. In so doing, it strengthens a CINC's ability to identify and comment on capabilities he does not directly control but which are critical to mission success.

B. Problem Areas

Our review of the CRS, essentially the JMRR process, revealed a number of problem areas that are described below. The authors believe that these problems stem from the current concept and structure of the JMRR. These problems should in no way be considered a reflection on the hard working and dedicated military and civilian personnel who prepare the JMRR or who work to eliminate JMRR deficiencies. The following findings are based on extensive interviews with members of the Joint Staff, Service Staffs, and CINC and Component Staffs. They also reflect interviews with CSA personnel and attendance at JMRR and SROC briefs, as well as review of past JMRR briefs and Quarterly Reports to the Congress.

1. *The CRS does not measure the capability of U.S. Armed Forces to carry out the NSS, NMS, and DPG.*

The JMRR focuses almost exclusively on the capability to carry out MTWs—either a single MTW or two nearly simultaneous MTWs.[2] The wide range of smaller-scale contingencies (SSCs) identified in the Respond portion of the strategy are largely ignored on the basis that there are no existing plans or Time-Phased Force and Deployment Data (TPFDDs) for these SSCs. In general, only ongoing SSCs are considered in the JMRR. In fact, the potential for the U.S. to commit forces to new SSCs is much higher than the likelihood of an MTW in the near to medium term. Furthermore, the potential challenges posed by such SSCs are significant, as witnessed by considerations for introducing ground forces into Kosovo, intervening to halt genocide in the heart of Africa, or providing peacekeeping forces to East Timor.

In addition, the assessment of current readiness conducted by each CINC for every JMRR is not placed in the larger context of the CINC's readiness to carry out his responsibilities associated with the Shaping portion of the strategy. Although the CINCs make an assessment of their current and +12-month readiness, our research revealed a focus on ongoing events rather than on the requirements of CINC Theater Engagement Plans (TEP). Readiness issues related to a CINC's TEP were not obvious because the JMRR focuses on functional areas rather than missions and tasks. This lack of focus on the Shaping aspect of the strategy appears inconsistent with the fact that Shaping claims a

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[2] Although most JMRR assessments are conducted in the context of an ongoing SSC such as the war in Kosovo in l999, the focus of the assessment is on the readiness to conduct an MTW while the SSC is underway.

major portion of the day-to-day efforts of CINC staffs and is the basis for the expenditure of a large portion of current operational funding. When the Services discuss the need for additional force structure or operating funds, they are often prompted by perceived needs to support the Shaping portion of the strategy and the CINC TEPs.

2. *The CRS is not comprehensive.*

Title 10 calls for a readiness reporting system that is comprehensive. The CRS does not address the full spectrum of tasks and functions that must be performed by the CINCs, Services, and Defense Agencies if the DoD is to be ready to carry out the requirements of the NSS, NMS, and DPG.

CINCs are tasked to assess and report joint readiness, including deficiencies in the interoperability of the Joint Force and specific comments on the responsiveness and adequacy of support by the CSAs. However, joint readiness is defined narrowly as "the combatant commander's ability to integrate and synchronize ready combat and support forces to execute his assigned missions."[3] The CJCSI does require the CINCs to go beyond simply reporting their ability to integrate and synchronize ready forces, instructing them to report their readiness in eight functional areas that generally correspond to major staff areas of responsibility: Joint Personnel (J-1), Intelligence/Surveillance/Reconnaissance (J-2), Special Operations (J-3/SOD), Mobility, Logistics/Sustainment, and Infrastructure (J-4), Command/Control/Communications/ Computers (J-6), and Joint War Planning and Training (J-7). Missing from the reporting requirements are CINC assessments of their readiness to execute their operational tasks. In the context of Joint Vision 2020, operational tasks include dominant maneuver, precision engagement, full dimensional protection, and information operations.

The Service reports also lack comprehensiveness. Although the CJCSI calls for the Services to report the status of major combat, combat support, and combat service support units, the Service JMRR reports only address the status of major combat units. In addition, although the Services have readiness-related responsibilities identified in Title 10 for 12 functional areas, to include such vital areas as equipping, training, servicing, mobilizing,[4] they are limited by the CJCSI to reporting on 6 enablers, e.g.,

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3   CJCSI 3401.01B, Glossary Part II, p. GL-6 (readiness).

4   Title 10, Sections 3013, 5013, and 8013, assigns to each Service Secretary the responsibility of "carrying out the functions of the Department so as to fulfill (to the maximum extent practicable) the current and future operational requirements of the unified and specified combatant commands."

theater mobility support, engineers, health services, sustainability, security-AT/FP (anti-terrorism/force protection), and field services. These enablers are essentially subsets of some of the 12 functional areas. A particularly significant concern about the CRS stems from the lack of effective reporting by the Services on their ability to provide the support required by the Unified CINCs.

The reports of the Defense Agencies (DAs) also lack comprehensiveness. There are 15 DAs within the DoD. Seven of these are Combat Support Agencies, with specific responsibilities for providing operational support to the CINCs and the Services. Five of the seven CSAs report in the JMRR.[5] Our review of the DAs suggests that there is at least one DA that is not a CSA but, nevertheless, has important readiness responsibilities. The Defense Finance and Accounting Service (DFAS) is responsible for providing financial and accounting support to the rest of the DoD during an MTW, including financial transactions between Service accounts (requisitions for materiel and services), DoD procurements to industry, and the financial payments to Reserve and Guard personnel and their families called up for active duty. In the combat theater, DFAS is responsible for providing funds to support CINC and Service contingency contracting efforts. It may be that other DAs have readiness-related responsibilities.

We reviewed the JMRR reports and the methodology for developing these reports for the Defense Information Systems Agency (DISA), Defense Logistics Agency (DLA), and National Imagery and Mapping Agency (NIMA). The review led to further questions about the comprehensiveness of these reports. The readiness reports provided by DLA have questionable utility because (1) DLA's inventory management centers, which are responsible for providing most of the consumable spare parts for Service weapons systems and equipment, and its distribution centers do not contribute to the JMRR report, and (2) DLA does not include consumable spare and repair parts for weapons system support in its JMRR report.

In recent JMRR reports, several of the Services reported declining operational availability of their aircraft as a major concern. The unavailability of spare parts from DLA has played a critical role in this readiness decline. Yet the Military Departments have not apprised DLA of their requirements regarding spare parts for deploying units

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[5]   A new agency, Defense Contract Management Agency, was established in early 2000, and has been designated a CSA.

and depot maintenance wartime repair activities. It appears that DLA not only is not reporting critical readiness data, but lacks the information from the Services necessary to do so.

As a related matter, none of the entities belonging to the Defense Agencies report in GSORTS. Such nonreporting entities include: DLA headquarters, distribution depots, and inventory control centers belonging to DLA; DISA communications sites and other mission-critical elements of DISA and DIA's intelligence analysis sites. In the absence of GSORTS or other formal readiness reporting from subordinates, it is difficult to determine how the DAs could reasonably report their readiness. The JMRR briefs attended or reviewed by the authors did not provide detailed or meaningful reporting by the CSAs.

3. *Reporting focuses on the readiness of major combat units at the expense of reporting on capabilities necessary to meet the array of tasks levied on the military by the NSS and NMS.*

The readiness reporting system does not assess DoD's readiness to execute all aspects of the Respond portion of the strategy. It addresses neither the full range of capabilities the military requires nor the ability to bring those capabilities to bear in an effective and timely manner. By focusing on MTWs, the CRS tends to concentrate on the readiness of large combat units rather than on the mix of capabilities required to respond to the variety of contingencies such as those in which U.S. forces have been engaged over the past decade. In massing forces against the Soviets, divisions, battle groups, and wings were valid units of measure. In responding to most contingencies today, the U.S. picks and chooses from among smaller units to assemble specific sets of capabilities in joint task forces. The Air Force provides specific types of aircraft and their associated support. The Army provides battalions capable of performing specific missions, although all the capabilities and major equipment designed into a particular unit may not be needed. The Navy may provide a carrier and Tomahawk shooters for a strike mission or small escorts for a sanctions mission, but rarely does a CINC need an entire battle group for any specific mission. During the Cold War, the U.S. maintained sizable forces in Europe to respond to attack. Today, most forces are stationed in the United States, and a heavy premium is placed on the capability to move a tailored task force rapidly to a distant region.

4. *CRS reporting does not adequately take into account the time factor, particularly regarding DoD's ability to sustain forces for the duration of a conflict.*[6]

Sustainability is perhaps the most important enabler on which the Services report in the JMRR. Under the JMRR Lexicon of the CJCSI Glossary for Service readiness assessment purposes, sustainability is to include "prepositioned unit and bare base sets, spares and stocks, ammunition, bulk POL distribution, weapon system reliability and maintainability, general support theater maintenance, intermediate maintenance afloat and ashore, depot capability and backlog, and contingency contracting."[7] "Sustainability" is also defined in the CJCSI under "military capability" as "the ability to maintain the necessary level and duration of operational activity to achieve military objectives."[8] These definitions ignore critical components of sustainability. For example, not all war reserve materiel (swing assets) and other Service- and DLA-managed inventories would be included. Our detailed review of Service reporting on sustainability also revealed significant gaps. For example, the Services do not fully report on the status (depth and range) of accompanying supplies that would be used for initial sustainment. Measurements of the AVCAL range and depth status of all the Navy's carriers, for example, would be very useful. Nor do the Services fully report on prepositioned assets, ashore and afloat, or on war reserve materiel and starter and swing stocks located in CONUS and OCONUS.

The Services essentially ignore the ability of the DoD wholesale supply system to support wartime operations. Deploying units have minimum inventories of accompanying supplies—often enough to sustain operations until a supply pipeline can be established. Once these supplies are depleted (30 to 60 days for many Army, Marine Corps, and Air Force units), the wholesale system begins the replenishment of expended materiel. The DoD wholesale supply system is composed of industry suppliers and providers of support services, the Defense Distribution System, and the Service's and DLA inventory control points.

None of the Services report on their maintenance capability to sustain military operations. The ability to quickly retrograde, fix, and return items to the supply pipeline is critical in maintaining high levels of equipment operational availability. Operational

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[6] See appendix E for a detailed discussion of sustainability as a readiness problem.

[7] CJCSI 3401.01B, Glossary Part III, p. GL-4 (sustainability).

[8] Ibid., Glossary Part II, p. GL-5 (sustainability).

ground and Air Force units deploy with enough accompanying supplies to sustain the first 30 to 60 days. Currently, the Service-managed maintenance depots do not have readiness metrics to assess depot surge capabilities to meet wartime repair requirements.

We found that only the Army and Marine Corps (ground) have calculated requirements for war reserve supplies to cover the execution of the two-MTW scenario. The Army and Marine Corps do not, however, report on the status of these supplies. The Army is beginning to report on the status of its prepositioned sets, but only the gross percentage of fill of each set, not the depth, range, or condition of items in each of the unit sets. Other war reserve supplies maintained within CONUS are not reported.

5. *CRS reporting is not uniform.*

Title 10 requires the readiness reporting system to be "applied uniformly throughout the Department of Defense." In visits to the CINCs, Services, and CSAs, the authors found that staff officers often lack clear guidance on reporting methods, resulting in a heterogeneous range of methodologies and reporting criteria. Although the CJCSI contains an impressive amount of guidance on the nature of the JMRR, it still leaves broad discretion to each reporting CINC, Service, and CSA to make its own determination of what should be reported. In particular, we found that reporting in the eight functional areas is largely inconsistent. There are "associated elements" for each of the functional areas, but each CINC tends to establish his own unique basis for reporting. What one CINC looks at in assessing a functional area is likely to be very different from what another CINC looks at. In one instance, we found identical deficiencies reported by different CINCs in separate functional areas. Such discontinuities clearly hinder comparison of JMRR inputs and data aggregation.

Reporting by the CSAs is even less consistent. Not only is there a lack of guidance, but the JMRR functional areas, which the CSAs are required to use, are much more applicable to the CINCs than to the CSAs. The CSAs each have a unique function and a fairly narrow set of readiness issues compared to the CINCs and Services they support. Their reporting would be more useful if the JMRR process provided for them a method to focus on those unique missions.

Indeed, not only the CSAs, but also each of the CINCs and Services has unique missions and requirements. This has often been cited as a reason for not standardizing reporting. We do not find this argument persuasive. The total set of metrics used by each organization will not be precisely the same, and in that sense reporting cannot be

uniform. However, while organizations have unique missions, many have similar functions relating to the execution of those missions. Reporting in areas such as personnel, communications, and sustainment could be standardized using a common set of metrics. Additionally, where common metrics are not possible, a common methodology for assessing readiness could achieve the uniformity called for by the law. Failure to standardize readiness reporting obscures fundamental readiness issues, needlessly confuses readiness discussions, and frustrates those responsible for allocating resources to maximize readiness.

6. *The CRS lacks established metrics.*

All reporting metrics have been developed independently by the reporting organizations. The CJCSI provides associated elements for each of the CINC/CSA functional areas but does not provide actual metrics for reporting. In their JMRR presentations, the Services are required to report trends in four broad areas, as well as what is described as significant support force capability in six broad categories.[9] The Services are also required to develop metrics that depict operations and personnel tempo (OPTEMPO/PERSTEMPO) and their impact on readiness. The Services are provided no specific metrics to use, however, and no guidelines that might lead to standardized metrics.[10] The four broad areas in which the Services report readiness are expansively defined. For example, "Personnel" is defined to include "retention, recruiting, skill level shortfalls, personnel tempo (PERSTEMPO), operations tempo (OPTEMPO), etc."[11] Such broad definitions beg the question as to what metrics could possibly be used to measure them. Action officers at every level are left to blend together disparate factors in coming up with a subjective recommendation for readiness ratings of C-1 (fully ready) to C-4 (not ready). We found that these "gut feelings" were frequently accepted without serious analysis. If the determination is C-1 or C-2, there is little likelihood that the analysis contributing to that determination will be questioned. On the other hand, C-3 or C-4 ratings in areas such as ISR and mobility have become widely accepted as facts of life. The reality, however, is that commands and organizations, the Services in particular,

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[9] CJCSI 3401.01B, Encl G, Para 1b and 1c.

[10] Ibid., Encl D, Para 1.f.

[11] Ibid., Encl G, Para 1.b.(1).

use metrics in their own internal reporting and management. A failure to specify and incorporate metrics in reporting where it is possible to do so ignores the congressional mandate to provide objective reporting.

7. *There is a metric used in the process that reveals a weakness in the readiness reporting system.*

The June 2000 Feedback JMRR brief posed the question, "Is JMRR credibility waning?" The discussion that followed highlighted the disconnect between (1) the large amount of money put into readiness over the past 2 years and the number of JMRR deficiencies reduced and (2) the fact that CINC functional readiness had declined over the same period. Similar concerns that UNITREP reporting trends did not reflect massive budget increases in the early 1980s led Secretary of Defense Caspar W. Weinberger to establish a Readiness Analysis and Reporting Task Force in April 1984. A decline in the credibility of the current JMRR process may be traced to the emphasis placed by some of the participants in the process upon the *number* of outstanding JMRR deficiencies as a major indicator of readiness. While officers in the Readiness Division of the Joint Staff do not argue that the number of deficiencies can be correlated with readiness, their apparent preoccupation with that number, as well as with the number of deficiencies closed, particularly during JMRR briefings, may have created an impression that the number somehow has importance.

In fact, the raw number of deficiencies has little or no importance. Considering the number of deficiencies in any way as an indicator of readiness lacks merit, if for no other reason than deficiencies are derived almost entirely from CINC and CSA functional area reporting. As argued above, readiness involves considerably more than simply those eight functional areas. It is possible that money is correcting readiness problems, but not in places that would be reflected in reporting on the eight functional areas. Additionally, the absence of established metrics for the functional areas renders reporting on them largely subjective, thwarting attempts at meaningful trend analysis on the reporting.

The authors found this emphasis on the number of outstanding deficiencies to be a source of frustration to many officers on the CINC staffs, as well as to officers in a number of the Directorates of the Joint Staff. Many officers shared with us the opinion that the effort to hold down the number of deficiencies has prevented real readiness issues from being accepted for analysis. This suggests that the number of deficiencies might be being held artificially low, rendering the metric even less meaningful. The CINCs and

CSAs are free to report whatever C-ratings they wish, but the Joint Staff may or may not accept the deficiencies that are driving the C-rating reporting. This in itself would tend to skew any correlation between C-rating trends and the trend in number of deficiencies.

The Joint Staff recently conducted a review of the relationship between the number of deficiencies and risk. Among other insights, the review revealed that 49 percent of deficiencies closed in the past 2½ years were not closed as a result of those deficiencies being corrected. In particular, after new deficiency criteria were established, the Joint Staff removed a large number of deficiencies from the database because it did not consider them valid or quantifiable. Others were removed as a result of being combined with other deficiencies or because the Joint Staff reevaluated them as modernization rather than readiness issues. The review also shows that while the total number of deficiencies has been reduced, the number of category I deficiencies (those seen as critical warfighting risk drivers for OPLANS an CONPLANS) has remained nearly constant. This review appears to demonstrate the lack of correlation between the number of deficiencies in the database and readiness.

8. *The Full JMRR provides an overwhelming amount of data that would be difficult for any individual or any staff to absorb.*

The April 2000 JMRR briefing contained 172 slides and was presented in a little less than 2 hours. Individual slides contained a large amount of data and were often not displayed long enough for the information on them to be digested. Given the limited amount of time, there was little opportunity for questions and discussion, if any of the participants were so inclined. Consequently, many obvious questions raised by that JMRR went unasked, and many potential readiness issues were left unaddressed.

Defenders of the process argue that the Full JMRR is only a snapshot of joint readiness and that analysis of the data presented in the Full JMRR is accomplished in preparation for the Feedback JMRR and the SROC meetings. This rationale leaves unanswered the question as to what is, in fact, the purpose of the Full JMRR briefing. Reducing the amount of data and allowing an opportunity to discuss the data that is presented would lead to a more informed dialogue on readiness and generate a more comprehensive analysis of readiness issues.

We found that the Feedback JMRR also contained an abundance of data at the expense of a discussion of strategic readiness. The brief's stated goal was to "designate deficiencies to provide the best readiness picture." The focus was on individual

deficiencies rather than on the ability of the DoD to execute the several aspects of the NSS and NMS. A total of 134 slides were presented in a brief that lasted 2 hours. The discussion, as reflected in the slides, centered on the opening, closing, and status of deficiencies.

We observed that the SROC did find substantial readiness issues raised by the JMRR and did subject them to further detailed analysis by the Services. Although the SROC did not appear to drive specific corrective actions, it did succeed in highlighting specific strategic readiness issues. Such a focus is absent from the JMRR forums due to the excessive amount of data that is presented in the limited time available. The lack of focus and absence of a dialogue undermines the value of the JMRR in the eyes of many who participate in the JMRR process.

9. *The JMRR process does not yield an objective overall strategic assessment of readiness.*

The Feedback JMRR, conducted 2 months following the Full JMRR, is intended to provide "an overall assessment of the ability of the U.S. Armed Forces to execute the NMS."[12] The Joint Staff therefore has 2 months to conduct a strategic analysis and to integrate the inputs of the various reporting organizations. In fact, the Joint Staff does aggregate deficiencies into key risk elements and areas of strategic concern. However, we did not observe detailed strategic analysis with regard either to current operations (the Shaping aspect of the NSS) or to the scenario selected for the Full JMRR (the Respond aspect of the strategy).

The strategic assessment and overall risk assessment were covered together in one slide, and these assessments were made only in general terms. They neither reflected objective analysis nor addressed disconnects in the reporting of the various organizations. The risk assessment is subjective, with no written definitions for the risk categories used. Of particular interest, the assessment included an evaluation of first-to-fight forces, though only combat forces had been included in the analysis provided by the Services during the JMRR cycle. Despite the appearance of significant deficiencies in combat support and combat service support (CS/CSS) forces in the deficiency database for more than 5.5 years, there was no evidence that the role of CS/CSS forces had been considered in the context of the scenario under consideration. In separate briefs, the Services reported trends for personnel and material readiness factors and TEMPO, but did not

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12   CJCSI 3401.01B, Encl E, Para 1.

relate these trends to their impact on overall readiness. The Joint Staff brief, in its overall assessment, made no effort to assess the impact of Service trends on the ability of DoD to execute either the Shaping or Respond aspects of the NSS and NMS. Finally, neither the Joint Staff's strategic assessment nor its risk assessment suggested to leaders where resources might be applied to increase readiness or decrease risk.

In our interviews, officers on CINC staffs and in the Directorates of the Joint Staff expressed their concerns that the JMRR process did not yield a true strategic analysis. The officers expressing these concerns did not criticize those on the Joint Staff responsible for coordinating the JMRR, but they did suggest that the time and resources provided by the current JMRR process are inadequate to accomplish such an analysis.

10. *The actual JMRR process does not adhere to the CJCSI.*

In the JMRR's clearest departure from the CJCSI, the Full JMRR brief, though compiled by the Readiness Division, is frequently not presented. The brief presented in April 2000 was the first since July 1999. This suggests a tacit recognition of the lack of utility in bringing together very senior military officers to observe an excessively long slide presentation at which they have little opportunity to absorb the information presented or to discuss it. In fact, we were told that full JMRR stand-up briefs have given way to paper briefs in an effort to reduce the number of meetings senior officers have to attend where the same type of information is being presented and in recognition of the fact that significant changes are not seen from one JMRR to another. The Vice-Chairman retains the right to call for a stand-up brief but generally declines to do so.

The major participants called for by the CJCSI generally do not attend the Full JMMR brief. The Vice-Chairman does not often chair the meeting, and the Operations Deputies do not normally represent the Services. In fact, most of these three-star officers are usually represented by one or two star subordinates. Some JMRR experts argue that this is not important because the real work involves the identification of deficiencies and efforts to eliminate them. This point is relevant, yet the fact that senior officers and DoD officials with readiness responsibilities are not participating in the process as intended cannot easily be discounted.

To a certain extent, this apparent lack of interest in the Full JMRR is understandable. The process has become stylized and repetitive. The scenarios, issues, and conclusions are predictable. Participants see little change from one report to the next, which demoralizes both those making the reports and those receiving them. One General

Officer on a CINC staff opined that each new JMRR MTW tasking prompts the attitude, "Here we go again." A result is that "not a lot of original thought" goes into the response. The results and conclusions are easily anticipated.

Several other requirements laid out in the CJCSI are not being met:

CINCs and CSAs are required to report on their mutual support, and CSAs are required to report on the ability of the Services to provide complementary support. We found reporting in this area to be perfunctory and to reflect little actual analysis.

CINCs are required to report deficiencies in the interoperability of joint forces. We saw only limited reporting on interoperability regarding equipment and none regarding doctrine.

The Services are required to report on the readiness of combat, combat support, and combat service support units. As noted above, reporting appears to be limited to combat units, despite the fact that the JMRR database contains longstanding deficiencies regarding CS/CSS units. Services are also required to project the readiness of the units 12 months into the future; often, this does not occur.

The Services are required to present specific trend indicators for personnel, equipment, and training that project forward one year. The Services do not make those projections. More importantly, the Services report trends in isolation. The Services do not discuss the impact of the trends on their readiness to carry out current operations, nor do they assess the impacts of the trends on their ability to fulfill their Title 10 requirements over the range of scenarios mandated by the NSS and NMS.

The Services are required to provide an executive-level summary of current TEMPO and its associated impact on readiness, using metrics that accurately capture Service TEMPO concerns. There were no such summaries in the Service briefs.

The Services are required to depict Service tempo for the previous 12 months broken out by unit type, weapon platform, personnel specialty, and/or ship type. The importance of TEMPO to readiness reporting must be emphasized, particularly in view of current concerns with the impact of overseas commitments and the retention of personnel with specific technical skills. The reporting which does meet this requirement primarily takes the form of raw data in which the impacts on readiness are not specifically addressed. The system is missing objective measures of the effects of PERSTEMPO and OPTEMPO on current readiness and projected future readiness.

The Services are required to report their corrective action plans, if applicable, to address excessive TEMPO. We found only limited reference to corrective action plans. In particular, the Services did not report corrective action plans regarding the low density/high demand (LD/HD) weapon systems that are of particular interest to the CINCs. Congress requires the Secretary of Defense to report on these systems on a monthly basis.

Joint Staff personnel explained that while the impact of TEMPO and corrective actions related to TEMPO are not reflected on specific slides presented by the Services, the Service briefers do explicitly or implicitly discuss the impact of TEMPO in their remarks. They also told us that the impact of TEMPO was reflected on Service slides that depict trends such as the percentage of units reporting C-1 and C-2 and retention statistics. Nevertheless, missing were specifics regarding TEMPO and the executive-level summary called for by the CJCSI. Also, briefer's comments are relevant only when an actual stand-up brief is conducted, which now happens rarely.

11. *The methodology of the CRS does not allow or encourage thorough analysis.*

This is particularly true for the warfighting CINCs, who are dependent on the Services, supporting CINCs, and the CSAs in executing their missions. The warfighting CINC is required to develop and report against an OPLAN or a concept of operations for a given scenario, but he rarely possesses the information he needs to provide a thorough assessment. In particular, the force providers are not required to deliver to the supported CINC an assessment of their ability to provide ready forces on his schedule. Lacking such information, a warfighting CINC recently reported C-3 for a given scenario, while Joint Forces Command and three of the CSAs reported C-4 for their ability to provide the forces that CINC required for the scenario. TRANSCOM, whose ability to move forces on schedule is crucial to every plan, is required to submit its JMRR input one week ahead of everyone else; but this is too late in the process to be useful to those who would want to incorporate this data into their own presentations.

12. *The CRS does not provide incentives for detailed and thorough reporting.*

To obtain the serious attention of the Services and the CINCs, readiness reporting must affect that which interests them most. Readiness reporting must influence Services' ability to lay claim to a specific level of funding. For the CINCs, readiness reporting must contribute to fixing perceived deficiencies relative to both the MTWs and other

likely contingencies and to giving them the resources to carry out the Shaping aspect of the National Military Strategy in a robust manner. Both the Services and the CINCs perceive the JMRR process as useful only to the extent it helps them in these respects. One former CINC spoke to this point when he said, "A better readiness reporting system would serve as a driver for resource allocation."

Investing in older weapons systems reduces the funding available to Services for modernization—the procurement of major new systems. This might result in a disincentive to report on deficiencies or force structure issues regarding the older systems. This problem has particular salience for what are known as Low Density/High Demand (LD/HD) assets. These assets exist in relatively low numbers but are employed extensively by the CINCs. Therefore, the assets tend to incur a high OPTEMPO and PERSTEMPO and are not always available at the times requested by the CINCs. The Services do include their LD/HD assets in their TEMPO reporting. In many cases, they provide neither details as to the reasons for high TEMPO nor plans for corrective action to address excessive TEMPO, as required by the CJCSI.

The CINC staffs appear to perceive the Readiness Division of the Joint Staff to be primarily concerned with holding down the number of deficiencies and unwilling to champion CINC requirements with the Services. The CINCs appear much more willing than the Services to identify problem areas. Service personnel point out that the CINCs do not have the responsibility of funding the resources necessary to correct deficiencies. Nonetheless, it is the CINCs who have the responsibility for executing the National Military Strategy, and it is they to whom the senior civilian leadership and the Congress look to for a definition of requirements or shortfalls. While the CINCs appear more forthcoming than the Services in identifying deficiencies, their ability to gain acceptance by the Joint Staff for their recommended deficiencies is often limited by both their access to relevant data and the analytical capacity resident in the CINC staffs. Since the CINCs report in functional areas, much of their reporting is on factors that are the responsibility of the Services and CSAs. Consequently, they often have anecdotal information but little supporting data. Thus limited in their ability to make a strong case for deficiencies, the CINCs appear to concentrate on remaining consistent in their reporting of a very limited number of high priority items. They appear to have little incentive to attempt more comprehensive analysis, because they lack the information and the analytical capability within their staffs to make an effective case and thereby gain support for efforts to correct their perceived deficiencies.

A second disincentive to thorough analysis arises from the focus on forces and functional areas reporting C-3 or C-4. Organizations reporting an area C-1 or C-2 are unlikely to find their readiness status scrutinized by the Joint Staff. Therefore, staffs can be confident that if they report C-1 or C-2 they will not have to justify their assessment. The lack of metrics obviously makes it more difficult to challenge any tendency to report in the less controversial C-1 and C-2 categories. In fact, we found a number of cases in which the built-in incentives and lack of metrics had led to reporting on functional areas with little or no attempt to conduct an objective assessment of the area.

A third disincentive to thorough analysis and reporting arises from the voluminous amount of material each JMRR attempts to cover. Action officers on the CINC staffs know that their detailed analysis of a particular issue may be reduced to a sentence in the CINC's message input and may not be reflected at all in the final JMRR brief prepared by the Joint Staff.

We did observe a tendency in all of the reporting staffs to focus on specific issues and to attempt to remain consistent in reporting deficiencies on those issues in successive JMRRs. CINC staffs also seek to ensure that the information they report in the JMRR is consistent with that reported in the CINC's integrated priority list (IPL), although the CJCSI specifically warns against including IPL items that relate to modernization concerns unless they have a negative impact on current readiness.[13] In general, the staffs submit issues for which they think they have a chance of garnering support. To ensure they do not dilute their case for those specific concerns, they avoid raising other issues they consider subordinate or unlikely to be supported with additional resources and, thus, do not expend effort conducting analysis in those other areas.

13. *The CRS does not effectively link reporting by commands with clear interdependencies.*

Discussed above with regard to warfighting CINCs and their force providers, this problem arises with regard to all supported CINCs and supporting CINCs, Services, and CSAs. In one case, a CINC was very concerned about an infrastructure issue affecting his ability to wage war in his theater, but his reporting on that same issue was very limited with regard to its effect on his performance as a supporting CINC. Such situations are directly evident in the cases in which forces must swing from one MTW to another.

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[13] CJCSI 3401.01B, Encl D, Para 2.c.(1).

The failure to provide linkages in reporting is important anytime there is a competition for scarce major resources, such as transportation, communications, intelligence assets, training ranges, sustainment assets, or production capacity. The problem becomes particularly acute where there is dual counting as a result of units and assets being dual tasked in the JSCP. It is difficult for a CINC to assess his readiness in the absence of reliable knowledge of the capabilities he will have in a given situation. Even more fundamental is the failure to assess thoroughly the total number of assets required to support various scenarios and the impact of a lack of those assets. For example, in many cases the Navy does not have the repair parts, support equipment, or munitions to outfit every carrier and airwing. This does not pose a problem when the carriers are being cycled for routine peacetime deployments. It raises major questions of readiness when attempting to assess the MTW scenarios. Competing assumptions made by reporting commands regarding who will get what and when they will get it can be contradictory, and the implications for decision makers need to be made explicit.

14. *The CRS does not promote a dialogue on major readiness issues.*

Several factors discourage dialogue on major readiness issues. First, the time allotted for JMRR briefs themselves and the amount of information presented during the briefs simply does not allow time to delve into even the most obvious questions.

Second, the key players are seldom brought together. At the full JMRR briefings, the Services are supposed to be represented by their three-star operations deputies, but those officers generally send subordinates, who brief the Service slides. Written guidance for the CSAs is ambiguous. The CJCSI states, "The CSA directors are the senior representatives for the CSAs."[14] The same paragraph states, "CSAs will provide a representative and should be prepared to brief their agency's readiness status at each JMRR." In fact, the J-38 briefing officer briefs the CSA slides. The CINCs are represented by their Liaison officers, who are colonels or Navy captains and who do not have a speaking role. The J-38 briefing officer briefs the CINC inputs.

The Joint staff attempts to act as honest broker between the Services and CINCs by providing a feedback JMRR and by conducting deficiency reviews, but this does not constitute a dialogue between those responsible for executing the NMS and those responsible for providing the required capabilities. Such a dialogue would clearly benefit

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14   Ibid., Encl C, Para 3.e.

the senior civilian leadership in OSD and would provide useful insights to those in Congress involved in the oversight of defense issues.

Arguably, the most important dialogue on readiness is the one between the Congress and DoD. To be useful with regard to making decisions about defense priorities, that dialogue must be informed by meaningful information and detailed analysis—not simply unconnected data. The JMRR has the opportunity to make a major and meaningful input to that dialogue. Our study indicated that the JMRR process provides excessive data for the reports that are made to the Congress and frequently misses the opportunity to provide insightful analysis that would ultimately assist in making decisions about the allocation of scarce resources.

15. *Reporting organizations often lack the insight into issues necessary to give their reporting credibility.*

In particular, some of the functional areas in which the CINCs are required to report are the responsibility of the Services and CSAs. In these areas, the CINCs lack the visibility required to make a valid assessment. Strategic lift (mobility) is really the purview of TRANSCOM, and in-theater transportation capabilities are provided by the Services. Most of the functional elements of sustainability are the responsibility of the Services and the DLA. When a CINC reports a shortage of precision guided munitions, he may very well be correct, but his contention is unlikely to be based on the weapons inventories of his subordinate component commands or any regular reporting that he receives. To the extent the CINCs do report in such areas, it is often based on nothing more than anecdotal information.[15]

16. *Reporting by functional areas results in a failure to address fundamental CINC and CSA readiness issues.*

The eight functional areas reflect the organization of the Joint Staff and not the mission of any of the commands or organizations that report in the JMRR. They are perhaps most applicable to the warfighting CINCs, but even for them they tend to fit poorly. For example, the CINCs are asked to report on joint personnel readiness and sustainment, although each is primarily a Service function.

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[15] The assessments also do not appear to address wartime executive agency responsibilities (WEAR) where one Service provides critical services and supplies to other DoD components, e.g., water supply and distribution, and blood.

One cannot simply ask whether a command or organization is "ready." The fundamental question is, "ready for what?" In many cases, the functional areas do not address the "what" for which the CINCs and CSAs are preparing. The CJCSI addresses CINC readiness in terms of the ability of the CINCs to integrate and synchronize ready forces to fight wars. Every CINC is expected to address the functional areas in those terms, including Joint Forces Command (JFC), whose primary responsibility is not to fight a war, but to provide joint forces to the CINCs who will fight the wars or carry out the other aspects of the National Military Strategy. In responding in the JMRR in terms of the eight functional areas, CINCJFC does not address his readiness to perform his primary mission. Similarly, the Defense Agencies, by reporting in terms of the eight functional areas, cannot address their readiness to perform their very specific and narrowly defined support functions.

17. *Not all participants in the CRS are equally engaged.*

A senior military officer involved in each stage of development of the CRS told us that the JMRR was originally created in late 1994 in response to the surprise the SECDEF received when two Army divisions reported themselves not ready. At about the same time, the Navy was forced to shut down flying in some airwings owing to a lack of funding. The purpose of the JMRR was to require the Service Chiefs to once a month provide the SECDEF a readiness assessment, so there would not be further surprises.

Today, the CINCs, especially those responsible for the MTWs, hold center stage. It is their reporting on the various functional areas and their reported deficiencies which drive the process. Yet, the CINCs do not have primary responsibility for reporting the readiness of the combat forces because, with the exception of Joint Forces Command and Special Operations Command, they do not own most of the forces and do not have visibility into their readiness posture. The Services, which are responsible for manning, equipping, and training the forces, generally provide reports that lack the focus and detail necessary to illuminate current issues or predict important trends. The comment of a former CINC quoted above is particularly relevant: "The Service part [of JMRR reporting] is broken. The Services will not put a deficiency on the table they are not willing to fund." This same officer later indicated this should be modified with "except when the Services are looking for additional funding," as has been the case recently for recruiting, retention, and aviation spare parts.

Reports by the CSAs seem to be of little interest to anyone even though CSAs are the single manager for many critical services, such as ISR, communications, distribution, and mission essential materiel, e.g., Class I - subsistence, Class II - clothing and individual equipment, Class III - bulk fuels, Class IV - construction and barrier materiel, Class VIII - medical supplies and equipment, and most of Class IX - consumable spares. The ability of the combatant commands and Services to execute their Title 10 responsibilities is highly dependent upon the readiness and capabilities of the CSAs. We also found a mixed degree of effort, at best, expended by the CSAs in crafting their inputs. The CSAs' assessments often appear to have only volunteer inputs with little or no formal structure or linkage to their effect on the Services' and combatant commands' ability to execute a given OPLAN. For example, there is no assessment of DLA's ability to provide mission-critical consumable spare parts.

18. *Reporting on the readiness of major units for deployment is not comprehensive and does not meet the requirements of the CJCSI.*

The Chairman's instruction requires the Services and USSOCOM to depict "current readiness of significant combat, combat support, and combat service support units…."[16] The actual reporting to meet this requirement focuses almost entirely on major combat units.

The Army does not report the readiness of its separate combat support (CS) and combat service support (CSS) units, despite the fact that the JMRR deficiency database contains longstanding deficiencies regarding CS and CSS units. This raises several fundamental readiness questions: What is the current readiness of CS/CSS units? How long will it take to raise the readiness of CS/CSS units to deployment standards? What additional resources will be required to raise those units to acceptable deployment standards? Are those resources available and, if so, on what time schedule? The Army continues to report training readiness based on days-to-train without providing an Army-wide assessment of the availability of Army collective training resources to meet these training needs in the time estimated. As a result, confidence in the ability of the combat units themselves to meet the dates attributed to them is called into question.

The Navy, on the other hand, does a thorough job of analyzing and reporting on (1) when its carrier battle groups (CVBGs) and amphibious ready groups (ARGs) will be available to support various contingencies and (2) the level of readiness that those groups

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16   CJCSI 3401.01B, Encl D, Para 1.b.

can be expected to attain by the time they arrive in the supported CINC's AOR. It does not, however, report the readiness of combat support units, such as mine sweeping units. Even considering the detailed reporting done by the Navy, two clear problems exist. Most importantly, the basis for reporting OPLAN timelines against which the Navy measures its readiness are more stringent than the timelines specified in the DPG. Secondly, the Navy lacks an objective and well-defined method for establishing the aggregated readiness of a CVBG or ARG. In Feedback JMRR 6-00, the Navy stated that "projected aggregate readiness of the CVBG on arrival at MTW is a subjective evaluation."[17]

19. *Excessive turbulence hinders the readiness reporting process.*

We found many of the officers responsible for readiness reporting to be either relatively new to the job or about ready to give up the responsibility after having had it for only a short period of time. This was particularly true of the officers responsible for coordinating command inputs, which was viewed as a purely administrative function. We found turbulence created by both the normal rotation of officers and by the rotation of readiness reporting duties within a command. Consequently, we frequently discovered a lack of understanding of the readiness reporting process itself, a lack of corporate knowledge, and a lack of understanding or appreciation of basic readiness issues by key players in the process.

Not every relevant organization was significantly affected by turbulence. In some organizations, we found that readiness reporting duties were assigned to civilians who have been in their positions since the JMRR was created. At Joint Forces Command, we were assisted in our study by personnel in a division with full-time readiness reporting responsibilities.

20. *Limited staff affects the thoroughness of reporting.*

In most commands or organizations, readiness reporting is a collateral duty. Personnel assigned the responsibility have other significant day-to-day duties that consume the bulk of their time. On a given day, they may be involved in exercise planning, deployed for an exercise, providing support to routine operations, staffing a variety of projects, or manning a crisis action team. Despite the best of intentions, they

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17   Feedback JMRR 6-00, Navy Brief, Slide 22.

frequently do not have the time to devote to a fresh and detailed analysis of a given scenario or the status of a particular functional area.

Other staff elements involved in the process experience difficulties in apportioning an adequate amount of time to readiness reporting. Driven by the schedule of tasking the JMRR, submitting the reports, and preparing the brief, the Joint Staff has little or no opportunity to conduct a strategic analysis of the inputs and integrate them into a coherent picture of strategic readiness for the Full JMRR brief. The resulting presentation thus becomes a segmented picture of functional areas viewed through the perspective of those who are linked via the functional stovepipes, rather than a comprehensive view of DoD's ability to execute the salient portions of the National Military Strategy.

The Joint Staff does have additional time between the Full JMRR and the Feedback JMRR to conduct a strategic analysis. However, we found that the Feedback JMRR tends to focus on individual deficiencies within the stovepipes of the functional areas. Thus, the lack of meaningful strategic analysis remains.

We also found that, not surprisingly, personnel assigned readiness reporting duties are rarely trained analysts. At the same time, there are few analysts on most staffs to whom readiness personnel can turn for assistance.

As a result of a lack of time and a lack of trained analysts, staffs frequently can do no more than report the results of whatever analysis was done at the time the last OPLAN was constructed. This reporting may or may not be current and valid, but it clearly does not reflect a new look at the scenario or issue under consideration.

21. *The lack of automated systems supporting joint readiness reporting limits both the scope and depth of analysis.*

Today, nearly all military operations are joint operations; thus, readiness reporting is a joint issue, as indicated by the report title, Joint Monthly Readiness Review. Consequently, information to support readiness reporting needs to flow across Service boundaries. The conduct of any operation requires the Services, CSAs, and other CINCs to support the CINC in whose AOR the operation is being conducted. Again, this indicates a necessity for information to flow across organizational boundaries in a mutually supporting manner, so that relevant information can be pulled together and analyzed in support of readiness reporting. While we found a variety of databases and

automated systems, we did not find that information tended to be available across organizational boundaries for the support of readiness reporting.

Within a single organization, accurate and timely readiness reporting requires ways to tap relevant databases and to model or simulate a scenario using available data. We found that in most cases databases were not easily accessible to those involved in readiness reporting, especially to those on joint staffs. Nowhere did we find the use of modeling and simulation to assist in readiness analysis.

We found the lack of joint automated systems, supported by available databases and devoted to readiness reporting, to be a major factor limiting the potential for more timely and accurate readiness reporting.

22. *The CRS does not benefit from all the important readiness information developed throughout DoD.*

In conducting this study, we became acquainted with numerous reporting systems used by the Services in particular, but other organizations as well, that are used to manage readiness. We also found that the products of many of these systems are not used as they might be to shed light on related readiness issues in the joint arena. For example, detailed information on personnel, maintenance, and equipment readiness that would be useful in assessing the ability to execute a joint force commander's plans or in making decisions about force structure and resource allocation simply is not used in building the JMRR. A few specific examples include the Navy's personnel system, LOOMIS; the Navy's aircraft material system, NALCOMIS; the Army's personnel system, SIDPERS-3; and the Army's equipment system, ULLS. Whatever the current reason for not using all available sources of readiness information, it would appear useful to the military and civilian leaders responsible for setting policy, allocating resources, and executing the NSS and NMS to have as thorough and comprehensive a report as possible. Additionally, such comprehensive reporting is required by Title 10 and arguably represents the clear intent of the Congress. It would appear evident that thorough and comprehensive readiness reporting requires taking advantage of all relevant readiness data and information.

23. *The CJCSI does not prescribe a procedure for forwarding JMRR results to the senior leadership in DoD.*

Nowhere does the CJCSI explain how the results of the JMRR are to be provided to the Joint Readiness Oversight Council (JROC) or the Senior Readiness Oversight Council (SROC). The instruction also fails to provide any explanation of whether or how the findings of the JMRR process are to be presented to the Chairman or to the Secretary of Defense.

24. *The CRS does not take advantage of opportunities to predict future readiness or the impact of current operations on future readiness.*

The CJCSI does require the Services to present specific trend indicators that provide greater insight into personnel, equipment, and training readiness over time and does require those indicators to project forward one year.[18] As discussed above, the Services do not adhere to the requirement to make projections. In general, we found no effort by the Services to attempt to depict the impact of current operations on future readiness, despite their well-publicized concerns that the rising number of commitments and reduced force structure is undermining readiness. We also found members of the Joint Staff Readiness Division to be resistant to any discussions of future readiness issues, particularly insofar as they relate to attempts by the CINCs to identify emerging or future requirements. At the same time, we observed that the Congress was very interested in the relation between current and future readiness, particularly as it concerned the debate about whether to spend a fixed number of defense dollars on current readiness or force modernization and recapitalization. The Services do, in fact, routinely analyze future requirements to maintain ready forces and the manner in which current operations influence future requirements, but this body of analysis is not brought to bear in the JMRR process.

V. POTENTIAL IMPROVEMENTS TO THE CHAIRMAN'S READINESS SYSTEM

A. The Basis for Improvements

Having completed our survey of CINC, Service, and Defense Agency contributions to the CRS, we began a process of research designed to identify potential

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18   CJCSI 3401.01B. Encl D, Para1.e.

solutions to the problems identified in our review. The first step in this process required identifying the goals of a modernized readiness reporting system. Based on our review of the congressional requirements in Title 10 and of the responsibilities of the Secretary of Defense and other elements of the DoD, we concluded that the readiness reporting system should be designed to meet the following goals:

- Respond to congressional readiness concerns

- Provide readiness information necessary to assist:
    - the Secretary of Defense in the performance of his duties;[19]
    - the CJCS in the performance of his duties;[20]
    - the Services in the performance of their Title 10 functions; and[21]
    - the warfighting CINCs and the Defense Agencies in the performance of their peacetime and wartime missions.[22]

In addition to these considerations, we also recognized that a future readiness reporting system must address what most interests the Services and CINCs in order to attract their sustained attention. For the Services, readiness reporting must influence their ability to lay claim to a specific level of funding. This will entail taking a hard look at their force structure requirements for both the Shaping and Respond aspects of the strategy. In some cases, their routine peacetime requirements for assets are more demanding than those for the MTWs. For the CINCs, readiness reporting must contribute to addressing perceived deficiencies affecting both the MTWs and other likely contingencies. It must also play a role in helping them acquire the resources needed to carry out their responsibilities in the Shaping part of the national strategy. For both Services and CINCs, this means analyzing a variety of scenarios under a range of constraints. It implies an iterative process and an ongoing dialogue driven by the Joint

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[19] John Tillson and Robert Fabrie, "OSD Duties in the Respond Strategy," IDA Paper P-3407, January l999. This paper describes the spectrum of readiness-related duties of the Secretary of Defense and the Office of the Secretary of Defense.

[20] The CJCS is responsible for "advising the Secretary on critical deficiencies and strengths in force capabilities." (USC, Title 10, Section 153)

[21] Service Secretaries are responsible for "carrying out the functions of the Department of the Army, Navy, Air Force so as to fulfill (to the maximum extent practicable) the current and future operational requirements of the unified and specified combatant commands." (USC, Title 10, Sections 3013, 5013, and 8013)

[22] A CINC "is directly responsible to the Secretary for the preparedness of the command to carry out missions assigned to the command." (USC, Title 10, Section 164)

Staff or OSD. When their reporting influences the resources allocated to them, Services and CINCs will take readiness reporting seriously.

We also examined the concept of a readiness reporting system in the context of efforts to transform the Department to meet the challenges of the 21st century. The DoD has identified three key transformation elements.

Defense Strategy: The NSS with its three central elements—shaping, responding, and preparing—was the focus of our initial research, becoming the centerpiece of our search for potential solutions to the problems identified. The National Security Strategy provided a clear basis for answering the question "Ready for what?" Our review of the NSS in the context of the congressional requirements leads to the conclusion that the CINCs are responsible for reporting to the Secretary of Defense on the preparedness of their commands to carry out missions assigned to the them, and that the Secretary of Defense is required to report to the Congress on DoD readiness to execute the Shape and Respond portions of the NSS.

Joint Vision 2020: Joint Vision 2020 provides the conceptual framework for how U.S. forces will fight in the future and describes U.S. military goals for the future. This is the basis against which a future RRS should report readiness. Joint Vision 2020 defines the overall transformation goal as "the creation of a force that is dominant across the full spectrum of military operations." This spectrum of military operations appears to include the missions laid out in the Shape and the Respond portions of the NSS. Although there is no separate discussion of readiness in JV2020, the document does provide a benchmark against which readiness may be reported in the future. The following concepts identified in JV2020 would provide such a benchmark:

- "Full spectrum dominance is achieved through the interdependent application of dominant maneuver, precision engagement, focused logistics, and full dimensional protection."

- There is a need for a force that is "fully joint: intellectually, operationally, organizationally, doctrinally, and technically."

- "The joint force must be able to take advantage of superior information converted to superior knowledge to achieve 'decision superiority.'"

- "Interoperability is the ability of systems, units, or forces to provide services to and accept services from other systems, units, or forces and to use the services so exchanged to enable them to operate effectively together."

- "Information operations are essential to achieving full spectrum dominance."

- "Joint command and control is the exercise of authority and direction over the joint force. It is necessary for the integration of the Services' core competencies into effective joint operations."

A future RRS must address, for all missions assigned by the NSS and NMS, the full range of tasks identified in JV2020, including the full range of tasks associated with dominant maneuver, precision engagement, focused logistics, and full dimensional protection. It must include readiness to conduct joint and combined, interoperable operations. Finally, it must include Service and Defense Agency readiness to provide the full range of support the CINCs require.

Management Reform: The third transformation element of the DoD corporate vision is the effort to bring to DoD some of the management techniques and business practices that have restored American corporations to world leadership. Our review of corporate management techniques and business practices took us first to the Services and CINCs to identify management techniques and business practices under development or already in use. We investigated DoD efforts to meet the requirements of the Government Performance and Results Act (GPRA). We also conducted a wide-ranging review of current business literature in a search for concepts relevant to DoD readiness reporting needs. This review exposed a number of modern management concepts that form the basis for many of our most significant recommendations.

Given the range of issues and problems associated with the current JMRR process, we concluded that only a restructured JMRR process would make it consistent with the congressional mandate. These conclusions will be formulated in the recommendations below.

B. A 'Systems" Approach to Readiness Reporting

The massive amount of data collected and reported and the consequent difficulty in interpretation of the data represent one of the more difficult problems with the current RRS. Although the current system clearly provides important insights into specific problems and deficiencies,[23] as described above, we conclude that the current system has serious shortcomings including lack of comprehensiveness and lack of uniformity. In general, we found the JMRR to be unable to indicate overall DoD readiness to execute

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[23] Reports that the JMRR played an important role in forecasting problems that were to arise during the air war over Kosovo illustrate the benefits of the JMRR in identifying specific problems. However, as GEN Jumper, commander of USAFE, testified recently at IDA, the JMRR did not adequately address the problems caused by the lack of horizontal integration across the functional stovepipes.

the NSS. To remedy this problem, we conclude that the RRS should collect additional data. Given the difficulty in making sense out of the enormous amounts of data provided by both the GSORTS and JMRR today, how can we reconcile this finding with our finding that the current system needs to be expanded to cover important holes? How can we provide a RRS that is both comprehensive and comprehensible? How can we simultaneously collect more meaningful information and report less data?

Another problem was our recognition that the current RRS led to micromanagement of narrow deficiencies identified in the JMRR rather than to a focus on overall DoD readiness to execute the NSS. In this context, the problem we faced was how to reconcile the relatively narrow or stovepipe focus on the readiness of the bits and pieces of our capability with the needs of the Secretary of Defense and the Congress to understand DoD readiness on a larger scale.

The DoD must also manage the perennial conflict between the needs of readiness (capability today) and the needs of modernization and force structure (capability tomorrow). Is there a way to design a RRS that will provide insights enhancing DoD leadership's ability to decide between the demands for readiness in the near term and the demands for readiness in the future? Finally, there is a problem in resolving the conflict between the need for operational data and need for resource allocation data. If the CINCs are responsible for operational decisions and the Services are responsible for resource allocation decisions, is there a way for the RRS to enhance the ability of both to make good decisions?

As described above, our search for solutions to these problems led us to look at DoD management reform efforts and initiatives underway in the Services and the combatant commands with a special focus on new business management techniques.

Our review of American corporate management techniques and business practices provided a number of insights that have contributed to our recommendations for solutions to the problems we found with the readiness reporting system. The most important ideas from this review are listed in Annex 2 to this appendix and may be briefly summarized as follows:

- *The problem.* Organizations today consist of functional silos, or stovepipes—vertical structures built on narrow pieces of a process. Most organizations continue to manage their enterprise by managing individual departments. This management style prevents organizations from seeing the larger picture of the role of the organization as a whole. It also leads to the use of

inappropriate metrics that lead to suboptimization and micromanagement. Most organizations focus on maximizing local goals rather than global or organizational goals. Organizations generally do not recognize their internal processes or systems and do not have anyone in charge of, or responsible for, them.

- *The solution*. Organizations must redefine the scope of management to include the entire process or system, e.g., the entire supply chain. Organizations must reengineer their business processes to ensure that they are managed to serve the customer rather than to meet the suboptimal goals of functional managers. A few key leverage points in any system determine the overall performance of any organization. These constraints or bottlenecks can be identified and managed. Most constraints are not physical limitations but limitations created by the beliefs, assumptions, and policies that are built into the organization.

This review of the literature led us to conclude that a modernized readiness reporting system should be based on a systems or process approach. We conclude that a modern readiness reporting system could be both comprehensive and comprehensible only if the RRS were to report the readiness of systems that encompass the enormous amount of data collected by GSORTS and during the JMRR process.

1. Advantages of the Systems Approach

The systems approach holds out the potential for solving other problems we identified. First, a systems approach provides the participants in the system an opportunity they do not have today, namely to see where they fit into the system and how their actions affect the capability of the whole system. Given this ability to see the entire system, participants can make decisions with the capability of the whole system in mind. They need no longer focus narrowly on the bits and pieces of readiness over which they have visibility and control.

The systems approach also provides help in resolving the conflict between current and future readiness. If the CINCs, Services, and Secretary of Defense are able to see an entire system, e.g., the Defense Transportation System described below, they may be able to identify elements of the system that can be improved in the near term to enhance current readiness. They may also be able to identify elements of the system that can only be improved in the longer term with modernization or restructuring of the force. The visibility into the potential tradeoffs provided by the systems approach may allow participants to make better choices about readiness today versus readiness tomorrow.

Finally, the systems approach may help to resolve the conflict between the need for operational data and the need for resource allocation data. To some degree, both kinds of data will be available in the systems view. The visibility afforded to all participants in a system may allow both sides to make better decisions. It may also help to identify rules, policies, and practices that stand in the way of making better operational and resource allocation decisions.

2. DoD as a System of Systems

The basic steps in a systems approach to readiness reporting are: (1) collect the additional data necessary to make the RRS comprehensive; (2) organize that data into a comprehensible package, i.e., a system or process; and (3) require the responsible CINC or Service/Defense Agency chief to report on the readiness of the system for which he is responsible rather than on the readiness of the bits and pieces of the system.

We sought to determine whether DoD readiness data can be collected into comprehensible systems or processes, and whether it is possible to determine the readiness of those systems or processes. We soon recognized that DoD is indeed a system of systems—operational systems, support systems, supply systems, communications systems, and functional systems of all kinds. We concluded that DoD's ability to execute the National Military Strategy depends on the combined and synchronized capabilities of these systems to provide the right capabilities at the right time and for as long as necessary.

These preliminary conclusions were reinforced by our observations of certain Service and CINC initiatives. Both the Army and the Navy have initiatives underway that offer a number of ideas relevant to a modernized readiness reporting system. CINC TRANSCOM is working on a system that will allow it to look at the capability of the entire Defense Transportation System—from fort to foxhole.

The Army is developing a "Strategic Readiness System"[24] with the goal of becoming "a readiness reporting system that is accurate, objective, and timely in its measurement of the Army's ability to support the NMS and allows the Army leadership to direct resources in order to influence readiness across the Army." This Army plan is based on the Army's recognition that the current system "does not measure the full spectrum of missions—both functional and operational." The Army has stated a goal of

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[24] LTC Steve Geise, "To Change an Army, Introduction to Strategic Readiness System," Briefing provided in September 2000.

"reengineering readiness reporting to a mission focused system" based on the Army METL that covers the entire Army, not just the operational forces. To achieve these goals, the Army plans to build a "communication tool across the entire spectrum of the Army" and to develop "performance measures of every organization (TRADOC, FORSCOM, AMC, and our power projection platforms)."

The Army bases its approach to achieving these goals on "business process engineering," using Activity Based Costing/Management (ABC/M) as the principal tool for identifying readiness-related processes, measuring their readiness, and allocating resources to enhance their readiness. ABC/M has been selected by the USD(AT&L) as a tool for improving cost management. DoD is integrating ABC/M into management processes throughout the Department.[25]

On another track, the Navy is developing the Mission Capability Assessment System (MCAS), which is designed to measure the mission readiness of Navy battle groups (BG) and amphibious ready groups with a Marine expeditionary unit embarked (ARG/MEU). Although MCAS is not officially linked to the requirements of the Government Performance and Results Act (GPRA), MCAS evolved out of earlier Navy efforts to implement the GPRA. MCAS utilizes key performance/readiness indicators based on data currently collected by the BG staffs (CCDG/CCG, CVW, CDS). It requires no new data to be collected. The quantitative performance indicators are selected based on mission criticality and are packaged with a mission capability focus to provide the Commander with a daily "EKG" on the BG's state of readiness. MCAS is a distributed data entry system designed to minimize staff workload. The Navy successfully completed a MCAS pilot project in FY 1999.

CINC TRANSCOM, in apparent recognition of the importance of the overall Defense Transportation System (DTS), is developing "a mechanism that ties all of its analytic tools together to provide a complete picture of the deployment process from home station through arrival at the in-theater destination."[26] This system is intended to serve as "an integral part of planning, programming and exercise support" and to answer such key operational questions as:

- Where will elements of the force be at critical points in the deployment?

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[25] USD(A&T) Memorandum, subject: Defense Wide Implementation of Activity Based Management, July l999.

[26] TRANSCOM Briefing, Analysis of Mobility Platform (AMP), Defense Transportation into the 21st Century, Mr. J. Marcotte.

- How much lift is required to achieve the desired force closure?

- Is the allocated lift force adequate to achieve desired closure?

- Where are the bottlenecks, congestion in the flow?

This system may significantly aid in assessing the readiness of the DTS to meet the demands of the NSS.

3. Determining the Readiness of DoD Systems

If a system is an organization or a group of organizations with a common goal, then the readiness of a system is a measure of the system's capability to achieve its goal. If we are to determine the readiness of the system, the goal must be measurable, and the determination of the system's readiness must be based upon comparisons between goals and actual capabilities. A private business can be described as a system whose goal is to make money both now and in the future. Thus, the readiness of the business could be determined by comparing its profit goal with its actual profit. In much the same way, DoD's goal is to provide national security now and in the future. In the context of the RRS, the DoD's specific goal is to be ready to execute the NSS. Indeed, that is precisely what the Congress has asked DoD to report in its readiness reporting system.

If DoD is a system of systems, then the overall DoD system is made up of many subsystems, and those subsystems are made up of the bits and pieces about which DoD already has a great deal of readiness information. In other words, we believe it is possible to evaluate DoD readiness by: identifying the systems, subsystems, and sub-subsystems that, taken together, represent the entirety of DoD activities related to achieving the goals of the NSS; determining the goal of each system; arranging the fragments of readiness information into systems; and assessing the readiness of these systems by comparing their output with their goals. By building a picture of the readiness of multiple systems that ultimately make up the DoD system, it should be possible to provide the Secretary of Defense and the Congress a clearer picture of DoD readiness to execute the NSS, NMS, and DPG. The basic challenge is to enhance understanding of DoD readiness by building an incremental picture of the readiness of DoD systems.

One of the more important systems for maintaining readiness is the DTS—the system responsible for moving U.S. forces and materiel from a peacetime location to

some other location tied to the strategy. We think of the DTS as the "fort-to-foxhole" system. This system is, in fact, made up of a number of smaller systems such as the air and sealift systems, the CONUS fort-to-port system, and the overseas port-to-foxhole system. These systems can also be seen as comprising subsystems according to our definition. If the Secretary of Defense is to have a picture of DoD readiness, he must have an understanding of the readiness of the transportation system as part of that picture. (See Figure D-1.) By looking at the readiness of the transportation system as a whole, both operational and resource allocation decisions can be made with their impact on the overall output of the system in mind. Commanders at all levels will be able to see how their actions impact the overall capability of the system and may be able to work together to enhance the system's overall output.
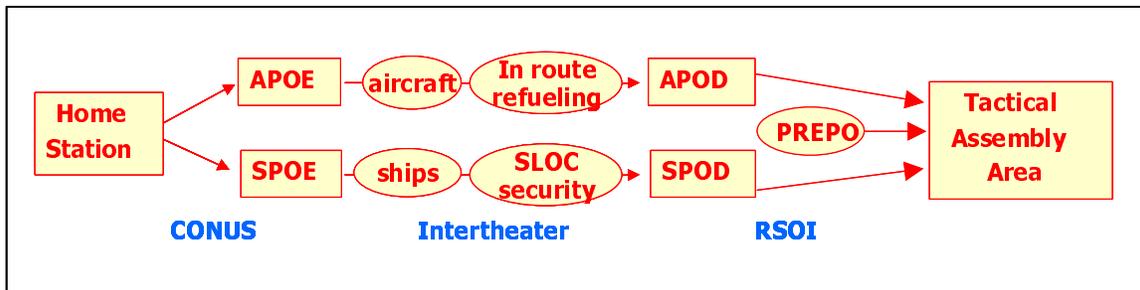
Figure D-1. CINCTRANS Reports the Readiness of the Defense Transportation System

This short description of the transportation system should clarify one of the more difficult problems inherent to the readiness problem. One reason why readiness of the transportation system is reported in bits and pieces is that there is no commander subordinate to the Secretary of Defense who can be said to be responsible for reporting on the readiness of the transportation system. Instead, there are at least three, if not five, CINCs and three Service Secretaries who have some responsibility for reporting on the readiness of some piece of the DTS. The JMRR reflects this fragmentation: each CINC and Service is responsible for reporting on some aspect of the DTS, but none is responsible for reporting on the overall DTS ability to move forces and materiel where and when needed. It is left to the Chairman and the Secretary of Defense to make sense of a diverse set of reports, none of which provide an estimate of the readiness of the system in terms of the system output (or throughput) within a given time frame.

This diverse set of reports, none of which provides an overall view of the system as a whole, leads directly to the micromanagement and suboptimization described above. In the current RRS, when the Joint Staff receives a report of a problem, the staff element responsible for the functional area considers the problem and decides whether it

represents a deficiency. Once a problem has been identified as a deficiency, the responsible staff begins an intensive management effort to eliminate the deficiency. As part of this process, efforts are made to determine the importance of the deficiency and to place it into an appropriate category.

In the absence of a measure of how each deficiency contributes to the readiness of the system in which it operates, efforts to eliminate specific deficiency tend to result in micromanagement and suboptimization; resources devoted to fixing a problem often fail to improve the output of the system. The reporting organizations and staff in the Pentagon simply do not have a comprehensive understanding of the relationship of particular problems to the overall readiness of the system. The responsibility for managing these systems may belong to another DoD component or cut across several organizations. Often no one has a clear view of the overall goal or purpose of the system in which the deficiency arises, and no one knows precisely who has the direct responsibility for correcting the individual deficiencies or those within a system as a whole.

In the DTS, for example, problems concerning the availability of spare parts for airlift aircraft, the capacity of in route refueling bases, and the capacity of ports of debarkation should be dealt with in the context of the system of which they are a part. It is as if the DTS were a chain and, just as a chain is no stronger than its weakest link, so the strength or readiness of the DTS is no better than its weakest link. If the DTS goal is to provide throughput, then the impact of each problem must be measured in terms of its impact on the throughput of the system. The fact that there is a problem as seen by one element of the system does not necessarily mean that the problem affects the overall throughput or readiness of the system. Nor should it be considered without a clear throughput understanding of its interrelationship with other systems that are dependent on its capabilities.

Managers often develop tunnel vision, striving to repair or optimize only their particular segment of the organization. Such a failure to recognize the relative significance of local problems to the health of the entire organization leads to a misallocation of resources. When participants try to fix or optimize the part of the organization or system they are responsible for or that they can see, they run the risk of using resources to fix a problem that is not as important as another problem. Using the chain analogy again, if they use scarce resources to fix a link that is already strong in relation to other links of the chain, they are likely to use scarce resources without

improving the capability of the system. Looking at the overall system and measuring its readiness in terms of its ability to achieve its goal—throughput in the case of the transportation system—leads to a search for the weak link in the chain that creates a bottleneck or constraint in the system.

CINC TRANSCOM's development of a method to model the DTS suggests a model for such an approach. TRANSCOM has a holistic perspective on what the DTS chain looks like—from the power projection platforms to the ports of embarkation, to the ports of debarkation, to the tactical assembly areas. Based on calculations made as part of the deliberate planning process and various programmatic studies, TRANSCOM knows the throughput requirements for each node and link in the chain. Given this information, CINC TRANSCOM need only require each node and link to report its readiness in terms of its throughput capabilities and then compare the reported capability with the required capability. Recognizing that a chain is no stronger than its weakest link, CINC TRANSCOM could then come to a conclusion about the overall readiness of the DTS. Having recognized the weakest link, TRANSCOM could also take actions to strengthen that link and thereby improve overall TRANSCOM readiness at the least cost.

The logistics system, another key DoD system, provides the logistic support and sustainability necessary to the execution of the strategy. The logistics system is made up of a number of subsystems, including those that provide food, POL, ammunition, medical support, and spare parts. Just as no single commander is responsible for reporting the readiness of the overall logistic system, no single commander is responsible for reporting the readiness of these subsystems. Indeed, as described above, major elements of these systems are not considered in today's RRS at all. Figure D-2 provides an example: the Navy sustainment system.
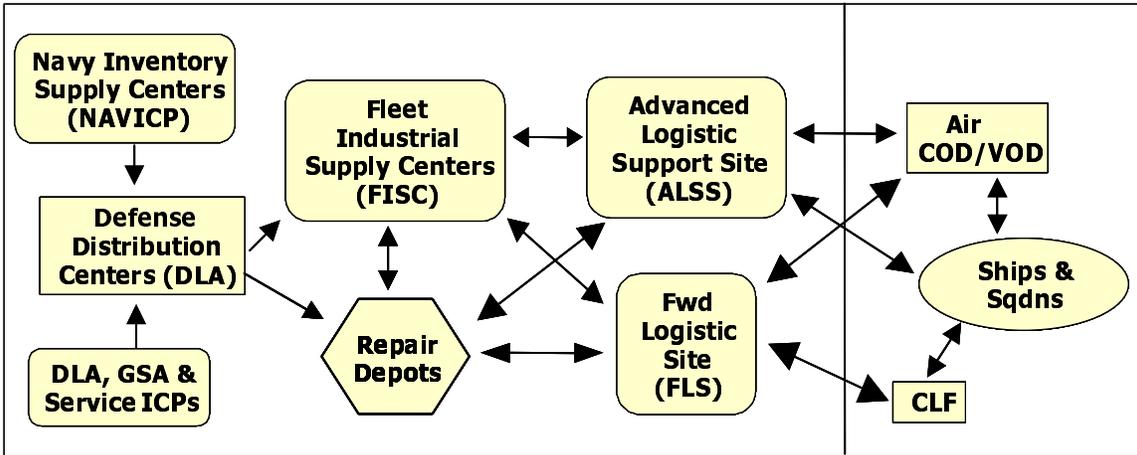
Figure D-2. The Navy Sustainment System

This Navy system for providing repair parts and consumable supplies to forward deployed Navy forces is essential to the Navy's ability to sustain its forces for the execution of the two-MTW strategy. Unfortunately, neither the Navy nor any of the other Services tracks the readiness of this sustainment system. Most of the pieces of the Navy sustainment system are excluded from GSORTS and, according to our research, many do not have an understanding of their specific mission-essential tasks in wartime. Indeed, as described in Appendix E, most of the recent initiatives to improve DoD logistic support have been focused on peacetime rather than wartime operations.

Nevertheless, if the Secretary of Defense is to have a complete picture of DoD readiness, he requires an understanding of the readiness of the entire logistic system. That measure of readiness must include the readiness to sustain the forces. For example, the Service Secretaries must be concerned with their Service's readiness to sustain their forces for the execution of the two-MTW scenario—a period of over 200 days. The supported CINC must be concerned with his ability to execute his tasks associated with "focused logistics." CINC TRANSCOM must be concerned with the readiness of his command to conduct transportation operations, including the sustainment of operational forces, for the duration of the two-MTW scenario. The Director of the Defense Logistics Agency is responsible for providing Class I rations, Class II clothing, Class III bulk POL, and Class VIII medical supplies to the entire DoD and must be concerned with his organization's readiness to perform these tasks.

The operational concepts laid out in Joint Vision 2020—dominant maneuver, precision engagement, and full dimensional protection—are best understood as operational level systems of systems. Today's RRS cannot determine the readiness of

these systems. Although the CINC or CSA functional area reports may address pieces of a system, these are stovepipes that do not encompass the entire system and do not describe the ability of the system to provide the output the CINC requires. For example, a CINC precision engagement system might include an ISR, a C4, and a logistic subsystem that could be included in the current JMRR functional area reports. Yet, the CINC, not knowing the capability of the operational units associated with the system and having no way to see how each functional and operational stovepipe fits into the overall precision engagement system, would be unable to determine the overall readiness of his precision engagement system. Moreover, none of the CINC's subordinates, who report to the CINC on the basis of functional areas, would be responsible for ensuring the successful operation of the precision engagement system.

The air, land, and naval component commanders each own a piece of the system, but none has the perspective needed to determine how his capabilities fit into the overall output of the system, and none can be held responsible for reporting the readiness of the precision engagement system. Indeed, in today's management context, not even the CINC has visibility over, or is held responsible for, the output of any of the operational systems identified in JV 2020.   Figure D-3 depicts a simplified example of a precision engagement system. To report his readiness to execute his precision engagement tasks, the CINC must know the readiness of this system.
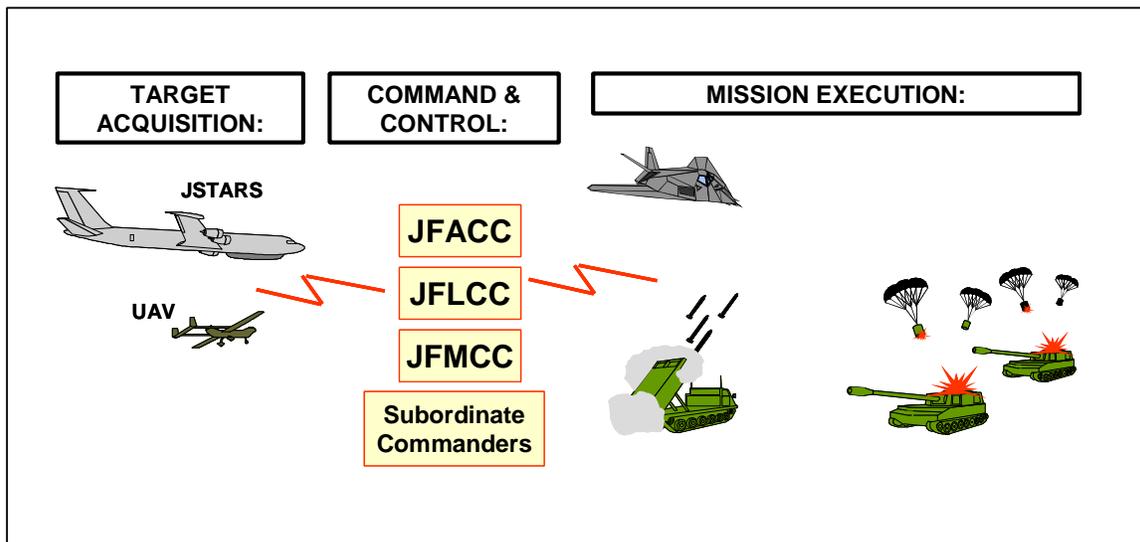
Figure D-3. The Precision Engagement System

In Korea, for example, one of the CINC's most important mission-essential tasks is to counter anticipated North Korean artillery attacks on Seoul and its defenders. The CINC has built a system of systems to accomplish this precision engagement task. The system comprises Army, Navy, and Air Force attack systems. It involves an ISR system that incorporates information from forces under the CINC's command and from supporting CINCs like CINC SPACECOM and from the Defense Intelligence Agency. It also involves a C4 system and logistical support system. In order to understand his readiness to execute this mission-essential task, the CINC must know the capability of this "counterfire" system in terms of its output over time. And, as with a chain, the system is no stronger than its weakest link. No matter how good the ISR capability, if the target information cannot be delivered effectively to the firing units, the system is not ready. No matter how ready the firing units are, if the ammunition is not available, the system is not ready. If the CINC assesses only bits and pieces of the system without examining the output of the system as a whole, he may miss important dynamics of the system, e.g., his dependence on satellite intelligence provided by SPACECOM and the DIA.

4. Mission-Essential Tasks as Systems

The output of each of the systems described above can be seen as a measure of the systems' readiness to execute a task, e.g., deploy the force. In other words, understanding readiness to execute a task requires understanding the readiness of a system designed to execute that task. We recommend that, in order to provide a comprehensive report on DoD readiness to execute the NSS, the supported CINCs report their readiness to execute the tasks they list in the joint mission-essential task lists, or JMETLs, they develop for each of their assigned missions. Supporting CINCs and DAs would likewise report their readiness to execute the tasks on their METL associated with their supporting missions. Services would report their readiness to execute their functional tasks as required to meet the needs of the supported CINCs. In each case, understanding readiness to execute these tasks requires understanding the readiness of the systems that execute the task.

The following is a notional list of mission-essential tasks, taken from the UJTL, that apply to specific commanders Each task can be seen as a system on which the CINCs and DAs might be required to report their readiness.

Supported CINC

- ST 1 Deploy, concentrate and maneuver theater forces
- ST 2.1 Manage theater strategic intelligence activities
- ST3 Employ theater strategic firepower
- ST 4.2 Coordinate support for forces in theater

CINC TRANSCOM

- SN 1.2 Conduct deployment and redeployment
- SN 1.2.8 Provide global patient movement and evacuation

CINC SPACECOM

- SN 2.4 Provide strategic intelligence
- SN 3.4.2 Provide integrated tactical warning and attack assessment
- ST 6.1.6 Support tactical warning and attack assessment in theater

The CINC cannot report the readiness of the systems required to execute many of his mission-essential tasks so long as he remains uninformed on the readiness of the forces that comprise important parts of those systems. As described above, the current GSORTS is inadequate for this purpose. An improved JMRR would include a report by the forces assigned or allocated to a CINC on their readiness to provide the capabilities that he requires. This report could reach the CINC either through the GSORTS system or through the chain of command. It requires that the component commander or the forces themselves report on their readiness to execute their assigned tasks associated with the CINC's mission. In the Army, for example, the division GSORTS reports might include an assessment of the readiness to execute CINC-related tasks. Alternatively, the component commands could provide these readiness reports. In the Air Force, the NAF commander might produce a report on the readiness of Air Force assets. For an SSC, the Air Expeditionary Force (AEF) or the Air Expeditionary Wing (AEW) commander or the Commander of Air Combat Command could produce a report on the readiness of the AEF/AEW.[27] In the Navy, fleet commanders might produce the reports for their assigned battle groups that are in port while operational battle group commanders would

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[27] During a recent speech at IDA, GEN John Jumper, the ACC commander, stated that he was responsible for reporting to CINC Joint Forces Command on the readiness of the AEF to execute the tasks required by the supported CINCs.

likely produce their own reports, especially for an SSC. Marine MEF commanders could produce the reports for their subordinate MAGTFs.

The supported CINC must also know when forces will arrive. Thus, the Services, Joint Forces Command, or other force-providing CINC should report their readiness to provide the forces required by the supported CINC. CINC TRANSCOM should report TRANSCOM's readiness to move the forces. In this regard, the Services themselves, or the Service component commanders, should report their ability to provide apportioned and associated below-the-line forces and their associated logistic support in accordance with the TPFDD schedule and should include the projected readiness of those forces at the time they deploy. And CINC TRANSCOM should report his readiness to move the forces and their associated logistic support in accordance with the TPFDD.

In addition to reporting on their ability to flow the forces, and recognizing the shortfalls of the current Service enablers, it appears reasonable that the Services should report on their readiness to execute their Service Title 10 functions—their congressionally mandated mission-essential tasks lists. Their reporting should be based on the system they have developed to accomplish those tasks. For example, the Services would report on readiness of their systems that mobilize, man, train, equip, and sustain the forces to meet the needs of the CINC who commands their forces for the execution of an MTW. Each Service today has a mobilization system, a personnel system, training systems for both individuals and units, an equipment system, and a sustainment system. Although Services have the capability to report on the readiness of these systems, they do not do so.

The DAs with operational responsibilities have mission-essential tasks requiring them to support a CINC, a Service, or another DA. They should provide reports on the readiness of those systems for which they are responsible. For instance, DLA should report the readiness of its systems to meet DoD needs for Classes I, III, and VIII. DIA should report the readiness of the intelligence system. The Defense Finance and Accounting Agency should report the readiness of the finance and accounting system. The DAs should report through the Services on the readiness of those systems for which they have a collateral responsibility, e.g., spare parts sustainability. They should report directly on those functions for which they have a direct responsibility, e.g., intelligence and communications.

Ultimately, the CINC must make the assessment about his readiness to execute the tasks assigned him. There can be no substitute for the CINC's own judgment and experience, but the systems approach will provide him the information he needs to make an informed judgment.

C. Specific Changes to the JMRR

Each of the following changes is consistent with the systems approach described above.

1. *Report readiness to execute the full range of scenarios and tasks covered by the NSS, NMS, and DPG.*

Congress has mandated that the DoD report its readiness to execute the NSS, the NMS, and the DPG. Furthermore, DoD managers need to understand the forces' readiness to execute the full range of activities they might be called upon to perform. As such, it is appropriate to include in the JMRR analysis of the full range of scenarios and taskings that the NSS, NMS, and DPG specify or imply. Every JMRR does not need to address the full range of scenarios and taskings involved in the NSS. In fact, attempting to do so would be counterproductive. But it is reasonable to ask the CINCs, Services, and CSAs to report periodically on their readiness to execute the elements of the NSS, NMS, and DPG for which they are responsible—even in the absence of an OPLAN. This includes the Shaping activities the CINCs undertake as part of the Theater Engagement Plans and the contingent tasks, e.g., the 15 types of smaller-scale contingencies (SSCs), listed in the DPG, that a CINC may be assigned. These Shaping activities include the full range of responsibilities assigned the CINCs in the Contingency Planning Guidance and the Joint Strategic Capabilities Plan (JSCP). They also include the Title 10 functional responsibilities assigned to the Services—responsibilities that they must be ready to execute in the context of their participation in the execution of the NSS. They also include the missions and functions the Combat Support Agencies and the other Defense Agencies are responsible for executing in support of the CINCs and Services.

2. *JMRR reports should flow through the supported CINC.*

Title 10 clearly states that a CINC is "directly responsible to the Secretary for the preparedness of the command to carry out missions assigned to the command."[28]

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[28] Title 10, Section 164.

Title 10 also makes it clear that the Service Secretaries are responsible for carrying out the functions of their Departments so as to fulfill the current operational requirements of the unified and specified combatant commands.[29]   The Combat Support Agencies, while not mentioned in Title 10, have clear responsibilities to support both the CINCs and the Services. For example the DoD directive assigning responsibilities to the DLA states the DLA "shall function as an integral element of the military logistics system of the Department of Defense to provide effective and efficient worldwide logistics support to the Military Departments and the Unified and Specified Commands under conditions of peace and war."[30]   This assignment of legal responsibilities suggests that the Secretary of Defense should obtain reports from each supported CINC on the CINC's view of the readiness of his command to conduct assigned missions. If the supported CINC is to provide such reports, he must first obtain reports from the supporting CINCs, Services, and DAs on whom he depends. In other words, even though the supporting CINCs, Services, and DAs are not in the direct chain of command of the supported CINC, it is appropriate for them to report to the supported CINC on their readiness to provide the support upon which he depends for successful execution of his mission. Today, the supported CINCs are forced to assume that their anticipated support will be provided when and where needed.

The requirement to report through the supported CINCs may add to the workload of the supporting CINCs, but the effort would be worthwhile in that it would serve to meet CINC information needs that are currently unmet. This change in the JMRR would offer greater assurance of the availability of the needed support and would lead to an improved discussion between the CINCs, Services, DAs, and the Secretary of Defense.

An alternative to supporting CINCs, Services, and DAs reporting to the supported CINC is for them to report to the CJCS or the Secretary of Defense, who would pass their reports on to the supported CINC. In either case, once these reports are placed on the SIPRNet, they are effectively available instantaneously to all participants and can be used as needed by all.

3. *Report readiness to execute mission-essential tasks (METs).*

Many CINC tasks are covered, at least in part, in the assessments each CINC makes in every JMRR. Unfortunately, given the focus on eight functional areas and the

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[29]   Title 10, Sections 3013, 5013, and 8013.

[30]   DoDD 5105.22.

lack of linkage to the specific tasks (the horizontal integration discussed above), it is difficult to make a judgment about a CINC's readiness to execute most mission-essential tasks (METs). We recommend that CINCs fundamentally change the way they report their readiness: rather than report in terms of the eight functional areas as in current practice, they should report in terms of the METs associated with their Shaping responsibilities and with their scenario-related MTW and contingency responsibilities.

Reporting in terms of METs would be entirely consistent with the Chairman's guidance in his "Joint Training Policy for the Armed Forces of the United States," which "requires commanders to examine their missions and document their command warfighting requirements based on the tasks [e.g., CINC-level METs] in the Universal Joint Task List (UJTL)."[31] Logically, if the CINCs are required to express their warfighting requirements using METs, they should report readiness to meet those requirements in terms of the same METs.

Not only the CINCs are required to identify their METs. The Joint Training Policy further states that "using these publications [CJCS Joint Training Policy, Joint Training Manual, and CJCS Joint Training Master Plan], grounded in the language of the Universal Joint Task List [METs], the CINCs, Services, and Combat Support Agencies develop their respective training plans to address their core competency training."[32] The same instruction goes on to state that "the UJTL is designed to serve as an interoperability tool for use by JFCs, Service component commanders, the Joint Staff, and CSAs to communicate their mission requirements as described in their respective JMETL/Agency Mission-Essential Task List (AMETL)."[33] Thus, the warfighting CINCs, the Services, the Service component commanders subordinate to the CINCs, and the CSAs and other CINCs providing support to the warfighting CINCs are all required to define their requirements in terms of METs. Accordingly, each organization and command having defined its requirements in terms of METs should report its readiness in terms of those METs.

Each command and organization should develop its METL (or AMETL) based on the documents that govern it. These include Public Law, the NSS and NMS, DoD Directives, the DPG, the JSCP, the Unified Command Plan, and approved OPLANS.

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[31]   CJCSI 3500.01B, Encl A, Para 1.b.

[32]   Ibid.

[33]   Ibid., Encl B, Para 3.b.

CINCs, Service component commanders, and the CSAs already do this, although the process has matured to differing degrees in the various commands and organizations. Each defense agency, in particular, should ensure that it is developing its metrics in conjunction with the Services and CINCs that it supports. Title 10 requires the Services to perform 12 specific functions. These are their METs and should become the basis upon which they report their readiness.

Reporting readiness on the basis of METs would achieve several distinct and worthwhile goals: it would link functions to accomplish the horizontal integration that is lacking in current readiness reporting; it would link readiness reporting hierarchically, so that the readiness of every organization to meet the needs of the warfighting CINCs would become apparent; and it would effectively link the joint training system and joint readiness reporting.

An example of horizontal integration would be the CINC MET to employ operational firepower. Related tasks for this MET include targeting (currently reported under the functional area ISR), command and control (currently reported under the functional area C4), and the ability to attack, counterattack, and interdict enemy forces (currently not reported in any CINC functional area). Reporting by MET moves readiness reporting out of the functional area stovepipes, introduces the operational element into CINC reporting, and relates reporting directly to the ability of the warfighting CINCs to perform their missions.

Hierarchical reporting relates the readiness of every subordinate and supporting command and organization to the overarching requirements laid down by law or by the warfighting CINCs who execute the NSS and NMS. For the Services themselves, this entails reporting their readiness to carry out their Title 10 functions of providing and sustaining the ready units required by the warfighting CINCs at the time established in approved plans and with the capabilities prescribed by the CINCs. For other commands and organizations, this means reporting their readiness to perform the supporting or command-linked tasks identified as requirements by the CINCs. Joint Training Policy describes supporting tasks as those tasks that enable subordinate elements to accomplish the CINC's METs. Subordinate elements include the CINC's headquarters staff, as well as the functional components and subordinate components of the command.[34] The same policy describes command-linked tasks as discrete events or actions designated by the

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[34]   CJCSI 3500.01B, Encl C, Para 2.c.(6)

CINC that must be performed by commands and agencies outside the CINC's command authority if the CINC is to perform his mission successfully.[35] CINCs are already required to designate their command-linked tasks annually when they develop and distribute their JMETL.[36]

Perhaps the most important result of reporting by METs would be the linking of GSORTS and the JMRR and the resultant ability of the chain of command, from the CINCs to the lowest level commanders, to link their mission essential tasks from top to bottom. The current CJCSI suggests using GSORTS as a basis of reporting in the JMRR, but there is no methodology for doing so. The use of METs provides the missing methodology. Figure D-4 shows how the use of METs would serve to link CINC METs to the forces assigned or allocated to the CINCs as well as to the Service and DA METs/functions that support the CINCs. In all three cases, entities that report in GSORTS would be linked via their intermediate headquarters to the needs of the CINCs in terms of the CINC METs they support.
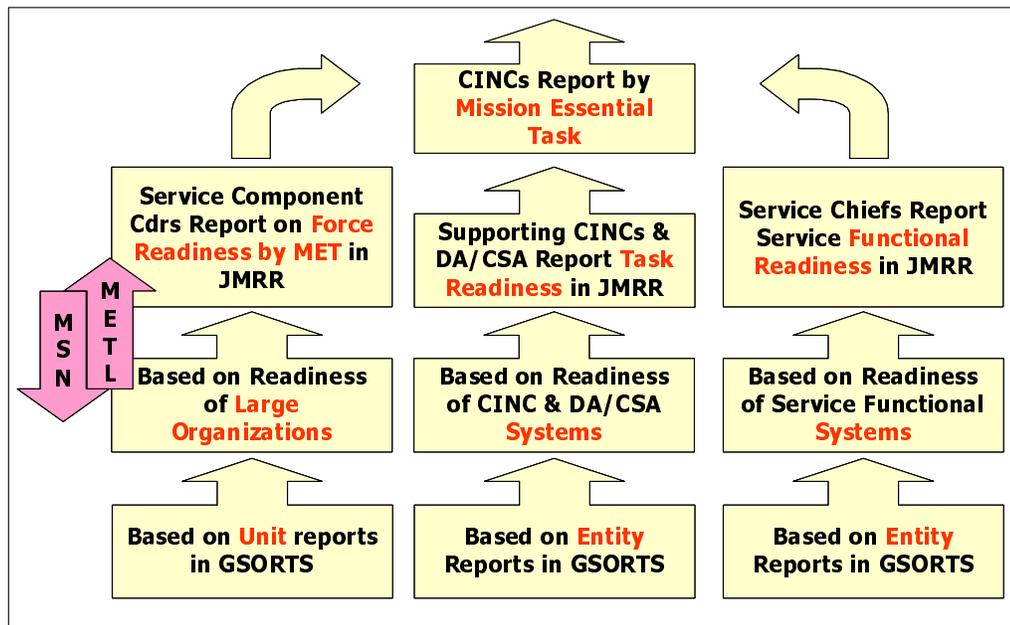
Figure D-4. The Flow of Readiness Info from GSORTS to JMRR

Reporting readiness by MET would provide an additional benefit: bridging a major disconnect between the emphases of the Services and those of the warfighting

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35 Ibid., Encl C, Para 2.c.(5).

36 CJCSI 3500.02C, Encl E, Para 2.b.(1)

CINCs. An often-expressed opinion within Service ranks holds that the CINCs maintain unreasonable expectations regarding the number of forces and level of capabilities the Services should provide. At the same time, some view the Services as procuring weapon systems based on their own cultural traditions and preferences rather than on the basis of the actual needs of the CINCs who must employ them. With both the CINCs and the Services reporting readiness using a system of directly linked METs, each would have the opportunity and obligation to express their assessment of force structure requirements using common METL language and methodology. This would be of particular use to efforts aimed at analyzing the force structure required to support routine deployments associated with CINC Theater Engagement Plans and contingency operations below the level of the MTWs. It would directly assist in efforts to focus on issues affecting LD/HD assets. In other words, it would help to answer questions regarding adequacy of force structure and balance within the force structure, as well as questions concerning the impact on readiness of the current level of overseas commitments.

Finally, reporting readiness by MET would represent a major step toward complying with the Title 10 requirement that the readiness system be "applied uniformly throughout the Department of Defense." Every CINC, Service, and Defense Agency would use the procedures of the Chairman's Joint Training System to identify and link their mission essential tasks, and all readiness reporting would be based on the ability to execute those tasks. If the conditions and standards associated with each task were developed consistently across DoD, then the reporting by MET would have the additional advantage of internally producing a standardized set of metrics that would aid decision makers at every level in analyzing related readiness factors, assessing risks, and allocating readiness resources.

Reporting readiness in the JMRR using METs and reporting in GSORTS based on METs, as discussed in appendix C, would establish all readiness reporting, from the most basic unit to the CINCs, Services, and CSAs, on the basis of METs. This would eliminate the holes resulting from reporting by functional area, particularly those holes associated with combat activity at the operational and strategic level. The direct linkage of all readiness reporting would facilitate analysis and provide a strong basis upon which leaders could make decisions regarding strategy, policy, and resource allocation.

4. *Conduct scenario-specific analyses.*

The two-MTW scenario is the most demanding of the conventional scenarios in the NSS, and there are significant differences in responsibilities of the CINCs depending on which MTW occurs first. It is therefore appropriate that the two-MTW scenario serve as the primary basis for the JMRR. Current practice is to measure two-MTW readiness twice a year. Certainly there is no need to conduct this analysis more than twice a year. In fact, measuring two-MTW readiness once a year would be sufficient for the following reasons: the two-MTW scenario has been so frequently analyzed over the past 5 years; the factors affecting the ability to execute the scenario do not change rapidly; and there are other important scenarios and readiness issues deserving attention.

As the DoD develops the systems approach to readiness reporting and as those systems become applications on GCCS, it will be possible to maintain a near-real-time appreciation for the readiness of critical systems, such as the DTS, associated with the MTWs. Also, more staff time will be available to analyze and plan for lesser scenarios.

The Secretary of Defense might consider investigating the readiness implications of different assumptions about the time separation between the two MTWs. Our investigations revealed that every two-MTW JMRR has used the DPG planning assumption that serves as the basis for the illustrative planning scenario. While this may be appropriate for program planning, it seems reasonable to consider different alternatives in the JMRR process. This would, of course, entail consideration of changes in the TPFDD and, perhaps, other changes in the existing OPLANs. Nevertheless, it seems reasonable to address a two-MTW scenario that occurs on a different, more challenging time schedule. Analysis of the two-MTW scenario might also include consideration of the requirements for deterring the second MTW and the requirements for swinging forces from one theater to the other.

5. *Conduct JMRR analyses of single MTWs, CONPLANs, and other SSCs twice a year.*

If the JMRR considers the two-MTW scenario twice a year and continues on its quarterly schedule, that leaves two JMRRs that can be devoted to other elements of the strategy. In recent years these other two JMRR periods have been devoted to readiness analysis of a single MTW or an SSC linked to an MTW or ongoing major contingency. While this is clearly useful, it leads to a constant focus on MTWs and to the readiness needs of the two CINCs directly responsible for the two MTWs, failing to address other

equally important readiness issues: readiness for other contingencies and the readiness needs of other combatant CINCs who are concerned about their readiness to conduct the contingencies assigned to them.

For example, we discussed the JMRR with General Wesley Clark shortly after he left his position as SACEUR. While understanding that he had an important role as a supporting CINC for MTW East, GEN Clark was concerned that the JMRR never considered DoD readiness to conduct SSCs such as the war he had recently concluded over Kosovo.   GEN Clark believed that this exclusive focus on MTWs had prevented him from effectively raising important, DoD-wide readiness questions that directly affected his command.[37]

Other discussions on this issue revealed a concern that reporting on a no-plan SSC would either be too difficult or involve too much work. TPFDD planners were especially concerned about this issue due of the lengthy time it takes to build a TPFDD. At the same time, however, we were told about efforts to develop the capability to build a TPFDD in 2 to 3 days. Even in the absence of this capability, it is appropriate periodically to ask CINCs to report on their readiness to conduct an SSC that is part of the strategy. GEN Clark argued that the SSCs for which we plan are not lesser and included versions of the MTWs. SSCs like the war in Kosovo or support to the United Nations in remote areas such as Rwanda and East Timor are so different that we cannot know our readiness until we actually conduct an assessment of our ability to meet the requirements of the specific SSC. Moreover, he argued that the need to report on readiness to conduct an SSC is probably good training for a real, no-plan SSC.

6. *Conduct each JMRR sequentially over a 3- to 6-month period.*

A problem identified in our review of the JMRR was the simultaneous nature of the reporting. Staffs that were dependent on information from other staffs did not get the information in time to influence their own report (or did not get it at all). Issues that would be dealt with sequentially in the normal course of events had to be dealt with simultaneously. These problems have the effect of reducing the accuracy and validity of the JMRR.   Accordingly, a sequential approach to building the JMRR should be developed. What follows is a discussion of how such a sequential approach might work.

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[37]   Interview with GEN Wesley K Clark. The Pentagon, June 2000.

The process would typically begin with a CJCS message describing the scenario to serve as the basis for the next JMRR. This message would contain scenario details and might include a requirement for special readiness reports. This message might serve as a mission assignment for a no-plan assessment.

Upon receipt of the message, the combatant CINC would identify his concept of operations and the capabilities he believes he requires in order to be able to execute his mission. He would base his statement of required capabilities on the relevant OPLAN, with changes appropriate to the scenario, or on his preliminary plan for a no-plan SSC. The supporting CINCs would also determine their requirements.

Once the supported CINC has determined the capabilities he requires, the Joint Staff, working with the Services, Joint Forces Command, and other force providers, would identify and allocate forces and resources to meet the supported CINC needs.

TPFDD development begins once the Joint Staff has made its decisions concerning force allocation.

After specific forces are identified and their missions assigned, the forces themselves or their component commanders, with the assistance of the Service headquarters, will report on the projected readiness of the specific capabilities required by the CINC. This readiness report will be based on the GSORTS reports but may require additional input if the tasks the units are to perform are different from their DOC. This report will also require intra-Service coordination to allow necessary consolidation of capabilities and assets.

Supporting CINCs, particularly Joint Forces Command, and Defense Agencies report on their readiness to perform their METs tied to CINC needs and OPLAN commitments. TRANSCOM (always a supporting CINC) reports on its ability to meet CINC transportation requirements. DAs report on their ability to meet initial Service support requirements. Services and DAs report on their ability to sustain the forces.

With all of the above inputs in hand, the supported CINCs conduct an overall assessment—by mission-essential task and time phase—of their capability to execute their METs. The entire JMRR assessment, especially in the context of a no-plan SSC, might be conducted as part of a CINC/Service/DA exercise or simulation; and the results of the exercise might be incorporated into the JMRR.

The Joint Staff coordinates the process and ensures completeness. The OSD staff provides oversight.

This process might be conducted during each quarter as it is done today. Alternatively, in order to provide the time needed for analysis, the process might be expanded to 6-month cycles, with two analyses running simultaneously. In either case, given the sequential nature of the reporting process, the various staffs should be given a schedule that allows them the time necessary to conduct the analysis.

7. *Establish uniform metrics as the basis of reporting.*

One of the most significant difficulties posed by the current RRS is the lack of a uniform standard for reporting. As discussed in Appendix C, the implementing instruction for GSORTS provides a large number of specific reporting requirements, but it also provides a wide degree of latitude to the Services in deciding exactly what to report and how to report it. Likewise, as discussed above, the Chairman's instruction for the JMRR provides associated elements for each of the CINC/CSA functional areas but does not provide actual metrics for reporting.

The systems approach described above points to the possibility of establishing uniform metrics. This approach describes the basic readiness metrics as the output of the systems whose readiness we are measuring. The readiness metric of an entity is based on the role that entity plays in the output of the system of which it is a part. For example, the readiness metric of the transportation system is the throughput the system is ready to provide in the context of a JMRR scenario. The readiness metric of a port would likely be based on the port's throughput requirement as part of the transportation system, and the readiness metric of a strategic airlift squadron would likely be based on the required capability of the squadron in terms of its contribution to the output of the transportation system.

This approach does not mean that entirely new metrics would have to be identified. In many cases, the metrics already exist. When organizations report degrees of readiness, they are basing that reporting on some internal assessment of the organization's ability to provide its required output. Very specific metrics are used both by the Services in preparing readiness reports for the Service Chiefs and by various organizations in making decisions concerning resource allocations. In many areas, those metrics are applicable across organizational lines. Aviation readiness, personnel readiness, and sustainability are all examples of readiness categories that have criteria

that could be made applicable across the Services. Similarly, the methodology for establishing readiness standards for operational systems ought to be much the same for each warfighting CINC, even though the specific requirements of each CINC may be different.

Specifying and incorporating output metrics in reporting will go far toward meeting the congressional mandate to provide objective reporting. Additionally, standardizing readiness reporting in areas where there are common systems will prevent needlessly confusing readiness discussions and will assist those responsible for allocating resources in their efforts to maximize readiness. We recommend that the CJCS, OSD, or a new readiness analysis center take the lead in identifying systems, developing objective output criteria for readiness reporting, and applying those systems and criteria, where it makes sense to do so, in a standardized fashion across DoD.

8. *Place more emphasis on the readiness of the force providers to deploy ready forces in the early stages of a contingency.*

As discussed above, Service reporting to meet the requirement of the CJCSI to depict "current readiness of significant combat, combat support, and combat service support units" appears to focus almost entirely on major combat units. A comprehensive and objective readiness reporting system should include reporting by each Service on all significant units, not only combat units.

As important as the deploying forces are the prepositioned equipment and supplies upon which many of the early deploying forces depend. Both their availability in theater and their condition are important readiness factors.

We recommend that the Chairman enforce his existing requirement for reporting on all combat, combat support, and combat service support units. He should expand the requirement to include reporting on the readiness status (and impacts from deficiencies) of prepositioned equipment and supplies that are included in the planning for the given scenario. We also recommend that reporting on the readiness of major units include a specific assessment of the time and resources required to make them ready for deployment, regardless of their current C-rating, and a statement of significant deficiencies that will remain when the forces arrive in the AOR. Finally, the method for assessing the readiness of organizations above the basic unit level (e.g., divisions, battle groups, or wings) should be objective and specifically delineated.

9. *Include the time factor in all scenario reporting.*

JMRR reports should include a time factor based on the expected duration of the event against which readiness is being assessed. For example, in a two-MTW JMRR, CINC TRANSCOM should report on his readiness to provide transportation support for the entire duration of both wars, i.e., the capability of the transportation system to move the units and materiel each CINC requires to execute his mission. Each Service should report on its readiness to sustain its forces for the duration of the war. The CSAs should report their ability to sustain operations and support the Services and CINCs for the duration of the war. The supported CINC, in reporting his readiness to execute his mission-essential tasks, e.g., his capability to execute the operational tasks that are a part of his OPLAN, should include a time factor in his assessment. In the case of MTWs, this might be done by addressing his readiness to execute the phases of his OPLAN.

10. *Focus JMRR presentations.*

The manner in which the full JMRR is presented can be much improved. A JMRR briefing may comprise nearly 175 slides. More data is flashed before the viewer than can be read, let alone digested and understood. Obvious questions go unasked and important issues go unaddressed.

Future JMRRs should avoid the routine, repetitive presentation of C-ratings and should instead do the following three things: (1) bring to the attention of senior leaders new readiness concerns (as is now done); (2) depict significant trends that are newly identified; and (3) provide specific reports on particular readiness issues that have been identified in advance for discussion. If the CINCs, Services, and CSAs knew that particular issues would be emphasized, considerably more effort would go into the reports and briefings. It is obvious to everyone today that the overwhelming amount of information presented at any given JMRR drastically dilutes the analytical effort expended by the those working in the trenches, creating a disincentive to those participating in the process.

CINC presentations should address the substance of any readiness concerns that impact their ability to conduct current operations or to execute their theater engagement plans. They should emphasize and elaborate upon the critical deficiencies impacting their ability to execute mission-essential tasks associated with the given scenario, even where those deficiencies have been repeatedly reported. CSAs should highlight the critical shortfalls that prevent them from performing their METs. The Services should

address any significant changes or anticipated changes in unit readiness. They should also address significant resource shortfalls that impact current operations and training or are anticipated to impact training and readiness in the near future. This was the original intent of the JMRR, but today the excess of data included in each presentation obscures the relative importance of issues. The Service reports should be characterized by instructive analysis, rather than a plethora of data. Congress requires that the reports to it contain not just information, but "an evaluation of such information."[38]

The scenario phase of the JMRR presentation should focus on specific aspects of the MTWs or contingencies under review. As with Service reporting, this process should shift emphasis from data to analysis and evaluated information. Focus a given JMRR on single issues such as the ability to rapidly deploy to the AOR, the ability to sustain the forces for a specified number of days with specified classes of materials, or the ability to carry out the CINC's precision strike plan. Such a format would provide an opportunity to justify concerns previously disparaged as based on purely anecdotal reporting; and it would require those responsible for various functions to prove they have the plans and resources to support the CINCs.

Finally, focusing JMRR presentations would help to ensure that assessments are comprehensive and thorough. The current methodology for presenting the JMRR simply does not provide an opportunity for those observing or reading the brief to determine whether the full range of questions relevant to an issue has been addressed or whether those questions have been explored in sufficient depth to provide a complete assessment. Focusing JMRR briefs on specific readiness issues would provide an effective method of ensuring more comprehensive and detailed analysis and reporting.

11. *Periodically focus on specific readiness indicators that are predictors of future readiness.*

Each Service maintains databases to manage readiness. Many of these are quite useful but are not fully exploited in the current readiness reporting process. Rather than allowing the data to be used to illustrate readiness issues only after they have developed into major problems, the Chairman should call for periodic presentations of indicators

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38   Title 10 USC, Sec. 482.(d).

that are often predictors of changes in readiness. This occurs to a limited extent in presentations on recruiting, retention, and other personnel issues. The practice should be extended to other important indicators, such as:

Preferred munitions inventories vs. Service goals and CINC planning figures

Personnel shortfalls in specific important areas (pilots, aircraft mechanics, information technology (IT) specialists, field grade officers)

Experience balance in key warfighting skill areas

Ability of commercial service and materiel providers to meet wartime requirements

Maintenance backlogs and trends, including for mission critical spares

Trends in maintenance time and cost

Spare parts shortages and the depth and range of mission critical items on hand versus authorized allowances

War reserve materiel stocks versus goals

Depth, range, and condition of prepositioned support equipment, e.g., bare base assets, bridging equipment, trucks, water and petroleum distribution, and other mission critical materiel

Flight hour and steaming day trends

Training range availability and usage

Trends in equipment aging and reliability

Today's readiness reporting receives frequent criticism for a lack of predictive capability. The DoD is unlikely to create a perfectly predictive system, but it certainly has a wealth of information available for analysts and policy makers to use in assessing readiness trends and making decisions about resource allocation. In many cases, this would simply require bringing forth information already being used at lower levels in DoD to illuminate policy discussions at higher levels.

12. *Periodically conduct a JMRR that depicts the impact of current operations.*

An issue of major political contention in the recent national election revolves around the question: Is the military overcommitted and, as a result, less ready than it needs to be to protect vital national interests? It is currently quite difficult to establish empirically a conclusive answer to this question. It would be very useful if the Services

were required in the JMRR process to demonstrate specifically how current operations are impacting current readiness and how current OPTEMPO and PERSTEMPO are predicted to impact future readiness.

Current operations are wearing out specific equipment at a certain rate. Current operations require a certain force structure to permit troop rotations. Current operations use dollars that otherwise might be used for training. (Is training readiness declining as a result?) Current operations are impacting retention of certain groups of personnel in some manner. These are issues the Services must grapple with every day as they affect both current and future readiness. They should be placed on the table in the JMRR forum so that the individual and cumulative effects may be weighed. Such a presentation would be much more likely than the current scripted format to attract the interest of senior military officers and civilian officials and to provide answers to the questions being asked in the Congress.

13. *Consolidate efforts to develop automated reporting systems.*

The Joint Staff and the Services, as well as other organizations, have a variety of programs underway to develop automated readiness or readiness-related reporting systems. Unfortunately, full development of these complex systems, many of which appear to have great potential, are languishing, owing to a lack of funding and the limited pool of qualified technology workers. We recommend that the Secretary of Defense take charge of an effort to develop a DoD-wide readiness reporting system that: takes advantage of promising developments to date; makes accessible to all involved in readiness reporting the myriad currently existing databases; and captures the funding and pool of technology talent that is currently spread throughout the department.

14. *Create a center for readiness analysis.*

The Secretary of Defense should establish a readiness analysis center as a small agency or support function. Such a center would be staffed by trained analysts and information technology technicians and would be accessible to all DoD elements. It could provide the analytical talent, the automated systems, the time for analysis, and the continuity and corporate knowledge that is frequently lacking today. It might also permit the modeling and simulation of JMRR scenarios as another means of assessing readiness.

15. *Revive the historic role of inspection as a means of validating the readiness reporting of CINCs, Services, CSAs.*

Historically, the Services or field commanders employed Inspectors General (IGs) to ensure the operational readiness of military forces. This was particularly true in the Army through World War II, as discussed in appendix G. Today, the Marine Corps tasks its IG to ensure that readiness reporting is accurate and to train the personnel in the field responsible for submitting readiness reports.   The Readiness Branch, under the Commandant's Deputy Chief of Staff for Plans, Policy, and Operations, supports the Marine Corps IG inspections by forming Readiness Assessment Teams (RATs). The IG performs regularly scheduled audits of unit readiness, employing members of the readiness branch as functional experts. These field visits provide for Service oversight as well as training to the operating forces. They also provide early warning of potentially serious emerging readiness issues that may not be uncovered in readiness reports and assessments.   We recommend employing the Joint Staff or OSD, supported by the CINC IGs, to validate readiness reporting associated with the Chairman's Readiness System.

The IG should determine whether—

- C-1 and C-2 ratings, which are generally not questioned, are supported by comprehensive analysis;

- All of the associated elements (METs) of each functional area (Joint Mission Area) are being appropriately included in CINC and CSA assessments;

- Established metrics are being used and applied appropriately; and

- The Services are reporting in the Joint venue in a manner consistent with and as a comprehensive as the readiness analysis done to support internal Service management.

In short, the IG should determine whether the intent of the law and the intent of the SecDef's and the Chairman's reporting requirements are being met.

16. *Senior members of the CINC staffs and CSA staffs should participate in JMRR briefs.*

When a JMRR focuses on an issue of interest to a particular CINC or CSA, that command or organization should provide a senior officer or civilian official to brief the issue in question. This would promote a dialogue on the issue and establish a balance in the forum between the Services, the CSAs, and the CINCs they are required to support.

Because of its unique position under the law, SOCOM already provides a senior officer to each JMRR brief; thus, there is precedent for this practice. If initiated, it would help to ensure that all relevant organizations are fully engaged in an issue. Not only would the CINCs be assured that their essential arguments were being forcefully articulated, but the Services and CSAs would be more likely to come prepared to address known CINC concerns in detail.

THE JMRR AS DESCRIBED IN THE CHAIRMAN'S INSTRUCTION
(CJCSI 3401.01B)

The CJCSI states that the JMRR will be conducted in the following four forums:[1]

a. <u>Full JMRR.</u> The Full JMRR is the quarterly forum for Service, CINC, and CSA readiness *reporting*. It is a snapshot of current readiness. Also, when directed by the Chairman, a full JMRR may be conducted on short notice to assess readiness implications of a potential or ongoing militarily significant event. The full JMRR is normally conducted the first month of each quarter.

b. <u>By-Exception JMRR.</u> This review is conducted during months in which no full JMRR is scheduled. Services, CINCs, and CSAs report any significant changes in readiness since the last full JMRR.

c. <u>Feedback JMRR.</u> This brief covers the status of actions to address significant readiness deficiencies and concerns raised by the CINCs, CSAs, and Services during the Full and By-Exception JMRRs. ("The Feedback JMRR also provides an overall assessment of the ability of the US Armed Forces to execute the NMS."[2]) This brief is normally 2 months after the Full JMRR.

d. <u>JMRR Deficiency Review.</u> Conducted by J-3, and briefed by the J-codes in collaboration with the CINCs, CSAs, and Services, this semiannual review updates the status and validates the categorization of all deficiencies in the JMRR database. It is normally conducted in February and August.

The CJCSI specifies the participants in each forum and their respective roles:[3]

a. <u>Vice Chairman.</u> The Vice Chairman chairs and serves as the approval authority for both the full JMRR and Feedback JMRR forums. His decisions are made in consultation with the Services.

b. <u>Services/USSOCOM.</u> The OpsDeps and SOOP are the senior representatives for the Services and USSOCOM, respectively. The Service OpsDeps present the unit readiness brief for each Service during Full and Feedback JMRRs. In addition, USSOCOM-SOOP presents the readiness of SOF at the Full JMRR.

c. <u>The Joint Staff.</u> The JS (J-directors) are the senior representatives for the JS. The applicable J-director will present the functional area deficiency status briefing during the Feedback JMRR.

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[1] Encl C, Para 1.

[2] Encl E, Para 1.

[3] Encl C, Para 3.

d. CINCs. CINCs will provide a representative at each JMRR. Normally this representative will be the CINC liaison officer.

e. CSA. The CSA directors are the senior representatives for the CSAs. CSAs will provide a representative and should be prepared to brief their agency's readiness status at each JMRR.

f. OSD. The Deputy Under Secretary of Defense for Readiness (DUSD(R)) may attend the JMRR.

Responsibilities

Specific responsibilities for the entire JMRR process are spelled out in Enclosure B of the Chairman's instruction, which is reproduced in full below.[4]

1. General. The Services, CINCs, CSAs, and the directors of JS directorates will perform the following tasks:

    a. Provide a point of contact (POC) to the J-3 Readiness Division to coordinate JMRR preparation.

    b. Assist in preparation of a collaborative JMRR Feedback report that addresses respective CINC readiness deficiencies and concerns raised within the JMRR.

2. Vice Chairman of the Joint Chiefs of Staff. The Vice Chairman will chair the JMRR.

3. Services/USSOCOM. Normally, OpsDeps will represent the Services, and the Special Operations, Operations Plans and Policy (SOOP) will represent USSOCOM at the JMRR. The Services/USSOCOM will assess, and the OpsDeps and USSOCOM-SOOP will report Service/USSOCOM readiness at the JMRR in accordance with Enclosure D.

4. CINCs. The CINCs will assess and report joint readiness to the JS, J-3, in accordance with Enclosure D. CINC assessments should include deficiencies in the interoperability of the Joint Force and specific comments on the responsiveness and adequacy of support by the CSAs. The USSOCOM SOOP will brief USSOCOM readiness at the Full JMRR.

5. Combat Support Agencies. The CSAs will assess and report agency readiness to the JS, J-3, in accordance with Enclosure D. CSAs will provide assessments in applicable joint readiness functional areas. CSA assessments will include specific

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4 Encl B.

comments on their readiness and responsiveness to support CINCs. CSAs should assist CINC staffs in assessing readiness of functional areas in which the agency has specific expertise. In addition, CSA directors should provide their narrative overall assessment of their agency's ability to support the CINCs.

6. <u>Director, Joint Staff</u>. The DJS, will assign a specific JS directorate to work new CINC and CSA current readiness deficiencies. The DJS will nominate appropriate deficiencies that require programmatic action for JWCA study. These are coded RED deficiencies. The DJS, with the coordination of the reporting CINC or CSA, will close corrected deficiencies.

7. <u>Joint Staff</u>. The JS is the focal point of the JMRR process. In general, the JS directorates will analyze joint readiness reports from the CINCs and CSAs, prepare the functional area assessments for presentation at the Full JMRR, report the status of the resolution of readiness deficiencies in a quarterly Feedback JMRR session, and update the status of assigned deficiencies during the Semiannual Deficiency Review (SDR). Specific JS directorate responsibilities are as follows:

a. <u>Office of Primary Responsibility</u>. Normally, a joint readiness functional area OPR is assigned to JS directorates as depicted in Table D-1-1. When required, an OPR may be assigned outside the functional area. The JS OPR will perform the following tasks:

(1) Prepare the joint readiness slides used during the Full JMRR video teleconference (VTC) with the CINC staffs.

(2) Monitor and brief the status of actions being taken to address current readiness deficiencies at the Feedback JMRR in accordance with Enclosure E.

(3) Input data-base information into the JS readiness deficiency database (DDB). JS OPRs are responsible for updating the status of the deficiencies in the database. (Exception: J-38 will enter deficiency category and status codes.)

(4) Update and brief status of assigned deficiencies during the SDR.

(5) Assess readiness issues for JWCA study consideration.

(6) Provide staff closure of deficiencies upon concurrence of the reporting CINC and CSA.

(7) If assigned outside the functional area, the OPR will coordinate with the functional area OPR to ensure the deficiency is included in the appropriate functional area briefing.

Table D-1-1. Joint Staff Office of Primary Responsibility

FUNCTIONAL AREA	JOINT STAFF OPR
Overall JMRR Responsibility	**J-3/Readiness**
Joint Personnel	J-1
Intelligence/Surveillance/Reconnaissance	J-2
Special Operations	J-3/SOD
Mobility	J-4
Logistics/Sustainment	J-4
Infrastructure	J-4
Command/Control/Communications/Computers	J-6
Joint War Planning and Training	J-7

b. <u>Director for Operations, J-3</u>

   (1) Brief the joint readiness status at the Full JMRR.

   (2) Coordinate and publish the JMRR schedule.

   (3) Coordinate and publish a JMRR scenario guidance message approximately 60 days prior to the Full JMRR.

   (4) Consolidate a list of new CINC and CSA current readiness deficiencies after each Full JMRR. Draft the DJS memorandum assigning responsibility for monitoring the status of actions to address JMRR deficiencies to the appropriate JS directorate.

   (5) Coordinate with cognizant JS directorates to identify deficiencies requiring new or additional programmatic action that would benefit from JWCA study. Draft the DJS memorandum that nominates these deficiencies to J-8 for JWCA study consideration. For each deficiency, prepare a baseline description that accurately describes the deficiency and requested JWCA assessment.

   (6) Manage the JMRR DDB.

   (7) Draft a Chairman's "personal for" message to the CINCs, Services, and directors of CSAs that summarizes results of each quarterly JMRR cycle as briefed to the SROC.

c. <u>Director, Force Structure, Resources, and Assessment Directorate, J-8</u>

   (1) Review deficiencies nominated by the DJS that require new or additional programmatic action for JWCA study consideration.

(2) Notify DJS, via JROC memorandum (JROCM), of JROC decision to study nominated deficiencies and final JROC disposition of JMRR deficiencies that have completed JWCA study.

(3) Assist JS directorates in tracking the status of readiness deficiencies in JWCA study.

(4) Provide fiscal analysis support on specific JMRR issues.

(5) Brief contingency funding status at each Feedback JMRR.

(6) When directed by the Chairman, conduct short turn-around JS internal assessments of projected operation impacts on a major theater war (MTW).

JMRR Format

JMRR reporting and JMRR presentations follow very specific formats. The requirements of each are spelled out in the CJCSI. The two principal forums are the Full JMRR and the Feedback JMRR. The essential elements of those two events are described below.

A. Full JMRR

The Full JMRR depicts two different types of information. It first of all depicts **current and projected readiness**.

The CINCs and CSAs are directed to "assess their readiness and capability in…eight functional areas… to meet current and 12-month projected AOR or functional requirements. The purpose of this element is to show ability by functional area to meet ongoing and projected engagement operations. Although the current and plus 12-month assessment…excludes execution of an MTW, it includes assessment of operations intended to deter the outbreak of hostilities."[5] The eight functional areas are listed in Table D-1-2.

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5   Encl D, Para 2.d.

Table D-1-2. JMRR Functional Areas

FUNCTIONAL AREAS	ASSOCIATED ELEMENTS
Joint Personnel	Unit-manning shortfalls, billet shortfalls, TEMPO concerns, and personnel deficiencies.
Intelligence, Surveillance, & Reconnaissance	Intelligence collection, processing, production, and dissemination systems and personnel. Includes IMINT, SIGINT, HUMINT, MASINT, ELINT, GIS, support for information operations, and compatibility between systems.
Special Operations	SOF-unique intelligence, logistics, C4, training, exercises, manning, and infrastructure. Ability to conduct direct action, unconventional warfare, PSYOPS, civil affairs, foreign internal defense, special reconnaissance, counterterrorism, humanitarian assistance, disaster relief, counterdrug, and combat search and rescue.
Mobility	Strategic airlift, strategic sealift, spacelift, power projection enablers (containers, railcars, pallets, CHE/MHE, port operations), joint total asset visibility, air refueling, aeromedical evacuation, intratheater transportation, throughput enablers (fuel, handling equipment, ramp space, port personnel), JLOTS.
Logistics & Sustainment	Materiel (Classes I-VII, IX), munitions, pre-positioned stocks (ashore and afloat), health service support (personnel and equipment), support force personnel and equipment, POL distribution units, equipment maintenance, aviation and vehicle maintenance, field services, mortuary affairs, and supply.
Infrastructure	Fixed structures to include road networks, airfields, seaports, rail networks, POL pipelines and hydrants, beddown facilities, and power generation. Also includes installation physical security, power projection, engineering units and equipment, and prepo facilities.
Command, Control, Communications, & Computers	Integrated systems of doctrine, procedures, organizational structures, personnel, equipment, facilities, and communications to support C2. Includes information assurance, bandwidth, networking, survivability, and reliability.
Joint War Planning and Training	Joint training and exercises, JTF headquarters organization, joint doctrine, joint deliberate planning, and joint force commander's assessment.

Source: CJCSI 3401.01B, Table D-2.

CINCs are directed to "make specific comments, when appropriate, about the adequacy and responsiveness of support received (for both current and plus 12-month periods) from the CSAs in each applicable functional area."[6]

CINCs are also required to report "deficiencies in the interoperabilty of the Joint Force."[7]

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6   Encl D, Para 2.c.(5).

7   Encl D, Para 4.

CSAs are directed to "make specific comments, when appropriate, about the capability of Services and CINCs to provide required complementary support for each applicable functional area."[8]

The Services and USSOCOM are directed to:

"depict the current location of significant combat, combat support, and combat service support units…[and their] overall C-level status."[9]

"depict overall Service and USSOCOM readiness status and trends in areas of personnel, equipment, training, and enabler…[with] [s]pecific amplifying comments… for each individual trend area."[10]

"depict current [and] projected… assessments of their support force capability in…six major areas: Theater Mobility Support, Engineers, Health Services, Sustainability, Security-AT/FP and Field Services"[11] for both the current date of the JMRR and a date 12 months in the future.

"present specific trend indicators that provide greater insight into personnel, equipment, and training readiness over time. At a minimum these indicators will cover the previous two years and project forward one year"[12]

The **Services** are further directed to "…provide an executive level summary of current tempo and its associated impact on readiness. The associated metrics developed by each Service should accurately capture Service tempo concerns. The presentation shall…include the following:

(1) Service tempo for the previous 12 months broken out by unit type, weapon platform, personnel specialty, and/or ship type.

(2) Identification of appropriate peacetime tempo threshold, above which a service would expect to see a long-term readiness degradation.

(3) Identification of unit, weapon platforms, personnel specialties, and/or ship categories that exceed the tempo threshold.

(4) Corrective action plans, if applicable, to address excessive tempo."[13]

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8   Encl D, Para 2.c.(5).

9   Encl D, Para 1.a.(1).

10   Encl D, Para 1.d.

11   Encl D, Para 1.c.

12   Encl D, Para 1.e.

13   Encl D, Para 1.f.

The CJCSI also infers that the Services and USSOCOM are to depict the readiness of significant combat, combat support, and combat service support units 12 months hence. However, no format is provided for doing so.[14]

The second type of information depicted in the JMRR concerns a **specific scenario** identified by the Joint Staff in a scenario guidance message published approximately 60 days prior to the date scheduled for the full JMRR presentation. "The scenario guidance will identify necessary planning assumptions (C-Day, JSCP Force Tables, etc.) to allow the Services/USSOCOM to assign specific units. In general, JMRR scenarios will start with real-world ongoing operations and will include a coordinated SSC [small-scale contingency] and/or MTW [major theater war] scenario."[15] MTW scenarios may involve one MTW or two nearly simultaneous MTWs. For the scenario portion of the JMRR:

> "CINCs and CSAs will assess their ability, by functional area, to…support execution of…[the] warfighting scenario…[16]

> "The Services and USSOCOM will depict the significant units, both combat and *support* (emphasis added) to be committed to the JMRR scenario…. The depicted units will reflect their overall C-level status as of the scenario C-Day. Units not at C-1 or C-2 on scenario C-day will reflect…[both the projected number of days from C-day when the unit will arrive in the MTW area of responsibility (AOR) and the projected C-level to be attained by the time of arrival in the AOR].[17]

The CINCs and CSAs are also required to provide an overall assessment of readiness:

> "**Overall Assessment**. In addition to the eight functional area assessments, CINCs and CSAs shall assign an overall C-level to their ability to execute the current, plus 12 months, and MTW scenarios….Additionally, CINCs and CSAs should indicate their top two readiness concerns."[18]

> "**CSA Director's Narrative**. CSA directors will provide an overall subjective assessment of their agencies' readiness to support current operations, projected operations over the next 12 months, and the execution

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14 Encl D, Para 1.b.

15 Encl D, Para 1.g.(3).

16 Encl D, Para 2.a.

17 Encl D, Para 1.g.(1) and (3).

18 Encl D, Para. 2.f.

of the MTW scenario. Assessments should identify external constraints that limit CSA support to CINCs. This narrative is designed to fulfill the reporting requirements of the Chairman [Title 10 USC, section 193]"[19]

B. The Feedback JMRR

The Feedback JMRR provides the forum for processing and making decisions about deficiencies. In discussing this aspect of the JMRR process, it is necessary to have an understanding of what constitutes a deficiency, how deficiencies are categorized, and how deficiencies are managed.

Deficiencies

CINCS and CSAs identify deficiencies. The Services do not identify deficiencies. The rules for identifying, validating, and processing deficiencies are very explicit.

The CJCSI specifies **the criteria for new deficiencies**. To be considered valid, a deficiency must:

(1) be a specific, current, quantifiable shortfall in the ability to meet an ongoing operation, JSCP, or approved OPLANs and CONPLANs.

(2) [Lower] readiness to a C-3 or C-4 level in one of the eight JMRR functional areas.

(3) Not [be] contrary to existing DPG.

(4) Not reflect future requirements or modernization issues unless the deficiency also results in a current readiness shortfall.[20]

Elsewhere, the CJCSI specifies that "[f]or deficiencies driving a functional area to C-3 or C-4, the CINCs and CSAs shall identify:

(a) The specific current requirement not being met and its corresponding source document (DPG, JSCP, OPLANs/CONPLANs, or JCS-directed tasking).

(b) Quantified shortfall and C-rating thresholds.

(c) Specific operational impact (e.g., time delay, capability degraded) on OPLAN execution.

(d) Contingency Plans in force/actions taken to alleviate deficiency.

(e) An estimate of what further actions will be required to improve the deficiency (to at least a C-2 threshold).[21]

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[19] Encl D, Para 2.g.

[20] Encl E, Para 2.a.

Additionally, CINCs and CSAs are required to have "consulted with appropriate agencies to investigate impacts/work-arounds/programmatics" prior to submitting a deficiency as part of the JMRR.[22]

Categorizing Deficiencies

"To ensure senior leadership focuses on the most critical readiness issues,"[23] all deficiencies are placed in one of three categories, based on their impact on the National Military Strategy (NMS):

(1) Category I: Deficiency is a critical warfighting risk driver for OPLANS or CONPLANS. Category I deficiencies will be briefed at every Feedback JMRR.

(2) Category II: Important deficiency that contributes lesser levels of risk to the NMS.

(3) "Top Two" Concern: A Cat I or Cat II deficiency, identified by a CINC or CSA as a "Top Two" in their JMRR input message."[24]

Deficiencies are then aggregated in order to facilitate assessment and to provide a better understanding of how deficiencies collectively drive risk to the NMS.[25] Category I deficiencies are combined into:

(1) "Key Risk Elements…[that] describe operational-level issues."[26]

(2) "Strategic Concerns…[that] are the overarching concerns that drive risk to the NMS."[27]

Deficiencies are also categorized based on the progress made toward their resolution:

(1) UNDER REVIEW: …still being worked by the JS OPR.

(2) [in the] JWCA QUEUE:…nominated to the JROC Secretariat (J-8) for JWCA study consideration.

(3) JWCA STUDY:accepted by the JROC for JWCA study.

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[21] Encl D, Para 2.c.(3).

[22] Encl D, Table D-3.

[23] Encl E, Para 3.a.

[24] Encl E, Para 3.a.

[25] Encl E, Para 4.

[26] Encl E, Para 4.b.

[27] Encl E, Para 4.c.

(4) FIX APPROVED: There is a short-term alternative or funded long-term fix that, once implemented, will correct the deficiency to at least a C-2 level….deficiencies are not closed but remain in a monitor status until the fix is actually implemented.

(5) PARTIAL FIX, ACCEPT RISK: Although a partial short-term workaround or long-term solution exists, it will be insufficient to correct the deficiency to a C-2 level. Remaining risk is acknowledged and accepted by the JS and Services. [These] deficiencies are not closed, but remain indefinitely in a monitor status until a CINC or CSA changes its operational concept or the condition driving the risk is no longer present."[28]

The Deficiency Data Base

"The JMRR DDB is the repository for CINC and CSA reported C-3 or C-4 readiness deficiencies."… "The database is a working level product, containing detailed information regarding the specific deficiencies and actions to correct them… DDB information includes: when the deficiency was first reported, by what CINC or CSA, operational impact, current status, interim workarounds, and projected long term fix."[29]

Managing Deficiencies

The CJCSI spells out specific responsibilities for managing deficiencies:

Director Joint Staff (DJS):

"assign a specific JS directorate to work new CINC and CSA current readiness deficiencies...

nominate appropriate deficiencies that require programmatic action for JWCA study...

with the coordination of the reporting CINC or CSA, [close] corrected deficiencies."[30]

Director for Operations, J-3:

"Coordinate with cognizant JS directorates to identify deficiencies requiring new or additional programmatic action that would benefit form JWCA study. Draft the DJS memorandum that nominates these deficiencies to J-8

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[28] Encl E, Para 3.b.

[29] Encl E, Para 1.a.

[30] Encl B, Para 6.

for JWCA study consideration. For each deficiency, prepare a baseline description that accurately describes the deficiency and requested JWCA assessment."[31]

"Manage the JMRR DDB [deficiency data base]"[32]

Director, Force Structure, Resources, and Assessment Directorate, J-8:

"Review deficiencies nominated by the DJS that require new or additional programmatic action for JWCA study consideration.

Notify DJS, via JROC memorandum (JROCM), of JROC decision to study nominated deficiencies and final JROC disposition of JMRR deficiencies that have completed JWCA study.

Assist JS directorates in tracking the status of readiness deficiencies in JWCA study."[33]

Office of Primary Responsibility (OPR)

"Normally, a joint readiness functional area OPR is assigned to JS directorates as depicted Table D-1-3:"

Table D-1-3. Joint Staff Office of Primary Responsibility

FUNCTIONAL AREA	JOINT STAFF OPR
Overall JMRR Responsibility	**J-3/Readiness**
Joint Personnel	J-1
Intelligence/Surveillance/Reconnaissance	J-2
Special Operations	J-3/SOD
Mobility	J-4
Logistics/Sustainment	J-4
Infrastructure	J-4
Command/Control/Communications/Computers	J-6
Joint War Planning and Training	J-7

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[31] Encl B, Para 7.b (5).

[32] Encl B, Para 7.b.(6).

[33] Encl B, Para 7.c.

OPR responsibilities include:

"…Monitor and brief the status of actions being taken to address current readiness deficiencies at the Feedback JMRR…

Input data-base information into the JS readiness deficiency database (DDB)...

Update and brief status of assigned deficiencies during the SDR [Semiannual Deficiency Review].

Assess readiness issues for JWCA study consideration.

Provide staff closure of deficiencies upon concurrence of the reporting CINC and CSA…"[34]

Preparations for the Feedback JMRR

Two preliminary actions are required prior to the Feedback JMRR. First, a decision must be made regarding which deficiencies identified in the full JMRR will be entered into the DDB. The criteria for this is discussed above. The Director of Operations makes the final decision.[35] Second, deficiencies are nominated by the respective OPRs to the DJS for closure. "To close a deficiency in the DDB, either of the following criteria must be met:

(1) In the judgement of the reporting CINC or CSA, condition generating a C-3 or C-4 functional area level has been corrected or mitigated to at least the C-2 level.

Note: Programming actions are not sufficient to close a deficiency—the fix must be implemented.

(2) Reporting CINC or CSA chooses not to revalidate the deficiency during the SDR."[36]

The Feedback JMRR Briefing

The Feedback JMRR Briefing is the culmination of the JMRR process. Its purpose is to "summarize the actions taken to address CINC, CSA, and Service key readiness concerns, and provide an overall strategic assessment."[37] The briefing includes three separate types of presentations.

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[34] Encl B, Para 7.a.

[35] Encl E, Para 2.b.

[36] Encl E, Para 2.c.

[37] Encl E, para 5.

(1) Director of Operations (J-3). As the process manager, the J-3 readiness section (J-38) presents a brief that:

    (a) Integrates the other JS Directorate and Service presentations,

    (b) Provides an overview of the Deficiency Data Base (DDB),

    (c) Summarizes Deficiency Status Changes,

    (d) Establishes the link for aggregated deficiencies from key risk elements to strategic concerns, and

    (e) provides an overall readiness assessment.[38]

(2) Joint Staff Directorates. Each directorate responsible for deficiencies in the DDB briefs the following, as applicable:

    (a) Cat I deficiencies and associated key risk elements, including operational impact, status, near-term workarounds, and long-term impact,

    (b) New deficiencies,

    (c) Closed deficiencies, and

    (d) JMRR concerns identified as a CINC "Top Two."[39]

(3) Services. Briefing guidance to the services is more permissive in nature.

    (a) The Services are directed to "use the Feedback JMRR forum as an opportunity to discuss the actions taken to address their top readiness concerns. Briefings will specifically describe top three readiness concerns, operational impact, near-term workarounds, and long-term solutions."

    (b) "[The] Services may (emphasis added) also highlight actions taken to address key CINC-reported deficiencies or other special-interest topics."

    (c) "Service presentations should (emphasis added) also highlight readiness issues that may not yet be visible to CINCs or CSAs."[40]

Publishing the results of the JMRR

The CJCSI indicates several means by which the results of the JMRR process, from Full JMRR to Feedback JMRR, are made known to the participants in the process, as well as the Congress.

(1) "On a periodic basis, the J-3 Readiness Division will ensure the JMRR DDB is made available to all Service, CINC, and CSA staffs"[41]

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38   Encl E, para 5.a.

39   Encl E, Para 5.b.

40   Encl E, Para 5.c.

(2) A dry run of the [Feedback JMRR] brief will be provided via a… VTC [video teleconference] prior to every Feedback JMRR.[42]

(3) Following each Feedback JMRR, the J-3 will coordinate a CJCS "personal for" message to the CINCs, Services, and CSA directors summarizing the results of the quarterly JMRR and SROC cycle.[43]

(4) The Quarterly Readiness Report to the Congress (QRRC) "consists of a summary of readiness assessments first presented in the JMRR and subsequently summarized for the SROC."[44]

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[41] Encl E, Para 6.a.

[42] Encl E, Para 6.b.

[43] Encl E, Para 6.c.

[44] Encl E, Para 7.

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LESSONS LEARNED FROM AMERICAN CORPORATIONS

Corporate management techniques and business practices describing the nature of the problem

- Most organizations still attempt to improve performance of individual departments rather than of integrated business processes. [1, p. 93]

- Often the efficiency of a company's parts comes at the expense of the efficiency of its whole. Work that requires the cooperation and coordination of several different departments within a company is often a source of trouble. Even when the work involved could have a major impact on the bottom line, companies often have no one in charge. [2, p. 8]

- We know that our organizations and even functional areas of responsibility are dependent systems, yet, when it comes to measuring, operating, and problem-solving within them, we continue to divide them up and segment them. By segmenting these systems, we lack the ability to see the bigger picture, understand the greater problem, and synchronize our efforts. Additionally, we often implement incomplete or grossly insufficient solutions that, at best, provide a temporary fix to the problem or, at worst, move and magnify the problem to another area of the organization. [3, p. 143]

- Current measurement practice and incentive and reward programs lead to the majority of conflicts in organizations and result in dysfunctional behavior across the organization. [3, p. 36]

- In most companies today, no one is in charge of the processes. In fact, hardly anyone is even aware of them. Companies today consist of functional silos, or stovepipes, vertical structures built on narrow pieces of a process. The contemporary performance problems that companies experience are the inevitable consequences of process fragmentation. [2, p. 27]

- Classical business structures that specialize work and fragment processes are self-perpetuating because they stifle innovation and creativity in an

organization.   The fragmented processes and specialized structures of companies bred for earlier days also are unresponsive to large change in the external environment. [2, p. 27]

- If too much pressure is placed on a single metric, managers could develop dysfunctional methods to achieve those metrics. A company's measurement system should not encourage suboptimization along any single measure. [2, p. 27]

Corporate management techniques and business practices suggesting the direction of a solution

- Management's concern and management's responsibility are everything that affects the performance of the institution and its results—whether inside or outside, whether under the institution's control or totally beyond it. [4, p. 40]

- The core message of our book is this: It is no longer necessary or desirable for companies to organize their work around Adam Smith's division of labor. Task-oriented jobs in today's world are obsolete. Instead, companies must organize work around process. It should already be possible to see why American companies can't be fixed but have to be reinvented. [2, p. 27]

- What is needed is a redefinition of the scope of management. Management has to encompass the entire process. The new assumption on which management, both as a discipline and as a practice, will increasingly have to base itself is that the scope of management has to be operational. It has to embrace the entire process. It has to be focused on results and performance across the entire economic chain. [4, pp. 33–34]

- Increasingly managing the economic cost chain will become a necessity. Executives need to organize and manage not only the cost chain but also everything else—especially corporate strategy and product planning—as one economic whole, regardless of the legal boundaries of individual companies. [4, p. 115]

- We define a process as a collection of activities that take one or more kinds of input and creates an output that is of value to the customer. The individual tasks within this process are important, but none of them matters one whit to the customer if the overall process doesn't work—that is, if the process doesn't deliver the goods. [2, p. 35]

- Success for government organizations should be measured by how effectively and efficiently they meet the needs of their constituencies. Tangible objectives must be defined for customers and constituencies. [1, p. 180]

- If you can't measure it, you can't manage it. [1, p. 231]

- There are a few key leverage points in any interdependent system that determine the overall performance of any organization. These points can be identified and managed. Constraints or bottlenecks exist. Either manage them or they will manage the organization. Most constraints are not physical limitations but are limitations created because of the beliefs or policies about how to staff, supply, maintain, and support the organization. Tackling policy and culture constraints is similar to slaughtering sacred cows. [3, p. xi]

- To sustain reengineered business processes (that at last abandon the functional orientation of the past), many progressive companies have been replacing inflexible, poorly integrated systems with enterprise-wide systems. [5, p. 10]

- To answer the question, "how are we doing?" most companies look inward and apply any number of functionally oriented measures. But excellent supply chain managers take a broader view, adopting measures that apply to every link in the supply chain and include both service and financial metrics. [5, p. 12]

- Many progressive companies have realized that the traditionally fragmented responsibility for managing supply chain activities will no longer do. Some have elevated supply chain management to a strategic position and established a senior executive position such as vice president-supply chain reporting directly to the CEO. This role ignores traditional product, functional, and

geographic boundaries that can interfere with delivering to customers what they want, when and where they want it. [5, p. 15]

- Companies should avoid the natural tendency to revert to functional specialization. Such functional compartmentalization is not consistent with accountability and problem solving. Responsibility for achieving the measures should be shared across the entire management group. [1, p. 262]

- A system is a network of interdependent components that work together to achieve the goal of the system. [6, p. 17]

- One of the essential elements of a manager's job is the ability to recognize and manage the interdependencies among the components of the system. [6, p. 18]

- In order to steer our system in the right direction we have to know how to make the right decisions. In order to do this, it is essential that we be capable of assessing to what extent our system is achieving its goal. In other words we have to be able to measure the system. We need a set of measurements suitable for assessing the impact of every local decision on the goal of the system. [6, p. 20]

[1] Kaplan Norton and David P. Norton, *The Balanced Scorecard*, Cambridge, Massachusetts, Harvard Business School Press, 1996.

[2] Michael Hammer and James Champy, *Reengineering the Corporation*, New York, HarperCollins Publishers, 1993.

[3] Debra Smith, *The Measurement Nightmare: How the Theory of Constraints Can Resolve Conflicting Strategies, Policies, and Measures*, Boca Raton, FL, The Lucie Press, 2000.

[4] Peter F. Drucker, *Management Challenges for the 21st Century*, New York, HarperCollins, 1999.

[5] David L. Anderson, Frank Britt, and Donavon J. Favre, The Supply chain Management Review, *The Seven Principles of Supply Chain Management*, http://www.manufactur8ing.net/scl/scmr/sevenprinc.htm

[6]   Domenico Lepore and Oded Cohen, *Deming and Goldratt: The Theory of Constraints and the System of Profound Knowledge*, Great Barrington, MA, North River Press, 1999.

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Appendix E
SUSTAINABILITY ASPECTS OF READINESS REPORTING

Robert Fabrie

CONTENTS

TABLES

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SUSTAINABILITY ASPECTS OF READINESS REPORTING

This appendix is intended to provide a detailed discussion of current DoD sustainability reports and of the existing DoD logistics and sustainment system in order to establish the need for improved reporting on DoD readiness to sustain deployed forces. We have taken this step because we believe the importance of sustainability as a critical aspect of DoD readiness has not been recognized. As we looked at sustainability issues across the DoD, we found a focus on peacetime efficiency rather than on wartime effectiveness. One fear is that the DoD will be unable to sustain itself in a Major Theater War if the logistics community continues to focus on peacetime efficiency and fails to build an adequate system for reporting its readiness to sustain U.S. forces.

THE READINESS REPORTING SYSTEM FOR SUSTAINABILITY

Global Status of Resources and Training System (GSORTS)

The Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3401.02, Global Status of Resources and Training System (20 October 1997), and change 1 (19 March 1999) provide basic policy, procedures, and criteria for the Services, the commanders of combatant commands (CINCs), directors of Combat Support Agencies (CSAs), and the directors of Joint Staff directorates. Information relating to sustainment is included in the Resources and Training Segment, under the equipment and supplies on-hand factor. The Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3150.02, Global Status of Resources and Training System (GSORTS) (15 April 2000), provides detailed implementation guidance for reporting equipment and supplies in enclosure N, Resources and Training Segment. All measured units are to report status information in GSORTS. Measured units include all combat, combat support and service designated combat service support units in all Active, National Guard, and Reserve component forces apportioned to operational plans, CONPLANS, the SIOP, or Service war planning documents.

Enclosure C of the CJCSI 3401.02, Global Status of Resources and Training Systems (GSORTS), dated 20 March 1997 does not require units to report accompanying supplies. There are minimal requirements to report on the status of accompanying supplies or prepositioned materiel needed to equip early deploying forces and initial

sustainment. Service units are to assign a readiness rating based on the percentage of on-hand equipment versus the authorized wartime requirement and the amount that are mission capable versus total possessed. Services are to develop supplemental instructions to measure the status of items with unique capabilities that do not lend themselves to percentage C-level ratings.

Some Services do report the status of accompanying supplies in their individual SORTS reporting systems; however, it is not applied uniformly across the Services, and none of the Services report all of the supplies that would be needed for initial operational capability or sustainment. (See appendix C for a more detailed description of the GSORTS readiness reporting by the Services.) Additionally, each of the Services supplement the CJCS documents with detailed guidance, both to reiterate the Chairman's guidance and to expand on areas unique to the respective Service.[1] The Service's accompanying supplies[2] are not now reported in the GSORTS but may be reported in the individual Service SORTS systems. Other types of equipment and supplies needed for initial and follow-up sustainment, e.g., war reserve materiel,[3] peacetime operating stocks,[4] prepositioned weapons systems and support equipment, bare base and engineering equipment and supplies, and unit-held accompanying supplies are not reported in GSORTS.[5]

Joint Monthly Readiness Review (JMRR)

Title 10, United States Code, directs the Chairman to establish, after consultation with the CINCs, a uniform system for evaluating the preparedness of each combatant command to carry out assigned missions and the readiness and responsiveness of the CSAs

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[1] See appendix C, Global Status of Resources and Training System, Part 1 Overview.

[2] Including but not limited to the Army's basic load, Prescribed Load List (PLL), and Authorized Stockage List (ASL); the Air Force's Mobility Spares Readiness Packages; the Navy's Consolidated Shipboard Allowance List (COSAL) or Aviation Consolidated Allowance List (AVCAL); and the Marine Corp's allowance list and accompanying supplies (ashore or afloat).

[3] War reserve materiel (WRM)—mission-essential secondary items, principal and end items, and munitions required to-attain operational objectives in the scenarios authorized for sustainability planning in the Secretary's Defense Planning Guidance.

[4] Peacetime Operating Stocks are inventories of materiel on hand at the retail (e.g., operational units) or wholesale level (e.g., distribution depots) to meet routine operating requirements and can be used to meet wartime requirements. War reserves are intended to be on hand at D-Day to provide sustainment until resupply can be established. They represent the additional demand from wartime operations over and above what would be available from the supply systems, industrial base, HNS, and other sources during the planning time frame.

[5] The Army does report prepositioned brigade sets assigned to a specific unit intended to close on the prepositioned materiel within a specific theater.

to perform with respect to war or threat to national security. Title 10 also directs the Chairman to advise the Secretary of Defense on critical deficiencies and strengths in force capabilities. The Chairman of the Joint Chiefs of Staff (CJCS) Instruction 3401.01B, Chairman's Readiness System, 1 July 1999, provides broad policy and guidance for the standardized presentation of unit, joint, and Combat Support Agency (CSA) current readiness assessment in the Joint Monthly Readiness Review (JMRR). The JMRR is intended to be a current assessment of the military's readiness to fight and meet the full range of the National Military Strategy (NMS). The focus of the JMRR assessments is on near-term operational issues. The JMRR process is designed to provide the DoD leadership a current, macro-level assessment of the military's readiness to execute the National Military Strategy (NMS) as assessed by the CINCs, Services, and CSAs.

The JMRR requires the Services and USSOCOM to report their respective unit readiness (combat and support forces) to support notional scenarios selected by the Joint Staff (JS). The reports are to show current force commitments, current and projected unit readiness (combat and support forces), assessments of readiness trends, and force assignments for a notional contingency. The current assessments are generally derived from GSORTS reports and are to reflect the most current data.[6]

The Joint Staff is the focal point of the JMRR process. The JS directorates are assigned responsibility for readiness functional areas in their specific areas of concern, to include analyzing joint readiness reports from the CINCs and CSAs, preparing the functional area assessments, and reporting and track the status of the resolution of readiness deficiencies. The Director for Logistics, J-4, has the primary responsibility for sustainment and other related functional areas. There are two separate input paths for logistics and sustainment readiness status and issues.

Services and USSOCOM

The Services and USSOCOM provide current and projected readiness in broad areas, including equipment and enablers. The Services and USSOCOM are to depict current readiness of combat, combat support, and combat service support units and support force capability in the following six major areas, including what should be

considered in assessments of these critical support enablers.[7] The enabler(s) assessment

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6   Paragraph 1.a.1 of enclosure D of CJCSI 3401.01B, 1 July 1999.

7   CJCSI 3401.01 B Enclosure D and Glossary.

areas are to include units or capabilities essential to support joint operations including sustainability.[8]

- Theater mobility support—The service assessment of support force capability for transition ashore, air mobility ground interface, and intratheater distribution.

- Engineers—Service assessments would include military specialized or contingency construction, real estate acquisition, contract construction, and key specialized functions.

- Health services—For assessment purposes the Services are to consider patient command and control, forward deployable hospitals, patient evacuation, medical supply, and force protection.

- Sustainability—For assessment purposes sustainability is to include prepositioned unit and bare base sets, spares and stocks, ammunition, bulk POL distribution, general support theater maintenance, intermediate maintenance afloat and ashore, depot capability and backlog, and weapons systems reliability and maintainability.

- Security—Service assessments are to include combat support and specialized military police, airfield protection, and inshore undersea warfare and port security.

- Field services—Examples include water production and distribution, laundry, shelter, mortuary affairs, and bath.

All of the six areas covering support force capability enablers are interrelated; thus, a failure to meet readiness objectives in any one area could have a direct impact on the ability to sustain operational forces. A key lesson learned from the Operation Allied Force in Kosovo was that the lack of forward-deployed engineering assets would have adversely affected the CINCs concept of operations and follow-on sustainment.[9]

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[8] CJCSI 3401.01B defines "sustainability" as the ability to maintain the necessary level and duration of operational activity to achieve military objectives. Sustainability is a function of providing for and maintaining those levels of ready forces, materiel, and consumables necessary to support military effort. Sustainability is described by the following components for assessment purposes: pre-positioned unit and bare base sets, spares and stocks, ammunition, bulk POL distribution, weapons system reliability and maintainability, general support theater maintenance, intermediate maintenance afloat and ashore, depot capability and backlog, and contingency contracting.

[9] Report to Congress, Kosovo/Operation Allied Force After-Action Report, 31 January 2000.

[10] GAO/NSAID-99-6 Report—Identified significant readiness issues, e.g., shortfalls, maintenance of equipment on military service prepositioning programs.

The Combatant Commands and Combat Support Agencies

The JMRR also requires the CINCs and the CSAs to report on joint readiness in eight joint functional areas, including logistics and sustainment. Several other joint functional areas, especially mobility and infrastructure, have a direct impact on logistics and sustainment. Table D-2 of enclosure D of the CJCS JMRR Instruction defines the following associated elements to be considered in the assessment of logistics and sustainment readiness:[11]

- Materiel (Classes I–VII, IX), munitions, prepositioned stocks (ashore and afloat)
- Health services support (personnel and equipment) and support force personnel and equipment
- POL distribution units
- Equipment maintenance, aviation, and vehicle maintenance
- Field services, mortuary affairs, and supply

The CINCs and CSAs are required to assess their ability in each joint functional area, to execute current missions, and to support the execution of a warfighting objective using C-level assessment criteria[12] based on approved national objectives, military objectives, and military and operational requirements. In the joint functional areas relating to sustainment, many of the components to be assessed, e.g., munitions, prepositioned assets, and maintenance, can only be effectively assessed by the Services that have Title 10 responsibilities for those assessment areas.

Each Service has Title 10 responsibility for equipping and sustaining its units. Many of the components to be assessed for the logistics and sustainment functional areas, e.g., prepositioned assets, some classes of supply (Class V munitions, Class VII equipment, and Class IX repairable items), maintenance and repair capabilities, munitions, health services support, POL distribution units, field services, mortuary services and supply, and their associated combat support units depend on the readiness and capabilities of the Military Departments. The Military Department—not the CINCs and the CSAs— have Title 10 responsibilities to ensure readiness and capabilities needed in these functional areas. For example, the Services—not the CINCs—have responsibility for the

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[11] Part III of the Glossary defines Logistics and Sustainment as a joint readiness functional area that consists of the following components for assessment purposes: prepositioned assets afloat and ashore, munitions, health services support, equipment that facilitates movement, equipment maintenance capability, and other classes of supply (I, II, III, IV, VII and IX).

[12] CJCSI 3401.01B, Chairman's Readiness System, 1 July 1999, Enclosure D, Table D-1.

procurement, storage, maintenance of prepositioned equipment and supplies and munitions including war reserve materiel. The DLA has inventory management responsibility for Class I and Class III and the management of Class I and Class III war reserve inventories. Other classes of supply, the determination of requirements, procurement, and management of war reserve materiel are the responsibility of the Military Departments.

The Services own, staff, operate, manage, and maintain the repair depots. Intermediate and organizational repair, including the trained maintenance personnel, equipment, and supplies necessary to perform maintenance activities, is also a Service responsibility. The Services are also responsible for the design, procurement, production and inventory management of munitions (Class V) and equipment (Class VII) and their war reserve inventories. The Services provide the combat support and combat service support units and their equipment for POL distribution, health services, supply, and other field services. The CINCs and CSAs generally do not have sufficient insight on the status, capability, or readiness of the Services to provide any of the items or specific services.

The Defense Logistics Agency (DLA), a CSA, has inventory management responsibility for most consumable secondary items, approximately 90% of all DoD items, and most classes of supply—Class I–IV, VIII and IX with the exception of some unique items managed by an individual Service. The DLA inventory management responsibilities are to ensure supply availability, primarily from a peacetime demand environment, and do not include the computation, procurement, or the prepositioning of war reserve materiel. The Services are responsible for the computation of wartime requirements to meet operational objectives and sustainability planning as approved in the Defense Planning Guidance (DPG) and to acquire war reserve materiel if needed.[13] Once war reserve inventories are acquired, the Services are to size, manage, and position them to provide the maximum flexibility to respond to a spectrum of regional contingencies.[14] The DLA may not even know what the wartime requirements for an item might be or what might be required to support depot repair surge requirements. The Services have materiel management responsibilities for Class V munitions and the Service-unique Class IX repairable secondary items used to support their Service-specific weapons systems.

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[13]   War reserve is materiel required in excess of normal peacetime operating requirements due to increased demand or the need to be prepositioned at or near a theater of operations.

[14]   DoDD 3110.6, War Reserve Materiel Policy, 25 April 1994.

Other logistic and sustainment-related functional areas to be reported on by the CINCs and CSAs in the JMRR that are essential to achieving sustainment objectives include:

- Mobility—Strategic air and sea lift, power projection enablers, e.g., rail cars, containers, pallets, CHE/MHE, port operations), joint total asset visibility, air refueling, aero-medical evacuation, intratheater transportation, throughput enablers (fuel, handling equipment, ramp space, port personnel), and JLOTS.

- Infrastructure—Fixed structures to include road networks, airfields, seaports, rail networks, POL pipelines and hydrants, bed-down facilities, and power generation. This would also include installation physical security, power projection, engineering units and equipment, and prepositioned facilities.

The same concerns exist regarding Service responsibilities in these areas. The Services—not the CSAs and the CINCs—will provide the combat support units such as JLOTS capabilities, throughput enablers, and many of the capabilities to create infrastructure in an austere environment, including prepositioned facilities and equipment. The CINCs can report on what is in place or readily available in the theater, and the DLA can report on the availability of fuel and what can be delivered to the theater. If the individual Services fail to provide accurate readiness reporting in GSORTS regarding the combat support and combat service support units, then the information in the JMRR may also be inaccurate. If the Services do not report on the status of WRM inventories, the wartime capabilities of repair depots and intermediate repair facilities, the status of prepositioned equipment and facilities, engineering equipment, etc., then the JMRR cannot provide an accurate and comprehensive picture of logistics and sustainment readiness.

Quarterly Readiness Report to Congress (QRRC)

The QRRC was first required by the fiscal year (FY) 1996 National Defense Authorization Act (NDAA) and was to be submitted within 45 days of the end of each calendar year quarter. Section 382 of the FY 1998 NDAA[15] directed an expansion of the scope of the QRRC to include comprehensive logistics and sustainability readiness

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15   10 USC 482 (PL 105-85).

indicators for active components and the DLA and is to be based on DoD readiness assessments and reports.[16] The readiness indicators are to include the following:

- Logistic—Equipment fill of deployed equipment, equipment availability, non mission capable (NMC) equipment, equipment age, and the condition of non pacing items

- Maintenance backlog of equipment

- Supply—The availability of ordnance and spares and status of prepositioned equipment.

The QRRC information is generally derived from existing Service and Agency readiness reporting processes, e.g., GSORTS and the JMRR, but also may contain additional information not reported in GSORTS or the JMMR. What is reported in the QRRC is also not necessarily comprehensive, covering the same time period, type, or range and depth of information within a specific reporting area or uniform across the Services, and may not be developed by the same personnel or organizations within each of the Service headquarters staff elements.

Joint Reporting Structure

The GSORTS is part of the Joint Chiefs of Staff Joint Reporting Structure (JRS). The CJCS Manual CJCSM 3150.01, Joint Reporting Structure General Instructions, 30 June 1999, provides policy and procedures for a system of joint reports and publications. Although, the JRS is not normally considered a readiness reporting system, its purpose is to meet the National Command Authority's (NCA) need for military information to perform its functions and to support command decisions regarding military operations. The JRS reports are a major source of information for the National Military Command System (NMCS). They also provide information to the NCA, CJCS, commanders of combatant commands and the subordinate joint forces commander, DoD Agencies, and the Services. The JRS provides readiness status in many cases and covers many functional areas including personnel, materiel and equipment status, operational and logistical planning, and actual military operations and exercises as well as GSORTS.

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[16] Based on any readiness assessments provided to any council, committee, or other body of DoD responsible for readiness oversight and the membership of at least one civilian at the level of ASD; by senior military and civilians of the military departments and commanders of the unified and specified commands; or as part of any regular established process of periodic readiness reviews.

The JRS participants are the Joint Staff, the combatant commands and subordinate commands, the Services, and the CSAs. Some functional areas covered that would be useful for sustainability readiness assessments are the following:

- Transportation Feasibility Analysis
- Civil Reserve Air Fleet Summary
- Joint Resource Assessment Data Base Report
- Munitions Status Report
- Bulk Petroleum Capabilities and Contingency Reports

Other Congressional Requirements for Reporting Sustainment Readiness

Section 366 of the National Defense Authorization Act (NDAA) for fiscal year 2000 directs the Secretary of each Military Department to develop logistic standards for sustained military operations for deployable units under the jurisdiction of the Secretary. The standards are based on "the unit's wartime mission, requirement(s) for sustained operations under each warfighting plan, and likely requirements for that unit to conduct sustained operations in an austere environment while drawing on its own internal logistic capabilities." The standards established by the Secretary of each Military Department are to reflect those "spare parts and similar logistic capabilities that the Secretary considers sufficient for each of the units to successfully execute their missions under the conditions described above." The standards are to include:

- The level of spare parts that the units must have on hand
- Similar logistics and sustainment needs

Section 366 requires that "the standards shall be taken into account in designing a comprehensive readiness reporting system as required by Section 117 of Title 10 and shall be an element in determining unit readiness and in establishing annual funding requirements for the Department." The Secretary of Defense is also to provide an analysis of the current spare parts, logistics, and sustainment standards and costs to address shortfalls in the annual report to Congress.

In meeting the intent of Section 366, the issue is what DoD components and supporting organizations should report and how to define logistic support and similar logistic needs to meet a unit's wartime mission requirement for sustained operations, especially in an austere environment. When coupled with the requirement in Section 117 of Title 10, it appears that the congressional intent on Section 366 of the FY 2000 NDAA is to support the National Security Strategy (NSS), the National Military Strategy (NMS),

planning and programming requirements in the Defense Planning Guidance (DPG), operational plans (OPLANS), etc. Sustainment, then, means the ability to support operational requirements for the duration of a two-MTW war or any other type of crisis. This latter perspective also agrees with the DoD definition of sustainment. For sustainment requirements, any crisis below an MTW is much easier to deal with but still can be a problem, e.g., the lack of prepositioned engineering equipment and supplies, aircraft spare and repair parts and precision munitions concerns experienced in Operation Allied Force.[17] If this is the case, then to meet the intent of Section 117 of Title 10 of the USC and Section 366 of the FY 2000 NDAA, DoD will need to cast a wider net over all of the DoD logistic system and its supporting systems that are necessary to sustain troops for the duration of the conflict.

In developing logistic standards that will meet the intent of Section 366, each Service should include the status of the weapons systems, support equipment, and the accompanying supplies and follow-on materiel required to sustain deployed troops. Each Service should report the readiness of combat support units and combat service support units, other supporting functional areas or DoD systems such as depot repair, the defense distribution system, mobility and infrastructure.

For example, the sustainment of a large ground force will require more than sufficient inventories of materiel. It will also require strategic airlift and sealift capabilities, and the ability to discharge cargo, marshal the cargo at inland staging areas and move it forward to operating units using a number of different types of intratheater transportation and combat support units. Spares and components needing repair will need to be retrograded back to intermediate and depot-level facilities also requiring intra-theater and strategic lift and the DoD distribution system to ensure delivery to the right repair facility and sufficient inventories of replacement items ready to send to the requisitioning unit. The Services will need to ensure that they have sufficient inventories of war reserve materiel and equipment and supplies that are prepositioned to equip early-arriving forces and to establish needed infrastructure and facilities for initial operational capabilities and follow-on sustainment. Medical evacuation pipelines and health support facilities will also need to be established and sustained. The CSAs need to ensure that they can provide the supplies (e.g., consumable items for troop support, operations and maintenance) and common other services (e.g., communications, distribution,

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[17] Report to Congress, Kosovo/Operation Allied Force After-Action Report, 31 January 2000.

contingency contracting, force protection, finance and disbursement). The CINCs will need to help ensure that proper access and support agreements, available infrastructure, etc., are in place or will be made available to support operations and sustainment. Each of these areas are interdependent DoD systems—if adequate transportation or in-theater throughput enablers are not available, then the availability of supplies for sustaining troops and operations will be adversely affected. If repair parts aren't available for the depots to repair spares, then weapon system operational availability will be adversely impacted.

THE DoD LOGISTICS AND SUSTAINMENT SYSTEM

Each Service has a different concept of logistic support with different supply pipelines and timelines for initial and follow-on sustainment. Each of the Services requires a great deal of support from different DoD components to provide logistic support and sustainment to deployed forces. There is also a significant amount of interdependence within the Services for combat support capabilities and logistic support. Determining what readiness measures the DoD sustainment system should consider requires the examination of three distinct components that make up the Services' logistic systems and their individual supply chains and distribution pipelines:

- The supply chain for different classes of supply. The supply support or sustainment of deploying troops rely on the following types of materiel; 1) equipment, support items and end items, 2) munitions, 3) medical items and blood, and 4) secondary consumable and repairable items. Although the Secretaries of the Military Departments have Title 10 responsibilities for the equipping and supply of their forces, the Services also rely on the DLA to provide critical secondary consumable items including operational rations and subsistence, individual equipment and clothing, bulk fuel and packaged petroleum, construction and barrier materiel, medical items, and many of the consumable spare parts used in weapons systems and end items. Each class of supply has a different supply chain and may have different organizations with management responsibilities over distinct elements in the supply chain for each class of supply and their supporting DoD systems. They also have different inventory management considerations that must be factored into sustainability readiness measurements.

- The capabilities and responsiveness of each of the Services in terms of 1) inventories of materiel and supporting equipment (e.g., prepositioned assets and secondary item war reserve materiel, munitions, accompanying supplies and inventories/responsiveness of the Service wholesale system), 2) the Service's combat support unit readiness and 3) the Service's organizational, intermediate, and depot maintenance capabilities. Within the individual Services, the management of materiel is at two levels of supply. The retail

system includes materiel for the initial sustainment of deploying troops such as unit and authorized loads. Accompanying supplies may include peacetime operating stocks that are on hand in the units or force held at the base or installation level. It may also include prepositioned equipment and supplies that deploying units will use to establish operational capability. It may include war reserve end and secondary items (starter stocks). The wholesale system includes items that are held at inventory control points, including war reserve materiel (swing stocks) and in the Defense Distribution System. The wholesale supply system also includes private industry, the Defense Logistics Agency (DLA), and the Service's arsenals, shipyards, and repair depot organizations. Materiel from the wholesale system can also include those items to be supplied through in-place industry agreements and third-party logistic support agreements, e.g., weapons system spare parts, fuel and medical items and war reserve items held as starter (forward) and swing stocks held in reserve for follow-on support.

- Sustainment supporting systems and capabilities, which include the Defense Transportation System and the Defense Information Infrastructure, including communications and decision support systems such as the Global Command and Control System (GCCS) and its supporting information systems, enabling infrastructure and equipment, and other Service-managed combat support unit and operational capabilities such as engineering, bare base assets, materiel and cargo handling equipments, etc., all of which have a direct impact on the capability of the combatant commanders to sustain operations.

The following section describes the supply chains for each of the critical supply classes and Service logistics systems, how the supporting systems and infrastructure may impact Service, DLA and CINC abilities to sustain military operations.

Classes of Supply

The Department of Defense has approximately 4.8 million items in its inventory that are used to support its day-to-day activities. The complexity and variety of items—in many cases military-unique items—has necessitated the creation of multiple supply chains and their supporting transportation and distribution systems. The wide range and types of materiel, the number of DoD components that have materiel management responsibilities, and the unique nature and methods used by the Services and DAs to provide this materiel to operating forces has resulted in many specialized supply chains, pipelines, and supporting systems. In some cases, supply management and elements of the supply and distribution pipeline(s) may be grouped together to enhance support to a particular capability or groups of capabilities. For example, supply support and distribution may be grouped under a single manager or pipeline into an operational theater. The Navy combat

logistic fleet (CLF), which provides continuous replenishment to Navy battle groups, is an example of a specialized pipeline. The readiness and capability of the CLF has a direct impact on the readiness of the battle group. Other examples include the Army Maritime Prepositioning Ships (MPS) and the Marine Corps Maritime Prepositioned Force (MPF) ships which merge various classes of supply, inventories of combat configured loads, and logistic support packages at a point in the pipeline to provide a specific capability in an operational theater over a defined period of time.

In most cases, these supply chains and their supporting pipelines are interdependent. Some parts of the supply chains and elements of pipelines may be common across a range of commodities, while other elements may be unique and dedicated to a specific item or specific class of supply. The commodity supply chains drive the distribution systems. They also drive the amount and types of equipment and combat support units within a theater. These chains and pipelines are an integral part of sustainment and operational planning. Thus their readiness to meet operational needs is an essential and important element in readiness reporting. The commodity supply chains can be roughly organized around classes of supply, as in Table E-1.

Table E-1. Classes of Supply

Supply Class	Types of Items	Management Responsibility
I	Subsistence—operational rations, water, and other food items	DLA—operational rations and all food items; water the Services
II	Clothing, individual equipment, tools and administrative supplies	DLA—most clothing and individual equipment; GSA for common administrative/cleaning items; Services—unique items
III	Bulk fuels and packaged petroleum	DLA
IV	Construction and barrier material	DLA
V	Ammunition, conventional and PGMs	Army (SMCA)—most conventional; Services—PGMs and conventional
VI	Personnel demand and hygiene	DLA
VII	Major end items, racks/pylons and other support equipment	Services
VIII	Medical materiel	DLA
IX	Repair parts and spares	DLA— most consumable items; Services—repairable and unique consumable items
X	Materiel for nonmilitary programs	All DoD components

Some classes of supply that are critical for initial sustainment are not part of the Service supply chain. The Military Departments often rely on other organizations such as the DLA, a supporting CINC, or the component commander of another Service component to provide these items. For example, for Class V, ammunition, the responsibility to ensure

that the right types and amounts of ammunition are delivered to the right place and time cuts across a number of DoD Components and their subordinate organizations. Class V items are managed through a combination of joint and service materiel managers. Although each Service is responsible for the design, procurement, and management of their war reserve munitions inventories, they are also dependent on other DoD organizations to manage critical industrial capabilities; to ensure reliability of war reserve conventional ammunition and precision guided munitions inventories; and to transport them into a theater of operations. All of the Services are dependent on other organizations to move their ammunition from inventory sites in the U.S. to operational forces in a theater. The Single Manager for Conventional Ammunition (SMCA) within the Department of the Army is responsible for acquisition, production scheduling, testing of inventory for quality and reliability, and management of critical DoD-owned industrial facilities for the production of conventional ammunition and energetic materials. The SMCA has management responsibility for small arms, mortar, artillery and ship gun ammunition, bombs, unguided rockets, land mines, grenades, flares and pyrotechnics, and energetic materials such as explosives and propellants. Services manage Service-unique items such as guided missiles, rockets, mines, torpedoes, and guidance kits for aerial delivery bombs.

Class V items consume physical distribution and transportation resources at the expense of other distribution and transportation missions because of the criticality of the item and the safety and security considerations that are inherent in munitions items. The transportation, storage, and handling of class V items present specific challenges that are not experienced with other commodities.

The transportation of munitions from "fort-to-port" requires special care and security and the number of ports of embarkation are limited. Storage facilities for munitions require specially constructed shelters, physical security, access to transportation, and safety considerations. The SMCA operates U.S.-based storage facilities that receive, store, maintain, and issue Class V items. The Services also maintain munitions storage facilities in CONUS and OCONUS and as prepositioned war reserve materiel ashore and afloat to provide rapid delivery to support worldwide operations. Transportation of munitions from fort to port also requires coordination and compliance with numerous jurisdictions, authorities and regulations. Within the United States, the Joint Munitions Transportation Coordinating Activity (JMTCA) is responsible for the movement of ammunition (for export) from the U.S inventory sites to the ports of embarkation. The JMTCA relies on commercial and DoD transportation systems. The JMTCA consolidates

all Service munitions transportation requirements, both SMCA managed and Service managed, into movement plans, ship planning, coordination, and execution actions for those munitions moving aboard common user sealift. Some high value munitions probably will be transported exclusively by strategic airlift.

Responsibility to move the ammunition from the port of embarkation to the theater rests with CINC TRANSCOM, who must manage, prioritize, and schedule the flow of materiel from Service inventory sites, commercial sources, and the Defense Distribution System into a theater or operational area. Within the theater the responsibility for the safety, security, and movement of munitions lies with the CINC, who, in coordination with the Host Nation, conducts detailed end-to-end planning for ammunition movement at every node throughout the distribution chain. The CINC relies on individual service capabilities[18] for logistics over the shore (LOTS) operations and the marshaling, distribution, and onward movement of materiel to the operational forces. At the operational and tactical levels, the Services have units with specialized capabilities for munitions storage, maintenance, and transportation. Munitions distribution functions are the responsibility of the Navy ammunition ships using underway replenishment methods for forces afloat.

Readiness measures for ammunition should incorporate the following considerations:

- Depth and range of ammunition inventories against war time requirements for each of the Services. If shortfalls exist, what options exists, e.g., substitute ammunition, industrial surge, alternate sources such as allied inventories, FMS, etc.

- The backlog of ammunition inventories needing re-inspection and maintenance before they can be released for operational use; this would include organizations such as the SMCA and the Services. Inventories of conventional and precision-guided ammunition require periodic inspection, modification, and preventive maintenance before reissue. Is there a backlog? Can it be re-inspected and provided to operational troops within the planning time frame?

- Surge production capabilities (if part of the war reserve offset for wartime requirements). Is the production base warm and can production supply

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[18] The Services and the DLA will deploy forward logistic support units (LSE) to coordinate the logistic flow of munitions or other materiel. Their purpose is to provide an interface between the strategic and operational logistic levels. For example, the Army will deploy a munitions LSE to link the CONUS-based munitions production and logistics support infrastructure to deployed units. The LSSE is composed of military, contractors, and civilian representatives of the materiel commands and operate under the direction of the component theater commander.

sufficient quantities of an item during the planning time frame. If not then sufficient war reserve inventories are needed.

- Capability to move ammunition from fort-to-port, port-to-port, and port-to-foxhole. This would require a number of organizations to report on their readiness to meet wartime needs. Can the JTMCA acquire sufficient transportation capability to move the ammunition from CONUS-based supply points to the designated port of embarkation? Can TRANSCOM provide sufficient port capacity? Are there sufficient assets to move the required amount of ammunition? Within the theater, who has responsibility for reception, staging, integration and onward movement and are available equipment, facilities, and infrastructure sufficient? Are there sufficient prepositioned assets available in theater for initial sustainment?

Some classes of consumable supply items, such as Class III – bulk fuels, and Class VIII – medical items, are managed by the DLA, not the Services, and are nearly totally dependent[19] on in-place commercial arrangements and capabilities to provide the supplies needed for deployment and sustainment. Other critical materiel such as Class I, operational rations, managed by the DLA, and Class V, ammunition, managed by the SMCA and the individual Services, require military unique and dedicated production capabilities and war reserve inventories.

Operational rations such as the MREs are like ammunition in that they are military unique and have a low peacetime to wartime demand. MREs also have a shelf life, are essential for initial and follow-on sustainment, and require war reserve inventories that must be maintained and balanced with production surge capabilities. Class I (operational rations), Class III (bulk jet fuels, JP-5 and JP-8 and diesel oil) and Class V (ammunition) have other similar characteristics that should be considered for readiness measurements. All depend significantly on war reserve inventories and a responsive industrial base for sustainment. Classes I, III, and V are also the highest bulk (volume) and weight commodities that must be delivered into a theater. These classes are "pushed forward" into the operational areas. They require a continuity of sustainment flow and require significant combat support resources to distribute them to operational units.

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[19] Bulk fuels such as JP-8 and JP-5 are military unique and require special refinery runs to add additives to these fuels for operational use. The Defense Energy Service Center of the Defense Logistics Agency maintains significant inventories of war reserve ashore and afloat and has extensive worldwide business arrangements with commercial suppliers to provide fuels en route or into a theater. Services may also have some prepositioned war reserve inventory for initial sustainment needs. The Defense Supply Center Philadelphia of the Defense Logistics Agency has a number of prime vendor contracts in place with private industry sources of commercial medical items that can respond to military requirements for deployment and sustainment requirements. They may help fill but are not intended to meet Service requirements for initial accompanying medical supplies.

Ammunition and bulk fuels must be effectively linked into the operational plans. Logistic support activities and essential stocks for Class III and Class V items require additional security. Considerations such as transportation assets, materiel handling, storage, and distribution into the theater all require other supporting units, infrastructure and equipment. In many cases, a specific class of supply, e.g., bulk fuels, requires specialized units, pipeline distribution systems, specialized storage facilities and transport equipment.

Each class of supply requires different consideration in assessing and reporting on readiness. Some examples of the differences of each class of supply sustainment system and what might be considered for readiness metrics are listed below.

Class I

Class I subsistence materiel consists of operational rations, e.g., Meals-Ready-to-Eat (MREs), tray packs (T-rations), unitized group rations (UGRs), water, specialized rations such as long range patrol and cold weather and other subsistence items. The Defense Supply Center Philadelphia (DSCP) of the DLA is responsible for the acquisition, inventory, and war reserve management and for ensuring a responsive industrial base for operational rations. The Services develop field-feeding plans and provide requirements to DLA for operational rations and follow-on field feeding support. The field feeding systems assume theater wide use of MREs for the first few days of a deployment. During the initial stages of an operation, consumption is predictable; the supply system pushes forward operational rations. Personnel strength, type of operations, and feeding capabilities determine the amount and type of rations needed. Initial demand for deployment is instantaneous. Since these are high bulk and weight items, prepositioned stocks and war reserves are required. As the theater stabilizes, components begin to introduce A-rations, such as fresh fruits, vegetables, and other perishable foods that need food service personnel and refrigeration. Other subsistence items, e.g., commercial nonperishable, refrigerated, and canned items used for base feeding and follow-on food support once a theater is stabilized, are provided through prime vendor contracts, HNS and contingency contracting. Each Class I source of supply could require a separate supply and distribution pipeline.

Operational rations such as MREs have military-unique specifications and packaging needed to meet operational requirements and initial sustainment needs of combat operations in an austere environment. Adequate war reserve inventory levels are necessary. Since these are perishable items, WRM must be balanced with production

surge capability. An adequate supply of MREs is dependent on the availability and readiness of the follow-on supply capabilities for other types (T-rations, UGRs, etc.) of subsistence items. Will there be enough unified group rations and follow-on food service capability (provided by the Services) available when needed in the theater? If there aren't enough follow-on operational rations, e.g., unified group rations, what other alternatives exist or could be provided to make up for the shortfall, e.g. more MREs, host nation support, and/or contractor services support. The readiness of the Class I supply chain should be a major sustainability metric.

Water is an essential commodity for sanitation, food preparation, construction, the operation and maintenance of weapons systems, and decontamination from attacks using weapons of mass destruction. The quantity of water used depends on regional factors, such as climate, and the type and scope of operations. In arid regions, the provision of water takes on a significantly greater importance than in temperate, tropic, and arctic climates. Water requirements are significantly greater in rear areas for support activities such as maintenance, laundry and showers, and medical treatment. Combat support units will be required for finding and drilling for water; for desalination, purification, testing, and monitoring; for maintenance of water systems and equipment; and for distribution including pipeline and hose lines, bladders, and tanker trucks and trailers. The scarcity of potable water in some contingency areas requires prepositioned water support equipment that can provide immediate support and additional equipment in CONUS-based depots/installations for follow-on deployments to sustain operations.

Class II

Class II, Clothing and Textiles, also includes tentage, individual equipment and weapons, tools, administrative and housekeeping supplies, and industrial supplies such as rope, cable, screws, nuts, and bolts. Class II contains the widest array of different types of items in a single class. GSA and DLA provide most of the materiel management for these items. Units carry only limited supplies of most Class II items since they are bulky and impede mobility due to excessive storage and transportation requirements. Deploying units normally carry critical items, e.g., chemical defense equipment that is held at a central supply and in most cases is not issued to units until deployment.

Class II items managed by DLA include critical individual equipment items and clothing that may be required for a specific theater or combat situation. Examples are cold weather gear, troop support items needed for a desert or jungle environment or force protection items, e.g., body armor, helmets, and chemical defense gear. These items may

also rely on unique production capabilities and require sufficient war reserve inventories to meet wartime planning requirements. Items made specifically to Service specifications, with limited or no commercial alternatives, such as extreme cold weather clothing, chemical protective clothing, body armor, individual equipment, and tentage, must be stocked and included in war reserve inventories to assure supply availability.

In some cases, on-hand inventory may be the only available assets in emergencies because of production lead times. Many of these specialized items are not normally unit issue. Service-owned inventories may be centrally located on an installation or are prepositioned near the theater and/or within the service supply system, or in the defense distribution system. Many organizations within each of the Services and the DLA would need to report on the available inventories for these items as well as whether the industrial base could meet the wartime demand. Many of the specialized items have military-unique specifications for materiel or a limited production base. Individual combat support clothing such as the chemical protective ensemble, extreme cold weather gear, and body armor comes in different sizes. Information on the depth (level of inventory) and the range (sufficient numbers of a size to meet the tariff schedules to account for the normalized distribution of size variations) would also be necessary. The readiness of the Class II supply chain should be a major sustainability metric.

Class III

Class III items include bulk and packaged petroleum; oils and lubricants; hydraulic oils; bulk chemical products; coolants; deicing and antifreeze compounds; liquid and compressed gases, natural gas, coal, and electricity. The major components of Class III by far are propulsion fuels (JP-5, JP-8 and F-76) for aircraft, ships, and vehicles. These account for much of the weight and bulk of supplies going into a theater.

The supported CINC is responsible for the overall planning for Class III logistic support and requirements determination for the supported theater. The Defense Energy Service Center (DESC) of the DLA is responsible for materiel management and the maintenance of war reserve materiel for bulk fuels. DESC acquires, manages, and transports JP-5 and JP-8 jet fuels, F-76 diesel fuel, motor gas, fuel additives, and bulk lubricants directly into the theater, where it hands responsibility to the Services. The Services, primarily the Army and Marine Corps, provide tactical distribution systems, e.g., the Marine Corps offshore petroleum discharge system (OPDS) and amphibious assault bulk fuel system (AABFS) and the Army's inland petroleum distribution system (IPDS), which supports ground and air forces on the ground. The Army is normally responsible

for the inland distribution of bulk fuels, including distribution of bulk fuels to Air Force bases and the Marine Corps. This responsibility requires the Army to provide the force structure to:

- Construct, operate, and maintain overland petroleum pipelines
- Manage fuel distribution within the theater
- Distribute bulk fuels by non-pipeline means

This responsibility may also require the prepositioning of IPDS assets within a theater. Pipeline and hose line systems bring the fuel forward as far as possible to reduce transportation requirements. Other bulk delivery systems supplement the bulk fuel distribution system within the theater and include barges, tank cars, tankers and aircraft, bulk transporters to deliver fuel to the units, and specialized handling and storage equipment within the combat support units of all of the Services. The Marine Corps and Air Force retain the responsibility to distribute retail stocks to their operating units and maintain sufficient force structure and capabilities to handle, transport, and distribute bulk fuels to their individual Service units. The Marine Corps also maintains capability to offload bulk fuels over the shore when necessary.

Bulk petroleum is procured from commercial sources but requires special runs to provide required additives. War reserve inventories are distributed globally to quickly provide initial surge requirements. Navy CLF ships refuel naval ships underway. The CLF, and in some situations navy ships, obtain fuel supplies from commercial shore refueling facilities under DESC in-place direct delivery contracts. Deploying aircraft also refuel at similar commercial sources en route through DESC prearranged into-plane contracts. Supplies of military jet fuels may be limited from a specific refueling site. The DESC and Services use prepositioning of bulk fuels such as the DESC tanker maritime prepositioning ships and Marine Corps Marine Prepositioning Force squadrons to provide initial sustainment. The Air Force's Air Expeditionary Force bare base fuel requirements may be met initially by air-transported fuel using the aerial bulk fuel delivery system but would eventually require linking up to other Service tactical petroleum delivery systems and HNS/theater energy support capabilities. The supply chain for bulk fuels is truly a joint operation system. It is highly dependent on the capabilities and readiness of the DLA supply centers, commercial sources, and the Services combat support units and distribution and delivery systems within the theater. The Defense Supply Center Richmond (DSCR), also under the DLA, has inventory management responsibilities for packaged POL and other Class III items and the Services have war reserve material responsibilities for packaged POL. Other sources of Class III items may be provided and

used whenever possible by HNS, commercial sources, and allied nation support. The readiness of the Class III supply chain should be a major sustainability metric.

Class IV

Class IV items consist of fortification, barrier, and construction materials. Class IV items are managed by the Defense Supply Center Philadelphia of the DLA and include many types of items ranging from barbed tape concertina, fence posts, sandbags, lumber, raw materials for construction and common base support, and maintenance and repair items such as plumbing, electrical, and heating, ventilation and air conditioning equipment. Class IV materials are used primarily for force protection, facility and infrastructure construction and facility maintenance. Some critical uses follow:

- Upgrading, maintaining, or building roads, bypasses, bridges, port facilities, and storage areas and facilities
- Building expeditionary air strips, expedient air drops, and landing zones and upgrading and repairing existing airfields
- Assembling rafts or bridges for river crossings
- Upgrading, repairing, or building facilities for combat support activities and/or enhancing the infrastructure of a host nation, e.g., as part of Military Operations Other Than War (MOOTW)

Class IV materiel will be in high demand in support of theater operations in an austere environment and for humanitarian assistance. Recent experiences in Operation Allied Force demonstrated the relative importance of having sufficient supplies (prepositioned inventories) of construction materials, equipment, and deployable bare base assets to support operations.[20] Construction supplies are also high bulk and high weight items that are not easily transported to a theater. Service component engineering/construction unit equipment such as construction and road equipment is also heavy and bulky. Class IV materiel requirements depend on whether specific operations are defensive or offensive and whether the theater is a developed or austere environment. Most construction materials are low cost and readily available from commercial sources; in many cases, the materials can be delivered directly into the theater from existing sources. The DLA has many types of commercial supply arrangements and prime vendor contracts similar to those for food and medical items. Some items, mainly barrier materiel such as barbed tape concertina and sandbags, have military specifications needed in force protection. Contingency and prepositioned stocks are placed aboard the MPF/MPS ships

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[20] DoD Report to Congress, "Kosovo/Operational Allied Force After-Action Report," 31 January 2000.

and in theater for both initial sustainment and, since most of the items are heavy and bulky, for efficient use of transportation assets.

Readiness metrics should include war reserve materiel and prepositioned inventory levels for critical items of supply, e.g., barbed tape concertina, sandbags, runway ramp materials, and other construction materials that may be required for an austere area that are identified as critical in a combatant command's OPLANS. Also, the need for prepositioned construction equipment and other base assets should be considered and reported in readiness reporting. The readiness of the Class IV supply chain should be a major sustainability metric.

Class VIII

Class VIII, Medical Materiel, consists of all medical items and supplies, including medical equipment and repair parts needed exclusively for such equipment, medical gases, blood, and blood products necessary to provide health services support (HSS) to personnel during peacetime and combat operations. The Defense Medical Standardization Board (DMSB), a joint organization made up of Service representatives, identify D-Day significant items and develop DoD-wide requirements for Class VIII materiel. The Defense Supply Center Philadelphia (DSCP) of the DLA has the responsibility to acquire, manage, store and distribute almost all Class VIII items.

Class VIII items provide initial supply and follow-on sustainment to deployed medical facilities such as Navy Fleet Hospitals and hospital ships, Army Mobile Surgical Hospitals and Combat Support Hospitals, and Air Force Air Transportable Hospitals and forward-deployed medical support units and teams, e.g., battalion aid stations. Class VIII medical materiel cover a wide range of items, from commercially available equipment, laboratory supplies, drugs, pharmaceuticals and vaccines to military-unique items with limited or no commercial use and limited sources and production capabilities. Medical items present particularly difficult choices to Service medical staffs who must ensure the readiness of medical support, e.g., potency dated material, special handling and security, to ensure sufficient levels of accompanying supplies and follow-on sustainment. There are a number of organizations, including all the Services, the DLA, combatant commands and industry that may have separate supply chain pipelines. Because Class VIII items are critical and highly perishable, they require special handling and special units that should be factored into readiness assessments.

- The medical treatment of combat casualties is far different from the medical treatment of personnel during peacetime. During combat the demands for

medical items to treat shock, burns, and trauma go up dramatically (many times the average annual peacetime demand) and in some cases the initial surge in demand and required follow-on sustainment can exceed the total available supply of an item. The same is true for certain vaccines and prophylactics, e.g., for malaria and other critical drugs and pharmaceuticals. Shelf life limitations preclude the ability to stockpile large inventories of Class VIII medical war reserve materiel and industrial sources may not be able to meet initial surge requirements or follow-on sustainment requirements for many critical items. Acquisition strategies and investments in contractor-managed stocks are required to meet medical readiness but in themselves might not be sufficient to support requirements for some critical items.

- Deployable medical treatment facilities and supporting units maintain accompanying stocks of medical equipment and supplies to support expected treatment for the level of treatment they are expected to provide. Because of the high cost and limited shelf life of many medical items, the Services and the DLA inventory managers must strike a delicate balance between on-hand inventories, which often must be kept below the predetermined allowances to avoid shelf life expiration, and the ability to rapidly acquire critical medical items from commercial producers and their medical supply distributors for initial supply needs of deploying units. The requirement for FDA approval may preclude getting items from overseas sources. There are limited inventories of medical materiel in the DoD supply and commercial inventory and distribution systems. Prearranged supply and support agreements for time-definite deliveries must be in place with commercial sources to meet wartime requirements.

- Blood and blood products are managed separately in the medical supply system. The handling of blood and blood products requires individuals especially trained in blood movement and storage and is handled by a unique end-to-end supply and distribution system. The Armed Services Blood Program Office (ASBPO) is responsible for the coordination of blood programs of the combatant commands and Services, including the collection, storage, and distribution of blood products across a range of military operations. The responsibility of the ASBPO is to ensure that blood products, in the required amounts and types, reach the theater in a ready to use/issue condition. Each theater has a standard jointly operated blood distribution system managed by the Joint Blood Program Office (JBPO), under the joint force surgeon general's office in the combatant command. The JBPO is the single item manager for the management and coordination of joint requirements within the theater. Air Force blood transshipment centers are established in each theater to serve as the central receiving point of blood products from CONUS for distribution to each Service component blood supply unit within the theater.

- Military unique chemical and biological defense items that have no commercial equivalent such as biological-defense vaccines and nerve agent antidote auto-injectors are critical. Readiness measures should include the readiness of surge production facilities for anthrax vaccines, nerve agent antidote auto-injectors, and other biological and chemical defense items.

- Many medical items have a limited shelf life ranging from 18 months to 3 years. Disposal of obsolete inventory is also a problem for many medical items. The DSCP has established wartime supply strategies such as surge clauses in prime vendor contracts and rotational stock contracts (a bubble in the supply pipeline) with producers of critical items, such as burn crèmes and vaccines, to ensure a surge supply capability. Readiness measures need to consider the depth and range of accompanying medical supplies for deploying health services units and the in-place strategies to ensure a surge supply capability for D-Day significant medical items established by the DMSB. This should include surge requirements in prime vendor contracts for readily commercial items.[21]

Owing to the high reliance on commercial sources for initial accompanying supplies, the supply chain, its management, and the supporting distribution systems from the industry sources into the theater are particularly complex and highly dependent on special handling and premium transportation resources. Prime vendor agreements with private industry use prime vendor distribution channels including DoD-contracted commercial air package services for the bulk of peacetime demands. Prime vendor arrangements would use these same distribution and transportation systems in wartime. If the commercial transportation resources aren't available, then new pipelines need to be established.

The defense procurement, inventory management, and distribution systems (depots) still provide conventional materiel management, storage, and distribution services for many critical medical items, especially military-unique items including war reserve materiel inventories. The defense depot system serves as a freight consolidation point, receiving medical items from industry, consolidating shipments, and inserting them into the Defense Transportation System. The depots also serve as an assembly node for the buildup of medical sets, kits, and units. Within a theater, each Service is responsible for providing medical supply and distribution support to its own forces. A combatant commander may exercise directive authority over joint Class VIII supply and distribution

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[21] Limited shelf life and high cost dictate just-in-time inventories for commercial medical items. Production of these items is limited to forecasted peacetime demands with minimum amounts of safety stocks, which may be insufficient for the initial surge in demand of deploying units.

system by assigning a single integrated medical logistics manager with responsibility to provide effective and responsive theater medical materiel management and sustainment.

It has always been difficult and expensive to provide responsive materiel management and distribution for medical materiel within the Department of Defense, especially under crisis and wartime conditions. Limitation of shelf life, a high dependence on contractual arrangements with commercial sources, special handling, transportation and distribution pipelines, and security considerations require careful readiness assessments of the end-to-end supply chain and distribution pipelines. Readiness metrics need to include available DoD-controlled inventories of such items as drugs, pharmaceuticals, and other medical supplies (especially those with short shelf life and high wartime surge demand) and those from contractor and prime vendor sources. The availability and condition of deployable medical assets such as field hospitals, medical sets, kits and outfits and other support equipment should be included in readiness metrics. The supply availability and the readiness of the industrial base for military-unique items (e.g., biological and chemical defense items) that would be needed to meet wartime requirements should also be included.

Class IX

Class IX covers all types of repair and spare parts except items unique to medicine. It can be categorized into two important types of supply with different DoD components responsible for the effective materiel management and sustainment of deployed forces within a combat theater. The two classes are 1) spare parts and materials (e.g., consumable piece parts and shop-expendable supplies such as shims, rivets, and gaskets) that are consumed in the repair of weapons systems and other equipment and 2) repairable parts, units, and components that are removed and replaced in operational forward units and sent back to rear echelon support units or back to the Service-managed repair depots in the CONUS.

Each Service unit deploys with an allowance of Class IX materiel calculated to support unit equipment, within its maintenance capabilities, for a predetermined period of time and to maintain an acceptable level of operational readiness until resupply can be reestablished. In most cases, the more forward the combat unit, the less maintenance capability, less depth and range of spare parts and higher reliance on removable components or repairable items. The higher the dependence on repairable items to maintain operational availability, the greater the need for a responsive supply and distribution system for resupply and for retrograde of unserviceable materiel back to rear

maintenance areas or CONUS-based government and industry repair facilities and depots. Service supply and distribution plans into a theater of operations will include the pre-stocking or prepositioning of critical high demand items as war reserve materiel or pipeline spares staged at an appropriate operational location or maintenance echelon to ensure operational availability. The high cost of repairable items (they account for over 75% of the total DoD inventory value but less than 15 percent of the total Class IX items) dictates the need to minimize inventories and rely on an effective and responsive supply, maintenance, and distribution system to retrograde unserviceable assets, repair them and return them to the DoD supply and distribution system as quickly as possible. All of the above elements (supply, inventory, maintenance, transportation and distribution) in the repairable item supply chain need to be factored into readiness metrics for sustainment.

Over 90 percent (approximately 3.3 million) of all Class IX consumable items used to support weapons systems are managed by the DLA. Although the Services have engineering and configuration management control over these items that are unique to a specific weapons systems or other supporting equipment, the DLA has inventory management responsibility for these items. As the inventory manager, DLA is responsible for forecasting demand and acquiring, storing, and redistributing the items to Service users in operational units and maintenance activities. The DLA is also responsible for the supply availability of these items to ensure the operational availability for critical Service systems is maintained at satisfactory readiness levels in peacetime. The inventory management and wartime planning for the sustainment of Class IX spare parts (consumable items for and repairable items) presents possibly the greatest challenge in accurately determining readiness. Following are some of the characteristics of Class IX items that should be considered in readiness assessments.

- The Services have hundreds of different weapons systems, some with several configurations, that must be maintained and in most cases ready to support DoD operations. There are approximately 1,200 different weapons systems in the DoD inventory; although there are common systems that are shared by two or more Services, many are unique to a specific Service. And in many cases, an individual weapon system will provide the combatant commands with critical and unique military capabilities. Most contain complex components, e.g., engines, radars, communications suites, and targeting and guidance systems, that in themselves present specific logistic support challenges. One weapons system may require specialized equipment and facilities for its maintenance support, including multiple repair depots.

- A single weapons system may have several different configurations and many different spare parts and repairable items with Class IX secondary item

materiel management and maintenance responsibilities that are shared by more than one organization and DoD component. Some examples of the shared responsibilities for Class IX materiel management are as follows:

− The M1 Abrams tank (all configurations) has approximately 22,600 different Class IX consumable items and approximately 480 different repairable items. Nearly 15 percent of the consumable items are unique to the M1 tank, and almost all of the repairable items are unique to this weapons system. The repairable items require different types of support equipment, maintenance skills, and repair facilities to maintain the vehicle's engine, chassis, hydraulics, electrical system, transmission, communications and armament systems. The inventory management responsibilities for M1 tank consumable and repairable items (common and military-unique consumable items) is spread over three different inventory control points under the DLA and at least two inventory control points (repairable and critical/unique consumable items) under Army materiel management control.

− The F-16 (all configurations) has over 92,000 different Class IX consumable items that need to be supported by the DoD logistics system. Inventory management responsibilities are spread over three DLA managed inventory control points and two different Air Force managed inventory control points. All configurations of the F-16 account for over 6,000 separate repairable assemblies, modules, and components also requiring a wide range of maintenance skills, specialized equipment, special test equipment, and repair facilities to maintain air frames, jet engines, navigation and radar equipment, ordnance and armament systems, communications; and targeting, fire control, and other aviation systems.

• The peacetime frequency of demand and individual demand rates for all these different types of spare parts and repairable items could range from many requisitions per month to few if any over a 2-year period. Wartime demand for many items may be totally different. Inventory management is further complicated by other considerations for resupply of any given item, e.g., whether there are any sources for the item; the availability of materials; lead time required to produce the item; whether it is designed and fabricated in a government-owned industrial facility; or the availability of skilled labor.

• The war reserve computations to develop daily usage rates, attrition, and failure factors for wartime sustainment requirements are complex for a weapons system with many different parts and repairable items. Wartime requirements for these items could range from many times normal peacetime rates to little if any difference. Consumable and repairable secondary items with high demand on high-density systems such as the M-1 tank and F-16 fighter aircraft are more likely to have significant numbers of items on the

shelf or in the resupply pipeline. Attrition rates and replacement factors experienced in peacetime may better approximate those used in computational models to develop wartime sustainment rates. Items with very low demand over a 2- or 3-year period may only be stocked to numerical stockage objectives, e.g., procure a few items for inventory to be available just in case (insurance items) they are needed. The wartime demand rate for these items could increase dramatically because of battle damage, increased OPTEMPO, operational intensity, terrain, climate, the geographic area, etc. Low demand items tend to be more complex or unique items that require longer production lead times of hundreds of days and that may have no readily available source of supply.

Current readiness reporting for DLA and Service-managed consumable spare parts is the supply availability of items available in the supply system to fill incoming orders when requisitioned from the appropriate inventory materiel manager. Supply availability is expressed in terms of the percentage of requisitions filled against those requisitioned. Supply availability is a gross measure of the effectiveness of the supply system to fill requisitions for thousands of orders from many different users for a wide range of items to repair hundreds of different weapons system in a generally peaceful operating environment. It does not measure the range of parts requisitioned, e.g., if of 20,000 different national stock numbered (NSN) parts ordered, the supply system could fill requisitions for 18,000 different NSN parts, supply availability would be reported as high as 90 percent.

Although, this metric may provide a good overall, peacetime measure of effectiveness of the individual supply systems within the DoD components, it is not necessarily a good measure of the readiness of the supply system to support the needs of the CINCs in a contingency. For example, if the system reported a supply availability of 90 percent for the F-16 aircraft, this could effectively mean that over 9,000 requisitioned parts were not available to fill specific requisitions. If these are unfilled orders for different mission critical parts and parts requiring a long lead time, it could be catastrophic in terms of operational availability. This may not be a problem for high-density weapons systems if available systems significantly exceed those required to support a wartime requirement and weapons system and equipment replacement, cross leveling and/or cannibalization could be suitable alternatives. For items supporting low-density and high-demand items and swing assets, this could be catastrophic and could effectively shut down an operation or significantly alter the CINC operational plans and objectives. In the alternative, supply availability could also be weighted by the type of parts being ordered and filled, e.g., high-demand, less complex, or non-mission-critical parts are less important

than the more complex mission-critical parts with limited sources and long lead times that are ordered less frequently and in lower quantities.

Class IX repair items have another supply chain characteristic that must be factored into readiness assessments—the requirement to retrograde unserviceable materiel back to government and commercial repair depots and facilities for repair. Service weapons systems are heavily dependent on the use of reparable components to maintain operational availability, especially during military operations. Force projection operations will rely more on CONUS-based logistic support and maintenance systems and less on in-theater maintenance capabilities. The sustainment of weapons systems and their maintenance will depend on a constant flow of serviceable components (over ½ million different items) flowing from the repair depots through the Defense Transportation System and intratheater transportation/distribution systems to the end users. Sustainment also depends on the reverse flow of unserviceable assets through the same supply pipelines. Moreover, the ability of Service-managed maintenance activities to repair and return repairable assets for reissue is highly dependent on supply availability of repair parts (mainly from DLA and industry) and contracted maintenance support from private industry.

The Services manage their own repairable items, the procedures and processes for transporting the items back, and their repair and maintenance facilities. The Services are dependent on other DoD systems, including the Defense Information Infrastructure (DII), to provide the communications links and information management needs, the responsiveness of intratheater airlift and the Defense Transportation System (e.g., strategic airlift) to retrograde parts to repair sites, and the Defense Distribution System (DDS) for storage and control of the flow of materiel between repair sites and the user. The Service-owned and operated repair depots are in turn dependent on the supply availability of DLA and Service managed Class IX consumable (repair parts) and the responsiveness of private industry for materiel and maintenance services. The transportation system(s) are also dependent on the ability of the supply and depot repair systems to repair unserviceable assets required for their systems and equipment.

Most of these DoD systems do not report in SORTS or the JMRR on their readiness to meet their wartime responsibilities. The readiness of the Class IX supply chain should be a major sustainability metric.

Service Sustainment Systems

Responsibilities

The Secretaries of the Military Departments have Title 10 logistic responsibilities to include the following:[22]

- Exercise authority to conduct all affairs of their departments to include:
  - Recruiting, training, supplying, equipping, servicing, mobilizing, demobilizing, administering and maintaining force
  - Constructing, outfitting, and repairing military equipment
  - Construction, maintaining and repairing buildings, structures, and utilities
  - Acquiring, managing, and disposing of real property or natural resources

- Prepare forces and establish reserves of manpower, equipments, and supplies for the effective prosecution of war and military operations throughout the range of military operations

- Conduct research; develop tactics, techniques, and organization; and develop and procure weapons, equipment, and supplies essential to the fulfillment of the functions assigned by the Secretary of Defense

- Recruit, organize, train, and equip interoperable forces for assignment to combatant commands

- Create, expand, or maintain an infrastructure that supports U.S. forces using installations and bases, and provide administrative support unless otherwise directed by the Secretary of Defense

The Services in fulfilling their Title 10 logistic responsibilities have established doctrine, policies, procedures, and supply capabilities to meet their unique operational needs. Each Service is responsible for the logistic support of its own forces except when such logistic support is otherwise provided for by the assignment to a common or joint provider (e.g. consumable items, single item managers, transportation, bulk fuel distribution) or through agreements with national agencies, the host nation, or allied nations. There is a significant amount of similarity among the Service supply systems at the strategic or wholesale levels. Each Service relies on common user support for supplies and services. The DLA provides single-item management for subsistence and bulk fuels and integrated materiel management for consumable items such as clothing and individual troop support equipment, construction and barrier materiel, medical items, and most repair

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[22] Joint Pub 4-0, "Doctrine for Logistic Support of Joint Operations", 6 April 2000.

parts. The Army is the single manager for conventional ammunition. There are, however, significant differences in how each of the Services provides logistic support and sustainment for their operational units. To some extent, these differences are caused by differing policies, reporting methods, supply processes, and procedures developed by the different organizations rather than a need to support an individual Service's unique operational requirements.

Sustainment readiness can be described in the following terms:

- Inventories of materiel and supporting equipment

    - Peacetime operating stocks at the unit or base installations including accompanying supplies, e.g., Army prescribed load list (PLL) and basic loads, Marine Corps allowance items, Air Force mobility readiness spares packages (MRSPs), Navy consolidated onboard stock allowance list (COSAL), and the Navy and Marine Corps aviation consolidated allowance list (AVCAL)

    - Prepositioned assets and war reserve materiel (WRM) including principal and end items, munitions, and secondary items. (WRM is either prepositioned ashore or afloat or held within the CONUS)

    - The wholesale system peacetime operating inventories held by the Services and the DLA (most is held within the Defense Distribution Systems managed by the Defense Distribution Command of the DLA. This will also include inventories and third part logistic support agreements with industry

- Organizational, intermediate, and depot maintenance capabilities, including private contractors, who may now account for as much as 50 percent of the peacetime depot maintenance workload, and support contractors at field organizations

- The Service's combat support units that report in GSORTs[23]

Inventory Management

Inventory management of materiel within the individual Services occurs at two different levels of supply. The retail system contains materiel closest to the point of

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[23] The readiness of combat support units will not be discussed in this section. The intent of this paper is to show that sustainment is a system that consists of a number of interdependent elements, e.g., combat support units and equipment, transportation, and information systems. Unit readiness measure must include all appropriate combat support units and the status of their equipment, including that portion necessary to establish initial operational capability and must be prepositioned in theater (ashore or afloat). Without ready combat support capabilities, deployed forces will be unable to establish initial operational capability and will lack the follow-on support necessary to achieve specific objectives.

consumption to meet immediate demand and is used at the operational and tactical levels of supply. Retail stocks also include materiel that could be used for a unit's accompanying supplies, which provide the initial sustainment of deploying troops. The retail system reflects the individual logistic and sustainment doctrine of each of the Services and will further determine the type of items and the depth and range of supply items stocked in an operational unit; that is, what may be included in accompanying supplies and for what duration of sustainment; and how the units will be re-supplied. In many cases, a Service's pipeline will drive the supporting infrastructure, combat service support, and logistics services necessary to sustain deployed forces.

The second level of supply inventory is at the strategic logistic level—the Service and DLA wholesale system(s). Materiel in the wholesale system has several distinct categories that must be considered in readiness metrics for sustainment:

- Peacetime operating stocks (POS) are held for the replenishment of retail inventories consumed at the unit level. They should be able to respond to demands not addressed by retail inventory demand and consumption patterns and should be designed to provide additional flexibility and agility in a Service supply system. In some cases, all of a particular item is held within the wholesale system, e.g., to better manage high-value, low-demand spares. The Services concentrate available inventories in a few points that can respond quickly to a demand rather than have items placed throughout the retail system.

- War reserve materiel—WRM consists of mission-essential secondary items (consumable and repairable spares, troop support, construction and barrier materiel, operational rations, bulk fuel, medical items, etc.), principal end items, and munitions required to attain operational objectives in the scenarios authorized for sustainability planning and budgeting in the Defense Planning Guidance. WRM may include prepositioned equipment and supplies ashore and afloat (starter stocks) that deploying units will use to establish operational capability and sustainment. Service wholesale systems[24] also hold WRM (swing stocks) at Service inventory control points and unit installation storage sites and facilities and in the depot supply facilities within the Defense Distribution System.

- The wholesale supply system also includes supplies and services available from private industry, the repair capabilities of the Service-owned repair depots/industry repair facilities, the peacetime operating stocks held within the Defense Logistics Agency (DLA) inventory, and the production capabilities/inventory held at the Service's arsenals, shipyards, and repair depot

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24   DLA also owns and holds WRM for Class I subsistence items (operational rations) and Class III bulk fuels.

organizations. Materiel from the wholesale system can also include those items to be supplied through in-place industry agreements and third-party logistic support agreements, e.g., prime vendor programs for medical and subsistence items, vendor-managed inventories and supply agreements for weapons system spare parts, and agreements for bulk fuels.

At the strategic level of logistics and sustainment, the responsibilities for supply and sustainment of component forces, inventory management issues, and the processes for the logistic support for deployment and sustainment for each of the Services are relatively similar. Therefore, any readiness metrics can be uniform across the four Military Services. Each of the Services operates individual inventory control points for Service-unique materiel, Service repair depots, and intermediate repair facilities, and a wholesale inventory management system. Each Service has a requirements determination process, a stocking policy, an acquisition process, and a requisitioning process, and each maintains inventories of peacetime operating stocks at the wholesale level. Each service manages defense-unique industrial base capabilities and supporting infrastructure, and each uses contracted logistic support for maintenance and supply support.

Current readiness metrics only measure supply availability, which is the gross number of parts available from the systems (available to fill a requisition) against the total number of parts requisitioned from the supply system within a given period against a critical weapons systems or end item. These metrics are inadequate as readiness reports. The responsiveness and capabilities of the Service and the DLA intermediate and wholesale supply systems are critical to providing initial and follow-on support to deploying forces in a contingency. Readiness metrics should reflect readiness to meet these contingency, not peacetime, needs.

War Reserve Materiel

The DoD War Reserve Materiel policy requires the Services to compute war reserve materiel requirements to meet operational objectives established in the DPG. The policy also requires the Services to procure secondary items, principal end items, threat and level of effort munitions, and bulk petroleum in peacetime in sufficient quantities to meet operational objectives[25] and requires the Services to take the following actions:

- Program and fund for WRM acquisition when requirements exceed assets (on-hand and or anticipated to be available)

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[25] DoDD 3110.6, "War Reserve Materiel Policy," 25 April 1994.

- Provide WRM to meet the needs of materiel managers including other services and the DLA

- Position WRM inventories once acquired as starter stocks and swing stocks[26] or as a combination of the two to achieve the greatest flexibility to respond to a spectrum of regional contingencies

- Report annually on WRM levels

The Defense Planning Guidance also requires the Services and the DLA to identify industry sources to help meet WRM requirements and to develop industrial preparedness measures to permit the accelerated production of munitions, essential troop support items, short shelf life consumables and GSORTS equipment in short supply. WRM shortfalls that cannot be offset by these measures should be procured by the Services and their readiness status reported.

Common Supplies and Services

Each of the Services is supported by providers of common-item supplies and services. Some examples follow:

- The DLA provides integrated material management for most of the consumable items such as subsistence, clothing, fuels, construction materials, medical items and consumable spare parts, and the defense distribution system and depots for the receipt, storage, and distribution of Service-owned materiel. DLA also provides single-item management for subsistence and bulk fuels including war reserve materiel. DLA should report on WRM levels for Class I and Class III materiel and their ability to provide other secondary mission-critical consumable items for wartime requirements to the Services and combatant commands.

- The Transportation Command provides common user transportation services through the Defense Transportation Systems.

- The U.S. Army provides single-item management for conventional munitions and chemical defensive equipment including the operation and maintenance of government-owned facilities and arsenals.

- The Defense Information Systems Agency provides information management and communications services through the Defense Information Infrastructure (DII) including the development, execution, and management of such systems as the Global Command Support Systems (GCSS), the Global Transportation

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26 Starter stocks are WRM positioned near the theater to conduct operations until resupply at wartime rates is established. Swing stocks are WRM positioned ashore or afloat that can support requirements of more than one contingency in more than one theater of operations.

Network (GTN), and other logistic C2, asset visibility, and transportation information systems.

- Some Services have wartime executive responsibilities (WEAR). For example, the Army provides core combat support and combat service support capabilities to the theater commander to provide common user logistic support and sustainment capabilities. Army readiness to perform these critical functions has an impact on the capabilities and sustainment of the other Military Services in the theater. Army responsibilities include operation of common user ocean terminals, inter-modal management, and common user land transportation in theater for all services and transportation engineering for highway movement. The Army is responsible for all air drop equipment and systems for all of the Services, for power generation equipment and utility services, and for overland POL support and land-based water resources for all the Services.

Prepositioned Material

The ground forces (Army and Marine Corps) generally have the biggest "logistic footprint" within a theater, and their initial logistic support and "set-up" requirements and follow-on sustainment reflect both the need to develop support infrastructure and the large numbers of troops with continuing support requirements for sustainment, such as food and water, bulk fuels, ammunition, construction equipment and barrier materiel, all high bulk and volume items, and other troop support items. The Army also has the largest requirement for both common-user airlift and sealift resources. Ground forces therefore require significant amounts of prepositioned materiel placed in strategic locations and also carry accompanying supplies, e.g., spare parts in order to sustain operations until resupply can be established.

Prepositioned assets alleviate demands on the defense transportation system and significantly reduce closure times of combat and combat support personnel. Prepositioned afloat assets provide flexible and agile support by being able to move into an area of crisis ahead of time. Prepositioned assets ashore assume a crisis ahead of time and are in place and ready for use. Prepositioned assets include combat equipment and support end items that enable early-arriving forces to establish a supporting infrastructure (e.g., port opening capability and bare base assets), and sustainment supplies to support contingency forces until resupply capabilities can be established. Prepositioned assets provide both an initial operational capability and sustainment for deploying troops. Without sufficient types and quantities of mission-capable equipment and levels of all the required mission-essential supplies, the units that are designated to use these assets cannot be ready to fight within

the planning timeframe. The DPG requires prepositioned assets to be maintained at a high level of readiness and to be quickly reconstituted. The depth and range of all prepositioned materiel should be reported in the unit (any unit designated to close on specified assets in the theater or the materiel managers of these assets) readiness reports. Some examples of the types of Service prepositioning assets follow:

- Army prepositioned stocks (APS) are to support a CONUS-based force projection and to sustain operational capability until sea lines of communications are established. The Army objective is to have eight combat brigade sets consisting of combat and support equipment and secondary items that are normally authorized as accompanying spares. Each prepositioned brigade set also includes equipment and supplies for a support battalion. The APS is owned by the Headquarters, Department of the Army and is decoupled from Army component commanders and from specific CINCS and theaters. APS are protected go-to-war assets and are not to be used to improve peacetime readiness or fill unit shortages. The depth and range of all types of APS should be included in readiness reports. Current readiness reporting within a specific APS set includes only a gross level of fill of equipment and does not include the condition and depth and range of all types of prepositioned/WRM assets. Also, since the management of these assets has been decoupled from component commanders in the theaters, readiness reporting should provide sufficient visibility of sustainment readiness issues for the CINCs. There are four categories of APS:

  - Prepositioned sets of organizational equipment include end items, supplies, and secondary items stored in unit configurations to reduce force deployment response times.

  - Army operational projects are materiel above the Army's normal table of organizations and equipment (TOE), table of distribution and allowances (TDA), and common table of allowances (CDA) authorizations and are tailored to key strategic capabilities essential to the Army's ability to execute its power projection capability. They are used to authorize specialized equipment and supplies needed for specific operational and theater requirements and would not normally be maintained by units. Operational projects may contain troop support items (e.g., extreme cold weather gear) and combat support materiel and equipment (e.g., runway materiel and bridging equipment) needed in a specific theater. They are primarily positioned in CONUS with tailored portions or packages prepositioned overseas or afloat.

  - WRM stocks consist of major end items and secondary item materiel aligned and designated to meet the Army's wartime sustainment requirements. They provide minimum essential support to combat operations beyond the capabilities of peacetime operating stocks, industry,

and host nation/ACSA support. Sustainment stocks are prepositioned in or near a theater of operations and are intended to last until resupply at wartime rates can be established.

− War Reserve Stocks for Allies (WRSA) is an Office of the Secretary of Defense (OSD) program that ensures U.S. preparedness to assist designated allies in case of war. WRSA assets are prepositioned in the appropriate theater and are released to the appropriate Army component commander for transfer under existing country-to-country memorandums of agreement.

- The Marine Corps depends heavily on its prepositioning programs. The Marine Corps Maritime Prepositioning Force (MPF) program is the combination of prepositioned materiel, Navy support elements, and airlift elements with a sustainment capability of 30 days for a notional force of 17,600 personnel. Marine personnel will fly into a theater of war and join with the equipment and supplies loaded on the MPF ships. The purpose of the MPF is to provide fleet commanders with deployment flexibility to meet missions ranging from combat operations to humanitarian assistance. The MPF is organized in three squadrons of ships forward deployed in strategic locations. The MPF is considered protected war reserve stocks and would normally be used in a contingency or wartime situation. The Marine Corps reports the depth, range and condition of the end items and not any of the other classes of supplies. Other inventories for sustainment of Marine Corps personnel include:

  − Landing Force Operational Materiel (LFORM), which is maintained on Navy LHA, LPD, LHD, and LSD type ships. These prepositioned supplies are intended to support a 2,000-person Marine Expeditionary Unit (MEU)[27] for initial set-up and sustainment for 15 days. The MEU is the lowest-level stand-alone unit, and it may be reinforced with additional units or become the advanced stage of a Marine Expeditionary Force (MEF) at the Division level.

  − Norway Geo-prepositioning Program has a capability and scope similar to that of an MPF squadron. It contains weapons systems, support equipment, ammunition and supplies for a force of about 13,000 Marines.

  − Type 3 allowances and other allowances used for specific situations or for a specific mission, e.g., cold weather gear and desert operations.

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[27] The MEU is the MAGTF routinely forward deployed for presence and quick response to a developing contingency. It is organized and equipped to provide rapidly deployable, sea-based capability with 15 days of sustainment. It includes a ground and air combat element and a combat service element with maintenance, transportation, engineering, and medical capability and 15 days of accompanying supplies (Classes I, II, III bulk, IV, V and IX).

- Two aviation Logistic Support Ships (TAVB) positioned on the west and east coasts of the U.S. to provide intermediate-level maintenance to aviation units. These ships could be strategically prepositioned with supplies, equipment to repair aircraft parts, and equipment for MAGTF aircraft in support of a contingency or developing crisis.

- The Air Force has prepositioned equipment and supplies ashore and afloat. The Air Force prepositioning programs are to quickly initiate and sustain operations until supply channels can be established. Air Force prepositioned supplies include:

  - Munitions (ashore and afloat) and mission-critical consumable secondary items consisting of tanks, racks, adapters and pylons (TRAP), 463L systems support (pallets and nets), subsistence (operational rations), packaged lubricants and in-place readiness spares packages (IRSPs). Repairable parts may also be prepositioned in forward locations or main operating bases.

  - War reserve engines may be prepositioned

  - Bare base programs comprise air transportable sets of equipment and facilities to quickly establish or augment air bases worldwide in support of combat forces and aircraft. These sets are especially critical in austere environments. The bare base assets are composed of:

    - Housekeeping packages—include water purification units and initial distribution systems, power generation, remote area lighting, electrical distribution equipment and distribution centers, and tentage.

    - Industrial packages—water source lines; electrical generation; common use, multipurpose, and administrative facilities; and shop facilities

    - Flight-line Support packages—aircraft maintenance related facilities, aircraft arresting facilities and aircraft airfield lighting

- Vehicle Support packages—engineering and materials handling, general purpose, tractor trailer sets, M-series vehicles, firefighting, aircraft maintenance and support vehicles, and runway rapid repair equipment.

- The Navy has a small logistic footprint ashore which would require some prepositioned (WRM) assets to provide infrastructure, support equipment and shelter for their personnel in support of ground operations.

  - The Naval Advanced Logistic Support Sites (ALSSs) and the Naval Forward Logistics Sites (FLSs) are the shore-based systems established for Navy wartime operations and are generally located near major transportation terminals. The ALSSs and FLSs receive, consolidate, stow, and transfer supplies and equipment to shore-based aviation units (including Marine Corps), fleet hospitals, navy construction battalions (in support of Marine Corps operations) and other Navy and Service units operating ashore. The Navy has prepositioned bare base equipment and supplies to support these operations.

  - The Navy Fleet Hospital Program was designed to provide deployable medical care capability for Navy and Marine Corps forces. The program is authorized ten 500-bed modular hospitals that include rapid erectable medical and surgical facilities. Eight of these hospitals are prepositioned outside the U.S. in strategic locations ashore and afloat.

  - The Navy maintains reserves of ordnance worldwide; however, the reserves are normally considered as part of forward depot inventories rather than a prepositioning program.

  - The Navy also may preposition aircraft engines in strategic locations and maintain firefighting equipment to augment shipboard materiel prepositioned overseas. These items are not considered prepositioned assets but as forward inventory and storage points to improve response times.

Prepositioning programs are reserves of critical military equipment and mission-essential supplies that are placed in strategic locations to provide the flexibility to respond to a wide range of crises and to ensure that the items will be readily available to U.S troops to establish operational capability and sustainment until resupply can be reestablished in the event of a crisis. Since prepositioned assets will equip designated (early arrival) units in addition to providing supporting equipment and initial sustaining supplies, the status, levels, and condition of all prepositioned materiel should be reported in the GSORTS systems.

Defense Depot Maintenance System

The DoD depot maintenance "system" supports and ensures the readiness and sustainment of over 300 ships, 16,000 aircraft/helicopters, 1,000 strategic missiles, and over 250,000 ground/combat/tactical vehicles. The depot system also supports and maintains hundreds of thousands of other-than-weapons system assets, primarily the repairable secondary items needed to maintain the operational capability of fielded systems and equipment. Defense maintenance and the repair of systems and equipment involve more than 700,000 (approximately 70,000 within the depot system) military (Active and Reserve component) and DoD civilian personnel. Depot maintenance overhaul, rebuilding, repair, and maintenance of weapons systems, end items, assemblies and subassemblies are performed at both DoD and private contractor facilities. Over 1,000 private-sector firms are engaged in performing maintenance of DoD materiel. They account for about 40%of the depot maintenance requirements for 1999. These combined government and industry efforts provide the necessary repair and maintenance necessary to sustain the operational readiness of combat forces, to ensure safe and efficient operation of weapons systems and equipment, and to renovate assets to extend service life and improve their performance.[28]

Service wartime logistic support and sustainment concepts will require deployed forces to reach back quickly to the CONUS-based wholesale logistic system for supply support and repair of secondary items (components, modules and assemblies) to sustain military operations once accompanying supplies and prepositioned assets are depleted. For some Services and operational units, it could be as soon as 15 to 30 days but generally no longer than 60 to 90 days. In order to reduce the in-theater footprint of combat support and combat service forces, the Services are eliminating intermediate in-theater repair capabilities and increasing their reliance on the ability to quickly remove failed items and induct them into the depot system for repair. With less operating inventory the Customer Wait Time (CWT) for sustaining supplies and repair must be reduced dramatically. During rising tensions, units preparing to deploy will place a "surge" demand on the depots to improve the readiness status of their equipment and reduce any backlog of repair and maintenance currently in the system. As OPTEMPO increases and during wartime operations, there will be an increase and a change in the demand patterns (mix of items) for repairable items inducted into the depot maintenance system that will require depot to operate at higher levels than in peacetime.

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[28] DoD's Maintenance Policy, Programs, and Resources Fact Book, 2000.

The capability of the Services' depot maintenance systems to respond to crisis and wartime maintenance and repair needs for their many systems, equipment, and repairable items should also be included in readiness reporting. Capacity utilization and the surge capability of a depot to meet these increased demands are critical performance metrics. Current depot performance measures do not include any measures to meet wartime maintenance requirements.[29]

The amount of maintenance backlog is also a readiness concern. The Quarterly Readiness Reports to Congress (QRRC) provides limited information from each of the Services regarding backlog of selected systems awaiting induction into the depot, primarily items selected for overhaul, scheduled maintenance, and modifications but not for any of the thousands of secondary repairable items the Services will need to fill accompanying unit stocks and to provide follow-on sustainment. Items are generally in backlog for the following reasons: 1) a constraint on repair of the item, e.g., lack of material or spare parts; 2) a capacity bottleneck caused by insufficient qualified labor, equipment, or testing capabilities; and 3) lack of available funding for Service units to induct items into the depot for repair. Similar readiness metrics should be developed for intermediate-level repair facilities and industry maintenance support for critical systems.

The readiness of DoD components that provide common supply and services support needs to be included in sustainment readiness reports. DLA's ability to support wartime requirements for Service operational units and maintenance depots and facilities is a critical readiness metric. Does the DLA know what the anticipated demand may be from the Service repair depots for spare parts? If so, what is DLA's ability to provide these parts quickly enough to turn repairs back into the supply pipeline within the time needed? What would be the impact on CWT and operational readiness of critical weapons systems? The responsiveness and capability of all of the components (e.g., DLA/Service inventory control points, the Service repair depots, intermediate repair capabilities, industry supply and logistic service support, and the distribution system) in the DoD wholesale supply system to meet Service weapons systems operational availability objectives should be an essential readiness reporting metric. Each of these entities should report in GSORTS.

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[29] DoD 4151.18 H, Depot Maintenance Capacity and Utilization Measurement Handbook, 24 January 1997.

Accompanying Supplies and Prepositioned Materiel

GSORTS does not require operational units to report accompanying supplies. Only weapons systems, support equipment, and other end items must be reported. The GSORTS guidance is only concerned with the availability of combat essential items and selected support equipment. The Services do not report the readiness status of accompanying supplies, prepositioned assets, or war reserve materiel for deploying troops in GSORTS.[30] These supplies and equipment would be necessary for initial sustainment for deployed forces. The operational and logistic doctrine of each Service will determine the type, depth, and range of accompanying spares and the duration of sustainment before re-supply. Each Service is responsible for procuring and maintaining supplies within the operational units at a level necessary to maintain readiness and operational availability in peacetime and war. The Services are responsible for calculating war reserve materiel (WRM) requirements,[31] acquiring WRM in peacetime, and positioning them in strategic locations to ensure they can meet operational scenarios as outlined in the DPG.

The readiness of operational units to deploy will depend on several types of inventory for sustainment. Some of this materiel is equipment assigned to a specific unit and will be prepositioned in strategic locations. Some is supplies carried by the unit or prepositioned near a theater of operations. On-hand stocks or accompanying supplies are items that a unit carries into combat. They are intended to fulfill the unit's immediate needs. Prepositioned assets and other WRM are necessary for operational capability and the initial sustainment of deployed forces. During the preparation and initial stages of deployment, unit shortages must be filled, and supplies must be brought up to required levels. Assault and early deploying combat forces need to be self-sustaining and must rely on their "basic loads" and overseas WRM until resupply pipelines can be established. Prepositioning equipment and materiel allows for a quicker reaction time for a combat unit to respond to a contingency. Prepositioned equipment and war reserve materiel will allow early deploying units to close quicker, save transportation assets, and sustain operations until supply pipelines can be established in the theater. When accompanying supplies have been consumed, resupply begins from CONUS-based component organizations, e.g., bases/installation supplies; Service and DLA inventory control points, Service intermediate and repair depots, and industry. Other resupply and logistic support services

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[30] An individual Service may report on the status of accompanying supplies or the status of WRM or prepositioned supplies in its (SORTS) system.

[31] The increase in consumption/attrition of mission-critical items and equipment above peacetime rates over a given period of time that are needed to sustain forces until resupply can be reestablished.

may also be provided through host nation support (HNS), contingency contracting, or acquisition and support agreements (ACSA) with allied or other friendly countries.

Many pipelines will need to be established (some by other military services and DoD components). Some pipelines will require additional infrastructure, equipment, and combat support units. The type of pipeline will depend on the class of supply. The pipelines will be different depending on the type of operational unit to be supplied. The pipeline to sustain ground forces will be different from that required to support an Air Expeditionary Force at a rear location or a Naval battle group. Austere environments and large operations will require special support equipment and infrastructure (e.g., airfields, ports, maintenance facilities, roads) to establish operational capabilities. Much of this infrastructure will need to be in place before resupply can begin. Once it is in place, other war reserve materiel (replacement equipment and consumable supplies) will be needed to sustain operations. For some items, war reserve materiel inventory may be the only available source during combat operations.

Each Service develops its own concept of supply and sustainment of deployed forces. Each Service depends on other DoD components for some part of supply and supporting logistic services to sustain their forces. The Services and component commanders establish the quantities of supplies to accompany the forces. The authorizations are expressed as prescribed load lists (PLL), authorized stockage lists (ASL), unit basic loads (UBL), authorized allowance lists, sets, kits and outfits (SKO), mobility readiness spares packages (MRSPs), aviation consolidated allowance lists (AVCALs), consolidated shipboard allowance lists (COSAL), fly-in-support-packages (FISPs), etc. The peacetime operating stocks (POS) in the units/installations and DoD wholesale systems can fill some of the requirements for accompanying supplies; however, their purpose is to support a unit's peacetime operational needs. The shortfall or differences between peacetime demand and increased wartime consumption must be filled by the service's war reserve inventories or programmed surge capabilities in the industrial base. The depth and range of materiel authorized in the units accompanying supplies depends on the warfighting doctrine of the individual Service, the ability of the units to carry supplies, the intensity and type of contingency, and the logistic support pipeline(s).

Table E-2 provides a summary of Service planning for sustainment including the types of accompanying supplies, days of supply, and sources of follow-on sustainment.

Table E-2. Service Planning for Sustainment

Component	Accompanying Supplies and Initial Sustainment	Days of Supply	Sources for Follow on Sustainment
Army Units	Basic load PLL and ASL APS – APA & APL	15 days	APA Wholesale system HNS & ACSA
Army (General and Direct Support)	ASL	45 to 60 days	Wholesale system HNS & ACSA
Navy Ships	COSAL	90 days	Wholesale system HNS & ACSA
Navy and Marine Corps Air	AVCAL FISPs	90 days AVCAL 30 Days FISP (MC)	Wholesale system MPF HNS & ACSA
Marine Corps Ground	Allowance lists, LFORM and MPF	15 Days for MEU 30 Days for MEB 60 Days for MEF	Wholesale system MPF HNS & ACSA
Air Force Tactical	MRSPs	30 Days	Wholesale systems HNS & ACSA
Air Force Strategic Lift	IRSPs	45 days	Wholesale systems HNS & ACSA
Air Force Bombers		15 days	Wholesale systems HNS & ACSA

The following should be included in unit GSORTS reports: 1) depth and range of the unit's accompanying supplies, 2) depth and range of all prepositioned equipment and supplies such as the MPS and MPF and other prepositioned unit sets, other support equipment, and supplies intended for initial sustainment, and 3) other war reserve materiel intended as starter stocks including conventional ammunition and precision guided munitions, operational rations, and bulk fuels.

RECOMMENDATIONS

These recommandations and the preceding discussion are provided in considerable detail because of the importance of sustainment to overall DoD readiness. We have also provided our recommendations in detail because we recognize that, given Service prerogatives to establish their own logistic systems and policies, the CINCs, and the

Secretary of Defense need detailed reports on Service and DLA readiness to provide the sustainment needed by our forces in the execution of the NSS.

GSORTS

GSORTS reports should include unit-accompanying supplies and prepositioned materiel intended for use for initial operational and sustainment requirements. Reporting should include both the range and depth of authorized levels of supplies and a measure of unit capability (weapons systems operational availability, days of supply, etc.) over the planned period. Organizations responsible for Service prepositioning programs such as the Marine Corps MPF, the Army APS programs, and the Air Force and Navy bare base assets programs should report as entities in the GSORTS. The prepositioning of weapons systems and equipment, operational projects, and other materiel, including WRM identified as starter stocks, are intended to provide initial combat or combat support operational capability and sustainment. They are placed in strategic locations with the objective of saving transportation resources and allowing early deploying units to have equipment and supplies in place for force closure. Units designated to close on these items leave their equipment at their home station and rely on the prepositioned equipment and supplies. If these assets aren't available, then the early deploying units aren't ready. Other prepositioned WRM managed by the Services and the combat support agencies such as operational rations; bulk fuels and munitions should also be reported in GSORTS.

The following are some examples of sustainment considerations that should be included in unit GSORTS reports.

Unit accompanying supplies, e.g., basic loads and authorized unit allowances of supplies should be reported:

- Air Force—Mobility Readiness Spares Packages (MRSPs), STAMP and STRAPP and In-Place Readiness Spares Packages (IRSPs)

- Navy and Marine Air—Aviation Consolidated Allowance Lists (AVCAL)

- Navy Fleet—Consolidated Ship Allowance List (COSAL)

- Army— Basic loads, Prescribed Load List (PLL) and Authorized Allowance List (AAL)

- Marine Corps (ground)—Allowance lists and other sustainment stock levels, e.g., type 3 allowances for all supply classes

Prepositioned weapons systems and support equipment intended for initial operational capability should be reported the same as unit equipment and accompanying

supplies—level of fill versus authorized levels and the condition of the equipment. Types of initial combat support and specific theater operational capabilities and other war reserve materiel should also be broken out in the reporting, e.g., LOTS, extreme cold weather, materiel handling, petroleum distribution, etc. Some examples of prepositioned materiel would include:

- Army—Army Prepositioning Stocks (APS), ashore and afloat, including brigade sets, their PLL/ASL supplies, operational projects that provide specific theater capability and war reserves secondary items

- Navy—Prepositioned equipment and supplies for Advanced Logistic Support Sites equipment and other equipment and supplies

- Air Force—Bare Base (Harvest Falcon and Harvest Eagle) inventories of ammunition afloat and other prepositioned support equipment and supplies

- Marine Corps—Marine Corps prepositioned equipment, ammunition, and all other secondary items on the Marine Positioning Force (MPF), and the LFORM.

DLA entities should report in GSORTS in several sustainment and supply management areas:

- Each DLA inventory control point should report in GSORTS on the depth and range of mission-critical spare parts on hand versus authorized levels for selected supported weapons systems (possibly the Service-designated level A systems—approximately 20 per Service). Other critical items designated by the combatant commands as mission essential such as barrier materiel, troop support items, and chemical defense equipment should also be included.

- Supply availability, although a useful metric of supply system performance, is not a wartime readiness metric and only measures the effectiveness of the peacetime supply system to fill requisitions for critical Service weapons systems and other CINC designated items. A more meaningful metric, albeit still a peacetime measure, would include both the depth and range of filled orders for mission essential items against Service requisitions for each measured weapons systems and equipment.

All DoD components responsible for maintaining war reserve items and supplies that are not part of the prepositioned materiel (e.g., swing WRM stocks in CONUS locations and materiel issued in deployments and maintained at central locations that normally are not unit issue) should report in GSORTS by level of fill versus authorized levels and a measure of capability, e.g., days of supply. This should include Service WRM inventories held at Service installations or managed by the inventory materiel managers in Service- or DLA-managed storage depots.

Service maintenance depots should report in GSORTS based on their ability to meet OPLAN requirements. These reports should be designed to provide information on bottlenecks, critical maintenance shortfalls, and backlogs that effect operational availability of critical systems. DLA-managed items such as Class I operational rations and Class III bulk fuels WRM should also be reported.

The Joint Reporting Structure

There are parts of the sustainment system, much of it CONUS based with significant reliance on contractor support, that requires an in-depth analysis of its capability or capacity analysis to meet wartime requirements as is done with the Bulk Fuel Capabilities (POLCAP) Report and the Joint Transportation Feasibility Analysis (JFAST) in the Joint Reporting Structure.[32] The JRS reports (GSORTS included) are a major source of information for the National Military Command System (NMCS). They are intended to provide the National Command Authority with military information it needs to make command decisions regarding military operations. The JRS reports cover functional areas such as personnel, materiel and equipment status, operational and logistical planning, situation monitoring and intelligence, as well as actual military operations and exercises. Situational reports may be done on a daily basis or even more frequently. The in-depth analyses such as POLCAP and JFAST are done on a yearly basis and enable the Chairman and Joint Staff, commanders of combatant commands, subordinate joint force commanders, the Services, and DoD agencies to understand their ability to support CINC wartime requirements and meet National Military Strategy needs. Other critical elements of the DoD logistic system should be included in the JRS reports, including Service maintenance depots, the defense distribution system, the defense information infrastructure and the readiness of private industry to provide supplies and services (e.g., contractor logistic support and repair services for mission critical items). These reports could be based on a GSORTS report but probably do not need to be made as frequently as are GSORTS reports for operational units. They could be done on a quarterly or a yearly basis and could be tied to specific OPLANS as is the case for the POLCAP and JFAST reports.

- Service maintenance depots should develop readiness metrics for their ability to meet wartime requirements. These reports should provide information on bottlenecks, critical maintenance shortfalls, and backlogs that effect operational availability of critical systems.

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[32] Joint Reporting Structure (JRS) Logistics, CJCSM 3150.14, 6 June 1997.

- The readiness of the Defense Distribution System (DDS) to meet wartime demands.

- The readiness of contractor supplied services and supplies, e.g., prime vendor and contractor logistic support programs to meet wartime demands.

- The Defense Information Infrastructure (DII), including the CONUS based information infrastructure provide by commercial sources.

- Consideration should be given to adding other reports, such as the DoD training system and other CONUS-based systems, to this system.

The Joint Monthly Readiness Reviews (JMRR)

The JMRR reporting process needs to be restructured with mandatory reporting requirements for the associated elements outlined in the Service functional areas. The current JMRR process is a "voluntary system" where the elements in each functional area are to be considered in readiness ratings but there is no requirement for any of the organizations currently responsible for their readiness to separately report on them. In some cases JMRR readiness reports of one DoD component are out of sync with other DoD component readiness reports. In other cases, critical readiness concerns may never get reported. Some examples include the following:

- Several Services recently reported on the declining operational availability of aviation systems. There were a number of reasons for this problem including under investment by the Service(s) for replacement spares and maintenance backlogs. One of the major factors for the backlog of maintenance was the lack of spare parts (on backorder) from the DLA, which has materiel management responsibility for aviation consumable spare parts. The DLA has several inventory control points (ICPs) that are responsible for the supply availability for nearly all of the consumable spare parts for these systems. These ICPs have never provided any type of readiness reports into the DLA JMRR input. DLA, on the other hand, was reporting a satisfactory rating for supply availability although it was a major contributor to the readiness issues being address by the Service JMRR reports. These elements should be included in the JMRR.

- DLA does not appear to be fully aware of the wartime requirements of the Services for these items and probably couldn't provide a rating on its readiness to provide these items for the repair of weapons systems. The DPG requires the Services to identify all WRM shortfalls and industry sources for these items and to develop preparedness measures to permit for their accelerated production. Only the Army and Marine Corps (ground) provide

any war reserve materiel requirements to the DLA for industry planning and accelerated (surge) production. All the Services should determine these requirements.

- Prepositioned supplies are especially important readiness considerations since they are intended to provide critical equipment and combat and combat support operational capability for early arriving units. In many cases they are also to provide initial sustainment and other operational capabilities necessary in the halt and build up phases of an operation. The Services report on prepositioned assets but not necessarily all of the prepositioned items and the depth and range of items in each prepositioned set of materiel. For example, the Army reports on the Army Prepositioned Stocks (APS) for each of the combat brigade sets and CS/CSS equipments that have been prepositioned ashore and afloat. This report is a gross measure of the percentage of fill—not depth and the range of fill. New JMRR reports will now include the ASL and Class VII and WRSI sustainment stocks but again not depth and range of items just a gross measure of level of fill. Army operational projects and war reserve secondary items that are prepositioned are not reported separately in the JMRR. The Marine Corps, Navy, and Air Force also do not fully report on their prepositioned stocks. The Marine Corps equipment and supplies on the MPS, the Navy and Air Force prepositioned stocks are all critical in meeting initial operational capability and sustainment needs but are not reported in the JMRR. All of these elements should be included in the JMRR.

- The DLA doesn't report on the status of war reserve materiel it manages for Classes I and III. The DLA also doesn't report on its ability to provide other classes of supply under its management such as Class II chemical defense items and Class VIII medical materiel, especially where DLA-managed inventories or industry capabilities may be used to offset war reserve requirements. These elements should be included in the JMRR.

- The readiness of the DLA managed Defense Distribution System to meet wartime requirements should also be included in the JMRR.

- The ability of the Service-managed depot repair facilities (government-owned and industry) to surge maintenance of repairable items to reduce maintenance backlogs, restore authorized levels of repairable items within the units, and quickly repair items being retrograded back into the CONUS-based maintenance systems is absolutely critical in meeting military service sustainment needs. All levels of maintenance are functional area elements to be considered in JMRR reports; however, depot and other levels of maintenance capabilities and the backlog of maintenance (peacetime) aren't reported. The Service depots do not have a readiness metric in place that could evaluate their ability to meet wartime maintenance or surge requirements. Also, the DLA doesn't have any requirements that they could be measured

against or to assess their ability to meet the demand of the depots and other Service maintenance organizations for spare parts in a crisis or wartime situation. The DLA has visibility only for the day-to-day peacetime demand patterns of each requisitioning military service organizations.

The Services and combat support agencies should provide a separate readiness rating for each of the functional areas for which they are responsible, especially where they have wartime executive agency responsibilities, e.g., the Army's WEAR for distribution of bulk fuels. In general they should report in terms of the readiness of the logistic readiness of the systems or processes they have established to meet the needs of their customers—the CINCs and the forces.

Here is a list of specific sustainability measures that should be incorporated into the logistic systems on which the Services and DAs report their readiness:

- The depth and range of all prepositioned equipment and supplies including bare base sets, initial operating spares, ammunition, and other supporting assets. This should be categorized by the capability required to support, e.g., equipping and sustaining a mechanized brigade: establishing a NAVY ALSS; equipping the force for chemical and biological defense or desert operations; equipping a combat support unit to provide water distribution; bridging equipment; and establishing a forward operating air base:

- All Service-managed WRM (starter and swing stocks) and DLA-managed bulk POL and operational rations WRM levels (depth and range) against required wartime levels. This should provide days of supply and include any gap in the continuity of supply due to industry shortfalls.

- The Services and DLA should report on any industry issues that impact the availability of any critical items for all classes of supply especially for critical weapons systems, e.g., continuing problems providing aviation spare parts, losses of a sole source for the supply of critical item(s), life-of-type-buyouts.

- Maintenance capabilities needed to respond to wartime demands including industry maintenance support agreements. The Services should include information on intermediate maintenance capabilities and depot repair backlogs for secondary items. Also, contractor capabilities, capacity/throughput and constraints. The DLA should report on its ability to supply consumable items to Service maintenance organizations.

- All munitions war reserve materiel inventories held by the Services against required levels for all ammunition and precision guided munitions both prepositioned and CONUS-based swing stocks.

- Levels of peacetime operating stocks against authorized levels held in measured units and in the Defense Distribution System (depots) for the DLA and the military services. Also, those held by the Service's retail and wholesale systems.

- Theater mobility support, e.g., logistics-over-the shore capabilities and capacity—throughput/constraints of other critical infrastructure and equipment such as ports, rail cars, and tankers.

- Ammunition (including peacetime operating stocks) inventory levels and the capability of the production base to surge critical munitions Is there a warm production base (item is in production) or is the production line laid away or not producing the desired items?

- Prime vendor, vendor-managed inventory, and other third-party logistic and materiel support capabilities to meet wartime requirements.

- Status of Acquisition and Cross Service Agreements (ACSA) and Host Nation Support capabilities (e.g. percent of expected supply by class/type of support, etc.) against wartime requirements.

- Status of deployable medical hospitals, supplies, and patient evacuation capabilities

- Mobility including strategic airlift and sealift, power projection enablers such as materiel and cargo handling equipment and rail cars, and theater logistic support enablers such as JLOTS.

- Infrastructure including roads, airfields, ports, rails, power generation, engineering units and equipment and preposition facilities.

The next two items are critical because of the military-unique and DoD-dependent industrial production base (like ammunition) with limited surge capabilities to meet wartime requirements. War reserve and troop-held supplies may be the only available assets. The key here is not just the quantity but the depth and range of the items such as authorized levels to meet required tariff levels (different sizes) to ensure that inventory levels will provide sufficient force protection.

- Inventory levels of chemical and biological defense equipment, medical items, and supplies

- Inventory levels of special individual troop equipment not normally issued to troops as part of their unit basic loads or allowances, e.g., cold weather gear, body armor, theater specific troop support equipment and clothing

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Appendix F
A FUTURE READINESS ASSESSMENT SYSTEM

Robert J. Atwell

CONTENTS

FIGURES

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A FUTURE READINESS ASSESSMENT SYSTEM

A. INTRODUCTION

The DoD has traditionally relied on readiness reports *from subordinates*. Reporting on the situation locally is understood to be the duty of the subordinate, either ad hoc or in the form of periodic reporting according to a structured format. The current GSORTS and JMRR are designed according to this model. The technology of virtual database management, which underlies the World Wide Web and is replicated in many ways within DoD computer networks generally, supports and facilitates the development of a new approach to readiness reporting in which reports are generated for the DoD leadership with limited participation from the lowest levels. This approach provides a way to resolve the apparent contradiction between capturing and using more complex unit and individual capability data on many more units than are currently measured, while still reducing the amount of time, stress, and manpower devoted to running the reporting system.

The proposed system captures data *once* from the lowest level functional activities [often known as "transactions"] in the organization, and these data become available throughout the system for aggregation, analysis, and decision-making. The GSORTS and JMRR reports would be generated by a "query" into the virtual database from the DoD manager/leader who wants and needs the information. The standard GSORTS report and the JMRR systems reports would be based on predetermined report formats such as the readiness matrix described in Appendix C. Periodic, scenario-based JMRR reports would be based on management queries designed to answer specific scenario-based queries.

In a new readiness reporting system, no matter how many or few echelons there are,

- Each level is responsible only for the timeliness and integrity of the "transactions" generated by their own functional actions/decisions.

- "Reports" are generated downward, so to speak, by the user inquiring into the database using predetermined formats for GSORTS and JMRR system reports and using situational queries for scenario-based JMRR reports. The current practice of reports being produced locally and sent upward would disappear.

This appendix describes how a Web-based Readiness Assessment System (RAS) could be constructed and used in conjunction with centralized DoD databases to provide reports of DoD readiness to execute the missions assigned in the National Security Strategy. It includes a database design that draws upon existing DoD databases and makes suggestions for database enhancements that would specifically link the Universal Joint Task List (UJTL) to Operations Plans (OPLAN) and the entities that support them. (The term "entity" in this paper refers to any unit, facility, agency, or system that provides the capability to perform tasks in support of some OPLAN.)

The appendix also describes two specific RAS modules that would allow DoD to analyze its readiness from either a task-based or operating system-based approach. Both of these approaches would draw upon the same database, and that database could be mostly populated from existing DoD management information systems that pertain to entity design specifications, readiness, training, personnel, and tables of organization and equipment. The proposed system has been designed to minimize the requirement for regular data inputs from units. The technology required for the proposed system is similar to that already in use for the Global Command and Control System (GCCS) and the Global Combat Support System (GCSS). The proposed RAS would leverage much of the same data over the SIPRNET as is used by Joint Operation and Personnel Execution System (JOPES), Joint Total Asset Visibility (JTAV), and the Global Transportation Network (GTN) as well as GSORTS.

The proposed RAS would use the Universal Joint Task List (UJTL) or the Service-specific Mission Essential Task Lists (METLs) to link CINC OPLANS with tasks performed by units assigned or allocated to the CINC and with tasks performed by Services and DAs. The precedent for this approach is found in the Department's Joint Exercise Management Program (JEMP) and not within the readiness community. Within JEMP, the Joint Training Information Management System (JTIMS) is being used to assist in designing training exercises. JTIMS contains modules that specifically address exercise force requirements, a plan for the tasks that will be trained, a schedule for task execution during the exercise, and an assessment of how well and who was trained to specification by the exercised tasks. The key point to remember is that these training exercises are specifically designed to train forces to be ready to perform CINC specified missions in accordance with CINC needs and the UJTL. It would seem logical that a DoD readiness reporting system would similarly report the readiness/capability of the Department to support CINC specified tasks as identified in the NSS.

B. LIMITATIONS OF GSORTS

As discussed in the main report and detailed in appendix C, GSORTS is the current major readiness reporting system for units. Efforts underway by the Defense Information Systems Agency (DISA), under the supervision of the Joint Staff in the context of a new Readiness Assessment System, form the basis of the recommendations contained in this paper. In RAS there are both input and output GSORTS modules that allows unit data to be input and reported upon. The proposed DISA RAS system, like JTIMS, is a Web-based application that has been developed in Java. These systems use ODBC database connectivity and Java runtime environments that allow these Java applications to run on almost all computer platforms within DoD, utilizing centralized databases that facilitate the common operational picture (COP) that our forces require during mission performance. The GSORTS databases contain two basic categories of units: registered and measured. Registered units are all those units that have been given a universal identification code (UIC). Measured units are all those units that currently have a GSORTS readiness-reporting requirement. Thus, measured units are a subset of the registered units that GSORTS has some information about in the databases that it uses to report upon readiness.

During our analysis we discovered that there are many more units, facilities, and nodes that should be reporting their readiness but at present do not do so. It is also apparent that many DoD agencies have very few units or facilities registered in GSORTS. These agencies often have substantial impact on our ability to mobilize, train, move, and sustain our forces in support of the NSS. Moreover, except for Navy reporting, the current GSORTS approach does not facilitate the reporting of measured unit readiness on a task-by-task basis. Rather, the system reports a generic unit readiness based on the current personnel status, equipment condition, unit supplies on hand, and overall unit training status. Each Service tends to report its GSORTS readiness in a Service-specific manner.

Current GSORTS reports use a broad-banded, four-level rating system that corresponds to a Service-unique readiness status for the category being reported upon. In general, the GSORTS unit readiness status reflects the lowest level of readiness in any category reported on by that unit. Thus, the current system may underestimate unit readiness to do some tasks and overestimate unit readiness to do other tasks. Unfortunately, the same codes do not always stand for the same thing even within a given Service. This makes the use of the automated system less efficient and often requires manual interaction with the data source provider to determine what a code refers to for

that specific unit. Standardized codes that are unique (at least across a Service) would greatly enhance the utility of the system.

C.   BUILDING A FUTURE READINESS ASSESSMENT SYSTEM

Several DoD efforts could be used in concert to better facilitate readiness reporting and assessments from a system of systems viewpoint. While none of the systems, either individually or combined with one another, will automatically provide comprehensive views of DoD readiness, their existence could greatly facilitate and accelerate DoD's ability to produce such a system. Our analysis discovered that data gaps exist within DoD that prevent the construction of such a system. These gaps could be filled if directed by the Secretary of Defense or the Congress. The data gaps include 1) databases that list the specific UJTL/METL tasks that each entity (unit, agency, or facility) has been designed to perform; 2) databases that list the readiness of each entity to perform said tasks; and 3) databases that list the capabilities of the entities to perform the quantities of work associated with each task.

The Services currently have METLs, ROC/POE/Primary Mission Areas, or Designed Operational Capability (DOC) statements for their measured units. These statements need to be automated and stored in a MIS that is consistent and useable for readiness reporting. However, as noted above it is not just measured units that need to be described in this fashion.

Many DoD entities are not categorized as measured units that report their readiness. As a result, we cannot ascertain Service functional or DA task readiness to support and sustain the forces. For example, DoD facilities do not report their readiness to support the loading and transport of forces. Since many DoD facilities participate in the loading and transport of forces, equipment, supplies, and personnel related to DoD OPLANs, it would seem reasonable that our readiness to support these OPLANs is impacted by the readiness of these DoD facilities to provide sufficient capabilities to load and transport forces in accordance with OPLAN requirements. As such, all DoD facilities that support OPLANs should report on their readiness to supply the capabilities required of them by existing OPLANs.

One final observation is that combat forces all have design requirements that are intimately linked to specific functional area task groupings. These groupings can be thought of as function-specific system areas of expertise. The Army refers to these task groupings as Battlefield Operational Systems (BOSs), while the Navy refers to them as

Primary Mission Areas (PRMARs). These systems usually consist of a set of personnel, equipment, and supplies that are necessary to perform a specific task. A system may include all the assets of a unit or only a subset. Unit assets are often shared by multiple operating systems (OSs). In an effort to provide common ground for all Services, we suggest that the OS designation be given a formal joint naming convention such as the existing Joint Mission Areas (JMA) or at least be framed in a Joint Operating System (JOS) context.

1. Preexisting Components for Creating a Task-Based Readiness Reporting System

The Department has several operational automated management information systems that can be leveraged to facilitate the construction of a UJTL task-based readiness assessment system. These systems include GSORTS, JTIMS, and JOPES. Moreover, the Services currently have designed operational capability (DOC) statements and/or METLs for each of the units in the existing force structure. A task-based readiness reporting system will require that these DOCs and/or METLs be input into an automated database format that links units with the tasks that they perform and the quantity of work that the unit is capable of performing when it is fully manned, equipped, trained, and supplied. This would be a one-time requirement. It would be a factual table within GSORTS and would not require an update report.

By making this linkage between the OSs and UJTL/METL tasks, the unit commander can keep track of the unit's readiness to perform mission-essential tasks by keeping track of the status of the operating systems.

2. Suggested Design for a Future Readiness Assessment System

The organization of a future Readiness Assessment System needs to be modular. Those modules need to be Web-based applications that draw upon common centrally located databases. The system would be deployed on the SIPRNET. The whole concept for this design is that the readiness to accomplish any plan or set of plans is a function of the readiness of the systems or processes that provide the needed output, and that the readiness of each system is dependent on the readiness of each and every entity that is part of the system.

3. Simplified Database Organization for a Future Readiness Assessment System

The database design for this system is quite simple. It is organized around those things that require readiness (OPLANS), those entities that have to be ready (units, agencies, and facilities), the tasks and work items that each entity needs to be ready to accomplish, and the personnel, equipment, supplies, and training that have a direct relationship to the readiness of the entities that perform tasks. In this section, we will outline a suggested database structure that is organized in this fashion. The purpose of this outline is not to provide rigorous relational database architecture or design for a future RAS but to illustrate that the concept is quite simple and could be achieved with today's technology with slight modifications to existing DoD MIS systems. There are three basic concepts for this system: 1) leverage existing practices and procedures; 2) expand and standardize entity reporting requirements; and 3) summarize readiness reporting based on the current knowledge of entity personnel, equipment, equipment condition, supplies, and the current collective and personnel training status for the entity.

In the near future, technology will allow the RAS database to be a virtual database that draws its information entirely from other DoD MIS systems that obtain their data based on day-to-day transactions. Most RAS reports will be nothing more than stored SQL queries that go against virtual data tables. Moreover, one could easily imagine a RAS where intelligent agents analyze potential readiness problems such as bottlenecks, identify them, and generate fixes or workarounds for them. This technology is already being used in manufacturing and is becoming increasingly incorporated into manufacturing planning systems. Since most manufacturing is composed of tasks that must be completed to accomplish a specific goal, the use of this technology in support of readiness assessment seems analogous. The major requirement of this approach for military readiness applications is to describe plans in terms of the task-based work that is required to accomplish the mission. If one quantifies the amount of work required, then it is possible to plan the process and determine whether or not there are adequate resources or workarounds available. Today, planners do this in an ad hoc fashion. In the future, this system might be used to facilitate the use of assets and to make planning a more understandable, flexible, and rapid process.

a. Plans and OPLANS

"Ready for what?" is the question that drives a readiness assessment system. The requirements for readiness come from a table that identifies the OPLAN(s) that is (are)

being assessed. This table must have fields that uniquely identify all the tasks that are to be performed for this plan. It must additionally contain field(s) to establish the required quantity of each task that is required by this particular plan. Establishing quantifiable estimates of the work required for a specific task is key to being able to estimate the readiness to accomplish that plan with a specific set of resource entities.

In general, OPLANs have a set of forces and other resources pre-assigned or allocated to them. This set of resources is intended by the CINC to handle the tasks required by the plan. Thus, it would seem prudent to include a database table that included the entity identification field and the OPLAN(s) that it is linked to.

This linkage, depicted in Figure F-1, would facilitate analyses of how ready the forces designated against a plan were to fulfill the requirements of that particular plan. It would also facilitate the identification of entities that are linked to multiple plans. This type of linkage can facilitate analyses that involve questions pertaining to issues such as the readiness levels of low-density, high-demand entities and assist in the identification of problems that arise when those assets are simultaneously required by multiple plans.
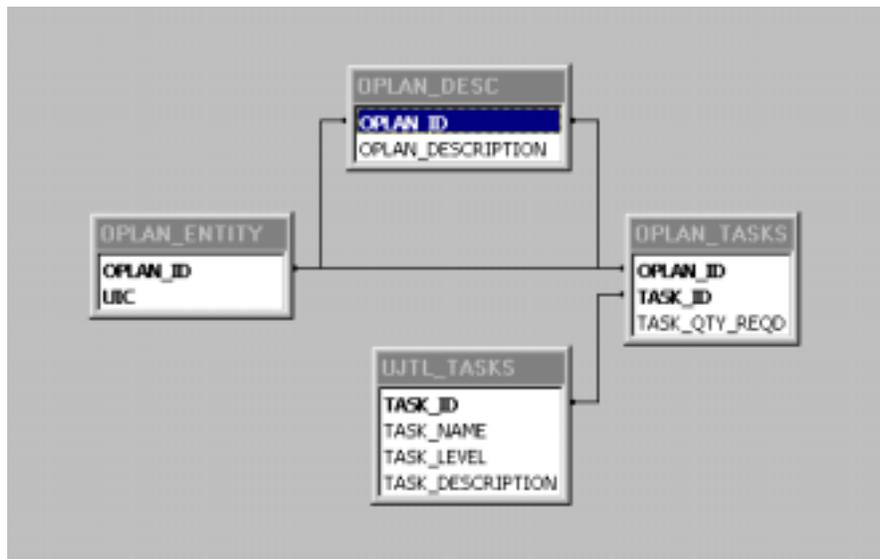
Figure F-1. OPLAN-Related Tables and Linkages

b. Tasks and Joint Operating Systems

The system must also include tables that contain the UJTL tasks and descriptions and the Joint Operating Systems/Joint Mission Areas. The DoD is currently focusing its training efforts around the Universal Joint Task List. The premise behind a UJTL is that all activities performed by military and military support entities will be recorded in the list.

As such, the UJTL may then be used to build plans by selecting the tasks that are required to accomplish a specific mission or set of missions.

A separate table that links a unit's Operating Systems to tasks is essential for facilitating analyses in support of commanders at the battalion level and below. This can be accomplished only if the system understands the relationships between the operating systems and the tasks. The table structure in Figure F-2 supports the identification of those task-to-OS relationships. It should be noted that these definitions are most likely to be look-up tables that only need to be initially defined and then modified or enhanced as necessary to support tasks when new units are defined or new equipment enters into service.
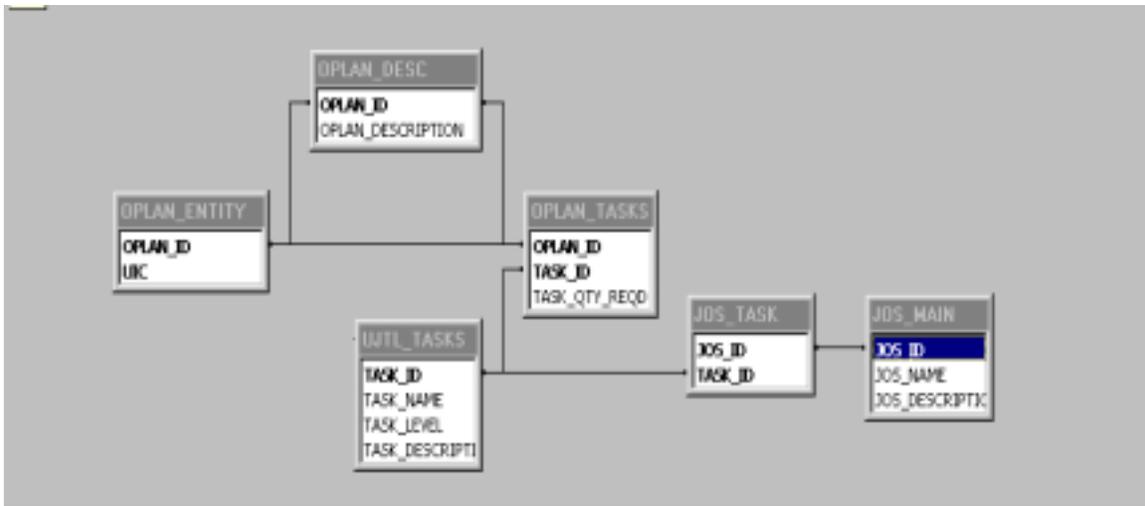
Figure F-2. Task- and OS-Related Tables and Linkages

c. Entity-Related Tables

Entities are those assets that are required to be ready to perform a task or multiple tasks from the UJTL. Entities will typically be military units, support agencies, or facilities that perform military related operations. Entities have unique IDs and specific capabilities to perform tasks based upon the personnel, equipment, supplies, and training that the entity and its personnel have received.

It should be noted that all entities are designed to be capable of performing some set of tasks to a specific level of capability. However, entities may also be required to perform tasks other than those that were included in their designed operational capabilities specification. The entity task database tables must account for this. Entities have designed and actual levels of personnel, equipment, supplies, and training. Moreover, the

equipment in the entity may be in various states of utility; thus the tables that contain the entity information for these areas will be separated into those that contain the entity's design specifications and those that contain the actual on hand values for those areas.

Entities may be part of larger entities or organizations so the database will contain a table of the parent-child relationships for all entities. This will allow high-level specification of entities to plans that require large numbers of forces without the need to specify all the lower level entities. This can simplify planning processes by allowing both large organizations and small specialty functions to be added to a plan in an efficient manner.

Finally, since lower-level units at battalion and below are organized around the operating systems concept, the entity tables for the actual status of personnel, equipment, supplies, and training will include linkages to both the related tasks and associated OS (Figure F-3). This will facilitate a better understanding of task work by commanders who are responsible for performing the actual task work. Moreover, it will allow him to better understand his task requirements in terms of the people and equipment that he has available.
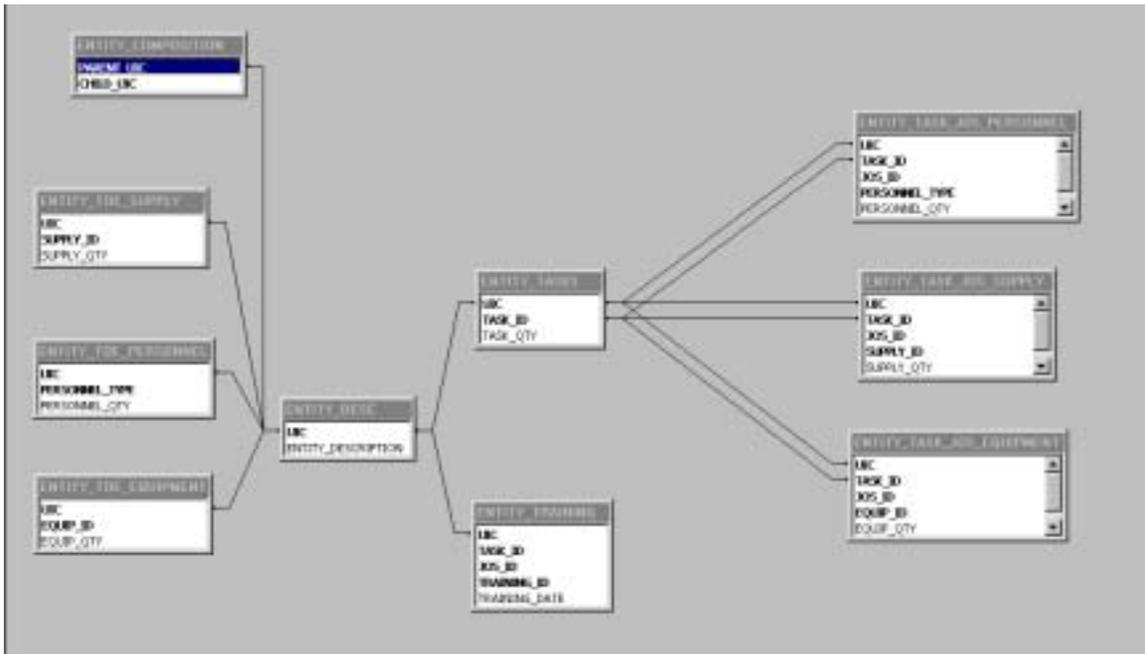
Figure F-3. Entity-Related Tables and Linkages

d. Personnel-Related Tables

Personnel information is an essential part of any readiness assessment system. Entities require specific numbers and types of personnel, and different personnel require different types of training depending upon their assignment. Currently, DoD has several personnel management data systems, but in the future it will have a single personnel data system that will track the employment records of both civilian and military personnel. This system will contain the complete employment records of all personnel and will include a historical record of all assignments and training that the employee has received—including both individual and collective training.

For readiness assessment purposes the primary interests focus upon three basic personnel-related tables. The first is a table that defines the various personnel types or categories and assigns both a unique personnel type code and description to each type or category. The second table is a personnel locator table. This table uniquely identifies every person in the system via a personnel id code, shows their current personnel type, the entity code to which they are assigned, the date on which they were assigned to that entity, and the date that they are expected to rotate out of that entity. This type of data is already maintained in existing Service personnel management systems and thus should be easily accessible for all military personnel. Figure F-4 depicts the personnel-related tables and linkages.
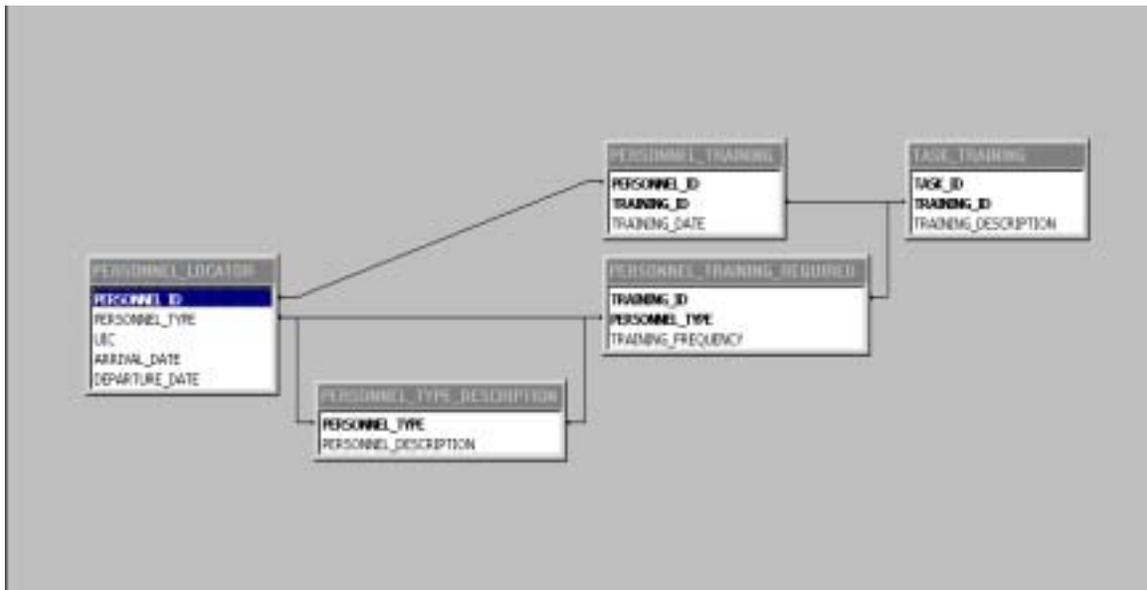
Figure F-4. Personnel-Related Tables and Linkages

e. Equipment-Related Tables

The readiness of an entity to perform many of its assigned tasks is directly related to the specific equipment that is part of its design. A readiness assessment system needs to track equipment and condition. The system requires a table that assigns unique equipment identification codes and descriptions (Figure F-5). It also requires a second table that tracks the assignment of equipment via its serial number, equipment identification number, entity identification code, quantity, and condition of the item(s). Some of the equipment is not tracked by serial number, however, in which case the quantity and condition fields will be entered.
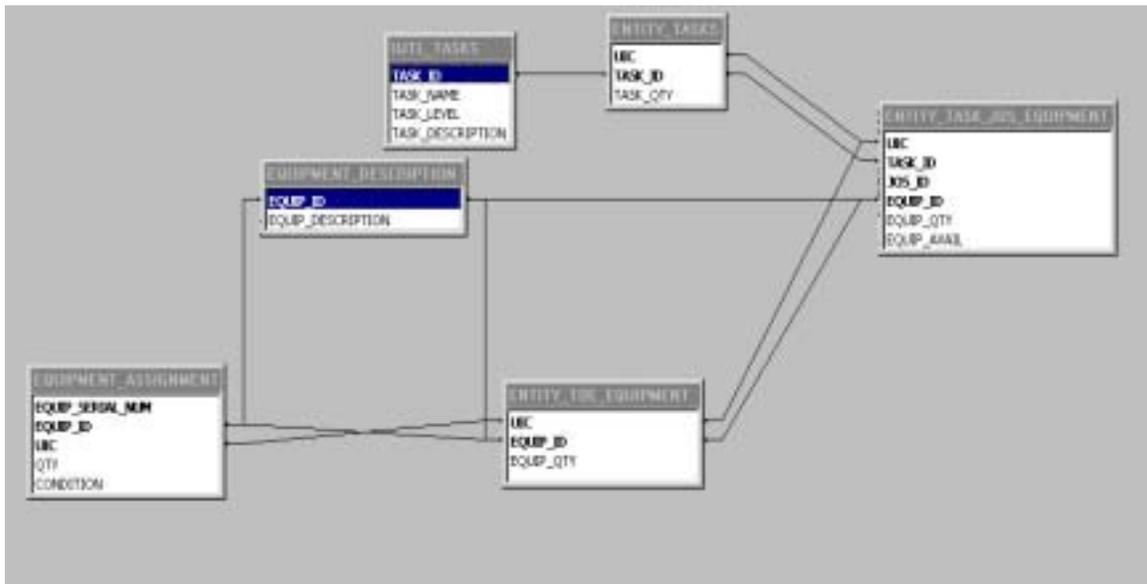
Figure F-5. Equipment-Related Tables and Linkages

f. Supply-Related Tables

The entities tracked in a readiness reporting system consume supplies during the performance of their assigned tasks. The system will use two tables to track supplies (Figure F-6). The first table will simply assign unique supply identification codes to supply descriptions. The second will track the quantity of each supply code that is located with each entity. These two tables in accordance with the entity supply tables will facilitate the determination of the adequacy of supplies to perform the tasks to which the entity has been assigned via a plan or set of plans. This view is very simplistic, but it will serve as a good starting point.
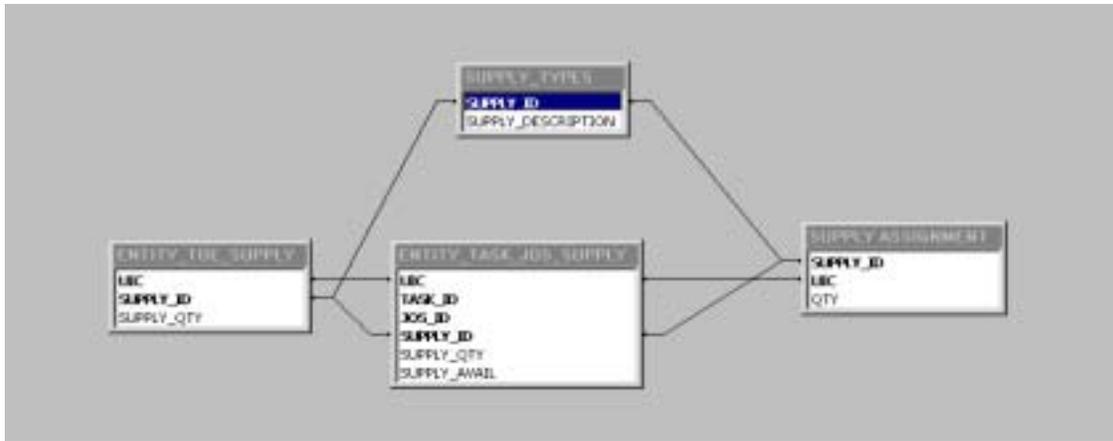
Figure F-6. Supply-Related Tables and Linkages

g. Training-Related Tables

All entities and personnel require training in order to perform their tasks. Four database tables will track the required training information in the readiness assessment system (Figure F-7). There are two basic types of training that are required to maintain readiness to perform assigned tasks. The first type is individual personnel training and the second is what can be termed collective training. Personnel and collective training identification codes and descriptions will be tracked in two separate tables along with the required frequency of the training. In addition, two tables will link personnel and collective training to the tasks that they are linked to. The collective training table will also link the operating systems to the tasks. This will facilitate analyses of training readiness problems at all levels of the entity hierarchy.
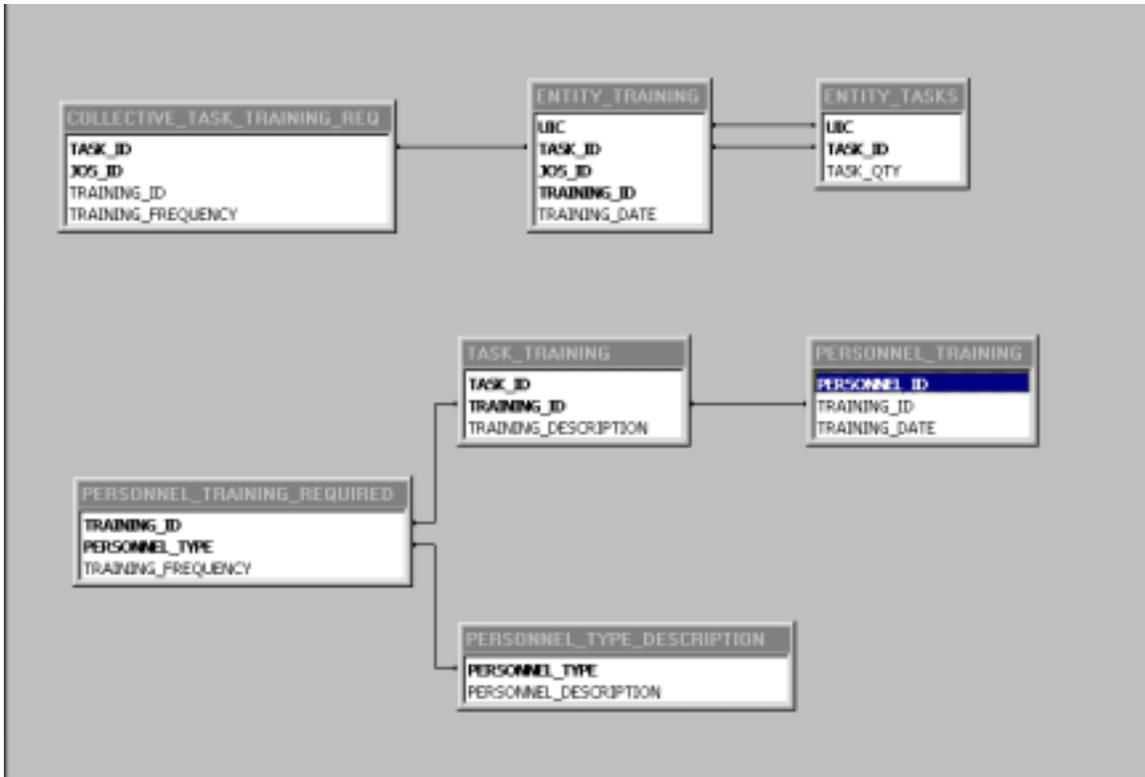
Figure F-7. Training-Related Tables and Linkages

h. Illustrative Modules for a Future Readiness Assessment Module

The functionality of the future RAS will be organized around modules that will generate reports from queries that are applied against the system database tables. This approach has multiple benefits. First, it makes the system extremely flexible in terms of its applicability to the multiple levels of command and functionality that it must support. Second, it provides a simple way to incrementally improve and modify the existing functionality in a way that minimizes changes to the overall system. Finally, the modular system facilitates the publication and distribution of information in a fashion that efficiently and securely gets the correct application functionality to each and every user. Below, two proposed modules for the future RAS are briefly described. The first module examines readiness from an entity perspective and the second from a system of systems perspective.

i. The Entity (Unit, Agency, and Facility) Readiness Module

The future RAS would include an upgraded or enhanced GSORTS module that would contain the standardized readiness information for all DoD units, agencies, and

facilities. The ability of a unit, agency, or facility to perform a specific task is generally a function of its designed capability. That design includes assumptions about the status of the unit, agency, or facility in relation to the personnel, equipment, equipment condition, supplies, and training assigned to it. In general, the ability of the entity to perform a specific task or function is independent of the OPLAN that it is supporting other than for those OPLANs where conditions for performance are imposed that impact the capability of the entity to perform the work that it was designed to do. Examples of such conditions are weather, terrain, and hazardous conditions such as those that might result from a chemical or biological attack. In any event the unit, agency, or facility should only report upon its readiness to perform relative to its designed capability. The impact of adverse conditions either singly or in combination should be maintained as factors in a database look-up table. This table can be designed to account for as much complexity as is deemed necessary and thus it can accommodate both simplistic scalars and more complex performance modifiers.

A true readiness assessment system will rely heavily on an enhanced GSORTS module that would contain an input tool that would allow units, agencies, and facilities to input/report their readiness status for each task by OS. The unit would report upon the current status of personnel, equipment, equipment condition, supplies, and training that it utilizes for each OS. To simplify this input and to help facilitate the required inputs, the new GSORTS input forms would show the designed status of the above items for a fully capable unit next to the current status input fields. The system would automatically calculate the percentage of designed operational capability for each OS specialty area when the actual (current) inputs are made, and the new GSORTS module would then role up the individual areas to generate an overall rating score for that JOS. The rating score could be displayed in the traditional C-rating system or as a straight percentage score. In this module, each OS is linked directly to a set of UJTL/METL tasks that must be performed in support of each operating system. The enhanced GSORTS input tool could thus facilitate first order assessments of the entity's readiness to perform specific tasks by allowing one to compare the readiness of a unit, agency, or facility to perform a given task across those operating systems that require the task.

Figure F-8 suggests the type of report that one could obtain for a specified unit or other entity. In this case we are showing a format that would support an existing "C"-like rating system for overall task performance and then breaking out the specific readiness components of each OS that supports the task for this notional unit in terms of this rating. Since most if not all of this information is already reported via existing

systems, the RAS would add few (if any) additional reporting requirements. The specific status indicators for each task and each OS would be automatically entered into the readiness matrix and the readiness status by task would be automatically determined and reported.

	SPECIFIED UNIT											
	DOC						ROC					
	Task 1						Task 2					
Operating System	C	P	T	E	EC	S	C	P	T	E	EC	S
Primary Operations												
Command & Control												
Maneuver & Mobility												
Intelligence												
Logistics												
Force Protection												
Overall												

Figure F-8 Plausible Entity Task Readiness Report

j. The Systems Readiness Module

Appendix D describes how a systems approach to readiness as part of the JMRR process could provide a more accurate and comprehensive view of DoD readiness. This can be accomplished by gathering the data that is provided by the Entity Readiness Module.

For example, a CINC might be interested in the readiness status and total capability of systems that perform specific combat operations such as the Precision Engagement or Force Protection Systems (air defense or ballistic missile defense) allocated to an OPLAN. The RAS System Readiness Module would allow the CINC to look at all the assets that support these systems. More specifically, it would allow the

CINC to see the readiness of all of the assets that support the tasks that must be performed for these systems to be operationally successful.

Similarly, a CINC might want to know the readiness status of all those systems that are necessary to support and sustain combat operations. Those systems could include the Logistics System in total or specific support functional systems such as the Communications, Intelligence, Medical, Transportation, and/or Fuel Systems. The future RAS would facilitate an examination of the readiness of those assets that allow the tasks associated with those systems to be accomplished.

This same approach could be applied to Service systems where entities associated with each system could be grouped to facilitate the analysis of Service specific manning, training, mobilization, deployment, and sustainment systems. These Service-specific operating systems could be further refined to focus upon specific OPLAN(s) or any conglomeration of activities that is of interest. This is a powerful tool that would allow the Services to examine the impact of readiness issues from many different aspects.

Similarly, Defense Agencies such as DIA, DISA, DLA, NIMA, and DFAS could also define systems for their specific tasking requirements for the OPLAN(s) that they support. If they were to do so, it would then be possible to understand the readiness requirements that OPLAN(s) place upon these agencies. Moreover, it would identify potential OPLAN problems that could arise if these agencies are not ready to provide the required tasking levels in support of a given OPLAN.

D. ROLES FOR A FUTURE READINESS ASSESSMENT SYSTEM

A robust future Readiness Assessment System should support force requirements analyses, mission planning, mission execution, and mission assessment analyses. The system should directly relate to the National Security Strategy via the CPG/DPG-mandated OPLANS. Those OPLANS should be defined in terms of their required tasks via the UJTL. The tasks themselves should be quantified in a fashion that directly relates them to the training specification requirements for all units in the currently available or a postulated force structure via their individual Service METLs and the units' capabilities to perform specific task work. Finally, the system needs to report not only on the resources that directly meet the CINC-specified force requirements but also on those resources that support the transport of personnel, equipment, and supplies during both the initial and sustainment phases of both OPLANs and named operations, as well as those assets that sustain the force during the execution of those same operations.

1. Force Requirements Analyses

The ability to identify force structures that directly meet the NSS requirements is a daunting task. The OPLANs call for the assignment of specific forces and resources to meet the requirements of numerous named operations and the two Major Theaters of War (MTWs). Although we currently have CINC-specified, broad-ranged tasks that need to be accomplished for each plan, we do not have specific links between these tasks and the capabilities required to accomplish these tasks. Since the basis for stating force requirements is directly linked to the number, diversity, and overall size of the tasks that need to be accomplished, a future readiness reporting system should include the ability to link specific forces that have specific capabilities (in terms of both skills and levels of effort) to specific tasks.

a. Using a Readiness Assessment System to Support Total Force Requirements Analyses

The proposed future readiness assessment system could be used to assess whether a force structure shortfall exists in our ability to support the National Security Strategy. Such a system could determine which tasks could be accomplished in accordance with both the OPLAN time phase and level of effort requirements. The future RAS would utilize database information pertaining to each of the tasks and level of effort that the CINC OPLANs required and could also utilize databases of Service provided information pertaining to the available force structure's units and the tasks and levels of effort that they are ready to provide. The future system could then generate reports from this information to show the capability of the current force to meet NSS needs given the overall force's current state of readiness, training, and utilization. In general, the system could schedule units with specific capabilities against tasks that require specific skills and levels of effort. The system could utilize any number of prioritization/optimization functions to ensure that forces are efficiently scheduled against the mandated tasks.

Once these tasks had been scheduled and the force requirements were understood, then the support and sustainment requirements could be determined. These requirements could then be linked to the scheduled tasks required by the plan and would then reflect a measure of what capabilities are required to be ready to accomplish the work contained in the plan. Any shortfalls in the support and sustainment functions could be linked to the tasks and work that are part of the plan. Decisions could then be made to either alter the plan to accommodate the shortfalls or to augment the support required to meet the plan's

requirements. In either case, the planner would know the tasks impacted by support force shortfalls and the amount of additional support required to sustain the plan.

b. Using a Readiness Assessment System to Support Named Operation Force Requirements Analyses

About 5 years ago, the Joint Staff attempted to build a system called the Contingency Operations Planning System (CAPS), which would allow a CINC or other planner to determine what forces are required to perform a specific set of mission tasks. Given a selected set of tasks and conditions, this system could assign and schedule forces to perform work associated with a named operation. This system was primarily designed to resource contingency operations that required various mixtures of security and humanitarian assistance forces. This process required that all elements of the force structure be associated with those UJTL tasks and the elements of work that accompany those tasks. The system then used a database table that contained the ability of a unit to perform task-associated work given a set of conditions that altered the amount of work that a fully trained, manned, and equipped unit could perform. Unfortunately, Service-validated databases which link units to the tasks and work that they are designed to perform are unavailable at this time. If this type of database link were included in the RAS, the system could readily support named operation force requirements analyses in a sound analytical fashion that actually could result in a work schedule for all units assigned to the operation by task that was to be performed.

c. Using a Readiness Assessment System to Support Unit Training

The fundamental purpose of training is to ensure that the trainee is ready to perform with adequate proficiency those tasks that are being taught or exercised. Within the Department, forces are assigned tasks both by their Service via a designed operational capability for a specific unit and by CINCs who place specific requirements upon the forces that are assigned to their specific theater OPLANs. Generally, Services are responsible for training their forces and the joint training programs are designed to integrate and exercise the capabilities of multi-Service forces that are typically assigned to CINC missions and OPLANs. There is currently no automated method of coordinating CINC required task training and Service task training.

A Readiness Assessment System that is based upon CINC-required UJTL mission tasks and units that are trained to a specific level of UJTL/METL task proficiency could allow both Service and Joint training programs to better tailor the training of their forces

to current Service, CINC, and NSS requirements. This type of approach facilitates analyses of how well specific Service units are trained and ready relative to both their Service-designed, task-based operational capabilities and CINC/NSS-required mission/task-based operational readiness capabilities. Service training programs could analyze the extent to which their Service based training meets CINC requirements. This type of analysis could help the Services to shape their training programs to better fulfill CINC-intended uses of their forces. As force providers, the Services are responsible for providing the CINC with forces that are trained and ready to accomplish CINC-mandated OPLAN objectives. A RAS that clearly designates both OPLAN task requirements based upon the UJTL and the readiness of forces allotted to that OPLAN to carry out those tasks could greatly improve our understanding of both what we are training forces for and why it is important to do so.

2. A Readiness Assessment System in Support of Mission Planning

Mission planning involves the identification of clearly defined objectives and goals that can be achieved through the successful execution of specific tasks and the work that is associated with each task. A RAS that could automatically identify force structure that is "ready" to take on the tasks associated with a given mission could greatly assist mission planners. There are several automated and semi-automated mission-planning systems that are available within the Department. The use of the UJTL and a direct linkage of those tasks required to perform a mission facilitates an understanding of exactly what work is required for successful mission accomplishment. The ability to determine that the units assigned to a given mission possess the capabilities to conduct the required tasks in terms of both expertise and quantity of work required is a measure of the readiness to conduct the mission with the assigned force. Planners are always trying to ensure that all mission tasks are adequately covered in terms of both expertise and level of effort. A RAS should facilitate their efforts by linking mission tasks (including the level of effort required for that task) with the capabilities of the force structure assigned to the task. This will allow planners to identify tasks that are both under and over-staffed. Moreover, it will provide them with a capability to refine the mission plan with the commander prior to its execution. This will further allow a commander to understand the inherent risks associated with the plan given the assigned force structure.

a. Planning Multiple Missions

The successful execution of all complex operations requires multiple missions to be completed in a synergistic fashion in support of an overall objective. Planners often are required to resource simultaneous (or near-simultaneous) missions with a very limited force structure. When resources are limited, it is often advantageous to devise schemes that optimize the assignment of force structure to required tasks in a fashion that supports the operational commander's priorities. A RAS that is useful in planning multiple simultaneous or near simultaneous missions needs to have the capability to link tasks and units that perform those tasks in a fashion that reflects the commander's operational priorities. Moreover, it should be able to provide simple perturbation analyses that will support his selection of alternative strategies under resource-constrained conditions. The logical extension to this is the ability to integrate existing OPTEMPO and PERSTEMPO constraints into this process on at least a unit-by-unit basis. If this functionality were included, it would allow planners to better understand the implications of each mission's effect on the overall desired/planned usage rates for a given unit and the resources it was intended to provide.

b. Planning Single Missions

Single mission planning is a subset of multiple mission planning, and the items outlined above apply here. However, on any one specific mission a RAS should be able to link those units that are most qualified and ready to accomplish it successfully not only those units that are qualified and available at the current time. There are times and missions when only the best forces will suffice, and a RAS should be able to identify those forces that are best suited to a mission or task upon request (even when those units are not currently available for use due to other tasking).

3. A Readiness Assessment System in Support of Mission Execution

The JEMP JTIMS contained a module that assisted mission execution within a Joint Exercise. This module facilitates this function by providing a common schedule for all units that participate in a joint exercise. This common schedule provides a clear understanding of: 1) who is doing what; 2) when they are going to do it; and 3) how long those involved in each task will be doing it. It is a function that is normally associated with planning tools but as one digs deeper into the meaning of readiness the ability to disassociate readiness from planning becomes extremely complex. The overall readiness of our force structure to carry out a given mission is intimately linked to both the current

involvement of our forces and how well we have matched their capabilities to the tasks included in our plans. In any event, a true readiness assessment system should be capable of providing a schedule that matches specific units to the tasks that they are associated with during a given mission or missions.

4.   A Readiness Assessment System in Support of Mission Assessment

The JTIMS mission assessment module reports upon the results of all missions included in a Joint Training Exercise. These reports indicate which units participated in each mission, which tasks they participated in, and for how long they participated in the activity. Discrepancies between the results associated with the mission plan and the actual execution of the mission can be ascertained by way of pre-constructed reports and/or user generated queries against the exercise database results. The ability to compare the exercise plans with the actual results allows one to ascertain both the success of the plan and the extent or level of training that each unit had during the course of the exercise.

Thus, the assessment component of a readiness assessment system could benefit from information indicating how well units have performed on specific tasks either during training missions or in real world missions where they have performed assigned tasks. A unit that has failed to undergo the proper task training during a given period may well have readiness proficiency in that task if they have actively been involved in that activity in their current duty assignment. Accordingly, a unit's readiness to perform a specific activity is a function of both its daily task activity and its scheduled training activities. The ability to demonstrate both is essential to any overall readiness assessment system. Thus, a good RAS must provide historical insight into a unit's task experience—not just its current task training status.   Similarly, units that are performing tasks that are significantly different from those that they were designed for may well have proficiency degradations in their designed operational capabilities while maintaining or developing significant proficiency in areas that are far removed from their intended purpose within the force structure.   The historical insight function within RAS can also facilitate risk analyses that have to be made when we assign forces to activities that are external to their original purpose.   It is important to understand the implications of using forces for purposes other than for which they were designed.

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Appendix G
ORIGIN AND EVOLUTION OF READINESS REPORTING

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CONTENTS

TABLES

ORIGIN AND EVOLUTION OF READINESS REPORTING

INTRODUCTION

Accurate and timely knowledge of their own forces' capabilities has been essential for military commanders of all nations throughout time. Such information is the foundation upon which military plans, programs, and budgets are based and an essential element in the military command function. The way in which that knowledge is gained and maintained differs according to the military policy and traditions of each nation. Politics, personalities, and technology also influence the way that readiness information is obtained, checked, and used.

This appendix describes the origin and evolution of readiness reporting in the United States Army and the Department of Defense. The narrative provides insights into how and why the current systems came to exist in their present forms. It illustrates the difficulties that civil authorities and military commanders have had in obtaining accurate and timely information on the status and capabilities of their own units and forces.

The evolution of readiness reporting may be divided into three major phases. The first phase is from the Revolutionary War until the end of World War II, roughly from 1775 until 1945. The second phase is the Cold War, from about 1947 until 1989. The third phase is the post-Cold War era from 1989 to the present day. Readiness has been perceived differently in each of these phases.

From its inception until the Cold War, the military policy of the United States was to maintain a navy in being as a first line of defense and a small standing army to be expanded when necessary to wage war. In this era, peacetime readiness was of little consequence. The Nation counted on having sufficient time to expand its military capabilities. Readiness for combat became important only during mobilizations to ensure that units being committed to battle were trained and resourced properly.

During the Cold War, the nation maintained for the first time large standing forces that had to be capable of immediate commitment against an obvious major foe. Readiness became important in peacetime and systems were established to provide information on selected units.

After the end of the Cold War, the major threat subsided but the dangers did not, and the operational tempo increased. Readiness became more important but also more complicated due to the provisions of the Goldwater-Nichols Act of 1986, which emphasized the responsibility of the commanders of the unified commands for planning and conducting military operations.

The first part of the paper discusses readiness reporting up to the start of the Cold War. The second part of the paper addresses the establishment of a joint unit reporting system in the Department of Defense during the Cold War. The third part tells about the development of a joint force readiness reporting system. Part four discusses some of the enduring issues for readiness reporting. The story is incomplete, but it is a start on tracing the development of this important element of military command.

PART I: READINESS REPORTING FROM 1775–1947

During this period of 172 years, the readiness reporting system had five major characteristics:

- Readiness reporting was the responsibility of commanders at all levels. Commanders submitted readiness reports to their next higher commanders, who aggregated the reports and submitted them up the chain of command.

- The principal measure of readiness was the subjective judgment of the commanders.

- The state of readiness and accuracy of readiness reports were checked by commanders, inspectors, and exercises or tests.

- The civil authorities responsible for raising, maintaining, and administering the military services vied with the military commanders responsible for conducting military operations over who was responsible for readiness and readiness reporting.

- Readiness reports became important during mobilizations for war and focused on the status of units who were deploying to combat in the United Sates or overseas.

Readiness Reporting in the Continental Army 1777–1783

The first readiness reporting system in the American Armed Forces was based on military ceremonies that survive today as rituals to honor distinguished visitors, recognize persons to be decorated or retired, and entertain tourists. The original, practical purpose of these reviews and parades was to inspect the troops. Good commanders then (as now) did not to rely solely on reports from subordinates. They wanted to see for themselves. Accordingly, a ship's company or an infantry company was assembled with their arms and accouterments on the deck or parade field to be inspected by their commanders. The first order of business was to have the subordinate commanders report the number of personnel present and the reasons for the absence of those not present. Then the captain of the ship and the captain of the infantry company inspected the condition of the men, their uniforms and accouterments, and their weapons to ensure that all were in working condition. After inspecting the crew or the troops, commanders would have them perform military movements to see how well they could drill. For the ships, this drill was to ensure that the crew could deliver a large volume of fire from the ship's guns. For the infantry, it was to demonstrate that the troops knew and could practice the manual of arms well enough to deliver volley fire of musketry. Thus, parades originally served the useful purpose of allowing commanders to ascertain the readiness of the units under their command and either make corrections to improve readiness or adjust plans to conform to that readiness.

Readiness was a major problem for George Washington's Army. The newly formed Continental Army had survived its first 2 years of war but was in poor condition for the campaigns of 1777. Discipline was loose, particularly in the colonial militia. There was no standard organization and no common system of tactics and training.[1] Colonies competed with Congress in recruiting soldiers. Few colonists had military service. Washington was kept busy reacting to British moves while asking Congress for supplies and support. He was not sufficiently confident of the capability of his army to take the initiative, but he had to be ready to counter the British. Above all, he had to keep the Army intact. Although Washington's Army suffered several tactical defeats, the Army survived, and Major General Horatio Gates defeated the British soundly at the Battle of Saratoga,

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[1] David A. Clary and Joseph W. A. Whitehorne, *The Inspectors General of the United States Army, 1777–1903*, Center of Military History, Washington D.C., 1987, Chapters 1–4, pp. 11–60.

which turned out to be the turning point in the Northwest. By the end of 1777, however, the Army was at the point of disintegration.   When the Army settled into inadequate winter quarters at Valley Forge in December 1777, it was the low point of the Revolution.

Late in 1777, Washington asked for an inspector general to assist him in training and disciplining the Army. Congress complied and authorized two inspectors general. The duties of the inspectors general were to see that 1) every officer and soldier was instructed in the exercises and maneuvers established by the Board of War, 2) the rules of discipline were strictly observed, and 3) officers commanded their soldiers properly and did them justice. The inspectors general were to review the regiments and receive reports from regimental commanders on the clothing, arms, and accouterments in the regiment; the number of personnel, names of wounded men, and the men unfit for service; and the fitness, behavior, and capability of every individual.[2]

Major General Friedrich W. A. von Steuben arrived at Valley Forge on 23 February 1778 and was appointed the inspector general on 28 March 1788.[3] In addition to assessing and reporting readiness, Steuben trained the troops and inculcated discipline. He wrote a drill manual of simplified movements that could be executed by citizen soldiers after a short period of training and taught this by what is now called training the trainer. General Steuben also wrote a body of regulations, revised the organization of the Army, and inspected and improved many aspects of the Army's administration, including pay. His energy was so great and his grasp so long that the officers of the Army feared that Steuben was usurping their duties as commanders. After a period of maneuvering, General Washington made clear the policy that inspection was a function of command, that the inspector general was the agent of the Commander in Chief, and that sub-inspectors were agents of the commanders to whom they were assigned.[4] This policy remained in effect over the next 200 years, although few inspectors general achieved the influence of Steuben.

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[2]   Ibid., pp. 25–26.

[3]   Ibid., pp. 33–45. Steuben was a captain in the Prussian Army but upon the advice of the American commissioners in Paris pretended to be a lieutenant general. He did not fool Washington, who hired him because of his evident capabilities despite his masquerade.

[4]   Ibid., p. 46.

Army Readiness Assessment and Reporting in the 19th Century

From the end of the Revolutionary War in 1787 to the establishment of the War Department General Staff in 1903—a bit more than the entire 19th century—the United States Army typically was not ready. In the aftermath of the Revolution in accordance with the intent of the Founding Fathers, the Continental Army that had just won the war was disbanded. The Army was reborn, but except during wars, it was never a large force and was seldom prepared or resourced properly for the missions the Nation gave it. The national military policy was to rely on the militia to expand the Army and provide the forces to wage war. This did not work well, and the United States was forced to improvise to form the armies it needed to fight major wars. Large armies of volunteers led by a few trained professionals and ambitious citizens were created almost from scratch for the War of 1812, the Mexican War, and the Civil War. After the Civil War, the Army became the border patrol for westward expansion, and small units were located in many, small frontier forts. The art of commanding and maneuvering large formations learned at such great cost in the Civil War was lost. The Army was consumed in the minutia of administration, kept on short rations by a parsimonious Congress, and busy policing the frontier. Readiness as it is understood now was not a major concern in peacetime the wars and became important only when expansion for war was necessary.

Upon the entry of the United States into the world scene in the 1880s, the concept of readiness reemerged as it was in Steuben's day. U.S. Army officers studied the increasing professionalism of European armies. In the 1890s, the Army made a concerted effort to train effective regiments. These preparations paid off in the Spanish-American War when the Regular Army performed well and, with the assistance of a competent U.S. Navy, defeated the Spanish Army handily. However, logistical support for the war with Spain was so bad that mobilization, deployment, and sustainment of the troops were a disgrace. The regular regiments were ready, but the systems needed to sustain them were not.

This failure was due in great measure to the organizational arrangements that prevailed in the Army during most of the 19th century. Before the creation of the General Staff in 1903, the Army was divided into two separate chains of command—one operational and the other administrative. Command of the combatant army was entrusted to the Commanding General of the Army, a professional soldier. The Secretary of War was responsible for administration and support of the army, particularly in fiscal matters and was the special adviser to the President on all Army matters.   The Commanding General

had no effective authority over the bureaus that provided such services to the Army as engineering, ordnance, signal, medical, transportation, supply, and general administrative work. The bureaus reported directly to the Secretary of War. They commissioned officers in their own specialties that supervised noncombatant tasks in organizations above brigade level. The bureau chiefs had tenure and enjoyed almost independent status in the Army.[5] The Bureaus and the Army Commanders seldom saw eye-to-eye and often vied for power. The situation was intolerable to the military commanders who had the responsibility but not what they perceived to be the necessary authority over the bureaus that raised, maintained, and sustained the line troops.[6]

This system of divided authority sufficed when military operations were small but failed when it was necessary to marshal larger forces and fight a major power. There was no professional soldier with authority broad enough to coordinate the operational and support aspects of War Department operations. Only the Secretary of War could make such coordination, and he was dependent entirely on the bureaus for action. This arrangement became less satisfactory as military operations became more complicated and required mobilization and movement of large numbers of personnel and large amounts of materiel for the support of the combatant forces. "At the end of the nineteenth century, the Spanish-American War showed that existing machinery for planning and managing the military effort was inadequate for the complexities of modern war."[7]

During the 19th century, following the precedent of General Steuben, the "main purpose of the inspector general was to determine and report on the Army's preparation for war."[8] As time passed, however, the Office of the Inspector General was also used for other purposes. Inspectors were used to audit the many funds of the Army, inspect depots and posts, establish the items that could be sold at post canteens, and conduct special investigations of alleged fraud or misconduct. The functions of the Office of the Inspector General differed according to the position of the person to whom the Inspector General

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[5] Ray S. Cline, *Washington Command Post: The Operations Division*, United States Army in World War II, Office of the Chief of Military History, Department of the Army, Washington, D.C., 1951, pp. 14–16.

[6] It was so bad at times that two commanders (Scott in 1848–50) and Sherman in 1869–76) maintained their headquarters away from Washington, D.C. to demonstrate their independence and avoid dealing with the War Department or (in Scott's case) the President.

[7] Senate Document 221, 56th Congress, Report of the Commission Appointed by the President to Investigate the Conduct of the War with Spain. Quoted in Cline, op. cit., p. 15.

[8] Clary and Whitehorne, op. cit., pp. 346–349.

reported. When the IG reported to the Commander in Chief, the emphasis was on training, spreading Army doctrine and standards, and assessing the readiness of the regiments for war. When the IG reported to the Secretary of War, the emphasis was on auditing financial accounts and investigating allegations of misconduct. Secretaries of War also tended to use the IG for reviewing such Army activities as the Soldier's Home, Military Cemeteries, and the Military Academy.

After the formation of the General Staff Corps in 1903, the Army at last had the organizational framework to achieve effective unified direction of military planning, operations, and support. This condition was not achieved fully, however, until 40 years later, when the Operations Division of the War Department General Staff was created to run the war against Germany and Japan. In the meantime, the Army remained unready in peace and forced still to improvise for war. The first challenge of the 20th century was World War I.

Readiness Assessment and Reporting in World War I

The Great War found the Army unready and with little appreciation for what had to be done to marshal and command large forces. The Army was miniscule and scattered in companies and battalions over 49 posts in 24 states. No officers had experience in commanding and maneuvering large combined arms formations. Fortunately, the Army had been given an opportunity to mobilize partially and assemble a maneuver division on the Mexican border in 1911 and again in 1913. In 1916, a raid by Pancho Villa on Columbus, New Mexico, led to the creation of the Punitive Expedition under Brigadier General John J. Pershing. These operations, as small as they were, provided invaluable experience for the War Department General Staff when it was faced in 1917 with the task of sending millions of Yanks over there.

There were two U.S. Armies in World War I. The Allied Expeditionary Force (AEF) under General Pershing was the operational army, and the remainder was the institutional army that supported the AEF. In modern terminology, Pershing was the CINC and the War Department was a force provider.

The task of the institutional Army in 1917 was to raise, train, and sustain the combat divisions and supporting units needed in France. The few regular officers available were quickly elevated to senior positions to oversee and manage the entire process, leaving to Reserve and newly commissioned officers the tasks of training, administering, and

motivating the volunteers and draftees entering the Army in large numbers. The Inspector General's Department, headed by Major General John L. Chamberlain, was instrumental in this process. Inspectors visited all new units and checked training and unit administration, providing advice to the inexperienced junior officers and arranging for help when it was needed. Inspectors visited all deploying divisions and validated them as ready for deployment or not according to the criteria established by the War Department. They were the agents of the Chief of Staff for readiness assessment. The key role of the inspectors in the buildup is attested to by the following remark:

> In more general terms, the Inspector General's Department association with unit training played a central role in the objective assessment of nearly every organization in the Army—strengths, weaknesses, and readiness for deployment. Every cantonment, school, and combat unit was visited by inspectors. In their inspection reports, they investigated or analyzed unique unit problems and made recommendations for their resolution, many of which resulted in improvements in overall conditions, including morale, and in the training of combat units and their supporting specialists. Nowhere in the Army was there a group with a better understanding of the status and problems of units and programs. The inspectorate became the fulcrum for the War Department decisions leading to the build up of the AEF in France.[9]

In France, the readiness of the troops was assessed and reported to Pershing by Major General Andre W. Brewster, the AEF Inspector General. Under Brewster's supervision, inspectors at all levels of command helped transform newly arriving partially-trained units led by inexperienced officers into a effective fighting force. They helped with training, promulgated and enforced common doctrine and standards, noted problems, and took action to see that deficiencies were corrected. When divisions of the AEF entered combat, inspectors visited the units at the front, observed their operations, and reported their findings to the commanders. They were instrumental in some cases in the relief of ineffective commanders. The AEF inspectors were not very popular with the commanders, but they were very good at promoting combat effectiveness.

Readiness Assessment and Reporting in World War II

During World War II, the Army formed, trained, and deployed 89 combat divisions and hundreds of nondivisional combat and support units to seven overseas theaters. After a shaky start, the General Staff realized that it needed to know the condition of these divisions

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9   Ibid., p. 155.

and units in advance in order to schedule them and prepare them properly before deployment. This required establishment of a unit readiness reporting system validated by the inspection process.

Initially, the readiness reporting was performed by the commanders responsible for the organization and training of the units, but it was soon discovered that reliable information on readiness could be obtained best by having outside officers inspect the units and assess their condition and readiness. Starting in 1943, experienced inspectors of the Inspector General's Department visited each division and unit and conducted a readiness review. These reports were forwarded to the General Staff and to commanders responsible for resource allocation and training.

These two complementary activities helped the War Department and the General Staff to prepare deploying units adequately. Although there were some instances in 1942 of deploying unready and poorly trained units, these did not occur after inspections were mandated and reports were rendered by disinterested officers. Not only did the inspectors provide accurate and timely information, but they had the ability to ensure that necessary corrections were made to bring units to the desired readiness level before they were sent into combat.

Each of the Army's three major commands were responsible for activating, organizing, equipping, training, and preparing units for deployment. The Army Ground Forces (AGF) provided combat divisions and other combat units; the Army Service Forces (ASF) provided combat support and combat service support units; the Army Air Forces (AAF) provided aviation units and aviation support units. Units scheduled for deployment were moved to staging areas near the ports of embarkation to wait for shipping. While at the staging areas, they were under the command of the ASF, which was in charge of the loading and movement phases. When the units arrived in a theater, they came under the command of the respective theater or task force commander. Proper working of this system relied on coordination and cooperation among the three major commands—a condition that did not always prevail.

All deploying units had to go through the Preparation for Overseas Movement (POM) process and be brought to a state of complete combat readiness before they could be released to the port commanders for staging and shipment. This was not easy. Conditions that prevailed 1942 to 1945 made the processing of units a difficult and complicated matter. Chronic shortages of personnel and, in 1942–1943, of equipment made it impossible to keep

units fully manned and equipped. "Consequently the earmarking of a unit for movement usually necessitated a hurried draft on other tactical organizations for both men and materiel. The vicious circle of robbing and replenishing resulted almost without exception in units reaching final stages of training with a heavy admixture of partially trained men. These had to be either replaced or rushed to completion of minimum training requirements."[10]

On 5 January 1943, the POM process was standardized and formalized to provide an orderly approach to deployment of units. Each month OPD furnished AGF, AAF, and ASF a list of the numbers of each unit type required to move each month for the succeeding 6-month period. Special unit training requirements were indicated on the list. Each major command designated specific units to meet War Department requirements. Upon approval of the designated units, the War Department issued a 6-month list that was the basis for personnel and equipment priorities and the initiation of movement procedures. To meet sudden demands for additional units not previously earmarked for overseas movement, the major commands maintained an emergency pool of nondivisional units that were completely organized, staffed, and equipped. Priorities were established as follows: Priority I to units earmarked for movement within 3 months; Priority II to emergency pool units; and Priority III to units listed to be shipped in the fourth, fifth, or sixth months. To ensure that units would have full equipment in time to complete final home station training, supply agencies were instructed to fill units 45 days prior to movement. If fill was not possible, supply agencies notified the major commands in time to allow obtaining the equipment from later-deploying units. Measures were taken to remove all nondeployable personnel from units earmarked for movement and fill those units to full TO strength. All personnel had to have "completed basic training and fired the prescribed course in marksmanship with his principal weapon."[11]

Finally, each major command would submit to the War Department a status report covering the organization, training, and equipment of each unit designated for overseas movement.

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[10] Robert R. Palmer, Bell I. Wiley, and William R. Keast, *The Army Ground Forces: The Procurement and Training of Ground Combat Troops*, Historical Division, Department of the Army, Washington, D.C., 1948, p. 565.

[11] Ibid., p. 584.

The Inspector General's Department (IG) played a particularly important role in the POM process. The War Department used the Inspector General's Department "to determine adequacy and efficiency of personnel, the state of technical training, and the completeness and condition of equipment" for units designated for deployment.[12] During 1941 and 1942, the IGs made occasional POM inspections. This proved to be insufficient to ensure readiness, and the new directive issued in January 1943 made IG inspections of the readiness of deploying units standard operating procedure. The number of inspectors was increased to handle the additional workload. In conducting these inspections, the IG teams were guided by War Department and AGF mobilization training programs and POM directives. To remedy deficiencies in administration and recordkeeping revealed in inspections, the AGF Inspector General published instructions on administrative records and procedures and sent personnel and classification officers to special troops headquarters to assist nondivisional units in assignment and other administrative matters, and to check up on compliance with AGF directives.

Tests were used to determine training readiness. All training was performed in accordance with War Department Mobilization Training Programs that prescribed what material was to be covered and the time allocated for each phase. At the end of individual training, corps or army commanders administered tests covering all subjects in the individual training program. All troops had to pass a physical proficiency test. During unit training, infantry and cavalry platoons took platoon-level combat-firing proficiency tests, and artillery units took battery and battalion tests. Infantry battalion field exercise tests were taken in the combined training period.[13] The plan called for combat divisions to participate in large-scale maneuvers after completing the combined training phase, but this was not often possible after the movement overseas began in earnest in 1943. In the second half of 1943 and early 1944, the quality of nondivisional unit training was improved by the adoption of new and improved tests for field artillery and tank destroyer battalions and for tank crews. Comprehensive tests were used to check the training of combat intelligence units, antiaircraft automatic weapons battalions, and other nondivisional units. Inspections of Service units in early 1944 revealed that many personnel were unable to perform their assigned duties in a satisfactory manner. This led to the introduction in 1944 of standardized military occupational specialty (MOS) tests that included both a written

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12 Ibid.

13 Ibid., p. 446.

examination and practical applications. Technical service units were also required to pass a unit test on tasks they would have to perform in the theater of operations.[14] As the lessons of the war were learned, infantry and cavalry unit tests were made more realistic and the passing scores for tactical proficiency tests were raised.

An "IG Reports Branch" was created in the G-3 Section of the Army Ground Forces, with the function of maintaining liaison with the Inspector General's Department. An officer from AGF attended POM inspections, rendering such assistance as was appropriate to the IG officers and the units under inspection. When deficiencies called for correction by higher headquarters, the AGF representative could telephone the corps, army, or other responsible headquarters directly and secure the necessary corrective actions quickly.[15] In the fall of 1944, AGF instituted a procedure whereby any unit rated "Unsatisfactory" by the IG would within 24 hours submit a report stating why the unit was rated not ready, steps taken to correct deficiencies, whether deficiencies could be corrected by the deployment date, and other information pertinent to the readiness of the unit. The IG inspections brought about a positive effort from the commands responsible for preparing the units:

> In part at least because of pressure from above, armies and other subcommands took extraordinary steps to prevent units from being declared unready. For example, in the fall of 1944, when preparations for movement were proceeding at an accelerated pace to meet increased overseas requirements, the Second Army sent a G-3 liaison officer and a G-4 officer to each division alerted. These officers remained with the division, rendering all practical assistance, until movement from camp was complete.[16]

Summary

For the first 172 years of its existence, the Army relied on commanders' reports, inspections, and exercises as the way to assess the readiness of its units. Commanders' reports were validated by inspectors general who worked for senior commanders. In times of peace, the Army was kept busy doing more with less; readiness for war was not a high-priority concern; and the inspectors worked for the Civil Authority, focusing on audits, investigations, and administration. During times of war, readiness became a major concern,

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14 Ibid., p. 538.

15 Ibid., pp. 610–611.

16 Ibid., p. 611.

and the inspectors worked for the military commanders. Inspection was the primary means for reporting readiness and correcting deficiencies so that units were adequately prepared before they deployed to a combat theater. Much of this experience was invalidated by the advent of the Cold War in 1947.

PART II: READINESS REPORTING DURING THE COLD WAR, 1947–1989

The advent of the Cold War in 1947 meant that, for the first time in American military history, readiness was going to be important in peacetime. The requirement for rapid response to contingencies that could occur with little or no warning meant that there would no longer be an extended period of time to mobilize and prepare after the war started. The advent of nuclear weapons and the necessity to deter likely adversaries from using them against us meant that our own nuclear forces had to be visibly ready to withstand an enemy attack and retaliate appropriately. Some units had to be ready to go all of the time. Peacetime readiness became a major concern of DoD, and how readiness was assessed and reported became an important element of Cold War strategy.

All of this appears obvious when looking back on the Cold War, but it was not immediately apparent to those engaged in that war. Changes in the readiness reporting system occurred incrementally and as a result of both specific operational needs and the institutionalization of lessons learned from World War II that led to the enactment of the National Security Act of 1947.

The progression of readiness reporting in the Cold War occurred in three general phases. During the period from 1947 to about 1953, the older methods of readiness reporting through command channels were used, but without the benefit of inspections. During the period from 1953 to 1968, reporting through the chain of command was still predominant, but the individual Services also established unit readiness reporting systems to provide senior commanders detailed information on sets of unit of particular interest. From 1968 on, the unit readiness reporting system was consolidated under the Joint Chiefs of Staff to provide unit level readiness information to intermediate and senior commanders, including the CINCs.   In this 42-year period, these changes occurred slowly and incrementally because of technological and political constraints but moved steadily toward a centralized system designed to suit the needs of the DoD.

The Korean War

       The Korean War was the first major theater war of the Cold War, but because the forces to fight it were not ready, it was also the last of the old-style impromptu wars. The United States Far East Command (FECOM) in 1949 was not ready for war because of budget cuts, complacency, apathy, and lack of strategic appreciation. General Douglas A. MacArthur, the CINC responsible for the region, was charged with the defense of Japan, the Ryukyus, and the sea-lanes in the Far East Command against an attack by the Soviet Union. In 1948, President Truman ruled out a possible defense of Korea against Russian and North Korean aggression, and General MacArthur's responsibility for Korea ended when the American troops pulled out in 1949. As events in Europe heated up, DoD's limited resources were focused there, and the Far East Command receded in importance. Strengths and training funds were reduced, and the troops settled into an occupation routine that left them unready and unconcerned. "No serious effort was made in these years [1945–1949] to maintain combat efficiency at battalion or higher level."[17]

       This attitude changed when General MacArthur in April 1949 shifted the focus of his forces from occupation duties to preparing for military operations. The goal was to create "cohesive and integrated naval, air, and ground fighting teams. Efforts were made to fill units, and a training program was initiated for the combat divisions of Eighth Army. FECOM sent readiness reports to the Department of the Army, asking for troops, funds, and resources, but few were forthcoming. FECOM did what it could with its resources and found a way to make good use of the equipment and supplies left over from World War II. Despite these efforts, however, FECOM was not ready when the North Koreans invaded

South Korea on 25 June 1950.[18] Underresourced and ill-trained troops were sent to stop the invading North Koreas. They ultimately succeeded, but they paid a heavy price for their lack of readiness.

       In this era, readiness was a function of the chain of command, and there was no separate readiness reporting system. FECOM reported its readiness to the Department of

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[17] James F. Schnabel, *United States Army in the Korean War: Policy and Direction: The First Year*, Center of Military History, United States Army, Washington, D.C., 1990, p. 55.

[18] Ibid., p. 53–56.

the Army Staff, and General MacArthur personally informed the Joint Chiefs of Staff of the situation. The authorities in Washington were aware in general of the poor state of readiness of the FECOM forces, but little was done about it until the war started. However, the obvious cost of unreadiness in terms of losses and possible defeat contributed to the advent of better ways to identify and preclude future problems with a lack of readiness.

Readiness Reporting from 1953 to 1963

After the end of the Korean War, the traditional demobilization did not occur. For the first time, the United States maintained large standing forces in peacetime. This meant that readiness, which had never been a major concern in prior periods of peace, could no longer be ignored. The strategy of compensating for low peacetime readiness by urgent improvisation when war appeared likely was no longer very attractive or useful. Suddenly, it became necessary to maintain some ready forces for the skirmishes and major regional conflicts of the Cold War. And in order to maintain ready units and forces, it became necessary to find a way to assess the readiness of those units and forces and manage their readiness. A system of assessing and reporting readiness to senior commanders was needed.

The current form of reporting readiness by units appears to have originated independently in each of the Military Services after the Korean War. In these early Cold War days, each of the Military Services established systems for reporting the readiness of some of their units. An appreciation of the need to measure and manage readiness did not occur instantly. Spurred by the experience of several crises in which prior knowledge of readiness proved inadequate to the need, the Services devised ways to know beforehand just what was the condition of their ships, aircraft, and battalions The motivations for this action appear to have differed widely among the Services, and each system was designed to be compatible with the individual Service's traditions and methods of operation.

After the end of the Korean War in 1953, the Eisenhower administration adopted a strategy of Massive Retaliation that counted on our use of nuclear weapons to deter and defeat aggression anywhere. In this scheme, the Air Force had the nuclear capability and ruled the budget process. The Strategic Air Command (SAC) was created to provide a capability to deliver atomic bombs using long-range bombers.[19] The massive retaliation strategy was weakened when the Soviets built their own nuclear weapons and developed

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[19] Walton S. Moody, *Building a Strategic Air Force*, Air Force History and Museums Program, 1996.

bombers to deliver them. The mission of SAC became deterrence of a Soviet nuclear attack. The deterrence mission demanded a posture in which SAC could respond within 15 minutes of warning of an attack. Not only did SAC have to be ready, but it had to demonstrate that it was ready. SAC both trained and demonstrated its readiness by conducting mock bombing attacks, which had poor results at first but soon showed a high level of readiness.

Not satisfied with SAC's readiness, in 1948 General Hoyt S. Vandenberg, Chief of Staff of the Air Force, asked Charles A. Lindbergh to investigate the readiness of SAC. Lindbergh spent several months visiting and flying with SAC units and submitted his report on 14 September 1948. In the report, Lindbergh said that the SAC crews were inadequately trained because of numerous temporary duty assignments, the requirement for all crew members to be cross-trained, and "extra-curricular flying activities" that interfered with training for the primary mission of atomic bombing. He recommended several personnel policy changes to make it possible to keep SAC crews together for long periods of time and to improve living conditions for the military personnel and their families. The Lindbergh recommendations resulted in a major change in leadership and direction of SAC. On 21 September 1948, the commander of SAC, General George C. Kenney was transferred to head up the Air University, and Lieutenant General Curtis E. LeMay was announced as the new commander of SAC. On 19 October 1948, General LeMay assumed command of SAC at its new headquarters in Omaha, Nebraska, and established a system that stressed a high level of combat readiness based on command inspections, frequent exercises, crew cohesion, and rewards for good performance.[20]

During this period, the Army's relevance was questioned, and the Army's budget was cut. The Army had to demonstrate that it could perform under the new conditions. In 1956, the Army Chief of Staff, General Maxwell D. Taylor, created the Strategic Army Corps (STRAC) as the Army's primary rapid reaction force. STRAC units were identified in advance and were funded and supported to be able to sustain a high level of readiness consistent with the rapid deployment role. In addition, General Taylor organized the Strategic Reserve into four time-phased categories. Categories 1, 2, and 3 were to be ready to deploy in a general war by 30 days, 31–60 days, and 61–90 days, respectively. Category

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[20] Ibid., pp. 219–230.

4 consisted of units to be ready to respond to a minor operation in the Western Hemisphere within 72 hours.

In 1957, the Department of the Army sent a letter to the Commanding General of the Continental Army Command (CONARC) that established procedures requiring standardized quarterly status reports from all STRAC units to be submitted through CONARC to DA. The format of the STRAC Report was narrative. The report covered the following categories:[21]

- Personnel: percentage of POR qualified
- Equipment shortages
- Training: percentage of unit training not finished
- Additional Missions Assigned
- Commander's Assessment: weeks required prior to deployment

Readiness "C-ratings" were defined by CONARC for the first time in 1962. The CONARC commander informed Department of the Army (DA) that the ultimate goal was for all of CONARC's units to be C-1. A C-1 unit was "fully prepared for and capable of undertaking combat operations without assignment of additional personnel and equipment, and without additional training."[22] Units rated at C-2, C-3, and C-4 were combat ready to some degree, and for the first 4 years their unit readiness was measured by the time it would take them to reach C-1 status. A C-5 rating was reserved for newly organized or reorganized units.

The Army Unit Readiness Reporting System, 1963–1978

The Army Unit Readiness Reporting System (AURRS) was prescribed officially for the entire Army by the publication on 23 August 1963 of the first edition of AR 220-1, *Unit Readiness Reporting*.[23] Since then, AR 200-1 has been modified many times and the readiness reporting system has evolved and been renamed several times.

The 1963 version of Army unit readiness reporting was itself the culmination of a process that started in the early 1950s, when local procedures governed how unit readiness

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[21] Strategic Studies Institute, U.S. Army War College, *Unit Readiness Reporting*, AR 200-1, 1 June 1976 (SSI Study), p. B-1.

[22] Ibid., p. B-3.

[23] The primary source for this subsection is the SSI Study.

was reported to major commanders. Prior to 1963, Army readiness reports were submitted biennially by the major commands to the Adjutant General.[24] The focus was on TOE units and covered personnel, training, and logistics, including a detailed list of significant materiel shortages. Subordinate commanders rendered subjective reports of "excellent," "satisfactory," or "less than satisfactory" that were consolidated at the major command headquarters.

Over the 15-year period from 1963 to 1978, the Army's readiness reporting requirements were modified eight times to adapt to changing conditions and suit the desires of senior officers. The purpose of the reports changed repeatedly, and the complexity of the reports increased. Coverage expanded from just the STRAC units to additional TOE and TDA units, including some RC units.

The Genesis and Evolution of Army Unit Readiness Reporting

The publication of the first version of AR 220-1, *Unit Readiness*, was an Army initiative resulting from the uneven readiness of Army units exposed by the 1961 Berlin Crisis and the 1962 Cuban Missile Crisis. This was an attempt to standardize unit reporting against standards based on requirements for sustained combat and applied only to active Army TO&E units, except for Army Intelligence Command/Army Security Agency units. The major Army commands (MACOMs) assigned units a readiness category based on assigned contingency requirements and available resources. Units reported to the MACOMs their readiness condition (REDCON) using a scale from C1 (Fully Combat Ready) to C5 (Not Combat Ready) based on personnel, training, and selected items of mission equipment. The MACOMs submitted a unit readiness report to the Department of the Army quarterly.

Less than a year after the first version, the second version of AR 220-1 was published on 16 April 1964. The 1964 regulation stated, "Requirements for units and unit readiness generally exceed the capability of the Army to support within programmed and budgeted resources." Nevertheless, in 1969, the regulation made it clear that unit commanders were expected to achieve a readiness condition equal to the unit's authorized level of organization (ALO). A new measure, readiness capability (REDCAPE), was added

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24 Mark Sherry, "Evolution of U.S. Army Readiness Reporting," Fact Sheet, U.S. Army Center for Military History, August 2000. Sherry is the principal basis for this subsection.

to indicate the level of readiness assigned each unit within the capability of the major Army command to support with programmed and/or allocated resources. Readiness Category (REDCAT) was redefined as the level of readiness assigned in peacetime to each unit of a command as required by that command to accomplish the command's assigned missions in relation to the deployment schedule of the unit. Readiness requirements for units now derived from contingency plans and deployment schedules associated with plans, and REDCON ratings were reduced to range from C1 to C4 and were defined by category in percentage terms.

The next two revisions to AR 220-1 made no major changes but modified the units that were required to report their readiness. In 1965, combat support TA units were added. In 1967, Army National Guard Air Defense Artillery missile units on-site were added. Units either in or deploying to Vietnam and Southwest Asia were excused from reporting their readiness.

The version of AR 220-1 published on 28 April 1969 made some major changes. The objective of the unit readiness reporting system was changed to identify the readiness status of units rather than the broader goal of managing unit readiness. A separate readiness reporting system for ARNG and USAR units was established in AR 135-8. The REDCAT and REDCAPE categories were deleted. Active TO&E units were evaluated on TO&E missions, and selected TA units, on peacetime missions. Finally, units were required to submit 80-column data cards under the Army Force Status Reporting System (ARFORSTAT).

Starting with the 1971 version of AR 220-1, Army readiness reporting became part of the joint Force Status and Identity Report (FORSTAT) system prescribed by JCS Pub 6 (see below). However, the Army still was essentially in charge of its own system. In this version, the Army established the ALO as a "readiness management tool." The regulation also stressed standard, accurate reports that reflect the true condition of a unit.

The purpose and coverage of the readiness reporting system was broadened in the 1973 version of AR 220-1. The new purpose of the reporting system was to generate information that would provide National Command Authorities (NCA), the Joint Chiefs of Staff (JCS), HQDA, and commanders at all levels the current readiness status of U.S. Army units to enable them to make the most effective use of available resources and to determine requirements for additional resources. Army National Guard and Army Reserve TOE units and Military intelligence TO&E units were added to the reporting pool. Commanders at up to division/installation level were authorized to make changes to readiness ratings of subordinate units if they can influence the readiness condition of the units. In 1975, the Guard and Reserve units were instructed to report semiannually, while AC units continued to report monthly.

In the 1978 version, the authority for higher commanders to change rating criteria or readiness ratings of subordinate units was deleted. Readiness reports were to be considered a management tool and not an evaluation of commanders.

Reports were required more often. The initial requirement in 1963 was for a quarterly report for DA, with the proviso that individual commands could increase reporting frequency. In 1967, the timing was changed so that the quarterly report was to be "as of" the 10th day after the end of each quarter. The 1969 AR specified that the AURRS was still required quarterly and was not a substitute for the FORSTAT report that was required monthly. In 1971, the AURRS was combined with FORSTAT and became a monthly report.

Training readiness indicators prior to 1971 were based on the results of tests, inspections, and exercises in an attempt to be objective. However, from 1964 to 1967, units below C-1 in training were required to include the next higher commander's estimate of the time it would take a particular unit to be ready to be tested on the various criteria.

The difficulties encountered in describing training readiness are reflected in the following statement:

> Successive attempts in 1967 and 1969 to objectify the regulation and take into account the effect of a unit's turnover rate upon its proficiency, succeeded only in making the training portion of the URR a complex maze, to be entered into with trepidation and dread.[25]

Starting in 1971, training readiness was reported on the basis of the commander's estimate of how long it would take the unit to become fully trained, assuming a fill of MOS-qualified personnel to bring the unit up to TOE strength. According to the Study Team, this approach tends to produce a training readiness estimate equal to the rating for personnel or equipment.[26] This requirement was softened in 1973 by asking commanders to "strive to reach" a balance with the ALO.

The Army War College Readiness Study of 1976

In 1976, the Strategic Studies Institute of the Army War College published a study on the accuracy, credibility, accuracy, and reliability of the AURRS. A team of officers performed extensive research on the Army system and the readiness reporting systems of the other Services. A statistically sound sample of opinions of Army personnel was conducted using unattributable questionnaires. In addition, confidential interviews were conducted with over 1,200 Army personnel. The results of the study are summarized below. The Study Team's comments on the mission are revealing:

> Since the mission of the study group was to seek out weaknesses in the system for correction, the focus of the report is in those areas. It is recognized that one may get the impression from the study that the system is "all bad." This is not so, of course. The aim of the study is to improve upon what has gone before. The need for readiness reporting is accepted by nearly everyone the study group encountered. The problem is the method of accomplishing it in the best fashion.[27]

The AURRS was held in disrepute by the Army personnel most familiar with it. Seventy percent of the people surveyed disagreed with the statement that a unit's readiness report reflects the true readiness condition of the unit. Dissatisfaction was found in all

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[25] SSI Study, p. B-5.

[26] Ibid.

[27] Ibid., p. ix.

grades but was more intense at the lower levels of the organizations. Four of 10 personnel had been "subjected to unjustified pressure to raise their unit's readiness rating." More than 8 of 10 had heard others talk about such pressure upon unit commanders.[28] The study group concluded that:

> Self-reports are more susceptible to bias and distortion than any other type of reporting according to measurement theory. Outside evaluations are preferred. In order to accomplish the purpose of readiness reporting, however, regular relatively frequent input of data is required from the unit level. To meet that requirement through an outside evaluation system would be prohibitively expensive in resources. Therefore, a self-report by the unit commander is the next best means to evaluate the unit for readiness reporting purposes. Recognizing the shortcomings of any self-reporting system, the system established by AR 220-1 should be carefully constructed to minimize the natural tendencies toward bias and distortion.[29]

According to the SSI Study Group, the two main problems with the AURRS were with the mechanics of computing readiness ratings and the pressures within the system to produce inflated ratings.

- The mechanics of computing readiness ratings tends "to encourage inflation and to mask problem areas."

- Accuracy of the reports is compromised by the "conviction held by many commanders that their performance is being judged by the 'C'-rating they report in comparison with those of other commanders. So, the focus is on coming up with the right 'C'-rating. Commanders place little faith in explanations or elaborations made in the remarks section of the URR. The 'C'-rating gets visibility, not their remarks. Nor do they believe much attention is paid to remarks or action taken based on them from a management viewpoint."[30]

The data that is reported "as of the 20th" is actually collected 3 to 5 days earlier, so it does not reflect actual conditions on the 20th. This is necessary because of the time, space, and administrative realities involved in preparing the reports.

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[28] SSI Study, p. x.

[29] Ibid., p. 3.

[30] Ibid., p. x.

One very interesting remark has to do with personnel readiness:

> Where SIDPERS is functioning, use of this automated system as a basis for URR personnel data was frequently suggested by interviewees. With some minor reprogramming, most of the required data could be obtained in this fashion thus lightening the load at reporting unit level and providing a common basis for the data.[31]

A major finding of the study was that the system was not functioning with the degree of validity and reliability expected. Many of those surveyed reported experiences that, in their view, involved lack of integrity and/or proper professional ethics within the functioning of the system.

> A number of commanders at the battalion and company levels stated that, in the leadership climate within which they were functioning, combined with their perception of what it take to continue successful Army careers, they felt that had to take full advantage of the considerable judgmental and managerial flexibility permitted by the regulation to report as high a rating as could possibly be calculated under the system. Although such reports meet the letter of AR 220-1 and are not false reports in that sense, these commanders believe the reports do not meet the intended spirit of the regulation and present a distorted picture of a unit's actual state of combat readiness."[32]

One Major's view of the system was: "Right or wrong, our captains and lieutenants view the URR as the big lie to save the Colonel's career, and they are disgusted."

The Army continued to modify its readiness reporting system under the Joint system. There were six versions of AR 200-1 from 1979 until 1997. The 1982 version emphasized that the ratings are designed to provide indicators of unit capability and assist in allocating resources. Higher commanders were still precluded from changing readiness ratings but commanders up to division/installation level were allowed to add remarks to reports submitted by subordinate commanders. The 1986 version reflected the name change by the Joint Staff from FORSTAT to Status of Resources and Training (SORTS). Also, the Army added a new readiness level (C-5) for units whose status was deliberately degraded by a DA-directed action or program.

Two changes occurred in the 1990s. In 1992, the Army made several changes. A C-6 category was established to denote that one or more resource areas cannot be measured

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[31] SSI Study, p. xiii.

[32] Ibid., p. 4.

for a unit. TDA units apportioned to a Joint Operations Plan were included. Guard and Reserve units were to report quarterly instead of biannually, and Guard and Reserve round out units were to report to gaining AC commands as well as through their own channels. In 1993, the AR was modified to require Guard and Reserve round out units to submit monthly reports through their gaining AC commands. Finally, the 1997 version of AR 200-1 established the current system.

The Army War College Study of 1999

Thirty-three years after the 1976 Study discussed above, the Army Strategic Studies Institute of the Army War College was asked to look again at the Army's readiness reporting system.[33] In some respects, the new AWC study was encouraging, but in others it was discouraging. While espousing new definitions and corrections to the current system, the new study also concluded that the same problems with inaccurate reporting that had been reported in the previous study still existed.

After extensive study and discussion, the Army War College committee concluded that the current readiness reporting system had outgrown its utility in several respects. According to the study report,[34] the current Army readiness reporting system:

- Does not cover all Army operational and functional organizations that contribute to overall Army readiness.

- Does not provide for assessing readiness for future requirements and is thus reactive instead of predictive.

- Does not take advantage of existing Web-based automation technology that would allow access to readiness information on a timely basis.

- Fails to capitalize on the widely accepted process for developing mission-essential task lists for the entire spectrum of operations.

- Does not provide for measuring important new capabilities that did not exist when the current system was developed.

On the basis of these findings, the study recommended the following:

- Readiness should be redefined as an "organization's ability to accomplish assigned mission(s)."

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[33] United States Army War College Readiness Committee Final Report, 1999.

[34] Ibid., Executive Summary, pp. i–v.

- Each Army organization should be directed to accomplish one or more mission(s) and use these missions as the basis for measuring and reporting readiness.

- Mission-essential tasks should be used as the yardstick against which readiness should be measured at all levels of command.

- Intermediate commands, such as brigade combat teams, divisions, corps, and Army component commands should report on the overall readiness of their organizations.

With respect to the problem of biased reports that was a major concern of the 1976 study, the 1999 study concluded, "Army cultural perceptions, a sometimes distorted and misstated "can do" attitude, and subjective metrics make the readiness reporting system prone to bias." To support this conclusion, the AWC Committee cited evidence from a survey and interviews of officers at AWC and Command and General Staff College (C&GSC) and senior NCOs from the Sergeant Major's Academy (SMA). Two-thirds of the officers and NCOs surveyed thought that the system is subject to institutional and command influence. Many of the individual remarks are depressingly similar to those reported 33 years earlier, as exemplified by the following:

- Different commands have different norms for report standards.

- Some commanders are pressured by higher headquarters to change input.

- Too much command influence on what you should report, not what should be reported.

- On the personnel side, the readiness reporting system is a numbers game.

On the other hand, there were also a number of comments that took the view that the system was unbiased. For example:

> I feel the current readiness system is effective, objective, and non-command influenced! Believe it or not, officers are telling the truth! OERs are not based on C ratings! In my command the USR was used as an effective tool to relate to higher what we needed help with.[35]

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[35] Ibid., p. C-3.

Although not included in the AWC 1999 study, a retired Army four star general voiced a similar view, as follows:

> I've commanded a battalion, two brigades, a division, and a major Army command. I have never been pressured to submit a particular level of readiness, nor do I think I've ever pressured anyone.[36]

However, the real point of the findings was stated clearly, as follows: "There was no consensus as to the system's accuracy and reflection of true conditions."[37] That is, the inclusion of some reports that are inaccurate casts doubt on the entire reporting system because there is no way to determine which reports are valid and which are not.

The solution, according to the AWC Committee was fourfold:

- Informing the Army leadership of the perceptions of officers and NCOs consulted in the research.

- Developing objective metrics to reduce subjectivity in reporting training readiness.

- Requiring routine dialogues and feedback among commanders about readiness assessments and resource allocation decisions.

- Educating Army officers and senior NCOs on readiness reporting and the need for and purpose of readiness dialogues.

Trends in Army Readiness Reporting

Since its inception formally in 1963, the Army's unit readiness reporting system has been changed frequently in purpose, scope of coverage, timing, and content. There have been 14 versions of the basic reporting AR 200-1 between 1963 and 1997.[38] This degree of turbulence in the system's parameters reflects a desire for improvement driven by an underlying dissatisfaction with the basic system for reporting unit readiness.

Although the Joint Staff was deeply involved in readiness management since the publication of JCS Pub 6 in 1971, HQDA remained the major proponent for Army readiness reporting and controlled the content of the reports. Many of the changes made by

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[36] Message, retired Army general.

[37] AWC Readiness Committee Report, 1999, p. C-2.

[38] Sherry, op. cit.

the Army were designed to increase the accuracy of the reports. Some of the changes reflect a lack of consensus on the basic purpose of the unit readiness reporting system.

The original AURRS was intended to be a status report, an identifier of resource problems, and justification for requesting additional resources. The purposes of the reporting systems have been stated in various editions of AR 200-1 as follows:

- Indicating the effectiveness of the command in managing allocated resources
- Determining whether the allocation of resources needs to be reexamined
- Determining whether a unit ALO needs to be changed
- Determining if additional resources are needed to meet mission requirements
- Providing DA the basis for seeking changes in the FYDP
- Identifying readiness problems that require resolution
- Providing justification for requesting additional resources from OSD
- Determining Army readiness trends
- Assisting commanders at all levels to make the best use of available resources
- Providing information to make the optimum distribution of resources
- Giving commanders at all levels—DA, JCS, and NCA—the current readiness status of Army Units
- Providing indications of the effectiveness of resource allocation and management

This proliferation of purposes indicates that there has been in the Army a continuing tension between readiness reporting, resources, and overall readiness management. Was the system designed merely to provide information, or to initiate corrective action? It is interesting to note that Army acknowledged in the 1964 revision of AR 220-1 the necessity for resourcing units at different readiness levels—an approach referred to in QDR 1997 as "tiered resourcing." However, despite periodic readiness problems due to inadequate resourcing, high operational tempos, and expansion or contraction of its force structure, the Army has resisted adopting a cyclical readiness policy that allows units a preparation period to improve readiness, an operational period to use readiness, and a recovery period to regain readiness.[39]

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[39] Ibid.

Joint Unit Readiness Reporting Systems

The origins of the first joint unit readiness reporting system are obscure. One possibility is that the advent in 1961 of the DoD Planning, Programming, and Budgeting System (PPBS) stimulated interest in central DoD databases for units and unit characteristics. The PPBS required the allocation of forces and resources to specific program elements that were aggregated into major defense programs. In the Joint Planning System of that era, the Services were required to identify certain combat units and support units that required the approval of the Secretary of Defense to be in the program. The requirement to list certain units in the forces file of the program may have created a stimulus for the creation of a central database for units of all of the Services and the collection of basic data on these units as part of this programming system.[40]

Another possibility is that the creation of such a system may have been as a by-product of the creation in 1964 of the National Military Command System (NMCS).[41] One of the provisos of the directive establishing the NMCS was that "the current combat readiness status of U.S. Armed Forces be maintained to provide required information to the NCA and JCS."[42] The first joint unit readiness reporting system may have been established in 1968 to provide that information. Since that time there have been four major versions of the joint system: FORSTAT, UNITREP, SORTS, and GSORTS. The joint unit readiness reporting system has evolved to provide more uniformity and better information. This evolution has been motivated by substantial dissatisfaction with each version and made possible by advances in information technology.[43]

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[40] There are some indications of an interest in unit classification. One indication is a Department of Defense Directive 5000.17, Defense Organization Entity Standard (DOES) Program, 14 January 1969. The DOES Program was intended to provide accuracy, uniformity, and economy in the identification of organizational entities and the management of data about them. Organizational entities are frameworks of authority that include units and organizations.

[41] The first reference to a joint unit reporting system pertained to the planning and establishment of the National Military Command System; thus, it is reasonable to infer that the availability of effective technology to create and manage large databases was at least an enabler if not a reason for having such a system.

[42] General Accounting Office, "The Unit Status and Identify Report (UNITREP System – What It Does and Does Not Measure," GAO/NSIAD ⁎4-30, 12 March 1984. (GAO UNITREP Report) The referenced directive is DODD S-5100.44, "Master Plan for the National Military Command System," 9 June 1964.

[43] Major E. M. Campbell, USMC, Readiness Reports: Fact or Fiction?" *Marine Corps Gazette*, April 1983, courtesy of Colonel Charles Lyman (USMC Retired).

Force Status and Identity Report

The first joint system of unit readiness reporting was the Force Status and Identity Report (FORSTAT), which was established in 1968 as the single automated DoD report to provide the National Command Authorities "basic identity and status information…on military units and organizations."[44] The FORSTAT report did two major things:

- It provided a uniform format for the identification of each unit of the Military Services by establishing the Unit Identification Code (UIC) to provide the Joint Staff and OSD a complete listing of all units—taken to be ships, aviation squadrons, battalions, separate companies, and detachments.

- It established standard categories for reporting unit readiness.

FORSTAT reports were submitted by the Services on an "as changed" basis as necessary to reflect changes in REDCOM status. The basic method for submitting reports was by punched cards sent by mail or over the Automated Defense Information Network. The reports were sent to the Joint Chiefs of Staff and appropriate CINCs.[45]

For a while after FORSTAT was established, the Army and Navy continued to use their own readiness reporting systems, meaning that unit commanders were submitting two reports. In 1972, the Army and Navy discontinued their own separate systems and relied entirely on FORSTAT.

The FORSTAT system "provided sufficient data on unit combat readiness under full mobilization conditions for broad planning and managerial actions." It did not "furnish data on current or projected capabilities with available personnel, equipment, and unit training status."[46]

FORSTAT was a major advance in providing force structure and readiness information to the Joint Staff and OSD, but it consisted essentially of an amalgamation of service reporting systems. The criteria used to measure unit readiness were established by the services, and each tended to do this critical measurement differently. As noted in a contemporary study "Each service establishes its own criteria for measuring resource

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[44] Milton H. Hamilton and Irving Heymont, "Appendix C, Analysis of Existing Force Readiness Reporting Systems," in *Deployment Readiness*, General Research Corporation, 1991, pp. 154–155. The document promulgating FORSTAT was Joint Publication 6, Chapter 1. Hamilton and Heymont reference the 1972 edition, but the system was established earlier.

[45] Hamilton & Heymont, op. cit, p. 155.

[46] Ibid.

readiness [and] there are notable differences among the Services and even within the Services. For example, the Marine Corps has different criteria for Active and Reserve forces. The USAF has different criteria for each of eight categories of reporting units." FORSTAT also had several other weaknesses, including the generation of generalized data that did not constitute a true output measurement and were of limited value to contingency planners.[47]

After 6 years of accumulated dissatisfaction, FORSTAT was replaced in 1979 by a new system designed to provide greater uniformity and take advantage of improvements in data processing and management technology.

The Unit Status and Identity Report

The Unit Status and Identity Report (UNITREP) was introduced to provide more accuracy, uniformity, and relevance to wartime missions. The standard used for comparing current status was changed from peacetime authorizations to wartime requirements in people, equipment, and supplies.[48] In addition, the method for inputting the data was changed from punch cards to message text format.[49]

The change from FORSTAT to UNITREP did four things:[50]

- The new name reflected the fact that the system reported unit status rather than force status.

- Units were required to report C-ratings for the four resource areas compared with their wartime requirements rather than their peacetime authorizations.

- The quantitative criteria in terms of percentages for assigning ratings in the four resource areas were standardized.

- A fifth C-rating was added for units that were not in combat ready condition because of programmed actions, such as overhaul or equipment changes.

UNITREP maintained an inventory of military units and provided information on the status of each of those units. Its principal function was to provide a database of selected

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[47] Ibid.

[48] Richard K. Betts, *Military Readiness*, The Brookings Institution, 1995, pp. 136–137. Betts asserts that changes in the unit readiness reporting system were driven by the desires of senior officials to avoid embarrassment caused by low readiness ratings.

[49] Interview, Mr. Bob Crutchfield, Air National Guard Operations Center, 10 June 2000.

[50] GAO UNITREP Report, p. 3.

units and certain of their characteristics of interest to the Joint Staff. The following information elements were reported: home station, present location, operational and administrative chains of command, current activity, unit type code, parent organization, nuclear and conventional equipment, selected communications equipment, and crew status. The essence of this system was "to measure a unit's ability to perform wartime tasks by assessing the peacetime availability and status of resources possessed or controlled by the unit or its parent unit in four resource areas."[51] The readiness of these units was measured by a C-rating.

One reason why the UNITREP system was established in 1979 was to provide greater uniformity among the Services.[52] Each reporting unit was to be assigned a rating in each of four different resource areas: personnel (P), equipment and supplies on hand (S), equipment readiness (R), and training (T). An overall C-rating was applied to indicate the readiness of the unit for combat. Provision was made for four combat ratings, and a fifth rating was added to account for units undergoing conversion or otherwise temporarily and deliberately unavailable for operations. The C-ratings were as follows:

C-1. Fully Combat Ready

C-2. Substantially Combat Ready

C-3. Marginally Combat Ready

C-4. Not Combat Ready

C-5. Service Programmed Not Combat Ready

Each resource area was divided into similar categories, with specific criteria established for each C-rating. This was intended to allow planners and analysts on the Joint Staff and OSD to interpret readiness ratings without having to refer to four different Service readiness manuals. As an example, the criteria for the personnel resource area were as shown in table G-1.

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51 Ibid., p. 2.

52 Campbell, op. cit.

Table G-1. Criteria for the Personnel Resource Area C-Ratings

Category	P-1	P-2	P-3	P-4
A. Total Strength	90%	80%	70%	Under 70%
B. Critical Skills	85%	75%	65%	Under 65%
C. Senior Strength	85%	75%	65%	Under 65%

The actual strength of a unit was compared with the unit's authorized wartime strength to compute the percentage in the categories shown. A unit with a total strength of 90% or more would be rated P-1 for that category. The unit's P-rating would be the lowest personnel category rating. This process would continue for each of the resource areas, and a P-rating, S-rating, R-rating, and T-rating would be assigned. The unit's overall C-rating would be the same as the lowest resource area rating.

UNITREP was a significant improvement over FORSTAT in many respects but was also faulted by critics for several reasons. Although UNITREP provided greater uniformity than FORSTAT, many report entries were left to the discretion of the Services.   For example, the Category C, Senior Strength item in the Personnel Resource Area was optional, and the Marine Corps elected not to use it in its UNITREP submissions. Another criticism was that a unit's C-ratings were determined by the resources it had at the time the report was submitted and did not take into account the external support needed to accomplish a wartime mission. That is, the system did not take into account that a unit does not function in isolation.[53]

UNITREP was not expected to provide all of the information needed for planning. It was complemented by a system of annual reports from the CINCs to the JCS on overall readiness and also by Service performance evaluations. All of the Services routinely used tests and exercises to assess readiness. The Air Force conducted periodic Operational Readiness Inspections (ORIs), the Army conducted ARTEPS, the Navy conducted Total Force Exercises, and the Marine Corps used Marine Corps Combat Readiness and Evaluation System (MCCRES) exercises to evaluate each task required for a combat mission.[54] The results of these Service evaluations did not directly affect the UNITREP reports, however, and they were not forwarded to the Joint Staff and OSD.

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[53] Ibid.

[54] Ibid.

A 1984 General Accounting Office discussion of UNITREP suggested four major inherent limitations of UNITREP, as follows:[55]

- UNITREP reported only on "readiness," which in the taxonomy of the time was but one of four components ("pillars") used by DoD to assess capability. UNITREP did not address the other three components: force structure, modernization, or sustainability.

- UNITREP reported identity and status only for combat, combat support, and Service-selected combat service support units. About half of DoD's active military personnel were assigned to units reported in UNITREP; the other half were assigned to nonreporting units. The nonreporting units were training centers, supply and maintenance depots, bases, and other support organizations needed during mobilization and wartime.

- UNITREP reported only on part of the resources controlled by or organic to the reporting units. "Important resources required to deploy a unit to a theater of operations and employ that unit in combat are not covered in C-ratings." Resources not reported included strategic lift assets and consumables (such as fuel and ammunition) needed to support operations.

- UNITREP did not assess unit readiness against requirements of specific operational plans or (except for the Navy) by mission areas.

The Readiness Analysis and Reporting Task Force—1984–1985

As the perceived problems with UNITREP accumulated, action was initiated to improve the unit readiness reporting system. On 25 April 1984, Secretary of Defense Caspar W. Weinberger established a Readiness Analysis and Reporting Task Force to examine the UNITREP system and suggest improvements that would increase the value of that unit reporting system.[56] The Task Force was co-chaired by Charles W. Groover, Deputy Assistant Secretary of Defense for Program Integration, in the Office of the Assistant Secretary of Defense for Manpower, Installations, and Logistics, and Commodore Edward K. Anderson, USN, Deputy Director for Operations, Joint Staff.

The task force was to survey existing readiness reports, review definitions and ground rules, extract essential information from the reports, and find ways to summarize the

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[55] Ibid., p. 4, and passim.

[56] Secretary of Defense Caspar W. Weinberger, Memorandum, "Readiness Analysis and Reporting," 25 April 1984. The task force is referred to sometimes with the word "analysis" and other times without.

data to "eliminate misconceptions caused by the current readiness summaries."[57]   Ten months later the Readiness Analysis and Reporting Task Force submitted an interim report that recommended five specific changes to UNITREP.[58] The interim report was sent to the Joint Staff and the Military Services for their views.

The task force was established because UNITREP reports did not reflect in improved unit readiness ratings the results of the massive budget increases sought and obtained by the Reagan Administration. According to one contemporary account:

> When reports emerged last year indicating that the readiness of the U.S. force was not what it should be, the Pentagon decided to shoot the messenger delivering the bad news. Officials said the UNITREP system, which was introduced by the Joint Chiefs of Staff (JCS) in 1980 to assess the readiness of combat units, produced misleading results and that critics of readiness compounded the problem by using the results incorrectly.[59]

The problem was noticed early in 1984, when UNITREP reports failed to show the increases in capability that OSD believed were occurring. It was at this time that Secretary Weinberger decided that UNITREP was not an accurate portrayal of DoD capability. As he said in January 1995:

> I am concerned that in the past too much emphasis has been placed on UNITREP as a measure of military readiness. As you know, UNITREP takes a snapshot of the readiness of an individual unit at a point in time. While it may be useful as an internal management system, UNITREP is decidedly not useful to measure trends in Defense readiness or to guide budget resource allocation decisions. Because of that, we do not use UNITREP for either of those purposes.[60]

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[57] Ibid.

[58] Office of the Secretary of Defense, Memorandum, "Interim Report of the Readiness Reporting Task Force," 25 January 1985. (Interim Report)

[59] Michael R. Gordon, "UNITREP Changes: Going Nowhere?" *Military Logistics Forum*, July/August 1985.

[60] Caspar Weinberger, Letter to the Honorable Sam Nunn, 1 February 1985.

Because of this "recent confusion and controversy over the readiness of U.S. combat forces," the Task Force was given the job of developing "a more realistic and meaningful assessment of "readiness" trends." It was to:[61]

- Ensure that readiness measurements are based on the four commonsense factors of people, equipment, training, and support.

- Survey existing readiness reports and review associated definitions and ground rules.

- Extract essential information from readiness reports and combine and summarize it in ways that will eliminate miscommunications caused by current summaries.

- Prepare readiness trend assessments.

- Recommend appropriate changes to definitions and identify additional data needs.

- Attempt to develop summary-level analytical models of the relationships among resource inputs, logistics support measures and other intermediate outputs, meaningful measures of force readiness, and the other attributes of overall combat capability.

- Focus initially on historical though current readiness but not rule out opportunities to improve the ability to project readiness estimates into the future.

The Task Force started work with the premise that "much of the confusion surrounding the recent debate on how U.S. forces have improved over the past three-and-a-half years could have been avoided if we had rigorously adhered to a common lexicon. For example, we often hear readiness and capability used interchangeably when, in fact, they mean very different things."[62] The Task Force used as the basis of its work a concept of capability that had been approved in 1981 by Deputy Secretary of Defense Frank Carlucci and published in the DoD Dictionary of Military and Associated Terms. According to this concept, military capability is "the ability to achieve a specified wartime objective, e.g., win a war or a battle, destroy a target set." The components of military capability include

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61 Weinberger Memo, 25 April 1984, op. cit.

62 Department of Defense, "Improvements in U.S. Warfighting Capability, FY 1980–84," May 1984. This document was prepared primarily by Salvatore J. Culosi, OASD(MIL).

force structure, modernization, readiness, and sustainment. In this construct, readiness is but one of the factors that affect the capability of a force to achieve a specified wartime objective.[63]

In this approach, readiness is "the ability of forces, units, weapon systems, or equipment to deliver the outputs for which they were designed (this includes the ability to deploy and employ without unacceptable delays)." The definition of readiness is amplified by the statement that readiness is "essentially a measure of pre-D-Day (peacetime) status of the force with respect to its wartime requirements for qualified manpower, trained units, and operationally available equipment and materiel."[64]

In January 1985, the Task Force submitted an interim report to the Chairman and the Assistant Secretary of Defense for Manpower, Installations, and Logistics. The OSD co-chairman of the Task Force included this comment in the memorandum transmitting the interim report:

> The OSD co-chairman considers the proposals in the attached interim report to be the minimum set of changes DoD should make to the UNITREP system. He believes that it is inevitable that UNITREP data will be used by people outside of the DoD to assess readiness trends despite our protestations that the system was not designed for that purpose. He considers it imperative that we make the kinds of changes necessary to minimize the deficiencies that led the SecDef and CJCS to publicly disavow UNITREP as a valid indicator of Defense readiness trends. Thus, he endorses each of the change proposals in the interim report and believes we will ultimately have to change the system even further.[65]

The Task Force recommended five specific changes in UNITREP. Four of the five recommendations are concerned with assessing initial sustainability—the extent to which a

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63 Ibid.

64 Ibid.

65 Charles W. Groover and Edwin K. Anderson, Memorandum, "Interim Report of Readiness Reporting System Task Force," 25 January 1985. The remarks quoted above are Mr. Groover's.

unit could operate without resupply. The fifth was an attempt to obtain some uniformity in the treatment of aircrews. The specific recommendations are as follows:

- Replace the C-rating structure with a new set of ratings: R-ratings for each of the four components of readiness; a new S-rating for a unit's initial sustainability, and an overall U-rating that is the minimum of the R- and S-ratings.

- The equipment status R-rating would capture operational equipment that would be available to the unit under mobilization conditions within realistic unit response times or 72 hours, whichever is less.

- The equipment fill R-rating should include only organic equipment. Supplies, such as spares, repair parts, munitions, provisions, and fuel, are not to be counted with the equipment.

- All Services should report a sustainability support S-rating for any spares authorized to be held by the unit.

- The unit training R-rating for flying units should be computed on the basis of the number of trained aircrews relative to the full wartime requirements or weeks of training needed to meet the full wartime requirement.

On 12 June 1985, Lieutenant General Jack N. Merritt, Director of the Joint Staff, sent a memo to Lawrence J. Korb, the Assistant Secretary of Defense for Manpower, Installations, and Logistics, that effectively killed the proposed changes.[66] While the Army and Air Force agreed with the proposed changes, the Joint Staff, Navy, and Marine Corps disagreed with all or most of the Task Force recommendations. Assistant Secretary Korb notified the Secretary of Defense of the opposition to the UNITREP improvements, declared "this attempt to improve UNITREP a dead issue," and recommended that the Secretary of Defense confer with General John W. Vessey, the Chairman of the Joint Chiefs of Staff, on the matter. Secretary Weinberger met with the Chairman on 16 July 1985 and tasked the Joint Chiefs of Staff to provide a "proposed revision and/or substitute/supplement to UNITREP by 15 September 1985."[67] The Chairman also agreed

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[66] The Joint Chiefs of Staff, LTG Jack N. Merritt, Director Joint Staff, Memorandum, "Proposed Changes to the UNITREP System," 12 June 1985.

[67] Major General Colin L. Powell, Military Assistant to the Secretary of Defense, note to Dr. Korb, 17 July 1985.

to help the Secretary in responding to congressional complaints of lax readiness. After a year of work and 3 months of coordination, the efforts of the Readiness Analysis and Reporting Task Force had come to naught.

The resistance to the proposed changes in UNITREP stopped the work of the Task Force. No final report was issued. Despite a plea by Assistant Secretary Korb for OSD to "take the lead in the Department's continuing efforts to improve its ability to measure readiness and combat capability over time," the lead shifted to the Joint Staff.

UNITREP took advantage of improvements in technology to establish a fully automated system, even in an era where keypunching of data elements into mainframe computers was the normal mode of operations. It did establish a database of DoD units available to senior officials, commanders, and staff officers in OSD, the Joint Staff, and the Services, and major headquarters. It lasted 8 years until accumulated pressure for changes and availability of much improved technology caused the establishment of the next version of the joint unit reporting system.

The Status of Resources and Training System

The Status of Resources and Training System (SORTS) was adopted in 1986. SORTS is regarded by some observers of readiness as a "minor modification" of UNITREP designed to report more accurately the kind of information provided by the reports. Although the methods of calculating them are the same, UNITREP's C-ratings were designed to reflect different degrees of readiness, while the SORTS C-ratings are intended to indicate the proportion of its wartime missions that the reporting unit can perform.[68] The basic structure for calculating C-ratings was retained, but some of the names were changed. More emphasis was placed on potential rather than immediate readiness, and the C-ratings were changed from "combat ratings" to "category levels."[69]

In 1997, the word "global" was added, and SORTS became GSORTS. This change signaled the application of new information technology to improve the quality, availability, and ease of operation of the existing SORTS. It did not involve major conceptual or computational changes to SORTS. One of the major features of GSORTS is the

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[68] S. Craig Moore, et al., Measuring Military Readiness and Sustainability, R-3248-DAG, RAND Corporation 1991.

[69] Betts, op. cit., pp. 137–138.

incorporation of the database as an element of the Global Command and Control System (GCCS). This change promises to make SORTS more widely available on a near-real-time basis to a large set of users. See appendix C for a detailed discussion of GSORTS and appendix K for a discussion of the application of information technology to readiness reporting.

PART III: READINESS REPORTING AFTER 1989

The end of the Cold War in 1989 changed the threat, funding, and security strategy of the United States, but it did not mean a return to the military policies that existed before 1947. The Defense Budget and the force structures of the Services were reduced somewhat, but the new situation did not allow a relaxation of combat readiness. In fact, readiness became more important for more of DoD than during the Cold War. The explicit reliance during the Cold War on full mobilization meant that only the first units to deploy had to be fully ready, and that there would be time to prepare and deploy some units to enter the war later. With the end of the certainties of the Cold War, DoD found itself with a lesser but broader threat that called for rapid projection of power to multiple regions more or less simultaneously, a high level of peacetime operations, a necessity to transform itself to a new way of wars, and all of this on constrained budgets. In addition, by 1989 the effects of the enactment in 1986 of the Goldwater-Nichols Defense Reorganization Act were beginning to affect the way that DoD did business. During the Cold War, the differences between the Services and the CINCs were muted by ad hoc arrangements that in effect allowed the Services to be both providers and operators. Under the new setup, there would be a major shift as the CINCs became more powerful, joint operations were stressed, and the Services moved slowly into their new role as providers of units, services, and supplies to the CINCs.

Readiness Reporting and Defense Reorganization 1980–2000

Starting about 1980, there was pressure from many different groups to make fundamental changes in DoD organization to achieve greater integration, jointness, and centralization. The thrust of these efforts is epitomized in this statement by former Chairman of the JCS, General David Jones:

> Organizational problems have plagued our military establishment from the start. The development of the Army and the Navy was accompanied by the growth of semiautonomous, often intractable fiefdoms which continued to riddle those services right up to the start of World War II. The demands of the war provided the incentive to make major progress in integrating efforts

within each service, but cross-service cooperation remained extremely difficult even under the pressures of a major conflict.[70]

This kind of thinking gathered enough momentum to overturn the inertia that had been the habit of DoD since the end of the Korean War and culminated in the enactment of the Goldwater-Nichols Defense Reorganization Act of 1986.

The importance of readiness varied during the Cold War as weapons and strategies changed. During the days of massive retaliation, the readiness of the nuclear retaliatory forces was paramount, and the Strategic Air Command set high standards for operational readiness. When the flexible response strategy was adopted, readiness of conventional forces also became important. During the Vietnam War, the readiness of forces in the United States and Germany suffered because first priority went to the forces in Vietnam. Readiness became a major problem during the drawdown after the end of the Vietnam War because the force structure was reduced at a slower rate than the resources and for several years DoD authorized more people, more equipment, and more supplies than it could afford. It was this condition that brought readiness to the forefront as a major concern. The entire experience was epitomized in the Hollow Army of which General Edward C. Meyer spoke in 1980. Readiness became a product to be debated, studied, and reported.

Advocates of Defense reorganization in the 1980s considered the readiness assessment system to be deficient because of flaws in the assignment of responsibility and authority. They pointed out that the CINCs are responsible for the conduct of military operations but "have limited power to influence the structure or readiness" of forces assigned to them for the conduct of such operations. The CINCs have insufficient authority and influence in peacetime to ensure their warfighting capabilities are commensurate with their mission."[71]

In peacetime, the CINCs have limited ability to determine the kind and amount of forces they will have for military operations. The Services "not only train and equip the forces assigned to the component commands under each CINC, they also control the flow of resources to those commands." Readiness reporting and evaluation "is centered in the components and routed through Service channels" so that correcting deficiencies is

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[70] General David C. Jones, Introduction to Archie D. Barrett, *Reappraising Defense Organization*, National Defense University, 1983, p. xxiii.

[71] Archie D. Barrett, *Reappraising Defense Organization*, National Defense University, 1983, pp 52–53.

"predominately a Service responsibility." The reformers concluded, "Development of a joint readiness perspective linked to the resource allocation process is not possible in the present system," and went on to say:

> The implications of these findings is that the CINCS are in the unenviable position of having to face any contingency which may arise with forces whose size, structure, equipment, support, and readiness have been largely determined elsewhere by the individual services acting independently. On a simplistic level, an analogous predicament would be that of a football coach expected to win every game with the players handed to him by management, but who has no voice in the drafting or trading of players to correct weaknesses.[72]

The reformers concluded, among other things, that the readiness reporting system of 1980 should be revised for the following reasons: [73]

- No OSD official was responsible for readiness evaluation.

- Readiness reports are not designed to help make resource decisions.

- A lack of uniformity in reporting procedures across the Services makes it hard to provide decision makers an accurate picture of the status of operational units at any given time.

- There is no overarching joint readiness assessment system that analyzes the preparedness of each theater force and subsequently relates these assessments to resource allocation decisions intended to correct the deficiencies noted.

These findings were considered during the ensuing discussion of alternative organizations for the Department of Defense and the passage of the Goldwater-Nichols Defense Reorganization Act of 1986, which led to major changes in the roles and responsibilities of the Chairman, CINCs, and Services.

The Goldwater-Nichols Act established a requirement for readiness reporting and gave guidance as to the nature of the system to do that.[74] Under the general heading of contingency planning, the law directed the Chairman of the Joint Chiefs of Staff to establish, after consultation with the CINCs, a Preparedness Evaluation System to evaluate the preparedness of each combatant command to carry out assigned missions. The

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[72] Ibid.

[73] Ibid., pp. 59–60 and 78–79.

[74] Public Law 99-433, 1 October 1986, Chapter 5 – Joint Chiefs of Staff, Section 153.

Chairman was also assigned responsibility for advising the Secretary of Defense on critical deficiencies and strengths in force capabilities (including manpower, logistic, and mobility support) identified during the preparation and review of contingency plans and assessing the effect of such deficiencies and strengths on meeting national security objectives and policy and on strategic plans. Congress directed the Chairman to establish the Preparedness Evaluation System by October 1987, but it was not until 1993 that the system was put in place.

The Chairman's Readiness Reporting System

The Chairman's Readiness Reporting System operates under the auspices of the Chairman of the Joint Chiefs of Staff to provide information on force readiness. The major feature of this system is a measurement process for tracking force readiness called the Joint Monthly Readiness Review (JMRR).[75] The actions that led to the creation of the JMRR started in 1993, when new Secretary of Defense Les Aspin made it clear he was interested in stressing readiness as a primary DoD product.

Joint force readiness reporting was not new, however. There had been precursor force readiness and military capabilities reporting systems before 1993, as a routine function of the military command process. In 1984, there were two reports related to the military capability of the Armed Forces. As discussed above, unit readiness status was reported in UNITREP. Military capability was reported in the Commander's Situation Report (SITREP).[76] The commanders of the unified and specified commands submitted the SITREP annually to the JCS to provide evaluations of significant factors that improved or degraded the capabilities of their commands to meet the requirements of JCS-approved plans. The SITREP addressed all of the four elements of military capability. The Defense Logistics Agency and Joint Deployment Agency also submitted SITREPS. These reports provided the basis for the annual JCS report to the Secretary of Defense on the capabilities of U.S. general purpose forces.

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[75] CJCS Memo dated 22 November 1994, *The Chairman's Readiness System*, established the system.

[76] GAO UNITREP Report, p. 5. The Commander's SITREP was established by MPO 172.

The Aspin Era

When Les Aspin was sworn in as Secretary of Defense (SECDEF) on 21 January 1993, he was determined to make readiness a major point of emphasis for his tenure in office. He had, over the course of many years of involvement in national security matters, noticed that readiness was a major problem for military organizations during times of decreasing budgets and force downsizing. He did not want to preside over another "hollow force."[77] Secretary Aspin put Deputy Secretary William Perry in charge of overseeing readiness and together they initiated the following actions to emphasize the importance of readiness:

- Established the positions of Under Secretary of Defense for Personnel and Readiness and Deputy Under Secretary of Defense for Readiness. (The Assistant Secretaries for Reserve Affairs, Health Affairs, and Force Management were incorporated into the new Office of the Under Secretary of Personnel and Readiness.)

- Established a Readiness Working Group

- Commissioned the Defense Science Board (DSB) to conduct a study of readiness to include both an appraisal of current readiness and an appraisal of current readiness reporting and assessment systems

After Secretary Aspin left office, William Perry became the Secretary of Defense. The new Deputy Secretary of Defense, John Deutch took over the readiness portfolio and set up the Senior Readiness Oversight Council (SROC). The SROC, chaired by the Deputy Secretary of Defense, was established as the senior DoD forum for readiness policy and oversight. Additionally, the first Deputy Under Secretary of Defense for Readiness, Lou Finch, set up the Readiness Working Group. This Group, co-chaired by the Deputy Under Secretary for Readiness and the Director of Operations (J-3), Joint Staff, was to provide support for the SROC.

The months preceding the chartering of the DSB study were fraught with readiness concerns. A consensus began to emerge among senior political and military leaders that the Joint Staff should play a major role and perhaps the dominant role in assessing and reporting readiness—a matter many considered a military rather than managerial role. This

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[77] Interview FHRDO, 27 March 2000.

was also the view of many of the members of the DSB Readiness Task Force. In fact, the Joint Staff was already providing a cadre of capable officers to assist the DSB Readiness Task Force.

The Chairman of the Joint Chiefs of Staff, General John Shalikashvili, began to take the lead in assessing and reporting readiness. This resulted in three actions:

- Admiral William Owens, the Vice Chairman, was made the Joint Staff focal point for readiness.

- The purview of the Joint Requirements Oversight Council (JROC), chaired by the Vice Chairman, was expanded beyond its original acquisition review function to include consideration of current readiness issues.

- The Joint Warfighting Capabilities Assessment (JWCA) process was expanded to consider, under the supervision of the Vice Chairman, operational and programmatic readiness to accomplish current and future military missions.

The Preparedness Evaluation System

The initial response of the Joint Chiefs of Staff to the readiness reporting provisions of the Goldwater-Nichols Act and the increased emphasis of the Aspin team was to establish the Preparedness Evaluation System (PES). In the act, the Chairman was made responsible for "establishing and maintaining (in consultation with the CINCs) a uniform system for evaluating the preparedness of each [combatant] command to carry out missions assigned to the command."[78] The Chairman was instructed to advise the Secretary of Defense on critical strengths and deficiencies in force capabilities identified during the preparation of contingency plans and to assess the effect of these strengths and deficiencies on DoD's capability to meet national security objectives.[79]

To carry out these provisions of the law, the Chairman established in 1993 the Preparedness Evaluation System. This system required the CINCs to report on the preparedness of their commands to carry out tasks assigned in the Joint Strategic Capabilities Plan (JSCP).[80] Specifically, the CINCs were to report any "significant force deficiencies" identified during their planning process. The reported deficiencies were to

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[78] Goldwater-Nichols Department of Defense Reorganization Act of 1986, Conference Report 99-824, p. 17, cited in Douglas C. Lovelace, Jr., *Unification of the United States Armed Forces: Implementing the 1986 Department of Defense Reorganization Act*, U.S. Army War College, 1996.

[79] Ibid.

[80] Office of the Chairman, Joint Publication 1-03.31, Preparedness Evaluation System, Washington, D.C., January 1993, pp. II-I–IV-3, cited in Lovelace.

serve as a basis for identifying military requirements that would, in turn, lead to programmatic actions to provide the necessary resources. The ultimate product of PES was a biennial Preparedness Assessment Report (PAR) that contained the Chairman's combined assessment of the preparedness of the combatant commands. Three PARs were produced, but the first two of them did not go beyond the draft stage. The third PAR was approved by the Chairman but was not submitted to the Secretary of Defense.[81]

The PAR proved to be unsatisfactory. It was based on self-evaluations by the combatant commands that were compiled, synthesized, and commented on by the Joint Staff. However, the Joint Staff neither evaluated independently the preparedness of any combatant command nor assessed the impact of the reported strengths and capabilities on the ability of DoD to meet national security objectives. Finally, there was no process to translate reported deficiencies into military requirements that could, possibly, lead to programmatic actions to remedy them. The PAR was out of synchronization with the DoD PPBS, the major instrument for translating military requirements into military capabilities. The PAR was concerned with the short term, while the PPBS is concerned with the midterm, from 2 to 8 years in the future. Deficiencies reported in the PAR could not result in programmatic remedies for several years, by which time the original circumstances that caused the deficiency would most likely be different due to changes in mission and the global strategic environment. For these reasons, the PAR was replaced by the current readiness system—the Joint Monthly Readiness Review (JMRR).[82]

The DSB Task Force on Readiness

The foundation for the JMRR came from the recommendations of the Defense Science Board Task Force on Readiness, established by the Secretary of Defense in 1993. General Edward C. Meyer, retired former Army Chief of Staff, chaired the Readiness Task Force (RTF). In addition to extensive discussion of real issues and challenges of individual and collective readiness, the RTF considered:

> Key indicators for measuring readiness and candidate methodologies for providing early warning of potential readiness problems, including

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81 Lovelace, p. 46.

82 Ibid., p. 47.

assessments of a) how the Department deals with readiness concerns; and b) the adequacy of existing readiness reporting systems.[83]

With respect to the existing DoD readiness reporting and assessment process, the RTF concluded that:

- Key indicators that measure readiness and provide early warning of potential readiness problems are strongest as they relate to a unit's current readiness within its Service and weakest as they address future and joint readiness.

- Current unit readiness assessment systems that are designed to focus on specific, critical readiness resources (e.g., personnel, equipment, training, supplies) provide a useful assessment of current unit readiness when coupled with commanders' experienced judgments.

- "The Department's focus for readiness assessments and resource allocation traditionally has been on military units within each of the Services. The direction to move toward jointness in future operations makes it necessary to broaden the focus beyond almost exclusive attention to units within the Services to include the readiness of multi-Service forces to engage successfully in military operations."

- The current system is not well designed to assess current joint (and combined) force readiness. This is partly because the nature of joint force readiness is itself poorly defined. There are general requirements for Combatant Commanders to report on a wide variety of readiness issues to the Chairman and SECDEF, and for the Chairman to provide a separate readiness assessment to SECDEF. However, there is no clear definition of areas of joint readiness analogous to the elements of unit readiness that incorporate the essential elements of force readiness.

- "The Department should reexamine the readiness oversight and management roles of the Office of the Secretary of Defense (OSD), the Office of the Chairman of the Joint Chiefs of Staff (OCJCS), the Services, and the CINCs."

- DoD war planning and force structure analysis should be expanded to account more fully for the participation of traditional allies, treaty signatory nations, or members of ad hoc coalitions in future military conflicts. CINC readiness evaluations should take into account the support that could be provided and would be needed by other national forces engaged in a combined operation.

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[83] Edward C. Meyer, et al., *Report of the Defense Science Board Task Force on Readiness,* June 1994.

- "There do not exist effective systems either to assess the readiness of DoD to conduct future multi-Service military operations or to estimate future joint readiness resulting from a given funding allocation."

- While continuing to exercise their current responsibilities for readiness reporting and assessment, the Military Services should take steps that will help the Department to achieve a greater joint forces readiness perspective.

The RTF recommended the following:

- Increase emphasis on joint and combined readiness and requirements.

- Continue refinement of the roles of the Secretary of Defense, Chairman and Vice Chairman of the Joint Chiefs of Staff, and the CINCs in readiness matters.

- Integrate the roles of the Office of the Secretary of Defense, Joint Staff, Unified Command Headquarters, and Service Headquarters in readiness oversight and management.

- Develop better ways to link readiness concerns to the policy development and resource allocation processes.

- Define joint training objectives and readiness criteria to such a degree that the joint readiness status of forces will be as clear and compelling as the unit readiness status that is the responsibility of the Services.

- Standardize the rating system for joint forces readiness among all CINCs.

The DSB Readiness Task Force Report was well received when it was published in June 1994. The recommendations concerning a joint readiness reporting system and the recommendation to have the Chairman more involved were also received loud and clear, and CJCS took on the responsibility to be "in charge" of readiness. Vice Chairman Admiral Bill Owens took on day-to-day responsibilities. This was a good match-up as the Vice Chairman was already both an SROC member and the JROC Chairman. As noted earlier, the JROC, already dealing with long-term readiness in its oversight of the acquisition process, became involved as well in current readiness. This has worked out well. The other initiative by Admiral Owens, to use the JWCA for assessing readiness, did not turn out as well.

Initially, a Readiness Panel was created as one of the nine JWCA panels or working groups. Responsibility was assigned to the J-3 because current operational readiness means "Ops." The first task was to implement the key recommendations of the RTF Report. The challenges of creating a CJCS process for assessing current readiness—integrating and assessing "traditional" Service readiness (people, training, and equipment) and CINCS

readiness to "integrate and synchronize" those forces—were formidable. Even the initial task to define "current readiness" was a major effort. The cadre of officers who had provided staff support to the DSB Readiness Task Force was reassigned to J-3 to form a Readiness Division. Since most of these officers were scheduled to depart the Joint Staff, the Division Chief, Colonel Fred Weiners, USAF, started hiring the best talent available to build a team. This "elite" team (composed of O-6s and senior O-5s), combined with the active involvement of senior military leaders, gave the Joint Staff the energy and credibility needed to tackle the "joint readiness" issue and get the Chairman "in front of the SROC on readiness issues."[84]

Perhaps the biggest single catalyst for creating the Chairman's Readiness System and the JMRR process occurred in October 1994, when two Army Divisions reported C-4 and the Navy had had to shutdown air wings at the end of the fiscal year. This whiff of a hollow force outraged Congress and upset the Secretary of Defense. Pressure mounted to immediately develop and implement a system that would allow the Chairman to make an independent assessment of force readiness.[85] The Chairman ordered creation of such a system to be in place by January 1995, in time for the next period of Congressional testimony. This deadline soon got pushed up to prior to Christmas 1994, essentially giving J-3 and the Readiness Division less than 8 weeks to deliver.

Creation of the Joint Monthly Readiness Review

The J-3 Readiness Division recognized, and Joint Staff leaders agreed, that the JWCA Readiness Panel process was not working. They decided to create a new process and forum paralleling the JROC that would deal exclusively with current readiness while providing a uniform methodology for assessing the readiness concerns of the Services, the CINCs, and eventually the Defense Agencies. The cross-functional aspects of the JWCA process were incorporated into the process. Joint Staff and Service Readiness JWCA representatives were also designated as the functional representatives. CINC and Defense Agency representatives were also added. This new current readiness forum was to be chaired by the Vice Chairman.

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84 Based on interviews with participants.

85 Additionally, part of the unstated purpose was to force the Service Chiefs to report quarterly to SECDEF what their readiness was, including their ability to support two MTWs.

To support this new forum, the J-3 Readiness Division created a "SORTS for the CINCs" that would consist of assessments of various functional areas. The idea would be to require CINCs to assess their capabilities to carry out the National Security Strategy of two major regional conflicts (MRCs). These assessments would deal with both current readiness and readiness 12 months into the future in regard to ongoing and projected activities. Since the SROC met monthly, the initial plan was to conduct monthly assessments and report a summary of the results to the SROC—hence the name Joint Monthly Readiness Review (JMRR).

As the JMRR concept matured, a series of high-level briefings were presented to senior officials. The reception was mixed. In general, the Services were not happy. They did not want to get too involved with jointness, to allow others to meddle in their business, or to be put in the position of being "tasked" by the CINCs. Their main fear was that the JMRR would become another JROC, participating in program decisions. They were concerned as well that money for CINC readiness would come from Service budgets.

The CINCs, on the other hand, came on board immediately. They and the Defense Agencies wanted the JMRR to deal with program decisions. They saw this new process as a great way to get money directly, an advantage they lacked with the JROC, on which they were represented by the Vice Chairman and to which they had no direct input.

The Joint Staff, however, in an effort to ensure realistic reporting and open discussion of readiness problems while avoiding conflict of interest problems, was determined not to allow the JMRR to become involved in program decisions and stated specifically that the JMRR was not a programmatic forum. Initially, institutional firewalls were built between the JMRR and the JROC, although later on links between the two forums were constructed so that JMRR issues could be matched with the Integrated Priority List (IPL) where appropriate.[86]

The first JMRR meeting was held in December 1994 amid much high-level visibility. Senior OSD and OJCS officials, including the Vice Chiefs of the Services, attended. A summary of the briefing was presented to the SROC as the formal CJCS readiness assessment.

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86 Based on interviews with participants.

During the JMRR's first year in existence, the monthly meetings evolved into a quarterly process. This was primarily a function of three factors. First, the Readiness Division was too small to prepare a JMRR briefing, a summary report for the SROC, and a follow-on Chairman's Message on a monthly basis, and to provide feedback on what was being done to fix reported problems. Second, most of the major concerns identified in the JMRR changed only marginally from month to month. Third, the Vice Chairman, not completely satisfied with monthly briefings on the same details and problems, wanted to expand the JMRR process to also capture what was being done to fix reported deficiencies. The process was changed to a quarterly cycle. There is a Full JMRR meeting in the first month of each quarter. In the second month, CINCs and Combat Support Agencies submit a "by-exception" report if they experience a significant readiness change. In the third month (which allows time for functional area assessments and action), there is a Feedback JMRR session to present the status of actions taken to address problems reported in earlier Full JMRR forums.

Two other modifications to the process occurred during this timeframe. The Readiness Division recognized that there was a need to group individual deficiencies into larger and more meaningful categories. By the summer of 1995, the concept of aggregating reported deficiencies into areas of "strategic concern," to provide senior leaders a more macro readiness picture, was developed and in place. Additionally, Congress placed a new requirement on DoD to provide a quarterly readiness report direct from the Secretary of Defense to the Senate and House Armed Services Committees, based on the readiness assessment provided by the Chairman to the SROC; hence, the Quarterly Readiness Report to Congress (QRRC) was born.

A key output of the JMRR process is the Chairman's assessment of overall "risk." One of the first issues the Readiness Division had to deal with was the definition of risk. The CINCs were being asked to assess their ability to carry out the National Security Strategy in terms of risk, but the definition of risk was unclear. After much discussion, "risk" for JMRR purposes was defined as the degree to which CINCs could not achieve their objectives on their own timelines.

The JMRR process was institutionalized formally on 1 October 1995 by a Chairman's instruction entitled Current Readiness System that codified the system as it had evolved over the preceding year. The purpose of the Instruction was to "establish uniform

policy and procedures for assessing and reporting the current readiness of the U.S. Armed Forces in the Joint Monthly Readiness Review (JMRR)."[87]

Changes to the JMRR Process Since 1995

Almost as soon as the JMRR process began, both minor and major changes were made to improve its ability to report and assess joint force readiness. The first year's evolution was formalized by a new Chairman's instruction issued on 15 October 1996 that:

- Added the requirement for a Quarterly Readiness Report to Congress (QRRC) as directed in the FY 1996 Defense Authorization Act.

- Expanded the content of the JMRR scenario provided by the Joint Staff for use in assessing readiness to include, in addition to one or two notional Major Regional Contingencies, one or more notional Lesser Regional Contingencies.

- Added the Combat Support Agencies (CSAs) to the JMRR process. CSA directors were designated as the senior representatives of their organizations. CSA representatives were to be prepared to brief at each JMRR their agency readiness status to include specific comments on CSA readiness and responsiveness to support the CINCs. CSA directors were directed both to assist CINC staffs in assessing their readiness in appropriate functional areas and to identify constraints that limit their ability to support the CINCs.

- Specified that CINCs and CSAs will review Service JMRR reports and comment on applicable deficiencies or readiness issues in their own subsequent JMRR report. In addition, CINCs will report on CSA responsiveness as well as the adequacy of CSA support.

- Tasked the Director, Joint Staff, with J-3 support, to assign to appropriate J-directorates monitoring responsibilities for new deficiencies and to nominate for JWCA study deficiencies that require programmatic action but are not included in a POM. Director, J-8, was tasked to review deficiencies nominated for JWCA consideration.

- Changed the emphasis of the By-Exception JMRR meeting to focus on degradations or improvements in readiness in the current, +12 months assessment areas.

- Tasked the Joint Staff directors to present the Functional Area deficiency status during Feedback JMRR meetings.

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[87] CJCSI 3401.01.

- Deleted the requirement for Services to report trends for enablers (e.g., low density critical unit status, AWACS, JSTARS, pre-positioned equipment, joint logistics over-the-shore capability) but kept the categories of personnel, equipment, and training.

- Changed the name of the six categories of enablers (Theater Mobility Support, Engineers, Health Services, Sustainability, Security, Field Services) from Support Force Enablers to Critical Support Enablers.

The second round of changes to the JMRR were codified by a second modification of the Chairman's Instruction that was issued on 1 July 1999 after an extensive period of study, briefings, and coordination.[88]   Many of these changes were taken in response to direction from the VCJCS and the Director for Operations (J-3) in order to address the following problems:

- The JMRR emphasized "what's changed" instead of "what's important."

- Service JMRR presentations were highly aggregated, bland, and uninformative.

- There was inadequate followthrough to correct deficiencies.

- The JMRR had limited linkage to the JWCA and JROC processes.

- The SROC was not receiving a useful product.

The changes to the JMRR made in the 1999 revision were major. A semiannual JMRR Deficiency Review was added. Major revisions were made to the JMRR C-level definitions, and the content of one of the functional areas (Joint Headquarters) was revised. The definitions of the functional area associated elements were expanded. The readiness items to be assessed by the CINCs and CSAs were modified. Greater emphasis was placed on assessing readiness for engagement activities in addition to readiness for warfighting and current operations. Procedures for the Feedback JMRR were expanded. A system for categorizing deficiencies was added. Specifically—

- The system was modified to help senior leaders notice and focus on important issues by highlighting in the presentations the right issues at the right level of detail. CINC and CSA assessments, which previously had been briefed at Full JMRR meetings without comment, were now to be highlighted to point out new and significant items, including deficiencies in the interoperability of Joint Forces.   Key readiness problems were to be explained in greater detail.

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[88]   CJCSI 3401.01B. The name of the JMRR process was changed to *The Chairman's Readiness System* to emphasize that this was indeed a readiness reporting system for the Chairman's information and use.

Coverage of minor items at the meetings was to be reduced. The Feedback JMRR meetings were modified so that the Joint Staff would brief all Category I deficiencies, plus Category II deficiencies that had been corrected or were new, and the Services would brief their top concerns.

- The role of the Services in the JMRR and SROC was increased. The Service Operations Deputies were officially designated as the senior Service representatives to the JMRR, reflecting the reality that the Vice Chiefs of Staff seldom attended the meetings. At Full JMMR meetings, the Services, which had heretofore presented only readiness snapshots, were asked also to show trends over time of key indicators, such as unit C-ratings, mission capable rates, and TEMPO, to allow senior leaders to put readiness measurements into perspective. At the Feedback JMRR meetings, the Service Operations Deputies were asked to report on their own 3-5 readiness concerns instead of just listening to CINC concerns.[89] For the SROC, in-depth, factual Service presentations were scheduled on topics of interest to OSD, such as aviation readiness, recruiting/retention, contingency funding, and personnel manning.

- The link between the JMRR, JROC, and JWCA was reinforced to provide greater programmatic visibility for readiness problems. To get the JROC involved in correcting readiness deficiencies, all Red JMRR deficiencies (those not in the POMs and nominated for JWCA action) were briefed to the JROC. A new JWCA Readiness Panel was established by combining the J-1, J-3, and J-7 readiness teams to consider key readiness issues that cross over functional lines. These changes reemphasized that long-term readiness and modernization issues are to be addressed via the JROC and JWCA, not the JMRR.

- The nature of the JMRR process was changed to accord better with the views of the senior leadership. The scope was changed from providing DoD leadership "a current, macro-level assessment of the military's readiness to fight and meet the demands of the National Military Strategy" to readiness to "execute the National Military Strategy."

- The roles and responsibilities of the Joint Staff Directorates were clarified. The Director, Joint Staff was given authority to close corrected deficiencies. The J-8 was assigned to report on JWCA and JROC decisions on nominated

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89 Prior to March 1998, the Service inputs to Full JMRR briefs were basically SORTS roll-ups. The Vice Chairman wanted the Services to have an opportunity to brief actual issues and to strengthen the connection between the formal readiness reports and anecdotal reports from the field. The Services were hesitant to do this at first but gradually opened up as they came to see this as a good way to "come clean" and get help.

deficiencies and to brief contingency funding status at Feedback JMRRs and JROC meetings. The J-7 was no longer required to provide Remedial Action Project (RAP) inputs to the JMRR process.

Several changes in the reporting requirements and procedures were made.

- Feedback JMRR briefings are to cover the status of Cat I deficiencies grouped into categories called Key Risk elements.

- The DPG was added as a reference from which CINC and CSA requirements may be derived.

- Deficiencies forwarded to the JROC "will be studied" by the JWCAs and regularly briefed to the JROC, which can change the status colors of JWCA issues.

- The name of the Joint Headquarters Capability Functional Area was changed to Joint War Planning and Training, and expanded to include joint force commander's assessment. The requirement to assess the subcategories of UJTL, JMETL, personnel availability, and allocation of forces for JTF HQ was deleted.

- For Unit Report purposes, "current" was defined as the "as of" date specified in the JMRR guidance message, and no longer includes "or most current SORTS data available."

- Amplifying comments for trends in personnel, equipment, training, and enablers were included in Service reports.

- Services are to provide an executive level summary of the current level of operational tempo and its associated impact on readiness.

- CINCs and CSAs shall assign an overall C-level to their ability to execute the current, plus 12 months, and MTW scenarios and indicate their top two readiness concerns.

- CINCs are no longer required to identify candidates for the CINC Critical Items List.

- The guidance for CINCs and CSAs for reporting deficiencies was expanded through inclusion of a decision flowchart and by requiring CINCs to provide additional details when reporting C-3 or C-4 ratings.

- The QRRC was modified to include an expanded list of specified readiness indicators as required by the FY1998 Defense Authorization Act.

- The size of units to be reported was clarified. The Joint Staff took over from the Services the designation of the size of significant combat, combat support, and combat service support units to be reported. This was done to ensure that

data is aggregated at the best level, striking a balance between too much granularity and too high a level of aggregation.[90] For the JMRR scenario, the Services will depict combat units at the brigade or battalion level for ground forces, squadron level for air forces, and battle group level for naval forces.

One area that saw a major overhaul was the system for identifying, addressing, and closing out readiness deficiencies. The problem was how to address adequately over 150 deficiencies in a Feedback JMRR meeting that lasts 2 hours. In the past, the responsible Joint Directorate tended to brief some representative or high-interest deficiencies that were relatively easy to fix, and often deferred consideration of deficiencies that were hard to fix. The Vice Chairman directed that the JMRR process be modified to ensure that the status of critical deficiencies was covered each quarter, even when no progress toward remediation had been made.[91] The solution had two parts:

- A system for categorizing deficiencies according to their importance was adopted. There are two categories of deficiencies. Category I deficiencies are the most important and are defined as "critical warfighting risk driver for OPLANS or CONPLANS."[92] Category II deficiencies are less important. In order to ensure that the CINC's views of what is important are given weight, each CINC is also allowed to nominate the Top Two "concerns" for that command. The Top Two and all Category I deficiencies are briefed at the Feedback JMRR meeting.

- The Semiannual Deficiency Review was set up in March 1998 by Vice Admiral Vern Clark, the Director of Operations, to deal with the fact that some CINCs (e.g., CINCSOUTH and CINCNORAD), because of the nature of their commands, do not have Category I deficiencies, but nevertheless have issues of high importance to them. The Deficiency Review provides senior-level visibility for Category II deficiencies. Twice a year, the Director of Operations reviews personally *all* deficiencies as presented by the Joint Staff and adjudicates proper (Cat I or II) categorization, color-coding, current status, and

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90 Devereaux interview.

91   Ibid. All of the issues reported by the CINCs are not placed by the Joint Staff in the Deficiency Data Base (DDB). All are reviewed by the Joint Directorates and coordinated with the CINCs before the Full JMRR meeting. While the CINCs would like all of their issues to be recognized as valid JMRR deficiencies, the Joint Staff works to ensure that only significant, quantifiable shortfalls against validated mission requirements are entered in the database as valid deficiencies. Resolution of this problem is the responsibility of the Readiness Division, which conducts a video teleconference with all parties about 2 weeks prior to each Full and Feedback JMRR. As a result of the preliminary conference, CINCs and the Joint Directorates know what deficiencies (issues) are to be addressed at the Full JMRR meeting.

92 CJCSI 3401.01B.

closure. The Director of Operations is very involved in this process and considers the deficiencies carefully. As a result of the Deficiency Review conducted in March 2000, 18 of the 102 deficiencies reviewed were consolidated, closed, or dropped.[93]

Finally, the Definitions of JMRR C-levels for the Service's Support Forces Functional Area and the Joint Functional Area were modified and combined to provide a single set of definitions. The new Combined definitions are more in line with the old Joint definitions. References to "external assistance" were deleted, as the purpose of the JMRR was to identify the problem, not what it might take to fix it. The new C-levels for the Services were directed at the Service enablers, not at basic SORTS data. Table G-2, below, compares the old ratings with the new, combined definitions.[94]

Table G-2. Changes to C-Level Definitions in 1999

	Old Service	Old Joint	New Combined
C1	The Service has sufficient capability and adequate readiness to meet all assigned missions.	The command/agency has only **minor** deficiencies with negligible impact on capability; **correction is** possible within the command.	The Service/command/agency has only minor deficiencies in this functional area with negligible impact on capability to perform required missions.
C2	The Service has sufficient capability and adequate readiness with only minor deficiencies to meet all assigned missions.	The command/agency has only **minor** deficiencies with **minor** impact on capability; may require **external assistance** to correct.	The Service/command/agency has some deficiencies in this functional area with limited impact on capability to perform required missions.
C3	The Service has **significant deficiencies** in capability or readiness that **reduce** ability to meet some assigned missions.	The command/agency has **significant** deficiencies that **reduce** capability to perform some assigned missions; may require **external assistance** to correct.	The Service/command/agency has significant deficiencies in this functional area that prevent it from performing some portions of required missions.
C4	The Service has **major deficiencies** in capability or readiness that **prevent** the ability to meet some assigned missions.	The command/agency has **major** deficiencies that **prevent** performance of some assigned missions; may require **significant external assistance** to correct.	The Service/command/agency has major deficiencies in this functional area that preclude satisfactory mission accomplishment.

Emphasis in original documents.

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[93] Devereaux interview.

[94] Ibid.

The general thrust of the changes made in the 1999 revision to the JMRR was to move the CINCs and CSAs away from merely assessing functional areas to a broader assessment of their capability to integrate and synchronize forces to execute missions. The scope of the assessment changed from warfighting only, to an assessment of the ability of the CINCs and CSAs to both execute current forecasted engagement missions and support execution of a warfighting scenario. The changes also clearly reiterated that the purpose of the JMRR process is to report on current operational readiness and not on desired capabilities.

The Current Situation on Readiness Inspections and Exercises

Inspections no longer play a significant role in readiness assessments for the Office of the Secretary of Defense, the Joint Staff, Unified Commands, the Army, and the Navy. These major organizations rely exclusively on readiness reports for their assessments. The Air Force, on the other hand, is continuing it traditional use of readiness inspections, and recently the Marine Corps has revived the role of readiness inspections.

The DoD Inspector General and her staff do not do readiness inspections. They are interested in waste, fraud, and abuse. As one officer on the Joint Staff said, "They are auditors, not inspectors."[95] This is made clear in DoD Directive 5106.1, 14 March 1983, which establishes a threefold mission for the Defense OIG as follows:

> Conduct, supervise, monitor, and initiate audits and investigations relating to programs and operations of the Department of Defense.
>
> Provide leadership and coordination and recommend policies for activities designed to promote economy, efficiency, and effectiveness in the administration of and to prevent and detect fraud and abuse in, such programs and operations.
>
> Provide a means for keeping the Secretary of Defense and the Congress fully and currently informed about problems and deficiencies relating to the administration of such programs and operations and the necessity for and progress of corrective action.

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[95] Interview, Colonel Debra Deville, 24 August 2000.

This mission is clear. The Defense IG is interested in waste, fraud, abuse, economy, efficiency, and effectiveness—but not in readiness to accomplish actual, assigned, or potential military missions. The Defense IG conducts audits and investigations, but does not do readiness inspections.

The IGs of the Joint Staff and the Unified Commands have no authority over units assigned to the component commands of the unified commands. They are responsible only for their headquarters and joint activities assigned to their headquarters.[96] The responsibilities of the joint IGs are as follows:

> The Inspector General is responsible to the commander for monitoring, evaluating, assessing, and inspecting operational and other areas essential to mission performance and for evaluating the ability of all echelons of the command to accomplish assigned missions.[97]

Despite this clear statement of purpose, the Joint IGs do not check on capability of their headquarters or joint activities to accomplish wartime missions but instead focus on investigations of complaints and allegations of misbehavior. According to the Deputy Inspector General of the Joint Staff, they don't check on readiness.[98]

Throughout the Cold War, the Air Force used Operational Readiness Inspections (ORIs) as a way for major commanders to check the readiness of flying squadrons and support units. An ORI is a full-fledged actual exercise in which a squadron, without advance warning, is required to assemble, load, and get underway for a combat mission. During the Cold War ORIs were conducted by special groups of trusted agents trained and rehearsed in the conduct of ORIs. The unit undergoing the ORI was evaluated on its ability to perform its mission tasks and produce its required operational capability using Air Force-wide standards. The results were made known and had an effect on the unit commander's career. These ORIs are generally considered to be have been very effective in sustaining the readiness of Air Force units.

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[96] DoD Directive 5106,4, 7 January 1993, establishes the position of IG and an Office of the Inspector General (OIG) in each Unified and Specific Combatant Command and, where appropriate, in subordinate joint commands.

[97] DoD Directive 1506,4, "Inspectors General (IGs) of the Unified and Specified Combatant Commands, 7 January 1993.

[98] Deville interview, 24 August 2000.

Recently, because of OPTEMPO pressures and the adverse impact of no-notice ORIs on retention, the Air Force has relaxed its ORI program by eliminating no-notice ORIs and by scheduling them in a way that limits impact on families. The combination of large numbers of operational missions for smaller-scale contingencies and large numbers of unannounced ORIs was considered to be too much for the airmen, aviators, and their families to handle.

The Navy has traditionally had an elaborate system of inspections and certifications to ensure the readiness of its operational units, but it did not include inspections by the IG. Inspections and certifications have covered everything from the ability to Launch Tomahawk missiles to supply readiness. Prior to a deployment, each carrier battle group (CVBG) and associated amphibious ready group (ARG) participates in a Joint Task Force Exercise (JTFEX), conducted by a numbered fleet commander (Vice Admiral). Separate Senior Officer Observer Teams (SOOT), headed by Rear Admirals, evaluate the operational readiness of the CVBG and the ARG. While this provides the senior leadership an opportunity to determine the readiness of its deploying units and to fix identified deficiencies, the Navy has no way currently to report objectively and on a continuing basis on the overall readiness of CVBGs and ARGs or on their readiness to perform discreet tasks. The Atlantic Fleet's ongoing effort to develop the Mission Capability Assessment System (MCAS) is an attempt to remedy this shortfall.

From time to time, the Navy has used inspectors to review specific aspects of readiness. A recent example of this was the designation of the Navy IG to conduct a review of the readiness of Naval aviation units.[99] His subsequent report dealt with a broad range of readiness issues, including morale, training time, and availability of repair parts. There is no indication that this report is linked to the readiness reporting system, but this use of the IG illustrates the use of outside inspectors to supplement the readiness reports for an entire area or system.

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[99] Rowan Scarborough, "Naval Air is Called Degraded in Report," *The Washington Times*, 15 September 2000, p. 1.

In recent years, the Marine Corps has made little use of its IGs to inspect readiness. That is about to change. The Commandant of the Marine Corps, General James L. Jones, has just established a new policy that emphasizes the use of no-notice IG inspections to check the readiness of Marine ground and air units.[100] The Commandant said:

> Announced inspections should cease immediately to the greater degree possible. Instead, they should become no-notice operations readiness inspections that provide a candid—and therefore more accurate—assessment.[101]

Readiness inspections will be the responsibility of the Inspector General of the Marine Corps. The guidelines for the IG readiness inspections are quite firm and revealing. The Marines don't want the inspections to disrupt units or detract from training. They are intended to assist commanders to prepare.

This is a major change in emphasis. Prior to this, the Marine Corps IGs focused on inspecting the administrative aspects of readiness reporting, not on whether a unit is actually ready to perform its mission. The older inspections determined whether the unit was reporting in accordance with Marine Corps SORTS regulations and provided instruction on reporting procedures.

Determination of the combat readiness of a unit has been and will continue to be done by the Marine Corps Combat Readiness Evaluation System (MCCRES). The MCCRES is essentially a test of a unit's ability to execute its mission-essential tasks. Formal MCCRES evaluations provide the Commandant and other Marine commanders an assessment of a unit's ability to perform the tasks considered essential to accomplishing combat missions. MCCRES will be the basis for the readiness assessments done during the no-notice inspections.

The Marine Corps intends the no-notice inspections to focus on this question: "Is this unit's readiness at the level we should expect, given the present stage of its life cycle."[102] Inspections that take heed of a unit's life cycle are considered unlikely to diminish a unit's sense of purpose, and the prospect of inspections with little or no notice

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[100] Lance Corporal John R. Lawson, USMC, "No-Notice Inspections Approved," *Marine Corps News*, 22 June 2000.

[101] Ibid.

[102] Lawson, op. cit.

will keep units sharp through every stage of their life cycles. The no-notice inspections will include field exercises as well the more traditional visits, depending on the circumstances for each unit. The challenge for the Marine Corps is to make these inspections "meaningful and realistic."[103]

The Army no longer uses tests or IGs to check on readiness. The Office of The Inspector General and the inspectors general of the major commands do not regularly inspect the operational or training readiness of units.[104] The Army depends on the chain of command to inspect unit training. Army IGs do check all aspects of a unit, and they do look at specific types of training and the conduct of training, but this is not a general practice. Commanders are subject to outside evaluation and critiques in a variety of exercises, such as those at the Combat Training Centers (NTC and JRTC) and the War Fighter Program. In both live and simulated exercises, the performances of units, commanders, and staffs are observed and critiqued candidly in extensive oral and written after-action reports. These reports, however, are completely separate from the unit status reports (USRs) and may or may not be included in the aggregate readiness assessments provided to the CINCs for the JMRR. The Army treats these as training events and not readiness assessments in order to maximize training value and diminish fear of adverse consequences from poor performance.

PART IV: ENDURING ISSUES IN READINESS REPORTING

The Department of Defense is too large and too complicated for senior officials and commanders to see for themselves the readiness of units, organizations, and forces. Ship, squadron, and battalion commanders can assess and report the readiness of their units personally. Commanders of intermediate organizations have to rely on reports from subordinate commanders, spot checks, and reports from their own staff officers. Commanders of large organizations and forces rely primarily on reports from others.

The current form of readiness reporting started with the advent of the Cold War, in which the readiness of large standing forces was important for deterring and waging a global war with the Soviet Union. Prior to the Cold War, readiness was largely ignored in peacetime and became important only when new, larger forces were created and readied to wage wars. As the necessity for peacetime readiness became apparent, the traditional

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[103] Ibid.

[104] Telephone interview, Colonel Tom Hinkle, Chief, Training Division, OTIG, Department of the Army, 8 June 2000.

readiness reporting systems that relied on the chain of command, inspections, and exercises, were augmented first by a unit readiness reporting system and then by a joint force reporting system. Simultaneously with the start of the Cold War, the Army, Navy, and a newly independent Air Force were incorporated into a Department of Defense that amalgamated the separate Services into one organization. As the Department of Defense evolved over the past 50 years, so did the readiness reporting system. Since the start of the Cold War, the Department of Defense has sought to find a way to assess and report readiness that will provide the Secretary of Defense, the Joint Chiefs of Staff, and their respective staffs the information needed to plan for and execute the National Security Strategy. Over the past 50 years there have been numerous modifications to the readiness reporting system in terms of method of reporting, uniformity, objectivity, comprehensiveness, technology, jointness, and impetus for improvement. The trends in each of these areas are summarized below.

Method of Reporting

The trend has been toward greater reliance on unit readiness reports and less reliance on inspections and exercises. When the Cold War started, readiness was reported exclusively by aggregated reports up the chain of command. Today, the Office of the Secretary of Defense and the Joint Staff rely almost exclusively on a centralized system in which units report their readiness directly to the Joint Staff and Office of the Secretary of Defense without aggregation or modification in the chain of command. Readiness of units, organizations, and forces is still reported routinely in the chain of command and aggregated at each level of command, but these are given less credence at high levels than the direct unit reports. Reliance on inspectors to assess readiness and validate unit readiness reports diminished greatly immediately after World War II and, with a few exceptions, is no longer a major source of readiness information. The use of exercises to provide a basis for assessing readiness continues, but the trend has been to separate the results of these exercises from readiness reporting.

Uniformity

The trend has been to demand greater uniformity among the Services and Defense Agencies in the formats and metrics used for unit readiness reporting. The first joint unit readiness reporting system was little more than an amalgamation of the earlier Service reporting systems, which were quite different in content and methodologies. Each

succeeding version demanded greater uniformity in the formats and methods of reporting unit readiness among all the Services.

Objectivity

The trend has been to eliminate "subjective judgments" in favor of "objective measures." The susceptibility of unit readiness reports to bias was recognized from the start. To offset potential bias, the changes have sought to reduce the influence of "subjective" assessments, such as commander's comments, in favor of "objective" measures. The difficulty of finding the one right way to structure unit readiness reports is attested to by the frequency in the changes in formats and rules. These changes have led to the use of ever more complicated numerical formulas.

Comprehensiveness

The trend has been toward greater comprehensiveness in the proportion of DoD units that report their readiness. The emphasis during the World Wars was on the readiness of units to deploy to overseas theaters. The first unit readiness reporting systems established during the Cold War involved only a few special units of interest to higher commanders. Successive changes have brought more and more units into the reporting system. At present only about 10,000 of the 56,000 units registered in GSORTS are measured in GSORTS. These reporting units are almost entirely combat and combat support units that are forward deployed or scheduled to deploy for a major war. Recent recognition of the necessity for a high state of readiness for all DoD systems exerts pressure to require nondeploying support units and headquarters to report their readiness to support combat operations.

Information Technology

The trend has been to use modern information technology to provide to a large audience detailed, near-real-time information on units and forces. As information technology has advanced, the unit readiness reporting system has changed along with it. Input has changed from written reports, to punch cards, to message text. The report database has become larger. Reports have become more detailed and available more quickly to larger audiences. The goal now is to have near-real-time access to unit level readiness reports for DoD-wide users.

Jointness

The trend has been toward more reporting of the readiness of the joint forces of the combatant commanders responsible for conducting military operations. The basis for this trend was the enactment of the Goldwater-Nichols Defense Reorganization Act of 1986, which enhanced the role of the combatant commanders (CINCs) in military operations and defined the role of the Services and defense agencies as providers of trained units, personnel, services, and supplies to the CINCs. As the impact of the Goldwater-Nichols Act was felt, it became necessary to report on the readiness, not just of thousands of units, but of the forces the CINCs would marshal and direct during combat operations. This led to the creation in the early 1990s of the Chairman's Readiness System (CRS), of which the primary instrument is the Joint Monthly Readiness Review. The JMRR is a series of meetings at which senior officials consider the readiness of the CINCs, supported by the services and defense agencies, to accomplish their assigned missions. As the full implications of Goldwater-Nichols are felt, the role of the JMRR in improving the readiness of the CINCs will increase.

Impetus for Improvement

At the start of the Cold War era, the Services initiated their own unit readiness reporting systems. These systems appear to have been primarily tied to operational concerns. In recent years the trend has been for the Congress and the Secretary of Defense to provide the impetus for improving the DoD readiness reporting system. Most of these improvements appear to have been directed at management efforts to improve the ability of resource managers to tie resource allocation decisions to readiness—both to identify where resources should be applied and to measure the impact of resource increases. Efforts to identify all DoD units and obtain data on their status were stimulated by the establishment in the 1960s of the DoD Planning, Programming, and Budgeting System under Secretary of Defense Robert S. McNamara. Efforts in the 1990s by Secretary of Defense Les Aspin and his successor, William Perry, to increase understanding of DoD readiness led to the establishment of the JRRR. Throughout this period, the Congress enacted laws and published reports urging improvements in readiness reporting. The Goldwater-Nichols Act placed great emphasis on the creation by DoD of an improved readiness reporting system.

This study is the result of yet another effort by Congress to improve the DoD readiness reporting system. This has been a bipartisan matter. Presidents, secretaries of defense, and members of Congress from both of the major political parties have recognized the need for better self-knowledge as the basis for adequate national security.

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Appendix H
ORGANIZATIONS AND INDIVIDUALS CONTACTED
IN THE COURSE

Mark Lewis

ORGANIZATIONS AND INDIVIDUALS CONTACTED IN THE COURSE OF THE STUDY

Unified and Specified Commands

Central Command

LCDR Abresch
LTC Anderson
LTC Barreto
Mr. Barron
COL Bishop
LTC Castrodad
LTG Dodson
LTC Faulkner
LTC Freeman
MAJ Gearhart
LTC Grable
LTC Gross
COL Kramlick
BG Meincke
LtCol Mieir
RADM Nichols
CDR Parsons
RADM Preston
LTC Risley
COL Robb
Mr. Rubright
LTC Ruffin
LC Sale
LTC Sarver

Joint Forces Command

LTC Beckerman
LtCol Boston
LTG Burnette and his principal staff officers
LTC Connelly
Mr. Cryan
LTC Ford

MAJ Gamboa
CAPT Hicks
CAPT (USN) Raymer
LCDR Trench

Pacific Command

CDR Agga
LTC Birrer (USA)
JJ Campbell
Mr. Cole
COL Dean (USA)
COL Duke
COL Gardner
LTC Gibbons
MAJ Hird
LCDR Holmes
LTGEN House
Mr. Hughes
COL Jinnett
LTC Johansen (USAF)
LTC King (USAF)
MAJ Majers
LCDR Matthews
COL McClain
LCDR McMahon
LTC McNulty
MAJ Millet (USA)
LTC O'Connell (USA)
RADM Porterfield
COL Rakestraw
MAJ Simpson
COL Shaffer
LTC Stevens (USA)
Mr. Wong

U.S. Special Operations Command

LTC Brasher
COL Brown
Mr. Corsen
Ms. Shiffer
COL Wilderman

Transportation Command

Mr. Adams
COL Busler
MAJ Calvano
LTC Cox
MAJ Dye
Mr. Hofman
CPT Hoyt
Ms. Kessler
Mr. Kimbrel
LTC Martin
CDR Martonosi
LTC Melchor
LTC (Ret) Meyer

Combined Forces Command

Mr. Alwoods
COL Brown
CAPT Cook
MAJ Cox
LTC Flowers
COL Flynn
MAJ Fontenot
LTC Franks
LTC Goldberg
LTC Isensee
MAJ Johnson
COL Kay
LTC Majors
MG McManus
LTC Moraghan
COL Reich
COL Sparks
CDR Trail
COL Weaver

MG Whitcomb
MAJ Whitley
LTG Petrosky

Former CINCs

GEN (ret) Clark
ADM (ret) Gehman
GEN (ret) Zinni

Special Operations Command Pacific

CDR Howe
LTC Shafer (USAF)
MAJ Falk (USMC)

Marine Forces Pacific

COL Jinnett

U.S. Army Pacific

COL Lynch
Mr. Doleman
Mr. Anderson
CPT McMurry
SGT Stewart

Pacific Air Force

COL Poulos
COL Janik
SGT Helms
LTC Holman
MSGT Puckett
MAJ Connolly
MAJ Byrd
CPT Cahill

Joint Staff

COL (USAF) Brandenberg
LTC Burrer
LtCol Clemons
LTC Colwell
LTC Coonce
CAPT (USN) Crowley
COL Devereaux
COL Deville
CDR Dobbs
LTC Harper
Mr. Hill
LTC Krulen
MAJ Linton

COL (USAF) Macken
MAJ McCarthy
LTC Norton
LCDR Olson
LTC Palekas
MAJ Pjetraj
CDR Radloff
COL Thomas
COL (USAF) Tillery
COL Watkins
RADM Snufflebeam
LTC Young

United States Army

Army Staff

LTC Ballew
Mr. Crissup
LTC Geise
COL Hinkle
LTC Laine
Mr. Mueller
LTC Raczak
MAJ Ross
Dr. Sherry
Ms. Thompson
Ms. Whitfield

Forces Command

Mr. Baird
Mr. Clarke
LTC Fishel
MAJ Ingram
Mr. Johnston
Ms. McDaniel
Mr. Peterson
Mr. Schulz
LTC Stewart

Third Army HQ

COL Fairchild
LTC Jeff King
COL Kissel
LTC Steffan
Mr. Schulz

XVIII Corps

COL Rodriguez
MAJ Schleicher
MAJ Shapiro
LTC Thein
LTC Winstead

82d Airborne Division

CPT Kelly
CW2 Roberts
MAJ Wade

Eighth Army

COL Ballantyne
COL Fundacaro
BG Livsey
LTG Petrosky

2d Infantry Division

MG Dees
CPT Griggs
MAJ Meisinger
COL Rowe
MAJ Winborne
LTC Wolverton

1-52 Aviation Battalion

LTC Dwyer and staff

2-2 Aviation Battalion

LTC Mangum and staff

6th Cavalry Regiment

LTC Foreman
COL Scherrer
COL Sinclair

2-9 Infantry Battalion

LTC Grimsley and staff

U.S. Army Material Command

Mr. Fahey
Mr. Hall
Mr. Hill

National Guard Bureau

MG Rees
COL Hesse

United States Navy

OPNAV Staff

LCDR Braunschweig
Mr. Gray
CDR Herman
CDR Hoover
LCDR Kelendei
CAPT Lasher
CDR Lawless
CDR Markiewicz
Ms Martin
Mr. Melcher
CAPT Punches
CDR Peters
Ms Shimp
LCDR Shivers
CAPT Sinnett
CAPT Stapac
LCDR Turner
CAPT Volonino
CAPT Williams
Mr. Williams
Mr. Wright

NAVFOR-K:

CAPT Cook
CDR Trail

Commander, Naval Surface Force, U.S. Pacific Fleet

CDR Albiso
Mr. Alcala
CAPT (ret) McHenry
CAPT Myers
LT Pellerito
SCPO Wegner

Commander, Naval Surface Force, U.S. Atlantic Fleet

LT Parkerson
LCDR Rainwater
LT Thiers

U.S.S. McClusky (FFG-41)

LT(jg) Rice
LT Luby

U.S. Atlantic Fleet

CDR Baker
Mr. Baker
RADM Bryant
ADM Clark
CAPT Jones
Ms Koonz
RADM Lafleur
CAPT Neselrode
CDR Ross
RADM Soderberg
Mr. Stanford

Commander Naval Air Forces, U.S. Atlantic Fleet:

LCDR Ron Fry
LCDR Norris
CDR Sellenbinder
Mr. Soler
CAPT Stites

U.S. Naval Supply Systems Command

CDR Borrebach

LCDR Burke
LCDR Fahringer
Mr. Kilko
Mr. Strauch
Mr. Thomson

Submarine Support Command (Pearl Harbor)

PO Goodson
LT Kelly

USS Lake Erie (CG-70)

OS1 Banks
OS2 Holt
LCDR Holmes

CINCPACFLT

CDR Erler
CDR Walter
LT Bust
LCDR Pederson
CDR Johnson

Submarine Squadron Support Unit (Norfolk)

CDR Beyroot
CDR Geer

United States Marine Corps

HQ, U.S. Marine Corps

LtGen Ayers
Ms. Barber
Maj Borrelli
Col Diaz
Col Enoch
LtCol Felder III
LtCol Greene
Col Tulley
LtCol Yokose

HQ, 2nd Marine Air Wing

SSgt Bullock
Maj Meissenheimer
GySgt McPherson

HQ, 2nd Marine Division

Col Coleman
Col Conry
Maj Dickey
LtCol Miller

II Marine Expeditionary Force (MEF)

MGySgt Andrews
GySgt Alexander
GySgt Bowers
Maj Budd
Maj Converse
Maj Papageorgiou
Maj Punkett
LtCol Stewart
Col Wilkes

10th Marine Regiment, 2nd Marine Division, II MEF

LtCol Camerra
CWO Curry

Col Gobar
LtCol Hymes
GySgt Miller

1st Battalion, 6th Marines, II Marine Division

1stLt Danielson
LtCol Jones

Naval Aviation Depot (NADEP)

Col Jackson

Marine Corps Historical Center

Mr. Crawford

United States Air Force

Air Staff

TSGT Bruce
COL Flierl
COL Freeman
CPT Gatlin
MSGT Greer
SSGT Houston
CPT Johnson
COL Jones
COL Kelly
MAJ Lord
MAJ McCormack COL
COL (Ret) O'Meara
CPT Pearson
CPT Rega
CPT Roszman
LTC Smith
TSGT Smith
COL Walker

Scott AFB

BG Keistler
MAJ Nezamis

Little Rock AFB

Lt Col Apgar
Col William Bradley
SSgt Breaux
Lt Col Loftus
Lt Col McDonald
LTC Ogden
CPT Schlichenmeyer

36th Fighter Squadron, Osan AFB

LTC West and selected GSORTS officers and staff

Air National Guard

Mr. Crutchfield

Installations and Logistics

MAJ Quiton
LTC Stewart

Air Combat Command

LTC Anderson
MAJ Canne
MSGT McAliney

Air Mobility Command

COL Brandenburg
TSGT Milby
COL Parker

MAJ Scherer
COL Verling
LTC Walker

7th Air Force

MSG Fauth
LTG Heflebower
Staff Officers and Enlisted responsible for
GSORTS reporting

Defense Agencies

Mr. Brock - Defense Logistics Agency
Ms. Horvath - Defense Logistics Agency

Mr. Gress - Defense Information Systems Agency
MAJ Tindall - Defense Information Systems Agency

Mr. Harris – National Imagery and Mapping Agency

Office of the Secretary of Defense

Mr. Angello
COL Boggs
CDR Bynum
Mr. Dean
Mr. Longstreth

Others

Mr. Cornforth - Center for Naval Analysis

The Honorable Lou Finch, Deputy Undersecretary of Defense for Readiness, 1993-1999

Mr. Hill – PRC, Inc

Mr. Hunter - OADUSD (L)

Dr. King - Logistics Management Institute

Mr. Jondrow – Center for Naval Analysis

Ms Junor – Center for Naval Analysis

CAPT Moore – Institute for Defense Analyses

Mr. Owen – PRC, Inc

Mr. Pearsall – PRC, Inc

LTG (ret) Trefry, The Inspector General, Department of the Army, 1979-1983

Dr. Whitehorne, Professor of History, Author of *The Inspector Generals of the United States Army*, Volumes I and II

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Mark R. Lewis

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Appendix J
STUDY TEAM MEMBERS

Mark Lewis

STUDY TEAM MEMBERS

John Tillson, the project leader, has led a wide range of IDA studies, which have examined such topics as new forces for the post-Cold War world, alternative defense strategies and operational concepts, the mix of Active and Reserve component forces, and the DoD personnel system. Prior to joining IDA, Mr. Tillson spent 15 years working in the Office of the Secretary of Defense and on the staffs of the Senate Budget Committee and the House Armed Services Committee. During that time he worked on a range of subjects from strategic and program planning to mobilization and logistic planning. Mr. Tillson spent 7 years as an Armored Cavalry Officer in the Regular Army and 23 years in the Army Reserve. He spent one tour in Germany and one tour in Vietnam, where he commanded an armored cavalry troop in combat. Mr. Tillson graduated from West Point and has a master's degree in Public Administration from Harvard.

Robert Atwell is a research staff member at IDA, with an interest in Computer War Games and Simulations, Operational and Strategic Forces Analysis, C4I Analysis, and Crisis Management. Mr. Atwell has a B.S. from Manhattan College and both an M.S. and Ph.D. in chemistry from Georgetown University.

John R. Brinkerhoff, Colonel, USA (ret.), is a consultant on national security affairs, with broad experience in mobilization, emergency management, force development, strategic planning, and manpower programming. He has been a national security consultant for 17 years and has been associated with the Institute for Defense Analyses for 7 years of that time. Mr. Brinkerhoff served for 7 years as a senior executive in the Office of the Secretary of Defense as Director of Manpower Programs, Director of Intergovernmental Affairs, Special Assistant to the Deputy Assistant Secretary of Defense for Reserve Affairs, and Deputy Assistant Secretary of Defense for Reserve Affairs. After leaving the Office of the Secretary of Defense, he was for 2 years the Associate Director for National Preparedness of the Federal Emergency Management Agency and concurrently the Deputy Executive Secretary of the Emergency Mobilization Preparedness Board. Mr. Brinkerhoff served 29 years in the United States Army, retiring as a colonel. During his 24 years of commissioned service, he commanded engineer units

in Korea, Germany, and Vietnam and served two tours of duty on the Army Staff and two tours in the Office of the Secretary of Defense. Mr. Brinkerhoff is a graduate of the United States Military Academy and has earned master's degrees from the California Institute of Technology, Columbia University, and George Washington University. He is a graduate of the Army Command and General Staff College and the Army War College.

William R. Burns, **Jr**., Captain, USN (ret.), is an IDA consultant and a retired naval officer with experience as a line officer and joint staff officer. As a surface warfare officer, he commanded three ships. He served as both Deputy Director for Operations and Deputy Director for Logistics and Security Assistance on the staff of the Commander-in-Chief, U.S. Central Command. His last Navy assignment was as Chief of Staff for the Battle Group Staff responsible for training Atlantic Fleet Battle Groups prior to their deployment. Mr. Burns is a graduate of the Naval Academy, the Navy Nuclear Power Training Program, and Harvard University's John F. Kennedy School of Public Administration.

Michael Burski, Lieutenant Colonel, USAF (ret.), is an adjunct Research Staff Member at IDA. He has worked on such diverse IDA projects as range instrumentation, information system testing, simulation and modeling, air-to-ground aircraft capability, airlift capability, unmanned aircraft vehicles, and combat identification. As a consultant, Mr. Burski has worked with other organizations on many programs, including the design of several instrumented test facilities. During his Air Force career, he was an air-to-ground pilot, an aircraft tester (primarily flying qualities and countermeasures) and a forward-air-controller with the 1st Cavalry in Vietnam. He also worked on the Air Staff and the Secretary of Defense Staff. Mr. Burski graduated from the USAF Academy and has a master's in Aeronautical Engineering from AFIT.

Jasen Castillo, a research intern at IDA, is a Ph.D. candidate in political science at the University of Chicago. He is currently completing a dissertation that examines why countries differ in their determination to fight and win wars.

Matthew Diascro has contributed to a number of projects during his tenure at IDA, including studies on the impact of culture and civil-military relations on battle outcomes and the role of U.S. shaping activities in preventing regional conflict. Prior to joining IDA, Mr. Diascro attended The Ohio State University, where he studied international cooperation, international institutions, and American attitudes towards

foreign policy and trade. He is currently working on his dissertation in pursuit of a Ph.D. in political science. Mr. Diascro also holds a B.A. and an M.A. from Wesleyan University as well as an M.A. from The Ohio State University.

Robert Fabrie, adjunct research staff member at IDA, has had an extensive background in defense acquisition as an engineer. His experience includes program management for major weapons systems, industrial support, mobilization planning, and logistics. Prior to joining the Institute for Defense Analyses, Mr. Fabrie retired from the Headquarters of the Defense Logistics Agency, where he was responsible for production management and industry support including crisis planning of the 4 million consumable items management by the Agency. Mr. Fabrie served 6 years as a senior fellow at the National Defense University's Institute National Strategic Studies, conducting studies related to transportation, critical and strategic materials, NATO and allied munitions capability and industrial mobilization. As a member of the Defense Acquisition Corps, Mr. Fabrie also held positions at the Army Materiel Command and Air Force Systems Command in support of major systems acquisitions and a 1-year industry assignment with the Boeing Aerospace Corporation as an engineer. He has also served in logistics and engineering positions in the field for the Defense Logistic Agency, the Air Force Contract Management Command, and the Navy Ship Engineering Center. Mr. Fabrie also worked for the Motorola Communications Division for 14 years in various engineering and manufacturing positions. Mr. Fabrie served 4 years in the Air Force. He holds a bachelor's degree in electrical engineering, a graduate from the Illinois Institute of Technology and a master's degree in business management from Webster University.

Waldo D. Freeman, Major General, USA (ret.), has worked as an independent consultant and as an adjunct analyst at the Institute for Defense Analyses since his retirement in 1996. He commanded troops at each level during his career, and has extensive experience in strategic planning, high-level policy making, and politico-military activities in Europe, the Middle East, and Japan. General Freeman's final assignment was Commanding General, U.S. Army Japan, where he improved the extensive bilateral training and exchange programs with the Japan Ground Self-Defense Force. He also commanded IX Corps until its inactivation in 1995. To replace it, he activated the 9th Theater Army Area Command and guided numerous initiatives to improve Army logistics capabilities in the Western Pacific. From 1992–1994 as Deputy Commander in Chief and Chief of Staff, U.S. Central Command, General Freeman led staff development and implementation of postwar strategy in Southwest Asia and the Horn of Africa. Activities

included implementation of no-fly zones in Iraq, peacemaking operations in Somalia, and major increases in prepositioned equipment and forward presence operations. Other assignments include Chief of Policy and Programs at SHAPE, and Program Manager, Saudi Arabian National Guard Modernization Program. General Freeman's troop duty included service in infantry battalions in Germany, Vietnam, Korea, and the United States. He also served as a District Senior Advisor in Vietnam. He commanded an armored brigade in Germany from 1983–1985 and was Assistant Division Commander of a heavy division there from 1987–1988. He attended the United States Military Academy, received his M.A. from The Johns Hopkins University School of Advanced International Studies, and graduated from the National War College.

Mark R. Lewis is a research associate at the Institute for Defense Analyses. Prior to this position, Mr. Lewis served over 11 years on active duty with the U.S. Army as an infantry officer and noncommissioned officer in Ranger, Airborne, and Mechanized units. Mr. Lewis has a B.S. in the Russian language from Georgetown University and is a master's degree candidate in Georgetown's National Security Studies Program.

Charles Lyman, Colonel, USMC (ret.), spent 26 years on active duty in the U.S. Marine Corps, retiring in 1995. While in the Marine Corps, he served in Vietnam and in Saudi Arabia on the staff of U.S. Central Command during the Persian Gulf War. During his military career he commanded a number of units in the operating forces and was directly involved in readiness reporting. After leaving the military, Mr. Lyman became an executive in the telecommunication industry, directing the international network management organization for Sprint, Inc., and for Global One, its joint venture with France Telecom and Deutsche Telekom. For the last 2 years, he has served as a consultant and adjunct research staff member with the Institute for Defense Analyses. He is a graduate of the Marine Corps Basic and Advanced Communication Officer Courses, the Department of Defense Telecommunication Systems Staff Officer Course, and the Industrial College of the Armed Forces. He holds a B.A. degree from San Diego State University and an M.S. from Boston University.

Lawrence Morton, Lieutenant Colonel, USAF (ret.), is an adjunct research staff member at IDA. He served 21 years as an officer in the Air Force as a Strategic Planner in the Strategic Plans and Policy Directorate (J5); Assistant Air Attaché to Sweden and Latvia; and a C-130 aircraft evaluator aircraft commander. While in J5, he co-wrote the 1997 National Military Strategy; was deeply involved with coordinating the Armed Forces' position on the President's National Security Strategy; and played a key role in the

1997 Quadrennial Defense Review, including co-authoring the Secretary of Defense's Report to Congress. Mr. Morton, a Distinguished Graduate from the Air Force Academy, studied international politics for 2 years at Stockholm University, Sweden, as an Olmsted Scholar and earned a Master of International Public Policy from the Johns Hopkins School for Advanced International Studies.

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Appendix K
GLOSSARY

Mark R. Lewis

John R. Brinkerhoff

GLOSSARY

A. KEY TERMS

Assigned Strength

Number of personnel assigned to an organization whether present or not.

Available Strength

Number of personnel assigned to a reporting unit who are physically present or can be present within the prescribed response time, and are not restricted from deploying or employing with the unit for any reason.

Capability

An output measure stated in terms of mission and tasks performed over time. See also Designed Operational Capability and Required Operational Capability.

CINC Readiness

A measure of his ability, with forces and resources assigned or allocated, to perform the tasks essential to the missions he has been assigned by the Secretary of Defense.

Combined Force

A force composed of units and/or personnel from the armed forces of more than one nation.

Designed Operational Capability (DOC)

A set of discrete tasks that a unit is designed to accomplish. The DOC sets a standard against which actual resources, current state of training, and capability can be measured.

DoD Readiness

A measure of DoD's ability to provide the military capability required to execute the tasks associated with the missions assigned in the NSS, NMS, and DPG/CPG.

Entity (Organizational Entity)

1. A set of people, equipment, and supplies that works collectively to produce an output that provides a certain amount and kind of capability to a system. In military context, an individual, team, work center, sub-unit, unit, organization, or force. 2. A unique framework of authority within which a person or persons act, or can act, towards some (extra-personal or extra-family) purpose: e.g. most things commonly called organization, part of an organization, establishment, activity, unit, enterprise, institution, company, corporation, agency, bureau, office, group, committee. [DOD Directive 500.17, "Defense Organizational Entity Standards (DOES) Program," 14 January 1969 (Rescinded)]

Essential Task	Tasks based on mission analysis and approved by the commander that are absolutely necessary, indispensable, or critical to the success of a mission.
Force	A set of units and intermediate organizations associated with a common mission. A force may be single Service, joint, or combined. It may fall under the command of a CINC or a Service. It may include both military and civilian units and intermediate organizations. When an operational mission is assigned or contemplated, a force is established to accomplish that mission. A combat force includes units and intermediate organizations that provide the output of the force, units and intermediate organizations that support the output units, and headquarters to provide intermediate levels of command to facilitate control during the operation. A support force includes support units and intermediate organizations and headquarters to provide intermediate levels of command. A force typically includes a wide variety of units and intermediate organizations working together to accomplish the common mission that inspired the creation of the force. According to this definition, a force may include the facilities, installations, depots, hospitals, etc., that a Service employs in the execution of its Title 10 functions.
Intermediate Organizations	Sets of units or, for the larger intermediate organizations, sets of smaller organizations and units that are under a single headquarters. Intermediate operational organizations include, for example, Army brigades, divisions, and corps as well as Air Force groups, wings, and numbered air forces. Intermediate support organizations include, for example, Service logistic commands and Defense Agencies. An airline that provides cargo aircraft as part of the CRAF program is an intermediate organization.
Joint Force	A general term applied to a force composed of significant elements, assigned or attached, of two or more Military Departments, operating under a single joint force commander.
Mission	1. The task, together with the purpose, that clearly indicates the action to be taken and the reason therefore. 2. In common usage, especially when applied to lower military units, a duty assigned to an individual or unit; a task. 3. An assignment with a purpose that clearly indicates the action to be taken and the reason therefore.

Operation	A military action or the carrying out of a strategic, tactical, Service, training, or administrative military mission; the process of carrying on combat, including movement, supply, attack, defense, and maneuvers needed to gain the objectives of any battle or campaign.
Operational Tasks	1. A task that has to be done to accomplish a mission. Also, the result of the planning process that distributes missions from higher to lower commands. The result of the planning process to accomplish a mission is a set of tasks that become missions for subordinate elements. 2. In the context of Joint Vision 2020, includes dominant maneuver, precision engagement, full dimensional protection, and information operations.
Organization	A set of units associated by a common commander.
Readiness - Unit, Organization, Joint, Or Force's Readiness	A measure of the ability to perform the missions, functions, and tasks for which it was organized or designed (its DOC) or which it is assigned (its ROC).
Required Operational Capability (ROC)	A set of tasks that have to be accomplished by a unit to accomplish an assigned or contemplated mission. A ROC is situation specific and requires the unit to be able to accomplish a set of tasks determined by the gaining/owning CINC. The ROC may require a unit to perform tasks that differ significantly from its DOC tasks. For example, a field artillery battalion that leaves its weapons at home station and deploys to perform as a de facto military police battalion for a smaller-scale contingency would have a ROC that would be focused on peacekeeping instead of fire support.
Required Strength	See structured strength.
Specified Task	A task explicitly stated and assigned.
Standard	The minimum acceptable proficiency required in the performance of a task. For mission essential tasks of joint forces, each task standard is defined by the joint force commander and consists of a measure and criterion.
Status	An input measure of available resources and of training actually accomplished.
Structured Strength	The wartime manpower requirements for an organization shown on Service manpower documents. Also called required strength.

Supporting Task	Specific activities that contribute to accomplishment of a joint mission essential task. Supporting tasks associated with a command or agency's mission essential task list are accomplished by the joint staff or subordinate commands or agencies.
Task	A discrete event or action that enables a mission or function to be accomplished by individuals or organizations.
Unit	An organizational entity that has been assigned a Unit Identification Code (UIC) at the parent unit (AA) level. By common usage, a ship, aviation squadron, battalion, company, or separate detachment. There are three general kinds of units: Combat units provide the output of a force for a combat mission; support units provide supplies and services for the force; headquarters provide command for the force and for intermediate organizations above the unit level.
Universal Joint Task List	A menu of capabilities (mission-derived tasks with associated conditions and standards, i.e., the tools) that may be selected by a joint force commander to accomplish the assigned mission. Once identified as essential to mission accomplishment, the tasks are reflected within the command joint mission essential task list. Also called UJTL.

B.   ACRONYMS

AABFS	Amphibious Assault Bulk Fuel System
AAF	Army Air Forces
AAL	Authorized Allowance List
AAW	Antiair Warfare
ABC/M	Activity Based Costing/Management
ACC	Air Combat Command
ACE	Airborne Command Element
AEF	Air Expeditionary Force
AEW	Air Expeditionary Wing
AFCAP	Air Force Contract Augmentation Program
AGF	Army Ground Forces
ALO	Authorized Level of Organization
AMC	Air Mobility Command (USAF); Army Materiel Command (USA)
AMETL	Agency Mission-Essential Task List

AOR	Area of Responsibility
APS	Army Prepositioned Stocks
AR	Army Regulation
ARCENT	Army Headquarters Component, U.S. Central Command
ARFORSTAT	Army force Status Reporting System
ARG	Amphibious Readiness Group
ARTEP	Army Training and Evaluation Plan
ASBPO	Armed Services Blood Program Office
ASF	Army Service Forces
ASL	Authorized Stockage Lists
ASW	Antisubmarine Warfare
AURRS	Army Unit Readiness Reporting System
AVCAL	Aviation Consolidated Allowance List
AWACS	Airborne Warning and Control System
AWC	Army War College
BG	Battle Group
BOS	Battlefield Operating Systems
CASREP	Casualty Reporting System
CbtCap	Combat Capable
CCK	Contracting Command Korea
CE	Command Element
CENTCOM	Central Command
CEOA	Central European Operating Agency
CEPS	Central European Pipeline System
CINC	Commander in Chief
CINCPAC	Commander in Chief Pacific
CJCS	Chairman of the Joint Chiefs of Staff
CJCSI	Chairman of the Joint Chiefs of Staff Instruction
CJCSM	Chairman of the Joint Chiefs of Staff Manual
CLF	Combat Logistics Fleet
CNO	Chief of Naval Operations
CONARC	Continental Army Command
CONCAP	Navy Emergency Construction Capabilities Contract
CONPLAN	Contingency Plan
CONUS	Continental United States
COSAL	Consolidated Ship Allowance List

CPG	Contingency Planning Guidance
CRAF	Civil Reserve Air Fleet
CRS	Chairman's Readiness System
CS	Combat Support
CSA	Combat Support Agency
CSS	Combat Service Support
CSSE	Combat Service Support Element (MAGTF)
CVBG	Carrier Battle Group
DA	Defense Agency
DESC	Defense Energy Service Center
DFAS	Defense Finance and Accounting Service
DFSC	Defense Fuel Supply Center
DIA	Defense Intelligence Agency
DII	Defense Information Infrastructure
DIMHRS	Defense Integrated Military Human Resources System
DISA	Defense Information Systems Agency
DLA	Defense Logistics Agency
DMS	Diminishing Manufacturing Sources
DMSB	Defense Medical Standardization Board
DOC	Designed Operational Capability
DoD	Department of Defense
DoDD	Department of Defense Directive
DPG	Defense Planning Guidance
DSB	Defense Science Board
DSCOPS	Deputy Chief of Staff for Operations
DSCP	Defense Supply Center Philadelphia
DSCR	Defense Supply Center Richmond
DTRA	Defense Threat Reduction Agency
DTS	Defense Transportation Group
DUSD(R)	Deputy Undersecretary of Defense (Readiness)
EAC	Echelons Above Corps
E-GSORTS	Expanded GSORTS
ELINT	Electronic Intelligence
ERC	Equipment Readiness Code
ES	External Support
EUCOM	European Command

FECOM	Far East Command
FMQ	Fully Manned and Qualified
FORSCOM	Forces Command (Army)
FORSTAT	Force Status and Identity Report
FYDP	Five-Year Defense Program; Future Years Defense Program
GCCS	Global Command and Control System
GCE	Ground Combat Element (MAGTF)
GCSS	Global Command Support System
GOMERS	Global On-line Marine Edit and Reporting System
GPRA	Government Performance and Results Act
GSORTS	Global Status of Resources and Training System
GTN	Global Transportation Network
HMMWV	Highly Mobile Multipurpose Wheeled Vehicle
HNS	Host Nation Support
HSS	Health Services Support
HUMINT	Human Intelligence
ICP	Inventory Control Points
IDA	Institute for Defense Analyses (www.ida.org)
IG	Inspector General
IMET	International Military Education and Training
IMINT	Image Intelligence
IMRL	Individual Material Readiness List
IPDS	Inland Petroleum Distribution System
IPL	Integrated Priority List
IRR	Installations Readiness Report
IRSP	In-Place Readiness Spares Packages
ISR	Intelligence – Surveillance – Reconnaissance
ITRR	Institutional Training Readiness Report
JBPO	Joint Blood Program Office
JCSE	Joint Communications Support Element
JFC	Joint Forces Command
JIC	Joint Intelligence Center
JLOTS	Joint Logistics over the Shore
JMA	Joint Mission Area
JMETL	Joint Mission-Essential Task List
JMRR	Joint Monthly Readiness Review

JMTCA	Joint Munitions Transportation Coordinating Activity
JROC	Joint Requirements Oversight Council
JRS	Joint Reporting Structure
JSCP	Joint Strategic Capabilities Plan
JSTARS	Joint Surveillance, Target Attack Radar System
JTF	Joint Task Force
JTIMS	The Joint Training Information Management System
JTS	Joint Training System
JWCA	Joint Warfighting Capability Assessment
KATUSA	Korean Soldiers Augmenting U.S. Army Units
LFORM	Landing Force Operational Material
LMSR	Large Medium Speed Ro Ro
LD/HD	Low-Density/High Demand
LOGCAP	Logistics Civil Augmentation Program (Army)
LOTS	Logistics over the Shore
LSE	Logistic Support Unit
MACOM	Major Army Command
MAGTF	Marine Air-Ground Task Force
MASINT	Measurement and Signature Intelligence
MCAS	Mission Capability Assessment System (Navy)
MCCRES	Marine Corps Combat Readiness Evaluation System
MEE	Mission-Essential Equipment
MEF	Marine Expeditionary Force
MET	Mission-Essential Tasks
METL	Mission-Essential Task List
MEU	Marine Expeditionary Unit
MIMMS	Marine Integrated Maintenance Management System
MOOTW	Military Operations Other Than War
MOS	Military Occupational Specialty
MPF	Maritime Prepositioning Force
MPS	Mission Performance Standards; Maritime Prepositioning Ships
MRC	Major Regional Conflict
MRE	Meal Ready to Eat
MRRC	Monthly Readiness Report to Congress
MRSP	Mobility Readiness Spares Package
MS	Materiel Shortages

MSC	Military Sealift Command
MTMC	Military Traffic Management Command
MTOE	Modified Table of Organization and Equipment
MTW	Major Theater War
NAF	Numbered Air Force
NATO	North Atlantic Treaty Organization
NCA	National Command Authority
NCMS	National Military Command System
NCO	Noncommissioned Officer
NDAA	National Defense Authorization Act
NEPB	National Emergency Planning Board
NIMA	National Imagery and Mapping Agency
NMC	Non Mission Capable
NMCS	National Military Command System
NMS	National Military Strategy
NSS	National Security Strategy
NWP	Naval Warfare Publication
OCONUS	Outside the Continental United States
OPDS	Offshore Petroleum Discharge System
OPLAN	Operations Plan
OPR	Office of Primary Responsibility
OPTEMPO	Operations Tempo
ORI	Operational Readiness Inspections
OS	Operating System
OSD	Office of the Secretary of Defense
PAA	Planned Authorized Aircraft
PACOM	Pacific Command
PAR	Preparedness Assessment Report
PEI	Principle End Items
PERSTEMPO	Personnel Tempo
PGM	Precision Guided Munitions
PGW	Persian Gulf War
PLL	Prescribed Load List
POL	Petroleum, Oil, and Lubricants; Petroleum
POM	Program Objective Memorandum
PPBP	Planning, Programming, and Budgeting Process

PPBS	Planning, Programming, and Budgeting System
PRMAR	Primary Mission Area (U.S. Navy)
QDR	Quadrennial Defense Review
QRRC	Quarterly Readiness Report to Congress
REDCAPE	Readiness Capability
REDCAT	Readiness Category
REDCON	Readiness Condition
ROC	Required Operational Capability
ROK	Republic of Korea
ROKG	Republic of Korea Government
RRS	Readiness Reporting System
RSOI	Reception, Staging, Onward-Movement & Integration
RTF	Readiness Task Force
SAC	Strategic Air Command
SDR	Semiannual Deficiency Review
SECDEF	Secretary of Defense
SIDPERS	Standard Installation/Division Personnel System (U.S. Army)
SIGINT	Signal Intelligence
SIOP	Single Integrated Operations Plan
SIPRNet	SECRET Internet Protocol Router Network
SITREP	Situation Report
SMA	Sergeant Major of the Army
SMCA	Single Manager for Conventional Ammunition
SOF	Special Operations Forces
SORTS	Status of Resources and Training System
SPACECOM	Space Command
SROC	Senior Readiness Oversight Council
SSC	Smaller-Scale Contingency
STAMP	Standard Air Munitions Packages
STRAC	Strategic Army Corps
STRAPP	Standard Tanks, Racks, Adapters, Pylons Packages
TAA	Total Army Analysis
TDA	Table of Distribution and Allowances
TEP	Theater Engagement Plan
TOE	Table of Organization and Equipment
TPFDD	Time-Phased Force and Deployment Data

TPFDL	Time Phased Force Deployment List
TRADOC	Training and Doctrine Command (Army)
TRANSCOM	Transportation Command
TRMS	Training and Readiness Management System
UJTL	Universal Joint Task List
ULLS	Unit Level Logistics System
UMD	Unit Manning Document
UNITREP	Unit Status and Identity System
USC	United States Code
USD	Under Secretary of Defense
USD (A&T)	Under Secretary of Defense for Acquisition and Technology
USFK	U.S. Forces Korea
USR	Unit Status Report (U.S. Army)
USSOCOM	United States Special Operations Command
VISA	Voluntary Intermodal Sealift Agreement
VJCS	Vice Chairman of the Joint Chiefs of Staff
WEAR	Wartime Executive Agency Responsibilities
WHNS	Wartime Host Nation Support
WMD	Weapons of Mass Destruction
WRM	War Reserve Materiel
WRSA	War Reserve Stocks for Allies

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14. ABSTRACT

IDA reviewed the Department of Defense's Readiness Reporting System (RRS) to determine how responsive it was to the statutory requirements of objectivity, accuracy, and timeliness and to make recommendations on improving the system, as appropriate. A clear, comprehensive RRS is important to Civilian and Military Leaders at all levels when establishing strategies, planning and conducting military operations, allocating resources, and preparing budgets. The study considered all the characteristics needed to measure the capability of the Department of Defense to carry out the full range of capabilities required by the National Security Strategy (NSS), National Military Strategy (NMS), and the Defense Planning Guidance (DPG). IDA found that the existing readiness reporting systems did not meet the needs of DOD or Congress. Some of the major recommendations include: (1) view the DoD as a "system of systems" and break the traditional paradigm of "stovepipe" reporting along functionary lines; (2) expand the readiness database to include all units and organizations that contribute to DoD's capability to execute the NSS; (3) require the CINCs to identify the capabilities required in terms of mission essential tasks and then require all reporting entities to assess and report against this set of missions and tasks.

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