United States Army

2004 Army Transformation Roadmap

July 2004

A CAMPAIGN-QUALITY ARMY
WITH JOINT AND EXPEDITIONARY CAPABILITIES

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FOREWORD

Our Nation remains at war. Our adversaries threaten the ideals and principles at the foundation of our society, the way of life those ideals enable, and the freedoms we enjoy. For the long term, the Nation must prepare itself to fight a protracted war of ideals against an irreconcilable and adaptive adversary.

The Army is reshaping itself to conform to this new strategic reality. It will become an Army of campaign quality with joint and expeditionary capabilities — an Army capable of dominating the complex land environment and sustaining that dominance for as long as necessary.

Our Army's commitment to the Nation is absolute. While we execute the global war on terrorism, the Army is harnessing all of its energies to transform to meet the challenges of the 21st century.

This Army Transformation Roadmap describes how the Army will sustain and enhance the capabilities of current forces while building future force capabilities to meet the requirements of tomorrow's Joint Force. It also shows how the Army is accelerating proven capabilities to reduce risk and improve effectiveness for our frontline Soldiers.

Soldiers remain the center of our transformation focus. As we improve our capabilities, we also remain dedicated to the well-being of our Soldiers, their families and the Army's civilian workforce.

As directed by the Secretary of Defense's Transformation Planning Guidance, the Army presents its second update to the Army Transformation Roadmap. Army transformation will meet the needs of future joint force commanders by providing a campaign-quality Army with joint and expeditionary capabilities.

Peter J. Schoomaker
General, United States Army
Chief of Staff

R. L. Brownlee
Acting Secretary of the Army

The 2004 Army Transformation Roadmap (ATR) updates the 2003 ATR and describes the execution of the Army transformation strategy in the context of evolving security challenges, continuing high demand for operational forces, and lessons learned from recent operations. The 2003 ATR articulated the Army's transformation strategy and described Army capabilities required by a joint force commander to execute the joint operating concepts. The 2003 ATR also identified the joint interdependencies required for optimal employment of Army capabilities.

The 2004 Army Transformation Roadmap refines the Army's transformation strategy and details Army actions to identify and build required capabilities to enhance execution of joint operations by the current force while developing the capabilities essential to provide dominant land-power capabilities to the future Joint Force. This ATR complies with the Defense Planning Guidance directive to report how Army transformation is congruent with defense transformation efforts through the future years defense program.

The annual Army Transformation Roadmap update is an unclassified summary of the Army's transformation strategy, initiatives and accomplishments.

This document is a product of the Office of the Deputy Chief of Staff, U.S. Army Operations, Army Transformation Office.

A summary of this document is available on the Army homepage at www.army.mil. For an electronic copy of this document, please go to Army Knowledge Online.

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	REQUIREMENT	RESPONSE
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EXECUTIVE SUMMARY

THE IMPERATIVE TO TRANSFORM

The Army is transforming now. Today, the Army must transform to a campaign-quality force with joint and expeditionary capabilities to provide relevant and ready land power to combatant commanders and the Joint Force. At the same time, it must also sustain operational support to forces fighting the global war on terrorism while maintaining the quality of the all-volunteer force.

The Army is focusing its efforts to enhance the capabilities of frontline Soldiers and units to meet the requirements of the full range of Army strategic commitments. The 2004 Army Transformation Roadmap describes the path the Army is taking to adapt its institutions and capabilities. It also depicts how the Army will transform in a time of war — balancing current and future needs.

Army transformation is framed in terms of defense transformation. It occurs from the top down and from the broader needs of joint operations to the more specific needs of the Army. The Army looks to operational experience to develop operational concepts and capabilities that are joint from the outset. Army transformation will develop the force structure to achieve full, joint interdependence. Further, Army transformation is changing the mindset of its Soldiers and leaders. It prepares them to face adaptive adversaries — in any environment — where ambiguity and uncertainty are the rule.

ARMY TRANSFORMATION STRATEGY AND ARMY CAMPAIGN PLAN

Transformation is a process that shapes the changing nature of military competition and cooperation through new combinations of concepts, capabilities, people and organizations. It employs the nation's advantages and protects against asymmetric vulnerabilities. It sustains the U.S. strategic position, thus helping peace and stability in the world.

As described in the 2003 Army Transformation Roadmap (ATR), the Army derives its transformation strategy from several sources:

- The Defense Strategy and Transformation Planning Guidance (TPG)
- A comprehensive joint view of the future operational environment
- Joint concepts that identify required joint force capabilities and interdependencies
- Operational experience that identifies both known shortfalls requiring change and promising improvements to joint and Army operations
- Exploration of technological advances and breakthroughs

The Army's transformation strategy has three components:

- Transformed culture
- Transformed processes
- Transformed capabilities

Since publication of the 2003 ATR, the Army has published the Army Campaign Plan (ACP). Army strategic commitments and resource availability dictate the synchronization and pace of change. The ACP directs this change through the efforts of all Army major commands; the Headquarters, Department of the Army staff; and supporting agencies and activities.

The decisive operation within the ACP over the near term is the modular conversion of all Active Component (AC) and Reserve Component (RC) maneuver brigades and the activation of up to an additional 15 AC maneuver brigades. Also, AC and RC division headquarters will transition to the modular headquarters design; select combat, combat support (CS) and combat service support (CSS) units will convert to modular support brigades; and AC and RC echelons above division and above CS/CSS structure will also convert to modular configurations. The modular conversion of division headquarters to the unit of employment X (UEx) designs is synchronized with projected operational requirements and should be completed by fiscal 2007 for the AC and fiscal 2010 for Army National Guard (ARNG).

At the same time, the Army has implemented force stabilization initiatives including unit-focused stability; AC/RC balance and restructuring actions; and APS, ARF and redeploying unit resets to complement modular conversion and increase Army capabilities. It has begun other Current to Future Force transformation initiatives that include actions to complete Stryker brigade combat team fielding and focused transformation of operational forces toward an FCS-equipped force. This effort will enable the Army to improve the capabilities of its operational forces.

The Army also is developing the right mix of force application capabilities required for modern conflict. At the same time, the Army is reorganizing its CS/CSS capabilities into modular packages. This will allow combatant commanders to more rapidly draw upon discrete Army capability modules. This process will create capabilities that provide the Joint Force with strategically agile and flexible arrangements of combat power.

GENERATING READY FORCES

To fulfill its strategic commitments, the Army is undertaking a series of initiatives to increase unit readiness through operational deployment cycles and expeditionary force packages. These initiatives employ unit modular conversions, force stabilization and force rebalancing efforts to create pools of ready forces that are better able to conduct sustained expeditionary operations. To maximize force availability, the Army will structure unit readiness through a progression of stages over time. Though unique for AC and ARNG maneuver forces, AC and RC CS/CSS forces, and specialized capabilities, the operational deployment cycles are phased:

- Reset: The unit is organized and stabilized for the upcoming readiness cycle. Any damaged equipment from a previous cycle is repaired, and changes directed by the Army's deputy chief of staff for operations are accomplished.
- Modular Conversion (if required): Units that have not converted to a modular design will enter a conversion process.
- Training: The unit reaches approved readiness standards in individual and collective training. The actual length of this phase may be adjusted due to operational requirements. The training phase concludes with a validation or certification exercise that transitions the unit to the ready phase.
- Ready Phase: For the remaining period of the operational cycle, the unit continues to improve its collective readiness. It will deploy when required. This is the only phase in the operational deployment cycle where ARNG forces are not available for Title 32 missions.

The Army will also build pools of units at staggered states of readiness. The units in these pools will be available for deployment within established windows of time. Operational requirements and a unit's pool of assignment will determine which units actually deploy and, in the case of RC forces, mobilize. Pooling forces in this manner will make deployment requirements more predictable for Soldiers and their families. It also enables the Army to surge forces more quickly based on operational need.

DEVELOPING CRUCIAL CAPABILITIES

The ATR and ACP articulate many Army initiatives that will transform capabilities across the Current and Future Forces. These efforts will make Soldiers more effective and will enable them to thrive and survive in the most adverse environments — one of the first requirements of adapting to a joint and expeditionary capability.

Future Combat Systems

The Future Combat Systems-equipped force represents a capability crucial to the Army's Future Force and the accomplishment of Department of Defense transformation goals. The FCS-equipped unit of action employs FCS in a manner congruent with the Future Force operational concept, which, in turn, is wholly compatible with the approved joint operations concepts. The FCS-equipped unit of action encompasses more than a new set of capabilities. Rather, this organization reflects a fundamentally transformed method of combat. The core of the Future Force's maneuver unit of action is the Future Combat Systems, comprised of 18 manned and unmanned platforms that are centered around the Soldier and integrated within a battle command network. FCS will provide Soldiers with significantly enhanced situational awareness — enabling them to see first, understand first, act first and finish decisively.

Army Aviation

Army aviation is undergoing a comprehensive transformation to a capabilities-based maneuver arm that is optimized for the joint fight. More than 1,000 aircraft will be recapitalized and 1,400 more modernized in the recommended program. Suites of aviation survivability equipment to guard against the most modern air defense threats are now being installed on all aircraft. Sufficient sets, kits and outfits to make the force more deployable and sustainable will be purchased. Advanced avionics and integrated cockpit architectures in development will make aircraft similar with one another and joint compatible. Intratheater cargo capacity and capability will be increased. Finally, attack aircraft will receive upgrades using many of the leading-edge technologies developed in the cancelled Comanche program.

Army Logistics

The Army delivers materiel readiness as the land-power component of the Joint Force. As the Army transforms, its logistics capability will similarly transform. In addition to the modular conversion of Army tactical and operational sustainment units, Army logistics transformation focuses on meeting force requirements through four major initiatives. The Army will develop a logistics data network to enable the war fighter to see requirements on demand. It will build a responsive distribution system that guarantees on-time delivery — reducing the storage requirements of forward units. The Army will design an integrated modular force reception capability to receive joint and expeditionary force flow and to facilitate immediate operational employment and sustainment. Finally, the Army will develop an end-to-end enterprise view of the supply chain and a service and agencies integration of processes, information and responsibilities.

Other Initiatives

In addition to the efforts listed above, the 2004 ATR describes several other Army transformation initiatives, to include:

- Personnel processes
- Training and leader development

- Combat Training Centers
- Concept Development and Experimentation
- Army science and technology
- Intelligence
- Special operations forces' integration with conventional forces
- Space
- Battle Command and LandWarNet

IMPLEMENTING CHANGE IN THE CURRENT FORCE

Since publication of the 2003 ATR, the Army has significantly accelerated the tempo of transformation — this while an average of 170,000 Soldiers have been deployed in combat at any given time. Over the past year, Army leaders have made crucial decisions to influence transformation efforts:

- Execution of Army transformation as directed in the Army Campaign Plan
- Design, number, mix and conversion sequence of brigade combat team (units of action)
- Modular conversion of the 3rd Infantry Division (Mechanized), 10th Mountain Division, and the 101st Air Assault Division to the unit of employment/unit of action design
- Divestment decisions equaling over $17 billion to fund crucial transformation efforts
- Design and initial implementation of unit operational deployment cycles that maximize readiness and availability of forces while ensuring greater stability and deployment predictability for Soldiers and their families
- Restructuring of Army aviation
- Rebalancing decisions affecting over 100,000 Active and Reserve Component personnel positions that provide crucial capabilities to the Joint Force in the near term
- Rapid fielding and rapid equipping initiatives that provide Soldiers with enhanced force-protection capabilities
- Creation of the Army Improvised Explosive Devices (IED) Task Force that assists joint force commanders counter the pervasive IED threat
- Enhanced resource and personnel management processes to reflect best practices in the private sector

RISK

Since publication of the 2003 ATR, the Army has undertaken a significant shift in emphasis of its near- and midterm focus based on the 2004 Strategic Planning Guidance and operational necessity. Prior to the events of Sept. 11, 2001, the Army assumed greater risk in the Current Force as it built to the Future Force. Over the past two years, the Army shifted resources to reduce operational risk of the Current Force. The 2004 ATR and the Army Campaign Plan attempt to balance the resource commitments to sustained war fighting and transforming to meet future challenges.

CONCLUSION

The Army is changing now and the changes ahead for the Army are significant — the most comprehensive transformation of the U.S. Army since World War II. A continuous cycle of innovation, experimentation, experience and change will lead to a campaign-quality Army with joint and expeditionary capabilities. This Army will provide dominant land power to the Joint Force now and into the future.

CHAPTER 1

THE IMPERATIVE TO TRANSFORM

America is a nation at war. Peace can no longer be viewed as the default condition nor war as the exception. The Army is transforming for continuous operations as a campaign-quality Army with joint and expeditionary capabilities. This new strategic reality is defined by:

- A conflict of irreconcilable ideas
- A disparate pool of potential combatants
- Adaptive adversaries seeking our destruction by any means possible
- Evolving asymmetric threats that will relentlessly seek shelter in those environments and methods for which the nation is least prepared
- A foreseeable future of extended conflict in which the Army can expect to fight every day and in which real peace will be the anomaly

The new strategic context and the lessons learned in three years of war are the catalysts for comprehensive change in the Army. The Army is focusing its efforts to enhance the capabilities of frontline Soldiers and units to meet the requirements of the full range of Army strategic commitments including the global war on terrorism. This focus pervades the entire Army — operating and generating forces, and fuels a rising culture of innovation. The Army always has changed and always will. But an army at war must change the way it changes. Today, a measured approach to change will not suffice. The Current Force is engaged in ways that could not have been perfectly forecast. Immediate demands are urgent, and fielding capabilities in the near term may outweigh protection of the program of record. The Army will shift resource risk away from fighting Soldiers.

This urgency does not excuse the Army from the obligation to prepare for the future, for the prolongation of this conflict, as well as the possible outbreak of others that cannot be predicted. But it does significantly blur the usual dichotomy between the Current and Future Force. The Army must apply lessons learned from today's fight to those Future Force programs, even if that means adjusting their direction and timing. Change in a time of war must deal concurrently with both current and future needs. The 2004 Army Transformation Roadmap describes the path the Army is taking to adapt its institutions and capabilities to build a campaign-quality Army with joint and expeditionary capabilities.

A JOINT CULTURE

The touchstone of America's way of war has been combined arms warfare. Each of the armed services excels in combining a wide variety of capabilities in each dimension — land, sea, air and space — to generate a synergy that creates overwhelming dilemmas for opponents. Today, that same emphasis on combinations extends beyond each service

to joint operations. The military services are no longer satisfied merely to deconflict their activities and now seek joint interdependence.

Joint interdependence purposefully combines service capabilities to maximize their total, complementary and reinforcing effects, while minimizing their relative vulnerabilities. At the strategic level, interdependence has long pervaded the Army's thinking. For example, lacking organic strategic lift, the Army can neither deploy nor sustain itself without the support of other services. While the Army has accepted strategic-level interdependence for some time, its commitment to interdependence now extends to the tactical level. Operational experience affirms a future that is irrefutably joint. To meet the challenges of expeditionary operations, the Army can and must embrace the capabilities of its sister services at all levels, from the land component commander down to the individual Soldier.

AN EXPEDITIONARY CULTURE

The challenge above all is one of mindset, because decades of planning and preparation against set-piece enemies predisposed American Soldiers to seek certainty and synchronization in the application of force. Now, Soldiers operate under conditions where uncertainty and ambiguity are the rule. As elusive and adaptive enemies seek refuge in the far corners of the earth, the norm will be short-notice operations, extremely austere theaters of operation, incomplete information and, indeed, the requirement to fight for information, rather than fight with information.

History and national strategic guidance call for expeditionary forces capable of sustained operations. In response to strategic and operational requirements, the Army must create Soldiers and units confident that they are organized, trained and equipped to go anywhere in the world, at any time, in any environment, against any adversary to accomplish the assigned mission. The Army must also develop the capabilities that provide the Joint Force with strategically agile and flexible arrangements of combat power for the full range of military operations.

JOINT TRANSFORMATION

ARMY CORE COMPETENCIES

- Train and equip Soldiers and grow leaders
- Provide relevant and ready land power to the combatant commander as part of the Joint Force

The nation requires a joint force that is full-spectrum dominant to meet the strategic mandates established by the National Security Strategy (NSS). They are further elaborated within the Strategic Planning Guidance (SPG), National Military Strategy (NMS), Quadrennial Defense Review (QDR), Transformation Planning Guidance (TPG), joint operations concepts (JOpsC) and emerging joint operating concepts (JOCs), joint functional concepts (JFCs), and joint integrating concepts (JICs). Also, they are outlined in the Office of Force Transformation's (OFT's) Strategic Transformation Appraisal for Fiscal Year 2003. As emphasized in the NSS, the military must transform in order to provide the president with a wider range of military options to deter aggression and defeat any form of coercion against the United States. This transformation occurs as the Army, as an integral part of the Joint Force, fights against adaptive adversaries in a highly complex security environment.

Joint transformation affirms the crucial role of land power to dominate the land domain that comprises the heart of most joint operations. Combatant commanders have clear and enduring needs to swiftly defeat the efforts of regional aggressors, win decisively in extended conflict to include establishing favorable political conditions in the post-conflict environment, and execute smaller-scale contingency operations. A campaign-quality Army with joint and expeditionary capabilities enables the Joint Force to exercise direct, continuous and comprehensive control over terrain, resources and people.

The United States holds a historic position of strategic advantage, and U.S. military forces maintain dominance in all aspects of conventional armed conflict. Yet the nation remains vulnerable to those who possess and seek to employ advanced capabilities or unconventional methods to threaten U.S. interests and its military forces. The March 2004 Strategic Planning Guidance for Fiscal Years 2006-2011 describes these challenges as traditional, irregular, catastrophic and disruptive.

- Traditional challenges are posed largely by states employing legacy and advanced military capabilities and recognizable military forces, in long-established, well-known forms of military competition and conflict.
- Irregular challenges arise from the adoption or employment of unconventional methods by non-state and state actors to counter stronger state opponents — terrorism, insurgency, civil war, etc.
- Catastrophic challenges involve the surreptitious acquisition, possession and possible terrorist or rogue employment of weapons of mass destruction (WMD) or methods producing WMD-like effects.
- Disruptive future challenges emanate from competitors developing, possessing and employing breakthrough technological capabilities intended to supplant U.S. advantages in particular operational domains.

The United States, in general, and the Department of Defense, in particular, must be prepared to address all of the these challenges simultaneously and to adjust resources and capabilities to meet specific threats in each category. Uniquely within the Joint Force, the Army provides both the general purpose forces and capabilities necessary to contend with all four security challenges, as well as special purpose forces required for specific threats. Army contributions to overcome these challenges are described in Chapter 2.

ARMY TRANSFORMATION STRATEGY

Transformation is a process that shapes the changing nature of military competition and cooperation through new combinations of concepts, capabilities, people and organizations. These combinations employ the nation's advantages and protect against asymmetric vulnerabilities to sustain the U.S. strategic position, which helps underpin peace and stability in the world.

As described in the 2003 ATR, the Army derives its transformation strategy from several sources:

- The Defense Strategy and Transformation Planning Guidance
- A comprehensive joint view of the future operational environment
- Joint concepts that identify required joint force capabilities and interdependencies
- Operational experience that identifies both known shortfalls requiring change and promising improvements to joint and Army operations
- Exploration of technological advances and breakthroughs

The Army's transformation strategy has three components:

- Transformed culture through innovative leadership and adaptive institutions
- Transformed processes — risk adjudication using the Current to Future Force construct
- Transformed capabilities for interdependent joint operations through force transformation

Transformed Culture Through Innovative Leadership and Adaptive Institutions

Regardless of concepts, capabilities and technologies, it is important to remember that at the center of every joint system are the men and women who selflessly serve the nation. Although the tools of warfare change, the dynamics of the hu-

man dimension remain the driving force in all military operations. Soldiers, infused with the Army's values and warrior culture, adapt to new mission demands, bear the hardships of combat and win the peace. The human dimension of Army transformation is the crucial link to the realization of Future Force capabilities and the enhanced effectiveness of the Current Force. To realize the full power of transformation, the Army seeks to embed a culture of innovation within its people and organizations to ensure innovative practices, processes and activities emerge to produce required joint force capabilities.

The underpinnings of a culture of innovation exist within the Army today. In ongoing operations in Iraq and Afghanistan, Soldiers and leaders adapt continuously to overcome determined adversaries. Indeed, the Army has an extraordinary record of anticipating and leading change. The development of the airmobile concept in the 1960s, the doctrine development and training revolution in the 1970s and 1980s, and the application of digital technologies of the 1990s were all remarkable innovations.[1]

Changing the Army's culture now, however, is not about introducing innovation. It is about changing how and when innovation occurs in the transformation cycle. Instead of processes constraining solutions, solutions must drive processes. Just as speed is crucial on the battlefield, the pace of innovation must increase. New solutions result from seamlessly linking operating[2] and generating[3] forces through a continuous cycle of experience, feedback, learning and experimentation. Innovation is accelerated as each person gains a feeling of responsibility to implement new and better ways to achieve organizational objectives.

Cultural change of an institution begins with the behavior of its people — and leaders shape behavior. The leadership challenge is to remove the impediments to institutional innovation through a wide range of behaviors that, over time, produce a culture that embraces transformation. Ultimately, the ability to rapidly adapt processes and resulting DOTMLPF solutions to satisfy the nation's requirements for its armed forces will be the measure of the Army's agility — and proof of its culture of innovation.

This culture of innovation also involves understanding the optimal way to achieve goals and then possessing the resolve to overcome institutional inertia. The culture must reflect a mindset that views all operations and actions from a joint-first perspective. This way of thinking must reside in joint training, education and leader development programs implemented at all levels within the Army. Further, the culture of innovation must be applied to developing and fielding capabilities for the Joint Force.

Transformed Processes — Risk Adjudication Using Current to Future Force Construct

As the Joint Force transforms, the Army, in coordination with its sister services, develops transformation capabilities from an inherently joint perspective. Development begins with a close examination of the future joint operating environment, where uncertainty, complexity and adaptive adversaries demand a capabilities-based approach. This scrutiny proceeds to development of an overarching articulation of how the Joint Force operates in the future across the range of military operations,

[1] "The Imperative for a Culture of Innovation in the U.S. Army: Adapt or Die," Brig. Gen. David A. Fastabend and Robert H. Simpson, Army Magazine, Vol. 54, No. 3, February 2004, pp 14-22.

[2] Oper
Joint Publication 1-02, April 12, 2001, as amended June 5, 2003, p 384.

[3] Under Title 10, United States Code, the Army's generating force has the responsibility for providing management, development, readiness, deployment and sustainment of the operating force. The generating force consists of the Army's institutional base, industrial base and infrastructure spread across Headquarters, Department of the Army, the major Army commands, field operating agencies, and staff support agencies. Army Modernization Plan 2004, p F-5.

as described in the joint operations concepts. The sequence then leads to joint operating concepts, which describe how a joint force commander will plan, prepare and execute joint operations. JOCs guide the development of joint tasks and ultimate desired joint capabilities required for success. Joint functional and integrating concepts further refine required joint capabilities. The Army structures transformation within the context of these joint concepts. Indeed, the success of Army transformation ultimately depends on the success of joint transformation and the generation of new capabilities for interdependent joint warfare.

The Army frames the constant change of transformation through the interaction of the continuously evolving capabilities of the Current to Future Force. The Current to Future Force construct provides a framework to base smart business decisions that reduce Current Force risks and provide greater force capabilities per dollar. The Army transformation framework discussion in this chapter details the Current to Future Force construct.

Transformed Capabilities for Interdependent Joint Operations Through Force Transformation

Defense transformation seeks to change the way joint forces employ operational capabilities across the full spectrum of operations within the context of JOCs. Army transformation achieves enhanced operational capabilities over time and integrates those capabilities into the Current and Future Forces to gain synergies that support JOCs. This adaptation and synergy must occur even as JOCs evolve.

A full-spectrum capable Joint Force that can see first, understand first, act first and finish decisively will successfully execute the JOCs. Seamless joint, interagency and coalition battlespace awareness comes from the correlation of fused data and information from strategic to tactical intelligence, surveillance and reconnaissance. This quality allows the joint force commander to identify enemy centers of gravity and vulnerability points. The joint force commander (JFC) can apply force directly to those areas with precise effects using more responsive, lethal, modular and scalable joint and combined forces. This capability enables the Joint Force to bypass enemy strengths and nullify its asymmetric strategies.

Current and future JFCs need a broad array of multidimensional options to execute JOCs. Knowledge-based Army forces exploit advanced information technologies and space-based assets for network-enabled battle command, while fully integrated within the joint, interagency and multinational environment. Unlike past, predictable operations, Army forces respond within days and fight on arrival in the joint operations area through multiple entry points. These capabilities allow the JFC to pre-empt enemy actions, assure access, seize the initiative and shape the battlespace. Army forces accelerate conflict resolution through multiple simultaneous actions to deny the enemy sanctuary and to rapidly achieve the operational disintegration required for joint campaign success.

Development of the Future Force is occurring during one of the most challenging periods in the nation's history. Failure in the current fight is unthinkable. Transformation during a time of sustained operations is not easy, but the Army is building on the progress of the past several years to transform the Current Force now.

THE ARMY TRANSFORMATION FRAMEWORK

Today, the Army is pursuing the most comprehensive transformation of its forces since World War II. The pace of Army transformation, particularly over the past several years, has produced important results:

- Fielding of the first Stryker brigade combat team (SBCT) and its subsequent deployment to Operation Iraqi Freedom
- Transition of the Future Combat Systems (FCS) from concept and technology demonstration to system development and demonstration
- Fielding of digital battle command capabilities to Army forces

- Fielding of enhanced joint communications capabilities by purchasing future network capabilities like the joint network node ahead of schedule

Based on a comprehensive analysis of operational requirements for current operations, combatant commanders' needs and a focused look at key areas, the Army has embarked on numerous initiatives since the publication of the 2003 ATR to implement the Army's transformation strategy. The Current to Future Force framework, the Army's strategic posture and Army transformation efforts, as directed through the Army Campaign Plan (ACP), synchronize transformation planning, preparation and execution. Through development of the ACP, the Army has prepared detailed, by-fiscal-year views of Army capabilities to develop the capabilities-based program and budget necessary to build a campaign-quality Army with joint and expeditionary capabilities.

Figure 1-1 describes the Army transformation framework within the context of the ACP. The Army frames the constant change of transformation through the interaction of the continuously evolving capabilities of the Current to Future Force. The Current Force, noted as "1" in the figure, is today's operational Army. The Army organizes, trains and equips the Current Force to conduct operations as part of the Joint Force. It is designed to provide the requisite land-power capabilities the JFCs need across the range of military operations. The Current Force's ability to conduct major combat operations underscores its credibility and effectiveness for full-spectrum operations and fulfills the enduring obligation of Army forces to fight wars and win the peace.

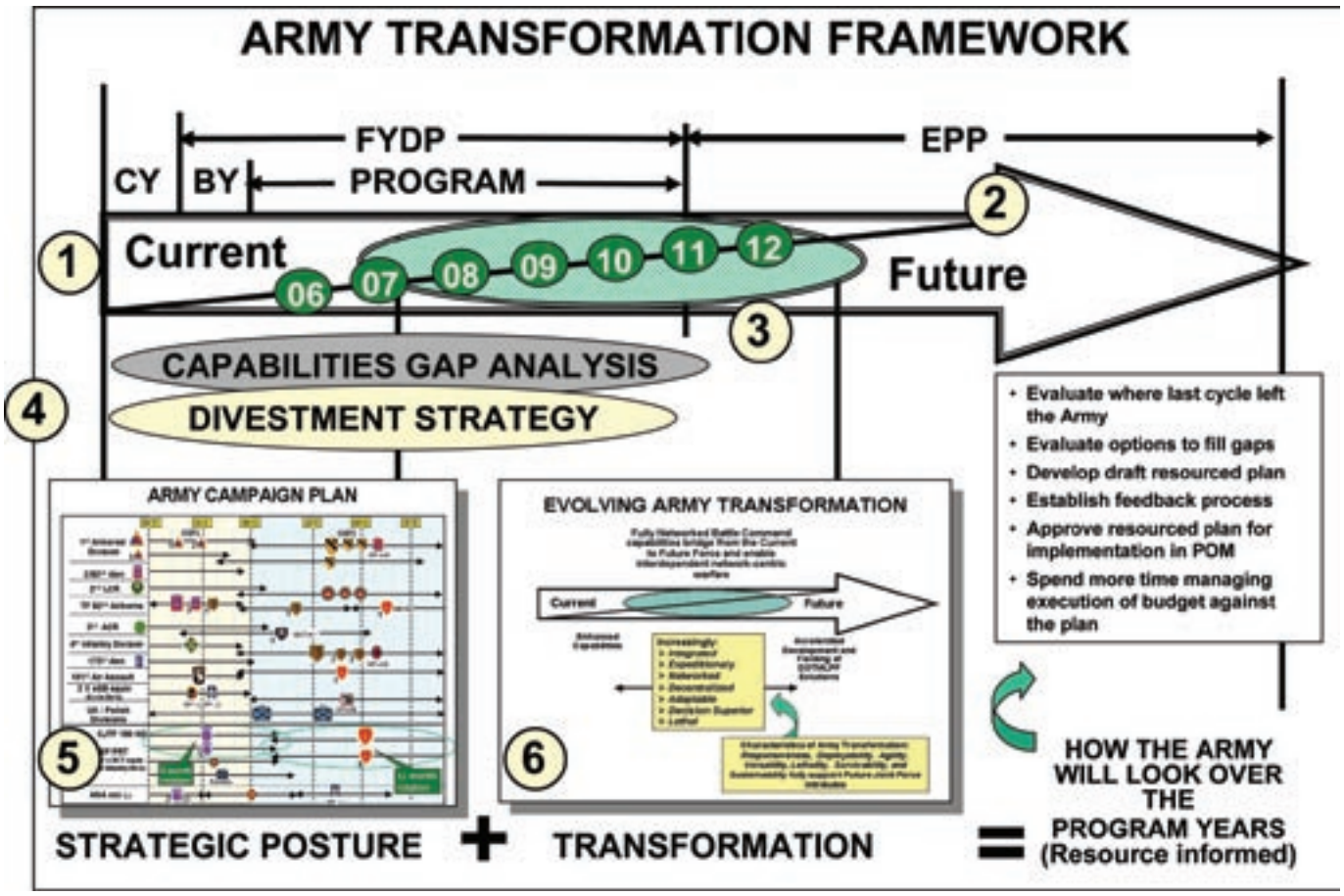

Figure 1-1. Army Transformation Framework

Framework components are described in detail within the text and are referenced by the numbers shown.

The Future Force, noted as "2" in the figure, is the operational force the Army continuously seeks to become. To best support national security requirements and Defense Department needs, the Future Force is the strategically responsive, joint, interdependent, precision maneuver force, dominant across the full range of military operations envisioned in the future global security environment. Optimized for strategic versatility, this more mobile, more lethal and agile force will dominate land operations in any future conflict.

The Army possesses and refines capabilities to enable the Current Force to conduct joint operations in the near term while it develops transformational capabilities for the Future Force. The two activities are symbiotic. While the Army develops the Future Force, it accelerates select Future Force DOTMLPF capabilities to enhance the Current Force. Similarly, the operational experience of the Current Force directly informs further progress toward Future Force capabilities. The shaded area, marked "3" in the figure, depicts this continuum.

Current Force operational experience, insights from joint concept development, experimentation processes, and science and technology allow the Army in its transformation efforts to rapidly enhance the capabilities of the Current Force while pursuing Future Force capabilities. This dynamic relationship constantly changes the composition and nature of both the Current Force and Future Force. This relationship requires careful consideration and balancing of operational, future, force management and institutional risks to determine what DOTMLPF capabilities to accelerate or pursue. The Army must determine when and how to introduce them into the force while sustaining its ability to meet combatant commanders' operational needs.

Transforming the nation's military capabilities while at war requires a careful balance between sustaining and enhancing the capabilities of the Current Force, while investing in capabilities for the Future Force. Joint concept development and experimentation; investments in science and technology; and Future Force designs that facilitate interdependent, network-enabled, joint operations will ensure that the Army meets the requirements of tomorrow's joint force commander. At the same time, accelerated fielding of proven technologies and other high-payoff improvements across DOTMLPF enhances the capabilities of the Current Force in meeting ongoing strategic and operational commitments worldwide. The Army's transformation strategy provides the construct for achieving and maintaining this requisite balance.

These efforts also enable the Army to identify and close capabilities gaps, noted as "4" in the figure, identified in the Current Force. This provides the Army with immediate efficiencies as it diverts crucial resources to areas of need. In addition, processes are underway to help the Army identify and divest functions that are not relevant to the campaign-quality Army with joint and expeditionary capabilities. Capabilities gaps are discussed in Chapter 2.

The transformation framework also balances two interdependent functions — strategic posture and Army transformation, noted as "5" and "6" in the figure. The strategic posture is the Army's level of commitment to meet combatant commander requirements, including the war on terrorism. This level of strategic commitment dictates the sequencing of transformation actions, noted as "6" in the figure. Also, the demands of ongoing operations and forward-presence commitments directly affect operating and generating forces and create windows of opportunity for focused change. These efforts are synchronized through the Army Campaign Plan.

ARMY CAMPAIGN PLAN

The Army Campaign Plan (ACP) sets into action the Army's transformation strategy by providing specific objectives, assigning responsibilities for execution and synchronizing resources. Within ACP objectives, listed in Figure 1-2, are crucial Army capabilities that support defense transformation objectives. The ACP directs the planning,

ARMY CAMPAIGN OBJECTIVES

- **Support Global Operations** — Organize, train, equip and sustain a campaign-capable joint and expeditionary Army to provide relevant and ready land power to the combatant commander as part of the Joint Force
- **Adapt and Improve Total Army Capabilities** — Organize Army forces into modular, capabilities-based unit designs to enable rapid-force packaging and deployment and sustained land combat
- **Optimize Reserve Component Contributions** — Transform RC force structure and continuum of service paradigms in order to optimize RC capabilities and provide relevant and ready forces and individuals to the combatant commander as part of the Joint Force
- **Sustain the Right All-Volunteer Force** — Recruit and retain competent, adaptive and confident Soldiers and civilians to meet immediate and long-range, multicomponent personnel and family readiness requirements
- **Adjust Global Footprint** — Adjust Army stationing and support infrastructure in accordance with integrated global presence and basing strategy to better execute the national defense strategy and support operational deployments and sustained operational rotations
- **Build the Future Force** — Develop Future Force capabilities to meet future land power requirements of the combatant commanders
- **Adapt the Institutional Army** — Transform the institutional Army and associated processes to responsively execute Title 10 responsibilities to sustain a campaign-quality Army with joint and expeditionary capabilities
- **Develop Joint, Interdependent Logistics Structure** — Create an integrated logistics capability that is responsible for end-to-end sustainment to a joint force commander across the spectrum of conflict

Figure 1-2. Army Campaign Objectives

preparation and execution of Army operations and Army transformation within the context of America's ongoing strategic commitments.

Army strategic commitments and resource availability dictate the synchronization and pace of change. The ACP directs this change through the efforts of all Army major commands; the Headquarters, Department of the Army staff; and supporting agencies and activities.

The ACP also directs, prioritizes and synchronizes Army efforts to transform while sustaining operational support to combatant commanders and maintaining the quality of the all-volunteer force. For the ACP, campaign objectives are clearly defined, measurable, decisive and attainable goals that enable the Army to achieve its core competencies.

With publication of the ACP, the Army has undertaken a series of initiatives to provide transformational capabilities to the Current Force while simultaneously developing Future Force capabilities:

- Build a brigade-based Army of 43 to 48 Active Component brigade combat team (units of action) by 2007
- Initiate modular conversion during fiscal 2004 of 3rd Infantry Division, 10th Mountain Division and 101st Air Assault Division
- Implement a temporary 30,000 Soldier increase in active duty strength to facilitate the building of a modular force
- Begin modular conversion of 34 Army National Guard (ARNG) units to brigade combat team (units of action) or BCT(UA)s and eight ARNG divisions to UExs
- Build Army Reserve Expeditionary Packages as part of the modular conversion of the U.S. Army Reserve
- Accelerate initial operational capability from fiscal 2010 to fiscal 2008 of SBCT 6 — the 56th Brigade of the 28th Infantry Division of the Pennsylvania ARNG
- Reorganize and augment Army aviation employing freed resources from termination of the Comanche program

- Include measures to stabilize the force, thereby increasing combat effectiveness of units by reducing unit turbulence and providing increased stability and predictability to Soldiers and their families. Stabilized units are more agile, deployable and better able to support an expeditionary Army at war.
- Balance Active and Reserve Components (AC/RC), realigning existing force structure to better meet global commitments and reduce the burden on high-demand/low-density units. The ACP synchronizes the restructuring of about 100,000 personnel spaces to specialties that are most needed in the current operational environment
- Transform incrementally the Army's acquisition process by incorporating rapid fielding initiative, rapid equipping force, and Improvised Explosive Devices (IED) Task Force/Countermortar Task Force findings, based on lessons learned from Operations Enduring Freedom and Iraqi Freedom
- Address setting the force (STF), which increases readiness of forces returning from operational deployments to standards equal to or higher than before their deployment. STF includes resourcing and preparation for modular conversion along with resetting Army prepositioned stocks (APS), Army regional flotillas (ARF) and Army war reserve stocks
- Continue development of Future Combat Systems-equipped brigade combat team (units of action)

The decisive operation within the ACP over the near term is the modular conversion of all AC and RC maneuver brigades and the activation of up to an additional 15 AC maneuver brigades. Also, AC and RC division headquarters will transition to the modular headquarters design. Select combat, combat support (CS), and combat service support (CSS) units will convert to modular support brigades, and AC and RC echelon above division and echelon above corps CS/CSS structure will also convert to modular configurations. The modular conversion sequence division headquarters to the UEx designs is synchronized with projected operational requirements and should be complete by fiscal 2007 for the AC and fiscal 2010 for ARNG.

At the same time, the Army has implemented force stabilization initiatives including unit-focused stability; AC/RC balance and restructuring actions; APS, ARF and redeploying unit resets to complement modular conversion and increase Army capabilities; and other Current to Future Force transformation initiatives. This effort will enable the Army to improve the capabilities of its operational forces. While building a larger rotation pool of Active Component maneuver brigades and standardizing Active and Reserve Component unit designs, the Army is developing the right mix of force application capabilities required for modern conflict. The Army is reorganizing its CS/CSS capabilities into modular packages. This will allow combatant commanders to more rapidly draw upon discrete Army capability modules.

SUBSEQUENT CHAPTERS

The Army is developing the transformational capabilities to enable the emerging JOCs. Chapter 2 discusses the capabilities the Army provides to the Joint Force, articulates interdependencies with other services and agencies within the construct of the JOpsC, and highlights the operational environment and selected lessons learned. Chapter 3 discusses the three near-term efforts of Army transformation: achieving greater combat capability with modular, capabilities-based unit designs; force stabilization; and balancing the Army's Active and Reserve Component force structure. Chapter 4 addresses Future Combat Systems initiatives. Chapter 5 addresses other transformational initiatives: leader and Soldier development, concept development and experimentation, science and technology, transformation of Army resource processes, logistics, special operation forces, intelligence, space and the network. Chapter 6 outlines the Army's significant accomplishments since the 2003 ATR. Chapter 7 discusses how the Army balances operational and future risks as it resources transformation. Finally, Chapter 8 presents the conclusion and discusses the way ahead.

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CHAPTER 2 THE ARMY AS A MEMBER OF THE JOINT FORCE

Operational experience and joint concepts enhance development of the Future Force. The Army must embrace the capabilities of its sister services down to the tactical level to meet the challenges of the current and projected operational environment. This will require the Army to develop operational concepts and capabilities that are joint from the outset.

THE OPERATIONAL ENVIRONMENT AND LESSONS LEARNED

The Army's Current Force is engaged in ways that could not be perfectly forecast; however, the Army continues to prepare for that uncertain future. There are trends highlighted within recent operations that showcase the importance of understanding and adapting to the current and projected operational environment. The side that controls the physical environment, shapes the design of state institutions, understands and uses social demographics, leverages regional and global relationships, manages information, adapts technology, utilizes external organizations, builds national will and fosters economic growth most effectively will determine the ultimate end state of conflict. These hard-fought lessons learned must be translated into actionable solutions for the Current and Future Force across all doctrine, organization, training, materiel, leadership and education, personnel and facilities (DOTMLPF) functions.

While the Army prepares for the future, the urgency of current operations does blur the usual dichotomy between the Current and Future Force. Ensuring the application of the lessons learned from today's fight to those Future Force programs, even if that means adjusting their direction and timing, is tantamount to the Army's success. In short, change in a time of war and during an increase in operational tempo must deal simultaneously with both current and future needs.

The nation's opponents seek to offset U.S. military dominance by leveraging contextual and environmental factors. The success of groups like Al Qaeda and the Taliban within complex, mountainous terrain to avoid capture in the face of a dedicated reconnaissance and surveillance effort and overwhelming combat power is just one current example. Operations in the complex urban environment of Baghdad, a city of 5 million people with a damaged physical infrastructure and a networked resistance movement, has provided yet another challenge to conventional military forces. These actions will likely inspire future adversaries to exploit complex terrain and unconventional warfare techniques to avoid decisive engagement as a means of maintaining the viability of their cause.

Operation Iraqi Freedom (OIF) has also provided a context for the introduction of a technological wild card that remains under great scrutiny by military forces around the world. According to some media reports, the Iraqis obtained global positioning system

jammers and employed them during the conflict with little apparent success; however, the potential of these jammers to offset U.S. precision capabilities is a concern. Additionally, former Iraqi leader Saddam Hussein's security forces employed asymmetric tactics, sabotage, false surrenders, ambushes, etc., during major combat operations. The success of these irregular forces in delaying the movement of coalition forces north toward Baghdad may inspire future adversaries to employ similar tactics.

Iraqi irregulars have achieved considerable success and inflicted considerable damage on the local population and foreign forces during the transition that has ensued since the fall of Saddam Hussein. Among the hard lessons the U.S. Army has learned over the past decade is that the line between major combat and stability operations is blurred, and the enemy can be in a position to decide when the conflict is over — if allowed. OIF has shown that major combat and stability operations occur simultaneously. It has also shown that contextual and environmental factors can become more significant and imposing than the enemy. In Baghdad alone, the Army has faced the challenge of controlling a large, sometimes angry population; a damaged infrastructure; competing religious groups; displaced leadership; and entrenched and networked adversaries.

In OEF and OIF, key players shaping the environment have included non-governmental organizations (NGOs), differing religious factions, local militias, police forces, U.S.-trained military groups, local and state politicians, media, children and women, to name a few. Irregular forces have adopted a deliberate strategy to attack NGOs and other international aid organizations. The upshot of these attacks has been the departure of many of these organizations and a subsequent loss of the crucial services they provide. The departure of NGOs and aid workers further burdens a beleaguered, war-weary populace. In the future, adversaries may seek to control NGOs and tolerate their presence only as long as they serve their own interests and agendas.

Anticoalition elements also have targeted crucial economic and utility infrastructure. They have attacked the U.S.-trained police force. Angered at the U.S. presence, they have recruited openly in the cities for fighters to join in attacking Americans. These elements have understood the operational context and have influenced it with intimidation. Future adversaries will probably monitor indigenous peoples with respect to U.S. actions and presence in their country and devise strategies to exploit perceived vulnerabilities.

U.S. and coalition opponents in Iraq have used information operations to leverage the media and a possible worldwide jihad movement by crafting their resistance efforts into a fight for the preservation of Islam, which they seem to see as threatened. This information campaign has resulted in the introduction of elements into Iraq that have dramatically increased the lethality of attacks against the United States, its coalition partners and rank-and-file Iraqis. Adversaries have derived strategic benefit from tactical operations. Moreover, state and non-state actors with interests contrary to those of the United States have used information networks to attract and recruit new members to engage coalition forces. Coalition successes in the tactical arena in Iraq and other areas have been insufficient over the past decade. The United States and its allies must win the information war in places like Iraq and throughout the international community as a whole.

The enemy has used and adapted technology as a means of continuing its fight with a superior U.S. force. Improvised explosive devices, indirect fire systems, large stocks of small arms, electronic and communication devices, among other capabilities readily available through a globalized arms market, have provided a steady flow of changing means to irregular forces. External individuals moving through porous borders provide experience and expertise. This lends credibility to a future environment of threats with more sophisticated capability employed in more imaginative and unpredictable ways.

OIF and OEF have informed the global community of a number of capabilities crucial to U.S. battlefield domination. These include air dominance; precision-strike capability; power projection that facilitates massing of combat power in short time; and superiority in the domain of command, control, communications, computers and intelligence, surveillance and reconnaissance (C4 and ISR) capabilities. Potential adversaries are engaged in extensive efforts to challenge and/or mitigate U.S. dominance in these areas.

Future adversaries may seek to offset U.S. air dominance with emerging technologies such as directed energy weapons and electronic attack munitions. Adversaries may try to confuse U.S. acquisition systems by employing camouflage, cover, concealment, denial and deception (C3D2) techniques that range from burying jet aircraft underground to hiding weapons systems inside nonmilitary structures. During OIF, the Iraqis attempted to disrupt operations at U.S. forward operating bases (FOBs) with surface-to-surface missile strikes. Future adversaries may target U.S. FOBs with multiple munitions seeking destruction and network disruption. They may also attempt to disrupt power projection from bases within the United States with the full range of attack options including the use of weapons of mass destruction. Finally, emerging technologies such as radio frequency and electromagnetic pulse weapons may give U.S. adversaries tools with the potential to significantly disrupt U.S. C4 and ISR capabilities.

OIF and OEF have showcased the importance of context and operational environment as they pertain to influencing the outcomes of war and achieving campaign objectives. Military capability is but one aspect of warfare and despite the fact that potential adversaries are seeking to leverage emerging technologies, most nations have ceded that domain to the United States. As a consequence, the emerging lessons from current U.S. operations do not involve the construction of a military force capable of meeting the United States on equal terms. Instead those lessons tend toward means and methods to offset the effects and negate or render irrelevant U.S. military superiority.

JOINT CONCEPTS

The context for developing future military concepts and capabilities lies within the anticipated boundaries of the projected operational environment. The joint concepts and associated capability

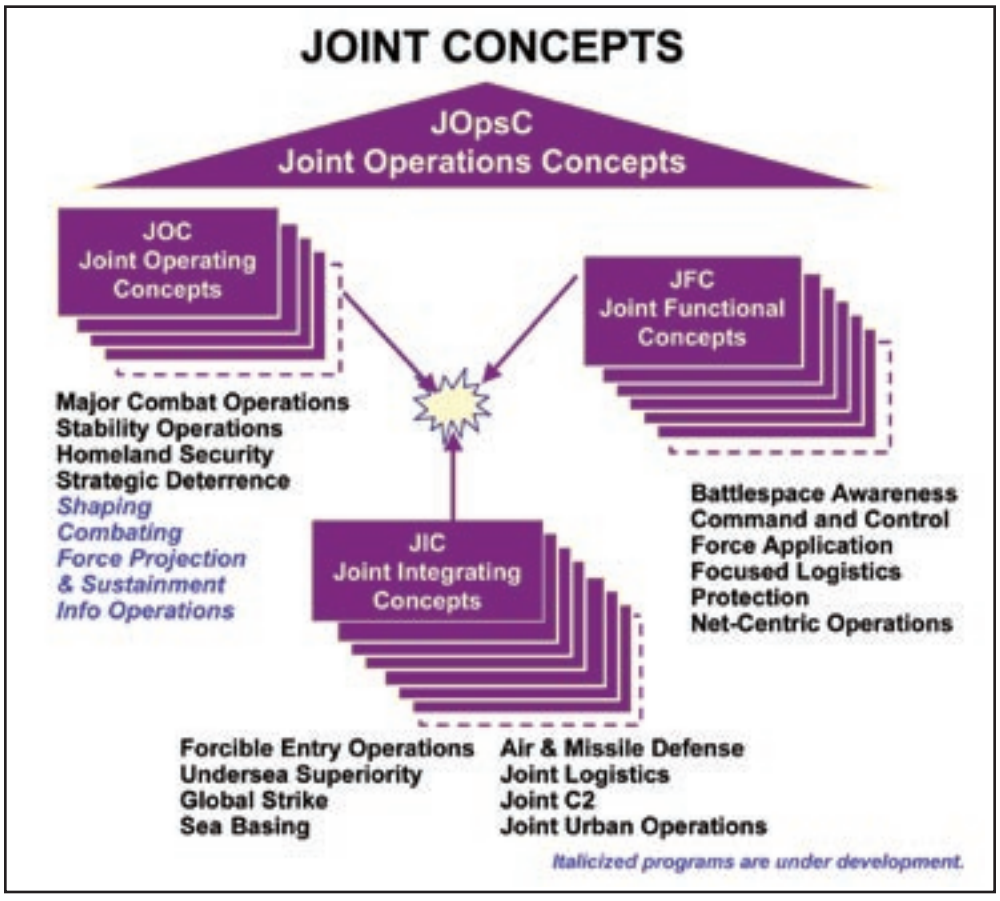

Figure 2-1. Joint Concepts Hierarchy

requirements under development by the Joint Staff, combatant commands and services influence Army transformation efforts. These concepts are intended to serve as the engine of change for the development of future military capabilities. Joint concept development occurs within an evolving framework that includes the overarching joint operations concepts (JOpsC), joint operating concepts (JOCs), joint functional concepts (JFCs) and joint integrating concepts (JICs), as shown in Figure 2-1. The JOpsC describes how the Joint Force intends to operate 15 to 20 years in the future across the entire range of military operations. The JOpsC also provides the operational context for transformation by linking strategic guidance with the integrated application of joint-force capabilities. The four JOCs describe how a future joint force commander will plan, prepare and conduct specific operations and identify the capabilities required for each. The JOCs are homeland security (HLS), strategic deterrence (SD), major combat operations (MCO) and stability operations (SO).

Joint functional concepts articulate how the future joint force commander will integrate a set of related military tasks to attain capabilities required across the range of military operations. They are broad, but derive specific context from the joint operating concepts. JFCs allow for experimentation and measures of effectiveness.

Joint integrating concepts are intended to be building blocks for joint operating or functional concepts and will describe how a commander integrates functional means to achieve operational ends. They are anticipated to focus on a narrow portion of a JOC or JFC and further describe capabilities in terms of essential tasks, attributes, and measures of effectiveness and performance that form the means to identify capability gaps and redundancies.

JOINT OPERATING CONCEPTS

Chapters 3 through 6 of the 2003 ATR focused on the four JOCs and associated capabilities. Each of these chapters described one of the JOCs and identified the joint and associated Army capabilities within the functional context provided by the JFCs that are required for success. They also discussed significant joint interdependencies implied by the JOC. The content in these 2003 ATR chapters remains valid — even as the Army continues to refine capability descriptions based on maturing JOCs and JFCs and the emerging set of JICs.

It is essential to recognize that JOCs are usually implemented simultaneously, whether in multiple regions, in a single joint operations area (JOA) or both. Army and joint forces must master the transitions between and among JOCs and have the ability to execute multiple, simultaneous JOCs across many regions. This recognition implies a capacity to conduct operations globally, in conjunction with one another, and to rapidly and effectively transition between them.

U.S. Joint Forces Command, U.S. Strategic Command and U.S. Northern Command are developing and refining a set of joint operating concepts that will serve as cornerstones in developing and maintaining required future military capabilities. Joint concept development occurs within an evolving framework that includes the overarching JOpsC and the four supporting JOCs.

Joint operating concepts are not stand-alone operations or mission sets. There is a fundamental, yet complex, interrelationship among the four JOCs. The HLS and SD JOCs are linked to their like-named strategic imperatives. By their very nature these two JOCs will continue regardless of major combat or stability operations. They include continental United States operations and actions, which play a key role in shaping the security environment for successful major combat and stability operations. Stability operations, which are military operations conducted with other elements of national power and multinational partners to establish order and promote stability, may be distinct operations, but they are also inherently part of MCOs, especially in pre- and post-conflict phases. The ability to rapidly and successfully conduct MCOs anywhere has fundamental deterrent value that underscores the credibility and effectiveness of joint forces for full-spectrum operations, enhances stability in key regions, and promotes U.S. homeland security.

Major Combat Operations Joint Operating Concept

Major combat operations are large-scale conflicts against an organized adversary possessing significant military capability and the will to employ that capability against U.S. interests or national security. The central objective of U.S. military forces in the MCO JOC is to achieve victory through the fluid and coherent application of joint capabilities within a joint, interagency and multinational environment.

The MCO JOC is predicated upon a globally integrated network that links U.S. military forces and all relevant agencies and coalition partners, facilitates collaboration and shared understanding, and serves as an integrating mechanism to achieve unity of action. Such a networked environment will improve synergy, adaptability and opportunism and thereby generate greater effectiveness.

The major combat operations joint operating concept is still under development and does not yet fully address how the JFC will conduct an MCO within a campaign construct. As concept refinement and experimentation continue, the MCO JOC continues to mature. At the same time, war gaming and lessons learned from recent combat experience continue to refine Army capabilities that support this JOC. Army capability in support of MCOs underscores credibility for full-spectrum operations, in which control of land, people and resources is required to achieve military victory and set the conditions to achieve strategic and political objectives. Key Army capabilities of the MCO JOC include:

- Forcible entry of mounted forces with superior organic mobility employed to achieve operational effects from tactical actions
- Battle command on the move that supports mission rehearsal and rapid, integrated, near-simultaneous operations throughout the JOA
- Enhanced Soldier, platform and force-protection capabilities
- Enhanced theater support capabilities
- Deployment and support infrastructure that reduces response times for early-entry forces and closes the gaps between early-entry and follow-on forces

Stability Operations Joint Operating Concept

The Joint Force conducts the stability operations under four condition sets: prior to initiation of combat operations — to prevent conflict, during combat operations — to mitigate the effects of conflict, as a result of combat operations — to consolidate gains and rebuild damaged societies, and as a stand-alone operation.

The military challenge inherent in the SO JOC flows from the premise that in order to create conditions amenable to political reconciliation, the Joint Force must establish and sustain control of land, people and resources within the JOA. The SO JOC envisions a link to interagency and multinational efforts. Stability operations respond and shape the regional battlespace in such a way to render resistance impractical and assistance welcomed. Stability operations are inherently manpower-intensive. They place a high demand on the military capabilities required to establish the safe and secure conditions necessary for all elements of the joint, interagency and multinational team's freedom of action to collectively achieve success.

The Army provides the majority of operational and sustainment capabilities for the Joint Force across the full scope of SO missions and tasks. Army capabilities required for MCOs are generally applicable for successful stability operations. Key Army SO capabilities include:

- Modular, tailored, multifunctional forces rapidly deployable into a JOA at times and locations required by the JFC
- Increased special operations forces (SOF) and counterterrorism capabilities
- Enhanced explosive ordnance disposal capabilities
- Increased security and protection capabilities for U.S. forces and assets, non-Defense

Department U.S. personnel, NGOs and key assets and infrastructure within the JOA

- Comprehensive medical diagnostic, prevention and treatment capabilities

Strategic Deterrence Joint Operating Concept

Strategic deterrence is the prevention of aggression or coercion by adversaries that threaten the survival of the United States or its national interests. Forward-stationed, forward-deployed and expeditionary forces around the world, as well as theater security cooperation actions, provide inherent deterrent value and assist in maintaining situational understanding. Similarly, active and passive homeland defense capabilities are major contributors to strategic deterrence. The SD JOC describes how a JFC will plan, prepare, deploy, employ and sustain a joint force to achieve specific deterrence objectives. Army capabilities that support MCO and SO greatly enhance the deterrent value of each and, therefore, directly support the overall concept of strategic deterrence.

The 2003 ATR addressed the SD JOC, focusing on influencing adversaries' decision-making calculus along three fundamental approaches: deterrence by benefit denial, deterrence by cost imposition, and constraint to mitigate the perceived consequences and costs. In addition to describing required joint capabilities and interdependencies, the 2003 ATR highlighted key Army capabilities for SD:

- Enhanced SOF direct action and special reconnaissance
- Modular combat forces that can be tailored as part of a joint team for limited duration global strike operations
- Ground-based space control capabilities to ensure JFC access to key command and control (C2) and intelligence, surveillance and reconnaissance (ISR) networks and to deny an adversary the same
- Ground-based integrated missile defense capabilities for homeland defense and protection of forward-deployed forces and allies
- Increased counterterrorism and counter-weapons-of-mass-destruction (WMD) capabilities

Homeland Security Joint Operating Concept

The homeland security joint operating concept posits a secure U.S. homeland as the nation's first national security priority. The HLS JOC describes how the Joint Force performs its responsibilities in support of securing the homeland — specifically how joint forces will conduct homeland defense against external threats and aggression, provide support to civilian authorities, and support defense emergency preparedness. Army forces provide essential capabilities for successful MCOs and SOs, which directly support HLS through operations in forward regions. Army forces also provide capabilities that directly support joint force HLS missions within homeland defense, civil support and emergency preparedness. Primary Army capabilities for HLS include:

- Modular, tailorable forces rapidly deployable for air and ground defense of key facilities; chemical, biological, radiological, nuclear and high-yield explosives (CBRNE) detection, defense and mitigation operations; and support to emergency responders and lead federal agencies
- Interoperable battle command capabilities that support and enable integrated HLS operations
- Army headquarters elements to coordinate support to local, state and federal agencies and to plan, coordinate and execute land defense of the United States and its territories
- Ground-based, midcourse defense segment of the ballistic missile defense system
- Ground-based air and missile defense assets in support of the joint integrated air defense activities
- Emergency response capabilities for protection of U.S. communications and network architectures and CBRNE

- AC and RC personnel to support local, state and federal officials for emergency preparedness and early response

JOINT INTERDEPENDENCIES

Rapidly transforming the Army to meet the challenges of the projected joint operational environment while engaged in a prolonged conflict will require an unprecedented degree of joint cooperation. To gain the right force structure mix to meet this challenge, the services and defense agencies must achieve joint interdependence.

The Army and its sister services have made significant improvements in the planning and conduct of joint operations, progressing from joint interoperability — the assurance that service capabilities can work together smoothly, to joint integration — collective efficiency and tempo. Yet joint operations continue to suffer from a myriad of gaps and seams that often hinder mission effectiveness. For example, targeting opportunities are missed because deconfliction and prioritization often take too long. Sustainment can be delayed due to inadequate asset visibility and factional pipeline management. These gaps and seams can also result in suboptimal force efficiency. This occurs when, at the expense of other valid requirements, individual services deem it necessary to compensate with organic capabilities that, in terms of total aggregated force structure, may be overly redundant.

JOINT INTERDEPENDENCE

Joint interdependence is the purposeful reliance on other service and joint capabilities to maximize their complementary and reinforcing effects while minimizing service vulnerabilities.

A commitment to interdependence requires broad understanding of the differing strengths and limitations of each service's capabilities, and clear agreement about how those capabilities will be committed. It also requires the absolute, mutual trust that, once committed, they will be employed as agreed.

The United States can no longer risk the operational fissures resulting from the lingering gaps in joint cooperation, nor can it fiscally afford unnecessary redundancies. However, achieving joint interdependency does not equate to the elimination of all redundancy in service capabilities. Some redundancy in the services will continue to be necessary to maintain operational flexibility.

What differentiates joint interdependency from joint interoperability and joint integration is mostly a matter of mindset, specifically, the degree by which the services collectively embrace the concept of purposeful reliance. Commitment to joint interdependency requires an understanding of the differing strengths and limitations of each service's capabilities, clear agreement about how those capabilities will be integrated, and, above all, absolute mutual trust that, once committed, they will be employed as agreed.

The five key joint and expeditionary interdependencies are

- Joint battle command
- Joint fires and effects
- Joint air and missile defense
- Joint force projection
- Joint sustainment

Joint Battle Command

A joint force commander's ability to dominate any adversary or situation in full-spectrum operations rests on his ability to make qualitatively better decisions faster than the adversary. To implement the JOpsC and JOCs, the future Joint Force will exercise battle command within an inherently joint, top-down network that provides common situational awareness. To succeed, this effort requires the alignment and synchronization of three major elements: operational concepts and doctrine, horizontally and vertically integrated systems, and the underlying joint technical architectural standards and global information grid (GIG) infrastructure in which the layered networks are nested. Key elements of a potential solution set include:

JOINT BATTLE COMMAND

The development and fielding of integrated joint battle management command and control (JBMC2) capabilities will enable U.S. forces to collaboratively plan and rapidly share an accurate picture of the battlespace.

Gaps:

- Absence of an overarching C4ISR architecture and data standard
- Noninteroperable communications and battle command systems
- Untimely and incomplete intelligence sharing
- Inefficient information dissemination
- Sequential, stovepiped planning

- Priority establishment of overarching, joint, integrated, operational architecture and embedded, holistic data strategy
- Development of the multi-echelon collaborative information environment (CIE) with horizontal and vertical infusion
- Multilevel security to extend CIE to interagency and multinational partners
- Continued development of the family of interoperable operating pictures to provide continuously updated blue and red force tracking in all battlespace dimensions
- Integration of mission rehearsal capability
- Horizontal and vertical sensor fusion, based in part on the distributed common ground station and aerial common sensor
- Development of a fully integrated joint fire control system of systems
- Fielding of the joint tactical radio system throughout the Joint Force for improved air-ground synchronization
- GIG bandwidth expansion
- Transformational satellite communications
- Network-enabled enterprise services
- Combat identification

Joint Fires and Effects

The future joint fires system of systems will use the CIE to sense, understand, decide and act faster than an adversary, gaining the desired operational effects with a combination of lethal and nonlethal means. Interdependence of joint fires will be vital to mitigating risk and reducing reliance on organic fires in a joint expeditionary environment. Linked through an effective joint command and control system, Soldiers will have the entire target acquisition and engagement resources of the theater at their fingertips. All future land force solutions depend on enabling even the smallest combat formations to leverage joint fires. Key elements of a potential solution set include:

JOINT FIRES & EFFECTS

Frees commanders from reliance on organic fires and requires absolute dependence on joint fires. Joint fires interdependency involves ensuring timely support and optimizing the overall capability of the Joint Force within a distributed battlespace.

Gaps:

- No fully interoperable battle command and fire control systems
- Limited linkages between operational net assessment sensor control data and joint intelligence surveillance and reconnaissance data
- Interface seams between communications and computer networks
- Few flexible fire control measures
- Limited tactics, techniques, procedures and experimentation for validating interdependent joint fires control system of systems
- Limited tactical air control parties at lower echelons

- Building an operational architecture that integrates
  - Service fires networks into a common operational fires network
  - Sensor-to-shooter capabilities that enable efficient and interdependent fires
  - Common language, collection network, strike capabilities, target list and common operating picture (COP)
- Remedying shortfalls by implementing and developing
  - Common fires situational awareness grid among joint and coalition targeting communities
  - Dynamic fires battle management and C2 processes
  - Joint ISR integration into the future fires process
  - Adequate joint fires tactics, techniques and procedures (TTP), experimentation, exercise and training
  - Joint terminal controllers at all required echelons
  - Adequate coalition forces integration and synergy
- Addressing methodologies across three functional domains
  - Knowledge — continually updating an operational net assessment (ONA) throughout the joint and coalition forces
  - Battle command — an adaptive, responsive command organizational management structure
  - Operational practices — automated targeting that facilitates targeting solutions

Joint Air and Missile Defense

The threat from ballistic and cruise missiles has grown steadily in light of U.S. dominance against the manned, fixed-wing threat and as sophisticated missile technology becomes available on a wider scale. The proliferation of weapons of mass destruction and the missiles that could deliver them pose a direct and immediate threat to the security of U.S. military forces and assets in overseas theaters of operation. They pose a threat as well to the United States and its allies. For maximum protection, the seamless means of attacking a missile in all phases of flight or even before it is launched must be achieved jointly. Key elements of a potential solution set include:

JOINT AIR & MISSILE DEFENSE

A fully networked, interdependent, joint-theater air and missile defense network of space-, air-, sea- and land-based elements that provides a very high degree of protection beyond the JOA to include regional forces from atmosphere-delivered weapons of mass destruction.

Gaps:

- Reduced protection in the face of sophisticated missile technology
- Lack of seamless means for attacking a missile in all phases of flight or before it is launched

- Dependence on space-based assets for long-range, theater ballistic missile (TBM) warning and the integration of ground- and air-based sensors to generate surveillance needs for shorter range TBM, unmanned aerial vehicle and rocket, artillery or mortar threats
- Dependence on the Air Force, Navy and Marine Corps to provide air defense against fixed-wing threats
- Establishment of joint air and missile defense task forces that are airlift-deployable, modular, mission-tailorable and can deploy/employ directly to the JOA for land maneuver forces conducting joint forced-entry operations
- Development of a combination of ground-based and elevated sensors to achieve surveillance and fire control against a full range of threats

- Development of a COP that includes a single integrated air picture, a single integrated ground picture and a maritime picture
- Pursuing directed-energy AMD capabilities, including defense against RAM, ballistic missiles and cruise missiles

Also, within joint air and missile defense, the Air Force and Marine Corps would depend on the Army and Navy for theater ballistic missile defenses. The Army and Marine Corps would partner on unmanned aerial vehicle and rocket, artillery and mortar defenses. All services would partner on cruise missile defenses.

Joint Force Projection

The current and projected suite of strategic lift capabilities is insufficient to meet Department of Defense 10-30-30 swiftness goals for strategic responsiveness of the Joint Force as a whole within the 1-4-2-1 framework. In particular, neither the airlift or sealift programs projected for the next 20 years fulfill force projection capabilities gaps. With respect to campaign execution and operational agility, the currently programmed Joint Force also lacks the intratheater capability to carry out simultaneous operations, distributed within a noncontiguous battlespace, as described within the JOCs. Key elements of a potential solution set include:

- Supporting development of shallow-draft, high-speed sealift capability for prompt and sustained response
- Supporting development of an extended range, super-short, take-off and landing (SSTOL) capability to sharply expand the joint force commander's ability to act throughout the joint operations area. This will enable operational maneuver by air, delivering forces and sustainment to landing areas close to forward operating areas. It will also enable direct attack of mounted forces against key objectives anywhere within the JOA and will reduce predictability.
- Supporting development of heavy-lift, vertical take-off and landing (HLVTOL) capability will provide tactical-to-operational level sustainment and vertical maneuver of ground forces from either land or sea bases. HLVTOL will complement the operational-to-strategic capability available from SSTOL. The versatility, range and operating profile of the SSTOL and HLVTOL aircraft permit hundreds of entry points within the JOA for mounted or dismounted operations and expose any portion of the enemy's territory to attack by light and medium mounted forces.

JOINT FORCE PROJECTION

Improves the strategic responsiveness of the Joint Force as a whole within the 1-4-2-1 framework to meet Department of Defense swiftness goals. Improves the ability of the Joint Force to operate via vertical maneuver and other deployment concepts.

Gaps:

- Overreliance on improved air- and seaports of debarkation
- Limited ability to employ multiple force-projection routes and multiple points of entry to overcome enemy anti-access
- Limited ability to operate in austere theaters or sustain forward forces
- Limited ability to deliver ground forces in combined arms configurations for immediate employment
- Gap between early-entry forces and heavy forces
- Limited ability to operate from unimproved landing areas
- Limited ability to deliver Army forces over the shore in significant numbers
- Limited ability to conduct direct strike and maneuver against key elements of the enemy's center of gravity
- Limited ability to maintain high operational tempo and continuous pressure
- Inability to conduct operational maneuver and sustainment by air of mounted forces

- Supporting the continued development of the Theater Support Vessel (TSV) will provide rapid projection, shifting and sustainment of joint forces over the shore via unimproved seaports

SDHSS, SSTOL, HLVTOL, TSV and sea-basing capabilities permit Army forces to avoid improved airports and seaports, exploit multiple entry points, deliver forces in combat configuration for immediate employment, present multiple dilemmas to the enemy, and achieve operational surprise. Overall, the simultaneity of these actions permits the joint force commander to seize the initiative.

The Army also shares the Marine Corps' interest in the feasibility of deploying from a sea base. The Army supports the development of a joint sea-basing capability and looks forward to a cooperative effort to address the intratheater lift challenge.

Joint Sustainment

Dramatic changes in the joint operating environment prescribe operational maneuver of forces from strategic distances directly to the operating area. Successful employment of this concept demands the concurrent transformation and employment of a corresponding sustainment concept — to do otherwise carries the risk of deploying forces that cannot be effectively supported. In this new, noncontiguous and nonlinear battlespace, it is highly unlikely that theater distribution will continue to remain the exclusive domain of the Army, which has historically depended upon the ability to build up infrastructure and supplies along secure ground lines of communication. Key elements of a potential solution set include:

JOINT SUSTAINMENT

Transition from service-centric, supply-based, regionally focused logistics systems to a single, fully integrated, globally synchronized, end-to-end distribution-based system capable of providing agile, precise, responsive support to tailored expeditionary joint forces conducting distributed operations.

Gaps:

- Inadequate and noninteroperative asset visibility and tracking systems
- Factional pipeline management and process ownership
- Gapped, ad hoc command, control and communications
- Limited ability to maintain end-to-end control
- Limited ability to support rapidly changing, high-tempo operations

- Integrating current supply and transportation information systems into a single, demand-driven and distribution-based sustainment command, control and communications (C3) system. This system would be capable of providing a common logistical picture, solid logistical situational understanding, and complete and accurate asset tracking. This will enable sense-and-respond logistics.
- Supporting the establishment of an interdependent, globally synchronized sustainment capability that integrates strategic and theater distribution. It also integrates supply and transportation functions in order to provide seamless support to combatant commanders.
- Advocating the need for establishing a single sustainment C2 element for theater logistics
- Increasing support for joint programmatic funding to achieve the rapid development of advanced abilities. This will increase reliance on air- and sea-based sustainment operations simultaneous to deployment to facilitate sustainment in nonlinear, noncontiguous battlespaces. This includes SDHSS, SSTOL, HLVTOL, a joint precision aerial delivery system and sea-based logistics.
- Establishing protocols and infrastructure to engender content visibility at origin and assemble, throughout the pipeline, unit- and mission-configured loads to the tactical level
- Refining focused logistics, distribution-based concepts to derive DOTMLPF remedial action

ARMY CAPABILITIES-BASED ASSESSMENT THROUGH A JOINT LENS

The family of joint concepts and associated capability descriptions continues to influence Army concept development and experimentation that provide the basis for capabilities integration and development for a full-spectrum, campaign-quality Army with joint and expeditionary capabilities, depicted in Figure 2-2.

Capabilities-based assessment starts with an analysis of required capabilities discussed in overarching guidance documents such as the SPG; NMS; JOpsC; OFT STA, as part of Army campaign analysis; Army Concepts; etc. Integrated priority lists, operational lessons collected from the Center for Army Lessons Learned (CALL), USJFCOM, and operational needs statements serve as the primary documents to capture operational experience and combatant commander assessments to identify tasks and requirements, as shown in Figure 2-3.

Current and Future Force capability-gap analysis through a joint lens is the essential first step that identifies those areas that are or could present operational vulnerabilities for the Army as part of the current and future joint force. This effort focuses on working with other services to identify and invest in high-return DOTMLPF solutions that address the gaps. These solutions consequently increase Army and joint force effectiveness while reducing opportunities for adversaries. The Army will continually evaluate the operational environment and how it will change in the future, determine what types of capabilities the Army will require to remain the pre-eminent land force, and implement

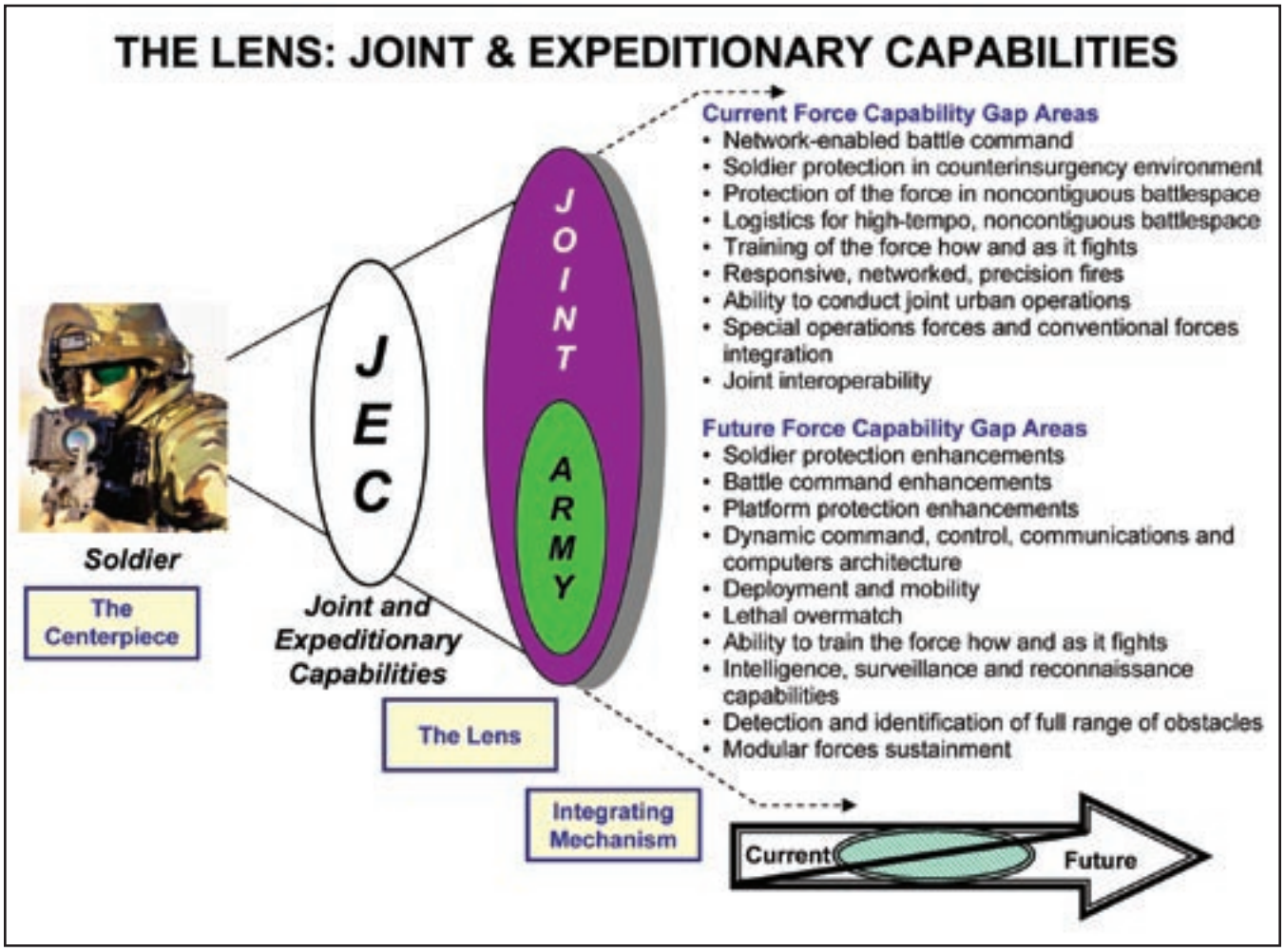

Figure 2-2. Army Capabilities Based Assessment Through a Joint Lens

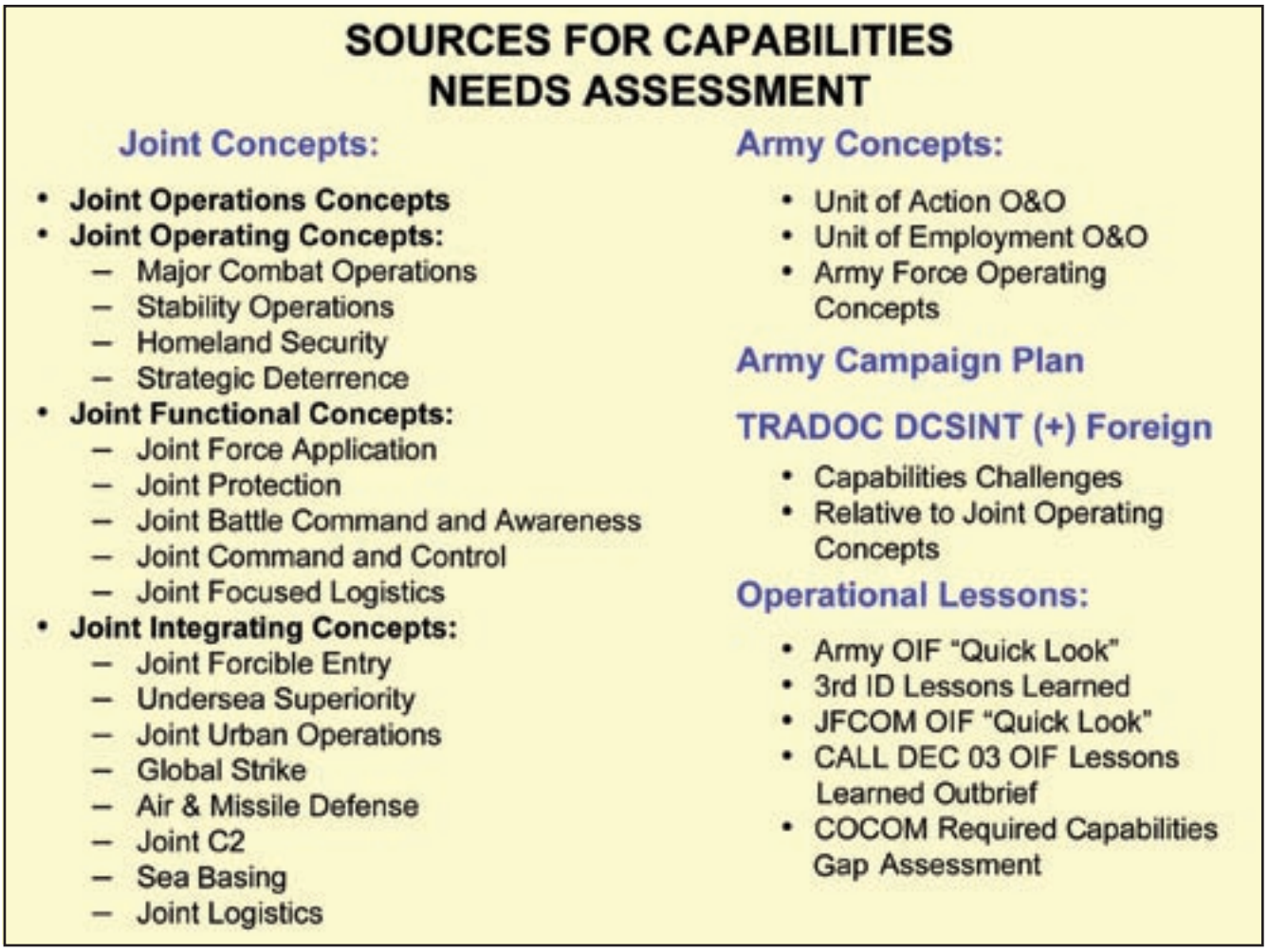

Figure 2-3. Sources for Capabilities Needs Assessment

the best methods for turning requirements into fielded solutions.

The processes driving the joint capabilities integration and development system (JCIDS) help the Army to assess operational gaps, as shown in Figure 2-4. The Army capabilities gap identification process focuses on detection, gap validation and prioritization. Those required capabilities that cannot be performed or that are inadequately performed with existing and programmed resources are defined as capability gaps.

Candidate solution identification provides input into the JCIDS process. TRADOC Futures Center is the lead agency for this phase and orchestrates a collaborative solution identification process. This phase incorporates a DOTMLPF approach to identifying potential solutions and an analytical assessment of candidate materiel solutions, as shown in Figure 2-5. The process is flexible and open enough to enable robust interaction between shortfalls and the sources of solutions. Functional

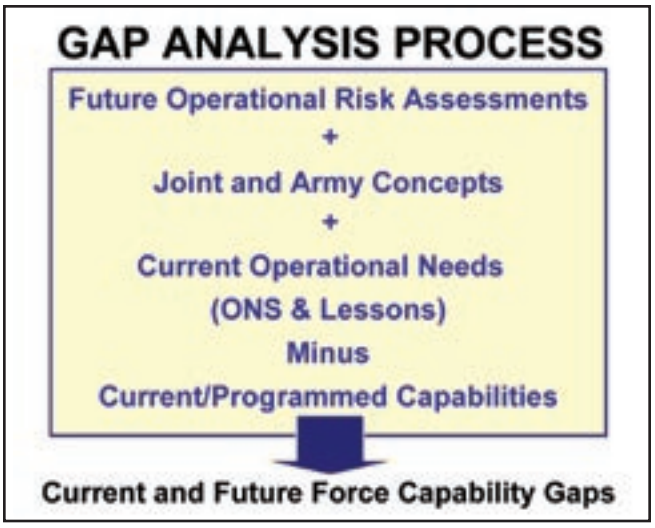

Figure 2-4. Gap Analysis Process

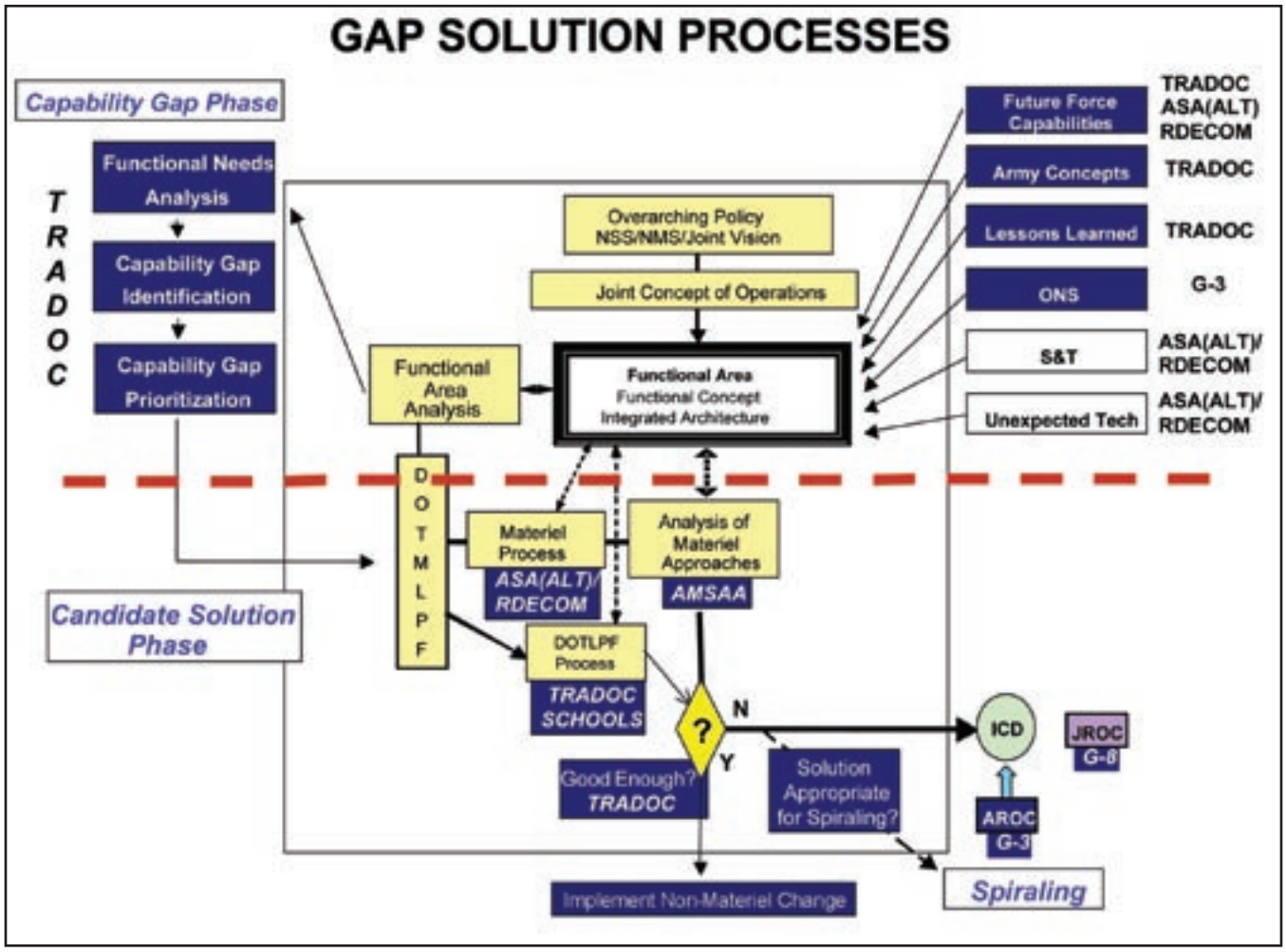

Figure 2-5. Gap Solution Processes

solutions analysis serves as the foundation document for this phase and provides an operationally based assessment of DOTMLPF approaches for solving capability gaps. This is carried out every six months and is coordinated with the planning, programming and budgeting system because of the funding requirements associated with recommended solution sets.

This phase also provides an opportunity to refine science and technology direction as well as current funding. This will enable the results of the spiraling process for each six-month period to feed the science and technology and acquisition program objective memorandum build in December and subsequent decisions in May and June, as shown in Figure 2-6. Once potential solutions are identified, the Army's deputy chief of staff for operations will lead the process of prioritization of solutions and make the final decision on which solution to implement. This decision influences Current and Future Force development through a variety of means:

- Rapid Equipping Force
- Rapid Fielding Initiative
- Agile Development Center
- Army Capabilities Integration and Developmental System

The complexity and uncertainty envisioned for the future operational environment reinforces the need for the Army's ability to adapt, innovate and learn. Potential adversaries are developing capabilities and strategies that avoid the Army's future strengths while others are developing asymmetric strategies to circumvent its current capabilities. These threats combine to necessitate progress from joint interoperability to joint interdependence.

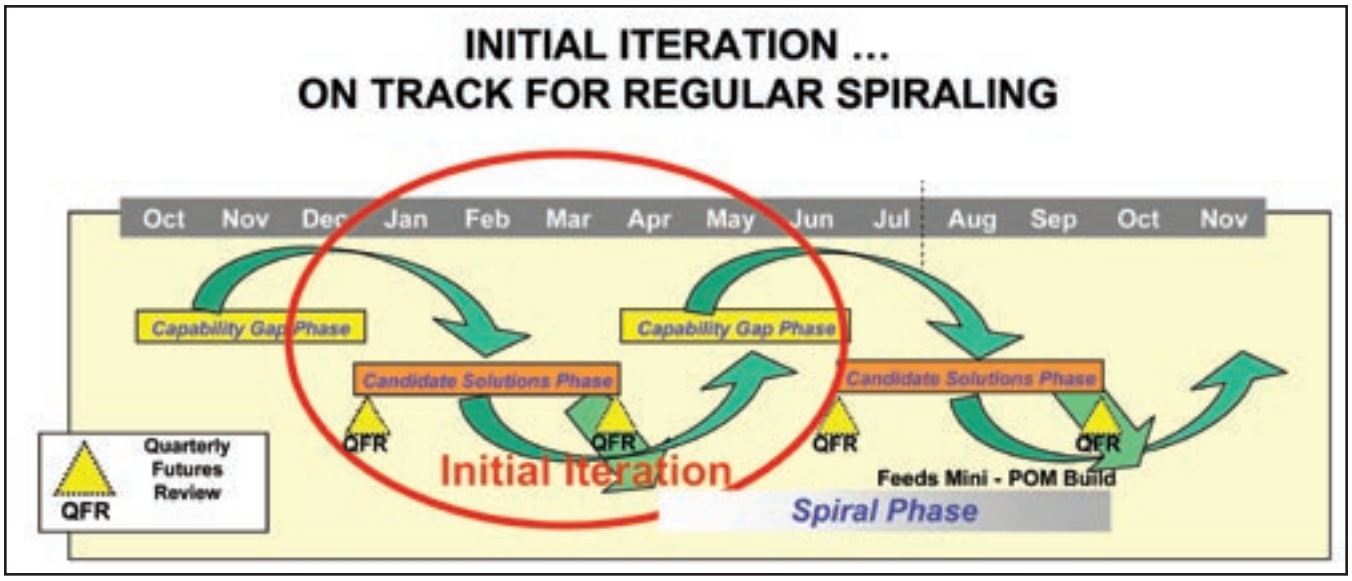

Figure 2-6. Current and Future Force Gap Analysis

The Army will continue to support Department of Defense transformation, as part of the joint team, and will provide a campaign-quality Army with joint and expeditionary capabilities for each of the four areas of challenge mentioned in Chapter 1 and as discussed below.

Much of this roadmap addresses the traditional challenges by discussing those required capabilities to counter potential adversaries who employ legacy and advanced military capabilities and recognizable military forces. To counter irregular challenges, the Army has refocused its war-gaming efforts to account for enemies who use combinations of traditional and irregular warfare against the United States. This has resulted in a new, organizational design with more infantry, a necessity for the irregular environment. The Army is also accelerating the development of tactics, techniques and procedures to ensure the lessons of irregular warfare are rapidly passed on to the operational force and the appropriate materiel development is accomplished. The Army is developing flexible, modular forces postured to rapidly augment homeland security forces against catastrophic challenges. At the same time, active programs in early development, within science and technology and research and development, anticipate disruptive threats as early as possible. The next chapter discusses how the Army will provide these capabilities to the Joint Force.

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CHAPTER 3

PROVIDING READY FORCES

A CAMPAIGN-QUALITY ARMY WITH JOINT AND EXPEDITIONARY CAPABILITIES

Strategic guidance and operational experience confirm that the nation requires expeditionary forces capable of sustained operations. As elusive and adaptive enemies seek refuge in remote and inaccessible areas, the norm will be short-notice operations, austere operational environments, incomplete information and the requirement to fight on arrival throughout the battlespace and to dominate potential adversaries for the duration of a campaign.

Campaigns are undertaken to bring about fundamental, favorable change in a crisis region and create enduring results. Many will likely entail lengthy periods of both major combat and stability operations. This requires the Army to sustain decisive operations for as long as necessary, adapting to changes as required. Though Army general-purpose forces are well-organized to adapt to change, Soldiers must be prepared and predisposed to operate under conditions of ambiguity. At the same time, the Army must reconcile expeditionary agility and responsiveness with staying power, durability and adaptability.

To maximize combat power, Army modular forces will be able to employ the entire range of available joint capabilities. Such joint interdependence is not unidirectional. Modular Army forces will be better able to support the joint force commander because modular capabilities enable the Army to provide flexible arrangements of combat power for the full range of military operations.

ACHIEVING GREATER COMBAT CAPABILITY WITH MODULAR, CAPABILITIES-BASED UNITS

A campaign-quality Army with joint and expeditionary capabilities requires versatile forces that can routinely mount smaller, shorter duration operations — without penalty to the Army's capacity for larger, more protracted campaigns. Near-simultaneous employment and deployment characterize Army operations, and these operations are becoming increasingly diverse in both purpose and scope.

The Army retains a broad array of reinforcing capabilities; however, its operational forces are configured to fight in large tactical formations with multiple layers of command and control. Within the Current Force, the Army must often disassemble division and corps structures to create purpose-built task forces. This often leaves behind substantial forces that are relegated to being inoperable remnants. Because of this, the Army has frequently found itself activating Reserve Component (RC) forces to fill the gaps left by disassembled Active Component (AC) forces.

The Army's ability to successfully provide the joint team both rapid expeditionary capabilities and the ability to conduct sustained land campaigns across the full spectrum of conflict requires both Active and Reserve Component contributions. The Army will restructure the Current Force, creating modular capabilities and flexible formations while obtaining the correct mix between AC and RC force structure. This rebalancing effort will enhance the Army's ability to provide the joint team relevant and ready expeditionary land-power capability, as shown in Figure 3-1. The Active Component will provide rapidly responsive, agile and expeditionary forces that typically respond within the first 30 days of an operation. The availability of adequate AC and RC follow-on forces provide the joint force commander the campaign-quality combat, combat support and combat service support capabilities necessary to achieve operational and strategic objectives and to conduct sustained land operations.

Maneuver Brigades/Units of Action

The decisive effort of Army transformation is the creation of modular, combined arms maneuver brigade combat team (units of action), or BCT(UA), of which there are three types: Heavy (armored/mechanized), Stryker and Infantry. As part of this transformation, the Army migrates capabilities that were previously found at divisions and corps to the BCT(UA) — the building block of combat forces in the Future Force. Each type of UA will be of standard configuration. These UAs will gain improved force packaging, sustainability, battle command and situational awareness while retaining the same lethality as the larger, task-organized brigade combat teams. These units will serve as the foundation for a land force that is balanced and postured for rapid deployment and sustained operations worldwide. Army general-purpose modular formations will be capable of rapidly foreclosing an adversary's options, achieving decisive results in major combat operations, and setting many of the security conditions for enduring conflict resolution.

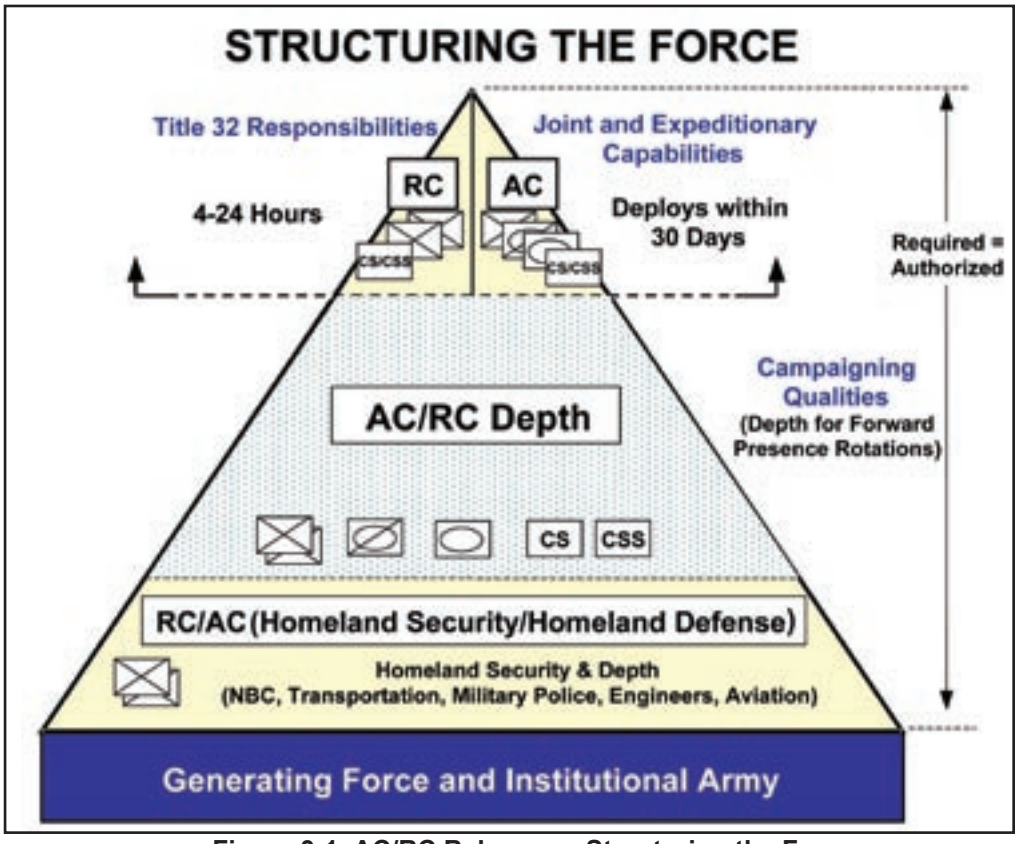

Figure 3-1. AC/RC Balance — Structuring the Force

Over the next six years, the Army will convert existing AC and RC brigade combat teams to one of three standardized modular UA designs. The Army will also build up to 15 additional AC BCT(UA)s over the next four years. The modular conversion sequence is depicted in Figure 3-2. The brigade conversions will occur in conjunction with the conversion of division headquarters to the unit of employment X or UEx configuration. The National Guard will convert at a pace similar to the AC using common organizational designs.

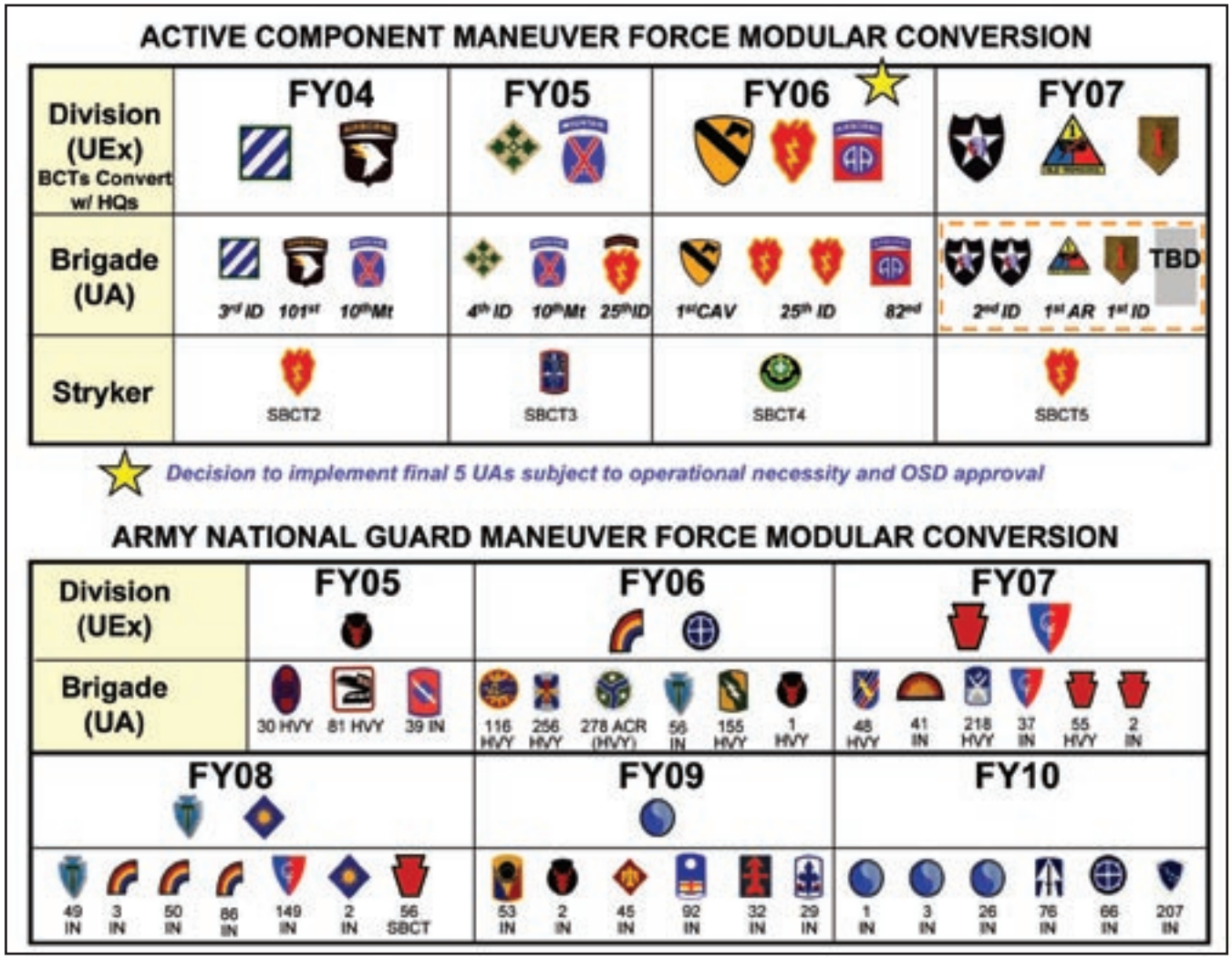

Figure 3-2. Army Maneuver Forces Modular Conversion Sequences

The three UA designs, Infantry, Heavy and Stryker, are similar in overall configuration. Infantry and Heavy will be organized with two maneuver battalions, while the Stryker will have three. Infantry and Heavy will have an armed reconnaissance or reconnaissance, surveillance and target acquisition, or RSTA, squadron; a fires battalion; a support battalion; and a brigade troops battalion. Stryker will not have a brigade troops battalion but will contain an engineer company. These designs are shown in Figure 3-3.

- The brigade troops battalion provides the command posts, liaisons, military intelligence and signal support for the UA.
- The RSTA squadron conducts reconnaissance, surveillance and target acquisition functions for the UA. It consists of conventional and chemical reconnaissance units.
- The two combined arms battalions are the maneuver forces for the Infantry and Heavy UA and consist of four infantry or armor companies. They also possess scouts, engineers and sustainment forces.
- The fires battalion consists of two artillery batteries with target acquisition and countermortar radar systems.
- The support battalion provides additional transportation, distribution and maintenance functions that cannot be covered by the forward support companies. It also directly supports the brigade troops battalion.

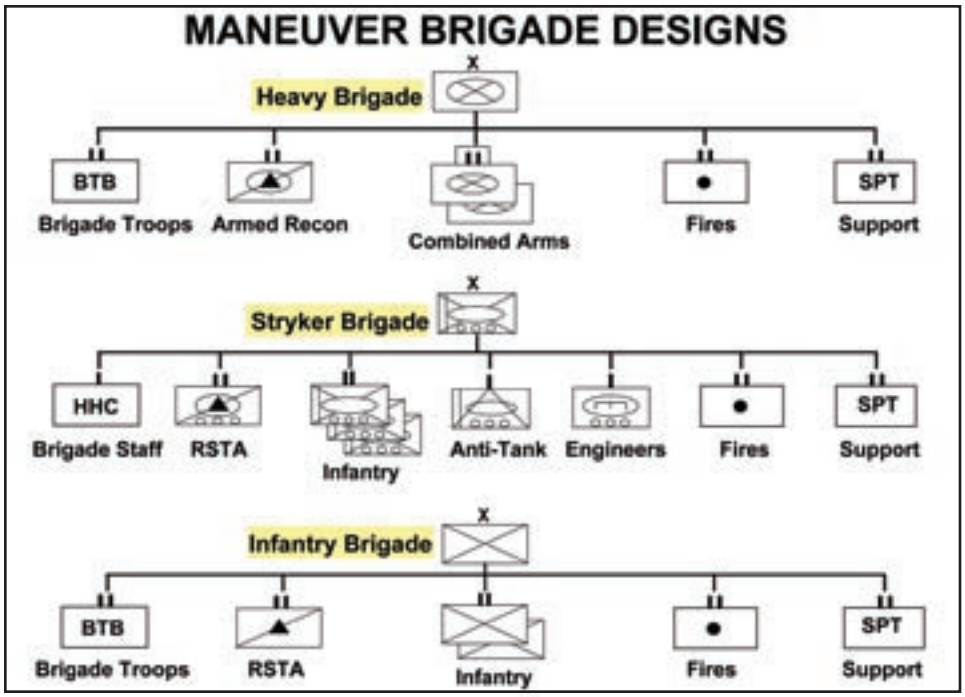

Figure 3-3. Maneuver Brigade Modular Designs

Linkages to Future Combat System-Equipped Units of Action

The Future Combat Systems (FCS) comprise a family of advanced systems being developed around a common network that will integrate joint assets in the conduct of high-tempo, decisive land operations. FCS includes a variety of joint-networked, manned and unmanned air and ground vehicles; advanced sensors; highly lethal weapons; and, most importantly, the Soldier. As a part of enhanced joint capabilities, FCS will improve the joint force commander's ability to successfully achieve national objectives while providing Soldiers with the best combat capabilities and protection. The capabilities of the FCS family are discussed in Chapter 4.

While the UA design reflects a transformation effort that employs the Army's current and near-term capabilities and joint enablers, these organizations will help the Army transition to an FCS-equipped force. The Army has mapped the path of the modular design to the FCS-equipped formation it will field within the next 10 years. These modular designs possess the characteristics of joint interdependence, versatility and agility for full-spectrum operations.

The UA's combat power grows rapidly as forces arrive. There is a clear path from the Current Force to the Future Force in all facets of modular organization design. These modular force designs will evolve through a comprehensive studies and analysis program; insights gained from training conducted in live, virtual and constructive environments; and lessons learned during tactical employment. The planned modular brigade design

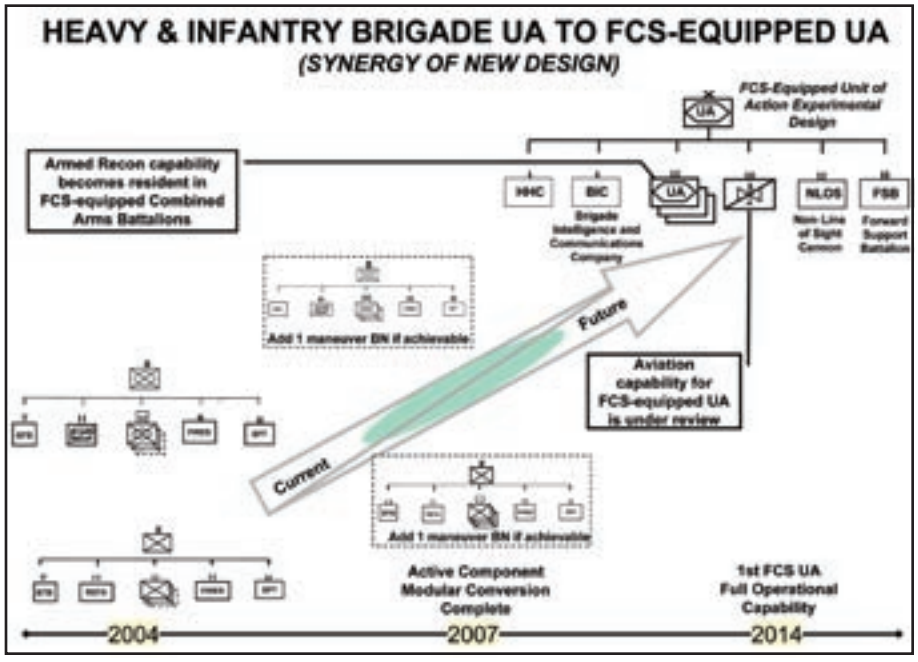

Figure 3-4. Modular Unit Designs Transition Effectively to FCS-Equipped Unit Designs

with Future Combat Systems-equipped UA is shown in Figure 3-4.

MODULAR HEADQUARTERS

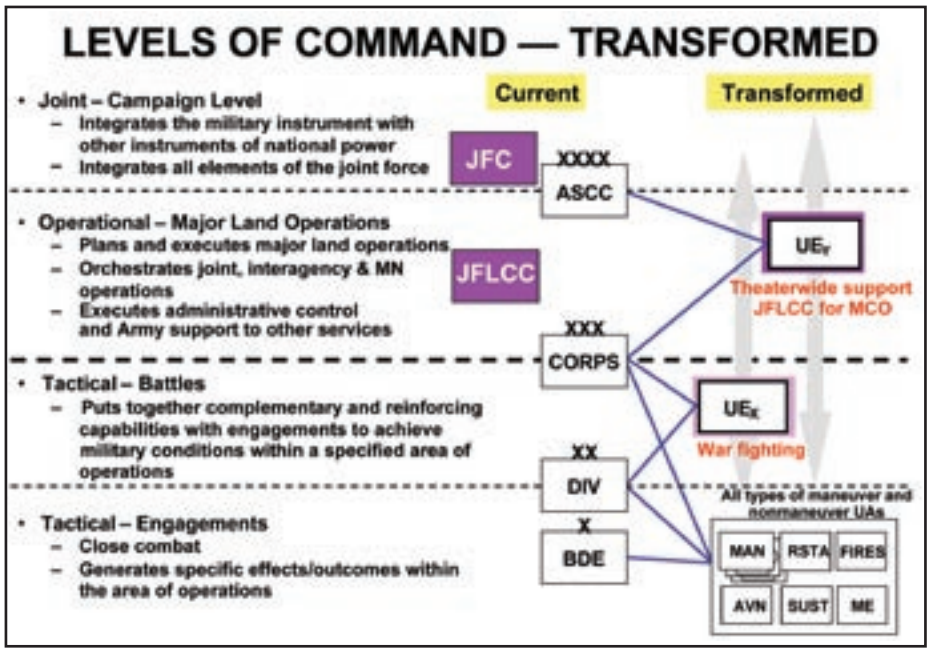

Figure 3-5. Redistribution of Headquarters Functions

Between now and 2010, two standing echelons will replace the existing structure of divisions, corps and echelons above corps. These echelons are currently designated UEx, which normally has tactical and operational control of units of action, and UEy, which normally provides the Army's functional capabilities to the joint force commander. While the natural tendency is to think of these echelons as linear improvements to the division and corps, the UEx and UEy are not. Both higher echelons will be modular entities designed to employ a tailored mix of forces and will integrate joint functions by design. Both headquarters will also be able to work directly for the joint force commander. Figure 3-5 shows these headquarters, the redistribution of functions, their relationship to each other and their correspondence to former organizations.

The Unit of Employment X

The unit of employment X (UEx) is the Army's primary tactical and operational war-fighting headquarters. It is designed as a modular, command and control headquarters for full-spectrum operations. The UEx has no organic subordinate units other than the actual headquarters units. These headquarters will employ separable, deployable command posts for rapid response and entry; provide reach and reachback capabilities to minimize forward footprints; and be network-enabled organizations capable of enhanced battle command. The UEx headquarters has organic liaison teams. It does not depend on any subordinate brigade to provide elements of the special staff, and it has a security company that can provide security platoons to its mobile elements. The UEx headquarters design is shown in Figure 3-6. The UEx is organized, manned, trained and equipped to:

- Control up to six maneuver brigades. It may control more maneuver brigades in protracted stability operations. The UEx may also control more maneuver formations when the maneuver units are cycling through mission staging, but, normally, the UEx can employ a maximum of six maneuver brigades at any one time during combat operations. The brigades may include any mix of Heavy, Infantry, Stryker and, eventually, FCS-equipped brigades. In addition, the span of command may decrease to one or two brigades for forcible entry operations.

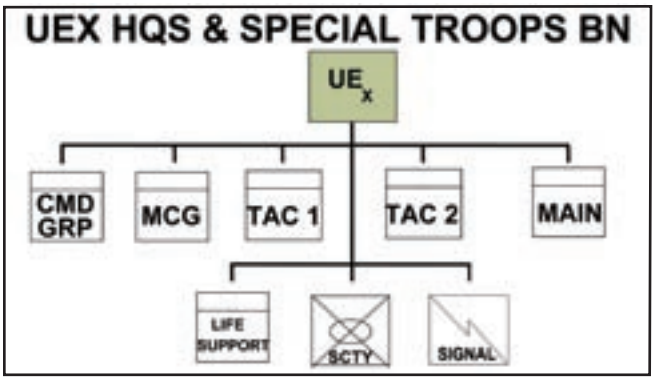

Figure 3-6. UEx Headquarters Module

- Control a tailored mix of other warfighting functions organized under multifunctional brigades including fires, maneuver enhancement, RSTA, aviation and sustainment brigades. The mix of forces assigned to the support brigades is determined by mission, enemy, terrain, troops, time, civil considerations (METT-TC) and not by standard template.

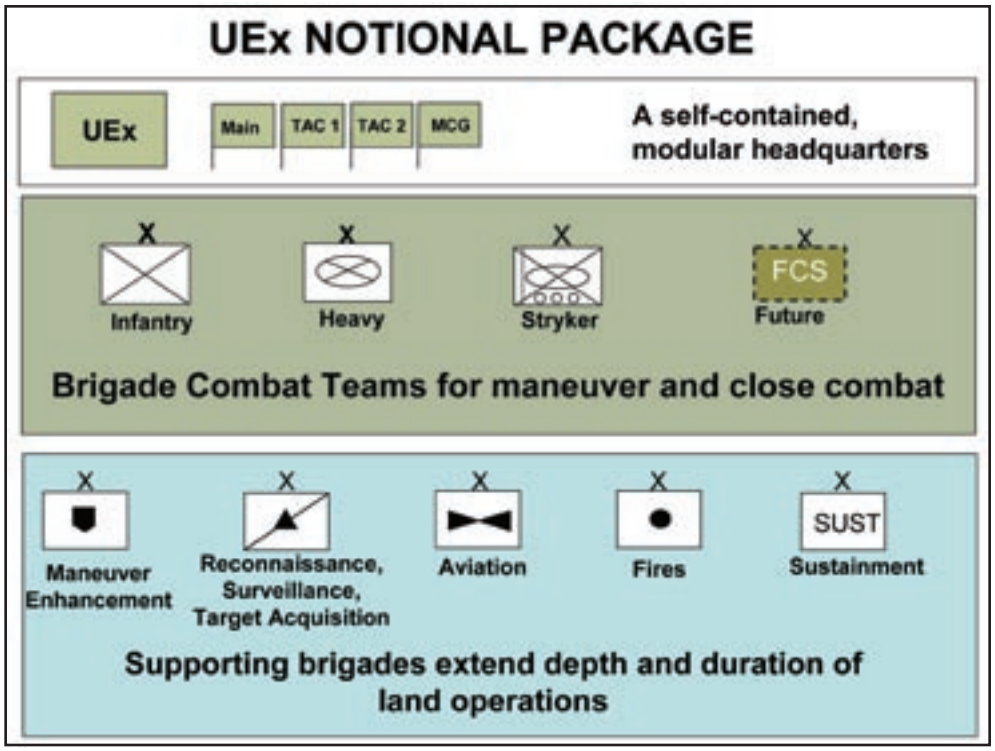

Figure 3-7. A Notional UEx Force Package

- Organize and distribute command and control assets according to the situation. The UEx commander may alternate command posts between planning and execution functions and assign them to geographically dispersed operations. The commander may allocate them to divergent, simultaneous operations or functions.
- Function as an Army forces (ARFOR) headquarters or the joint force land component commander (JFLCC) for smaller scale contingencies without additional Army augmentation, but with the capabilities of the unit of employment Y (UEy) to provide administrative control and support to forces deployed in the JOA. The UEx may serve as both the ARFOR and JFLCC simultaneously, although augmentation may be required for extended operations.
- Direct mobile strike and precision strike operations through mission orders to the aviation and fires brigades.
- Control battalion-sized to brigade-sized air assaults within its assigned area of operations, using aviation elements under its operational control. However, the UEx does not control simultaneous airborne operations and air assault operations. Most airborne operations will require either a brigade-sized airborne task force or another UEx.
- Employ sustainment brigades provided by UEy elements to establish temporary bases as required. Using these bases, the UEx rotates brigades through mission staging operations (MSOs), supports replenishment operations in the maneuver brigades' areas of operations, and provides area support to other brigades supporting the operation. The UEx employs maneuver enhancement brigades and maneuver forces to provide area security for these bases.
- Operate independently along a line of operations during offensive operations, or in an AO to establish the military conditions required for the successful conclusion of the major land operation or joint campaign.

The Unit of Employment Y

A concept is under development for an Army theater-level headquarters to support regional combatant commanders. This concept calls for the consolidation of functions currently performed by

corps and Army service component commands into a UEy organization. The UEy would focus on the Army's component responsibilities for the entire theater's joint, interagency and multinational operational land forces. During major combat operations, where the regional combatant commander is the joint force commander, the UEy would normally become the JFLCC and exercise operational control over tactical land forces. The specific organization of each UEy would be based upon the requirements of the joint force commander and the conditions in the theater. The UEy would normally include sustainment, protection and battlespace awareness elements. This would enable Army forces to be more responsive to the needs of combatant commanders, as shown in Figure 3-8.

most or all of their subordinate units organic, such as aviation brigades, will be able to be tailored for specific missions. Second, the brigades themselves will have to be modular so that they can plug into or out of any headquarters easily and effectively. Each will have the network connectivity and a liaison officer to work not only for UE headquarters, both UEx and UEy, but also for another service, another functional headquarters or a multinational headquarters. These units will be inherently joint in that they will be able to access and use appropriate joint enablers to accomplish their functions, and they will be able to, in turn, contribute to the joint capability. For example, the RSTA brigade will access and use joint intelligence to help it cue its own assets. It will feed the information it develops about the enemy into the joint force commander's

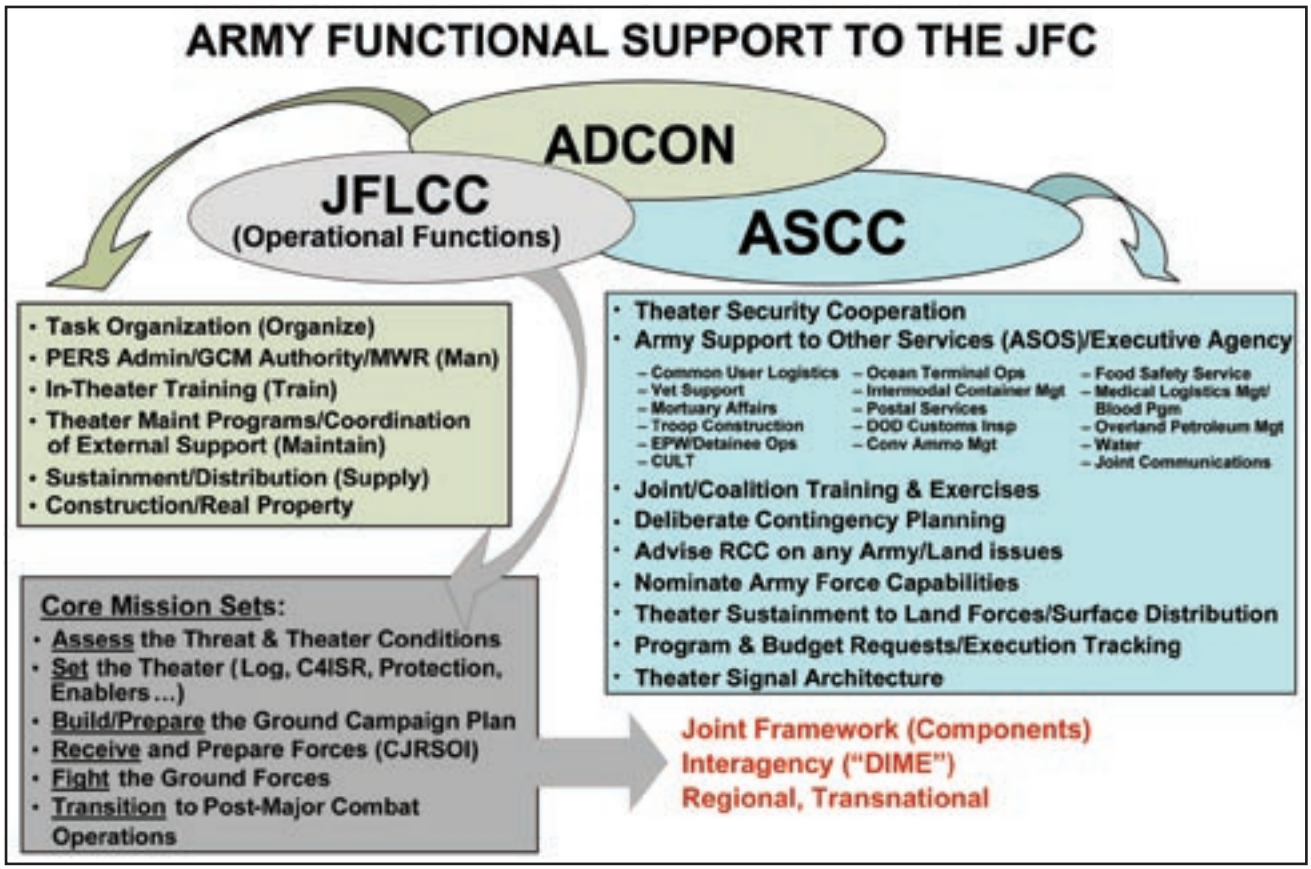

Figure 3-8. UEy Support to the Joint Force Commander

Support Brigades

Each support brigade shares a set of common characteristics. The support brigade will be tailorable based on METT-TC. Even those with

intelligence picture. Finally, the support brigades will have capabilities that can be used by the UEx commander to task organize other UAs assigned to the UEx. For example, the fires UA will have

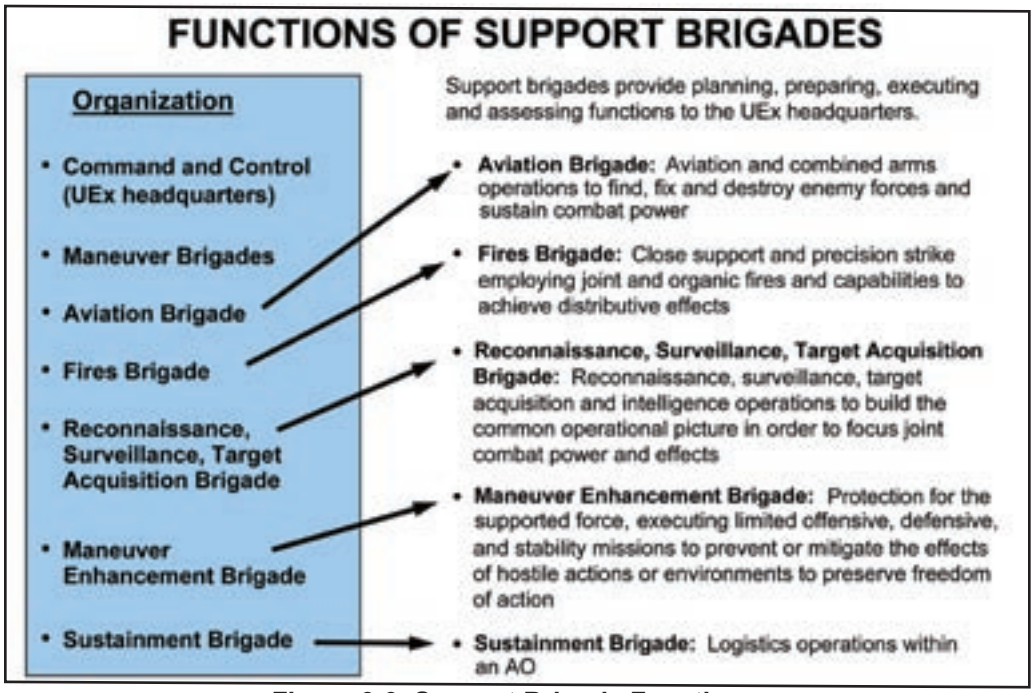

Figure 3-9. Support Brigade Functions

artillery that can reinforce artillery within a BCT, or be given a direct support mission to the aviation brigade for deep attack missions. Similarly, the mission enhancement brigade will be able to reinforce or provide basic capabilities for air defense for a fires brigade, provide additional engineer capabilities to any other UA, or provide nuclear, biological and chemical decontamination to other UAs.

In conjunction with developing modular maneuver units of action, the Army is also developing distribution support capabilities aligned by specific functions. Conceptually, these support brigades are currently aligned with UEx headquarters. They are self-contained organizations that are capable of deploying and operating independently. The functions of the support brigades are outlined in Figure 3-9.

The aviation brigade will be fully capable of planning, preparing for, executing and assessing mobile strike operations and deep attacks using attack helicopters. It will retain a fully capable fire support element that possesses suppression of enemy air defense, maintains the intelligence links to track targets, and includes the Army aviation battle command element to coordinate airspace control measures as necessary — all linked to the appropriate joint systems. The aviation portion of this chapter, pages 3-10 to 3-12, has further details.

The fires brigade will provide the UEx commander with precision strike capabilities that can control both Army and joint fires throughout the depth of the UEx area of operations. It has organic target acquisition capabilities and will be tied closely to reconnaissance and surveillance assets. It is capable of executing both lethal and nonlethal effects for the commander and will be able to direct armed UAVs. Figure 3-10 shows the fires brigade organization.

As its primary mission, the reconnaissance surveillance target acquisition brigade will synchronize all of the dedicated collection assets available to the UEx. It will link to joint intelligence, surveil-

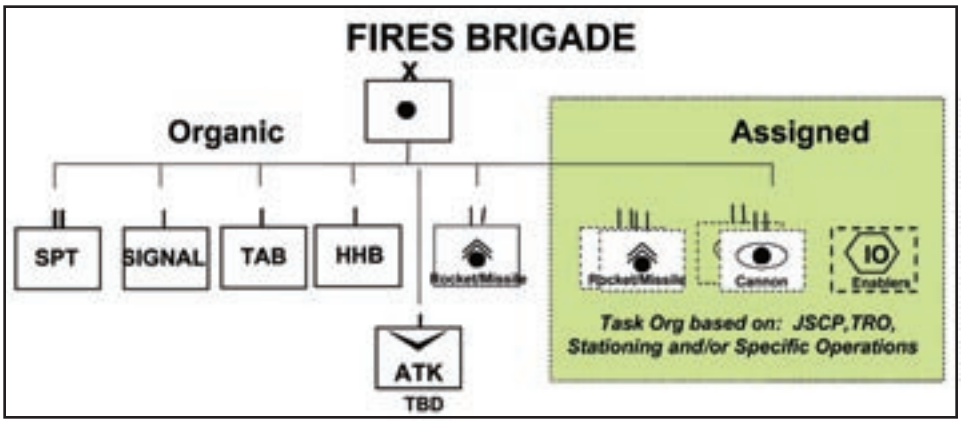

Figure 3-10. Fires Brigade (Predecisional)

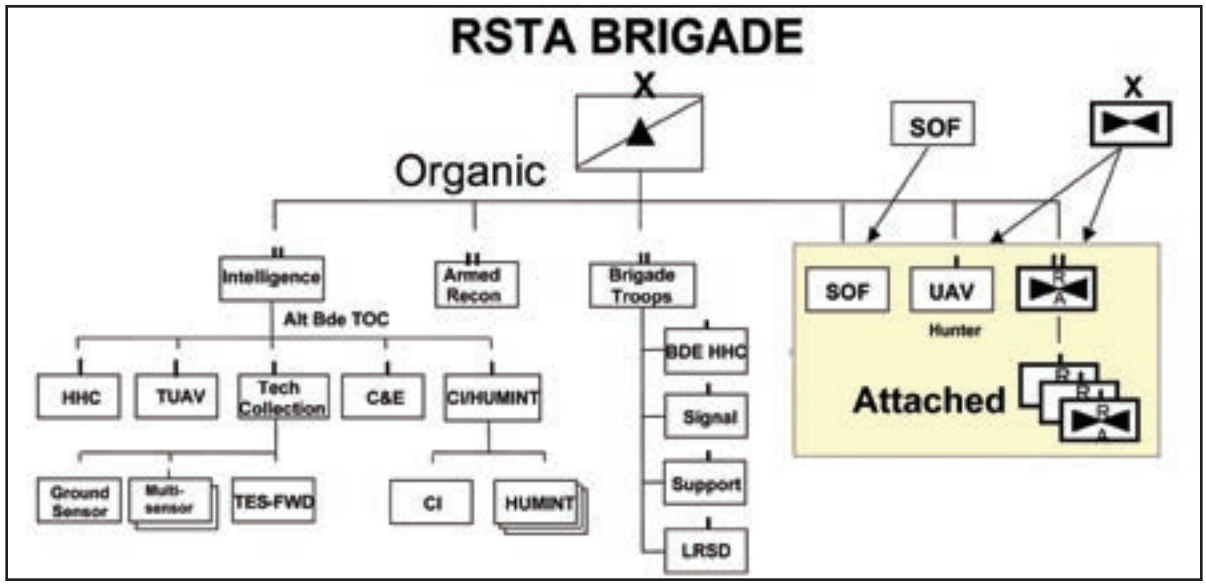

Figure 3-11. Reconnaissance, Surveillance and Target Acquisition Brigade (Predecisional)

lance and reconnaissance capabilities. This brigade will complement the situational awareness developed by the maneuver brigades and lead the fight for information within its area of operation. RSTA brigade structure is shown in Figure 3-11.

The maneuver enhancement (ME) brigade will synchronize protection, mobility and unique effects capabilities across the entire AO. It is to be the joint rear coordinator when the JFC designates the Army to carry out this function. It will have a staff capable of planning air defense, NBC defense, military police actions and construction engineer tasks. The ME brigade organization is shown in Figure 3-12.

The sustainment brigade will provide logistics support for the UEx and its subordinate units throughout the AO. The sustainment brigade will link theater-level supply and service activities with the maneuver brigades' organic sustainment organizations, as shown in Figure 3-13. Over the near term, the Army is developing a comprehensive sustainment concept for the new modular force design.

When completed, Army modular organizations will be menu items — brigade-sized formations that accomplish the major functions required for the full range of military operations from which the joint force commander may choose to meet

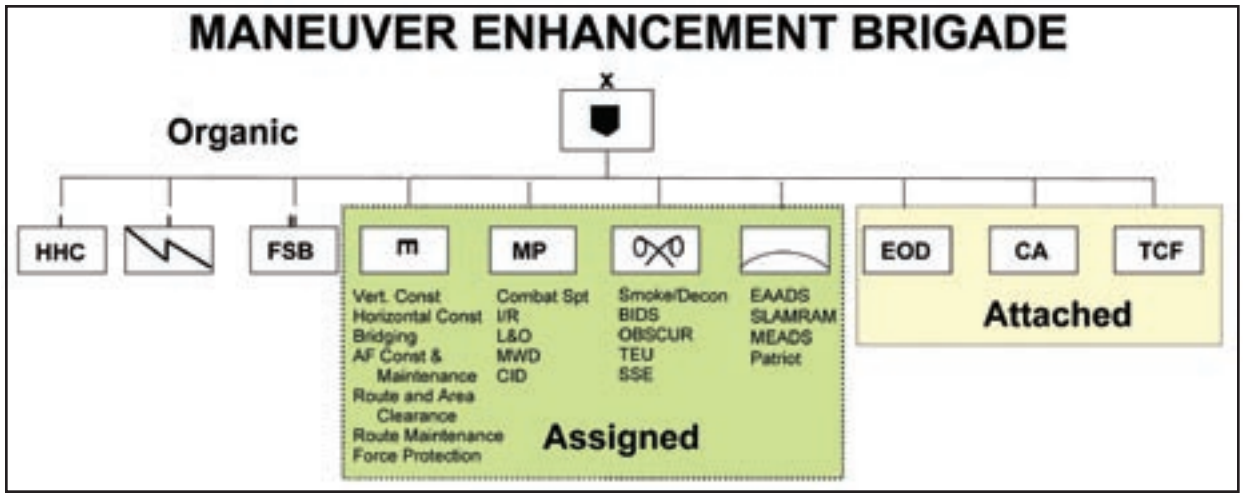

Figure 3-12. Maneuver Enhancement Brigade (Predecisional)

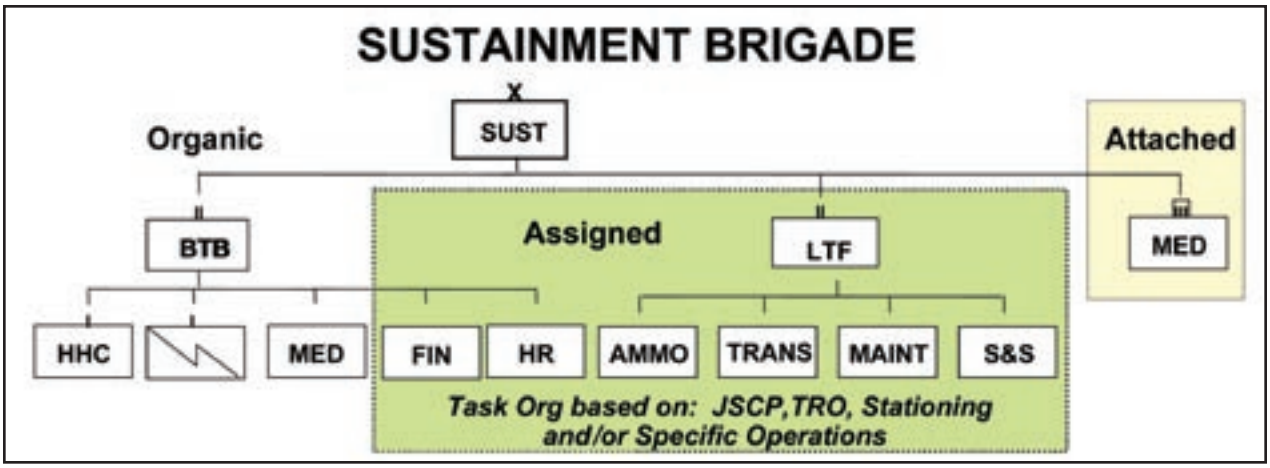

Figure 3-13. Sustainment Brigade (Predecisional)

his needs. The mission requirements determine the mix of forces without the constraints of fixed, large, standing organizations such as divisions or corps.

TRANSFORMING ARMY AVIATION

Army aviation is transforming to a capabilities-based maneuver arm with a shortened logistics tail and is optimized for the joint fight. The Army's aviation fleet is undergoing a total overhaul, and the main priority is increasing survivability to protect the aircraft and the Soldiers they carry.

After two-and-half years of war, Army aviators assessed an imbalance between capability requirements received from war fighters in the field and what was programmed. The Army aviation transformation strategy now corrects the previous imbalance between capability requirements and previous modernization plans, as shown in Figure 3-14.

Aviation transformation standardizes formations to build a sustainable modular capability. Each unit will have a common sustainability package that will allow rapid transition to task force alignments that best meet the mission commander's requirements. Commonality or standardized organization is a theme that runs from the company to the aviation UA design, as shown in Figure 3-15. Army aviation will transform in accordance with the Army Campaign Plan time line, shown in Figure 3-16.

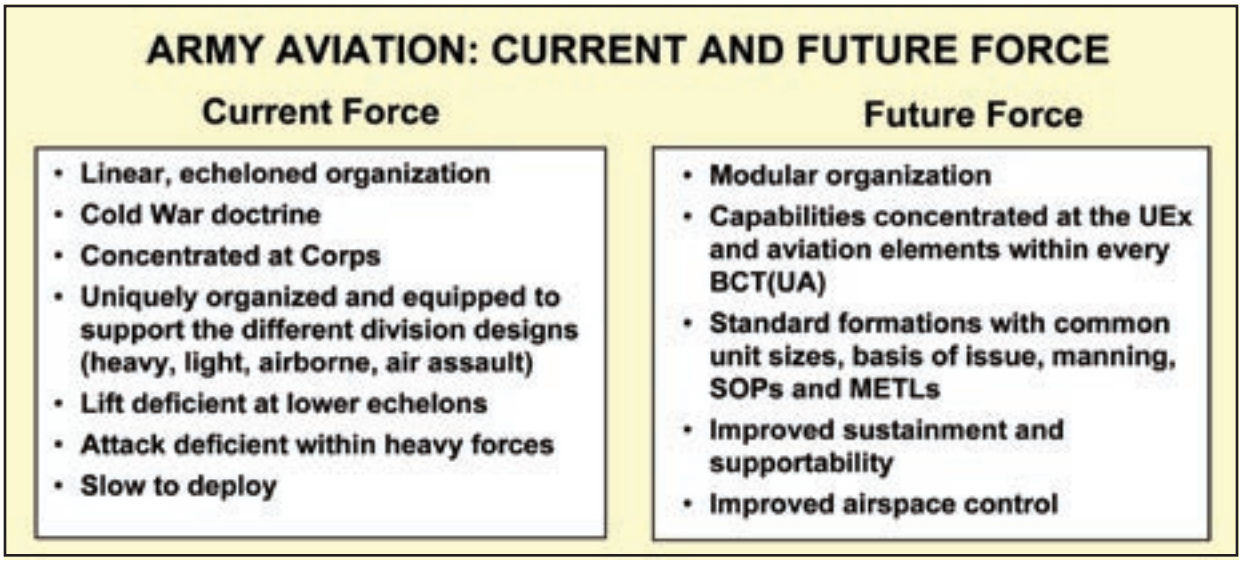

Figure 3-14. Correcting Capabilities Imbalances in Army Aviation

Ongoing transformation uses lessons learned about attack and lift deficiencies in close combat organizations and moves sufficient aviation assets into the aviation UA to support them. Additionally, transformation places a brigade aviation element (BAE) in every maneuver brigade unit of action.

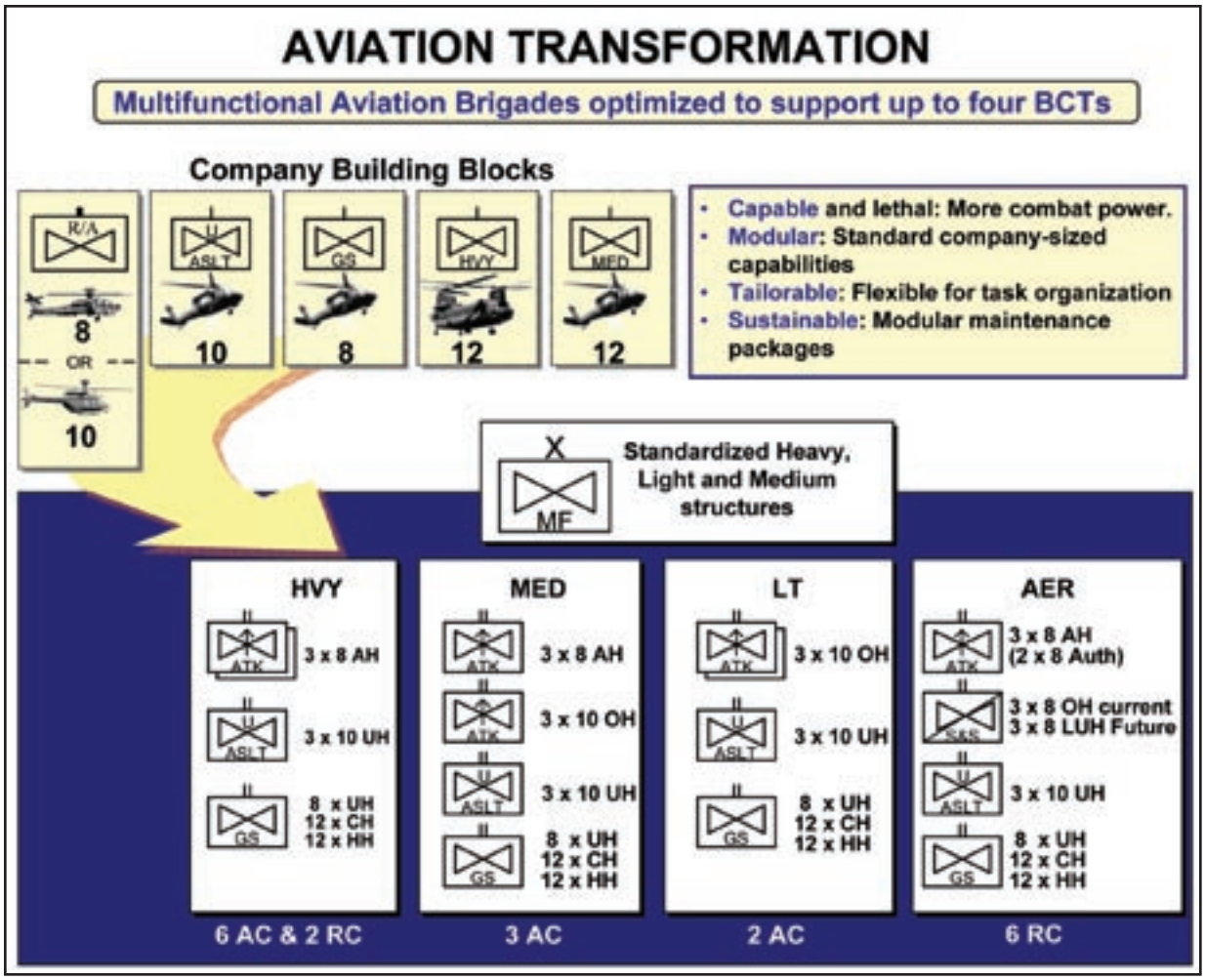

Figure 3-15. Aviation Brigade Organization

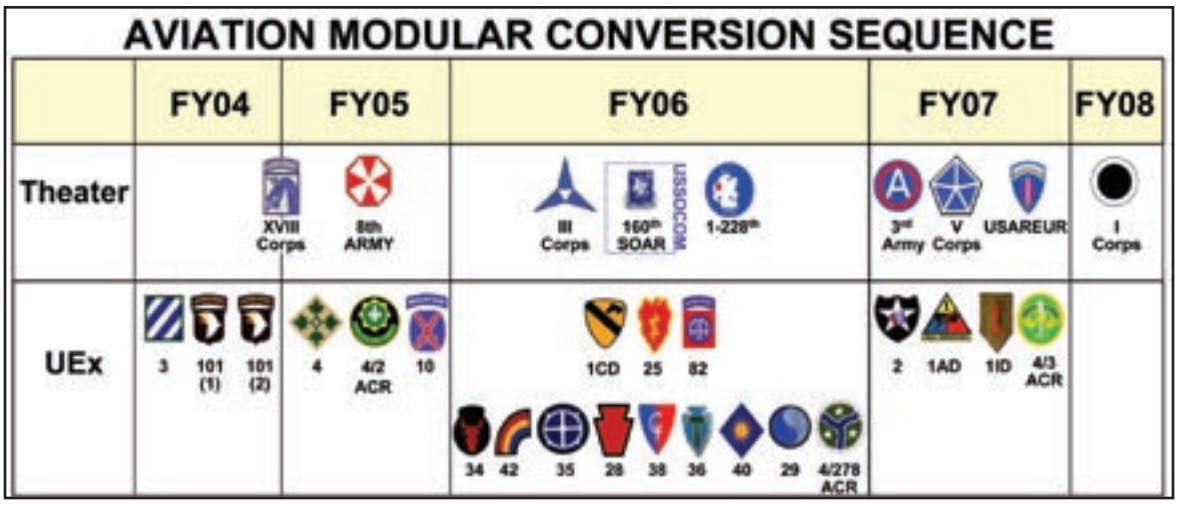

Figure 3-16. Aviation Brigade Modular Conversion Sequence (Provisional)

Similar in function to artillery's fire support element (FSE) the BAE will place a planning, coordination and execution staff in the maneuver brigade's headquarters to facilitate accurate and timely aviation employment. The BAE coordinates the employment of unmanned systems in the future battlespace to assist the commander with the growing requirement for airspace control.

Aviation is also transforming its sustainment and support organizations to adequately support modularization as well as transitioning to a two-level maintenance system to reduce the logistics footprint. Aviation maintenance is now fully embedded in every aviation UA with a robust aviation support battalion that provides maintenance for aircraft and unmanned aerial vehicle systems (UAVs).

This transformation is not without cost. Incorporating aviation survivability equipment and accelerating Future Force capabilities to the fleet will require a small increase in personnel, mostly in maintenance organizations, and a significant funding increase to fully modernize the fleet. The Aviation Task Force weighed the benefits of Comanche against the needs of the Current and Future Forces and recommended terminating the program to redirect limited resources toward improving all of Army aviation.

The Army will use the funds freed from the termination of Comanche to strengthen its current fleet and purchase new aircraft that were not previously budgeted for during fiscal 2004 through 2011, as shown in Figure 3-17. More than 1,000 aircraft will be recapitalized and 1,400 more modernized in the recommended program. Suites of aviation survivability equipment to guard against the most modern air defense threats are now being installed on all aircraft. Sufficient sets, kits and outfits to make the force more deployable and sustainable will be purchased. Advanced avionics and integrated cockpit architectures in development will make aircraft similar with one another and joint compatible. Intratheater cargo capacity and capability will be increased. Attack aircraft will receive upgrades using many of the leading-edge technologies developed in the Comanche program.

A light armed reconnaissance aircraft will be procured starting in fiscal 2007 to replace the OH-58D. In addition, a light utility aircraft will be procured for select Reserve Component units to enhance homeland security. Additional funding will purchase munitions to replenish depleted stocks from recent operations and bridge the gap until future munitions are fielded. Resources will be applied to accelerate the purchase of unmanned aerial vehicles, air traffic services equipment, automated logistics systems and a host of other systems.

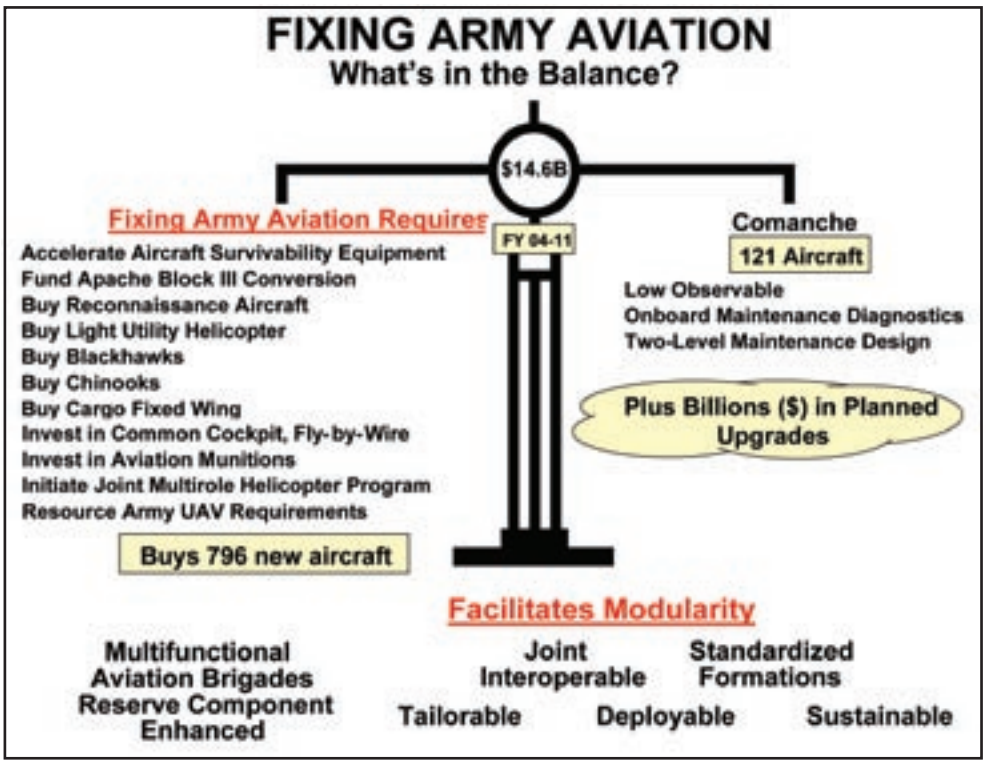

Figure 3-17. Yields from Comanche Divestment

FORCE STABILIZATION

The great demands placed on the Army led to a re-examination of many long-standing personnel and basing practices. The Army will begin to implement a personnel stabilization program during 2004 for the Active Component and revamp the manning system to complement a rotation-based system of global engagement. This initiative will reduce personnel turbulence and provide combatant commanders more combat-ready units while increasing stability and predictability for Soldiers and their families. As the Army builds modular capabilities, it implements two interrelated stabilization strategies: stabilization and unit-focused stability.

The Army will implement stabilization during the fourth quarter, fiscal 2004 across all continental United States installations. Soldiers will remain at their installations for longer periods. It will provide stability and predictability for Soldiers and families, enable company-grade horizontal and vertical cohesion, and will be enhanced by flagship installations. Under this personnel management concept, permanent-change-of-station moves are generated in support of three priorities: needs of the Army, leader development and individual preference. The intent is to minimize disruptions, attrition and losses for deploying units. Unit-focused stability aligns Soldier assignment to the unit's operational cycle. Personnel turbulence in the unit is concentrated to scheduled intervals that differ for life-cycle and cyclic manning. Figure 3-18 depicts this process.

While the Army seeks to stabilize as many Soldiers as possible, it recognizes that the existing individual replacement system will still be required for the institutional Army, some low-density specialties and some unique units. Also, units that have a mission to provide continuous command and control or support to multiple units — such as headquarters above UA level and CS/CSS units — will undergo cyclic manning, as opposed to life-cycle manning described above. Every year, cyclic manning will replace leaders and Soldiers in blocks of approximately 25 percent of a unit's total strength over a one- to two-month period.

Unit-focused stability recognizes the unit operational deployment cycle. This cycle includes organization for new units or resetting and reconstitution for existing units; a required training period, both individual and collective; and an employment period. The operational deployment cycle for Active Component units is approximately 36 months.

GENERATING READY FORCES

Generating ready forces is a structured progression of increased unit readiness over time resulting in recurring periods of availability of trained, ready and cohesive units prepared for operational deployment in support of regional combatant commander requirements. Figure 3-19 depicts how the Army will employ Active and Reserve Component operational cycles to generate ready forces in support of the combatant commanders.

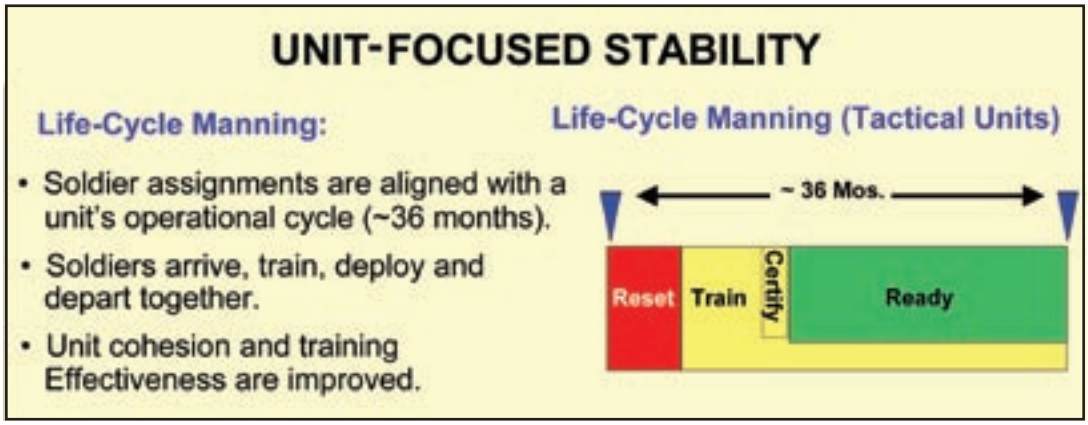

Figure 3-18. Unit-Focused Stability

The Active Component (noted as "1") the Army National Guard (noted as "2") and the U.S. Army Reserve (noted as "3") operational deployment cycles are discussed in detail.

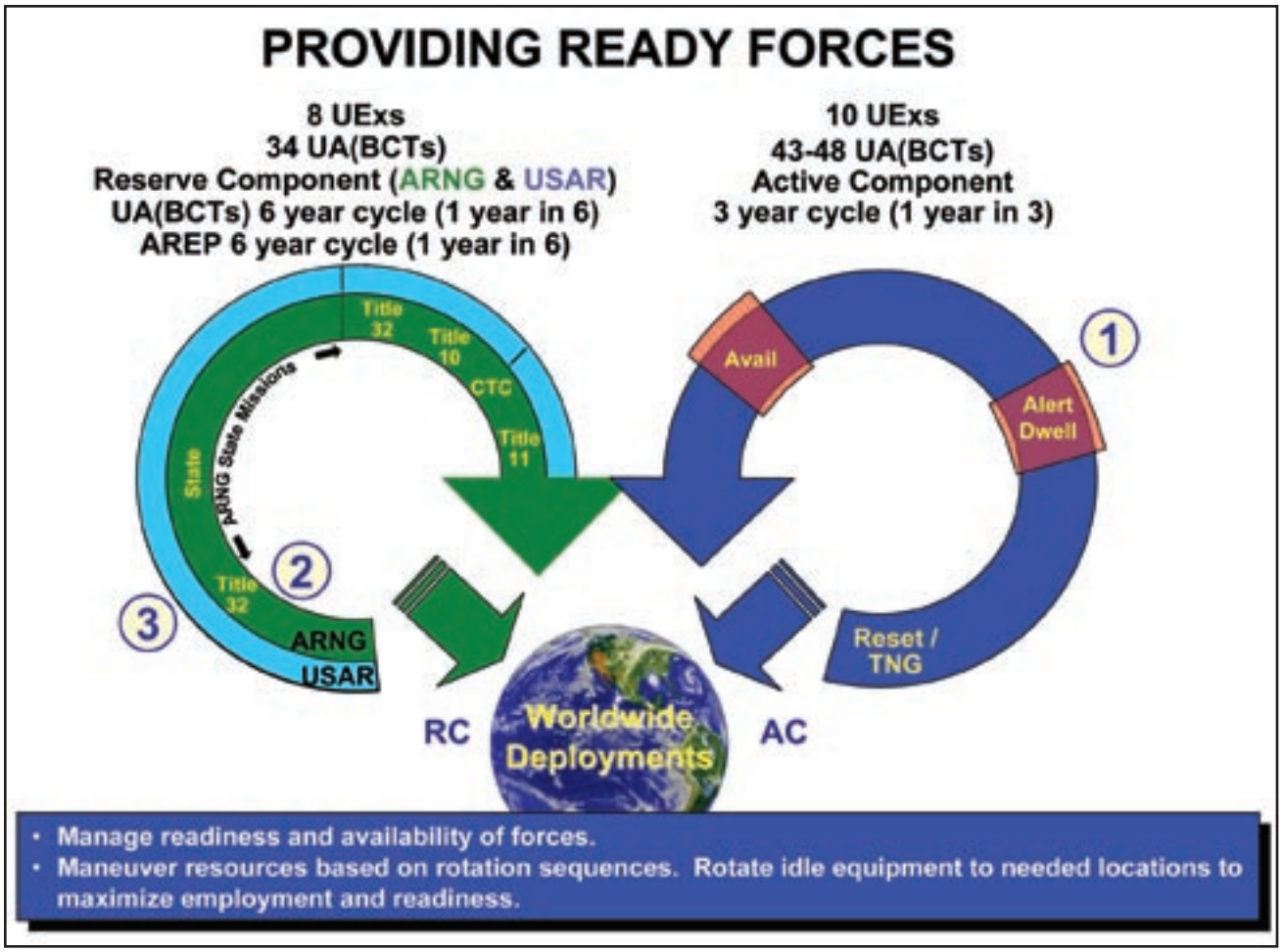

Figure 3-19. Generating Ready Forces

1. *Active Army UA and UEx Operational Readiness Cycles*

A. **Reset Phase:** Reset of equipment and personnel occurs at the conclusion of a deployment regardless of the operational deployment cycle phase of the unit. Reset is executed on order from the Army's deputy chief of staff for operations based on a variety of factors including operational deploy-

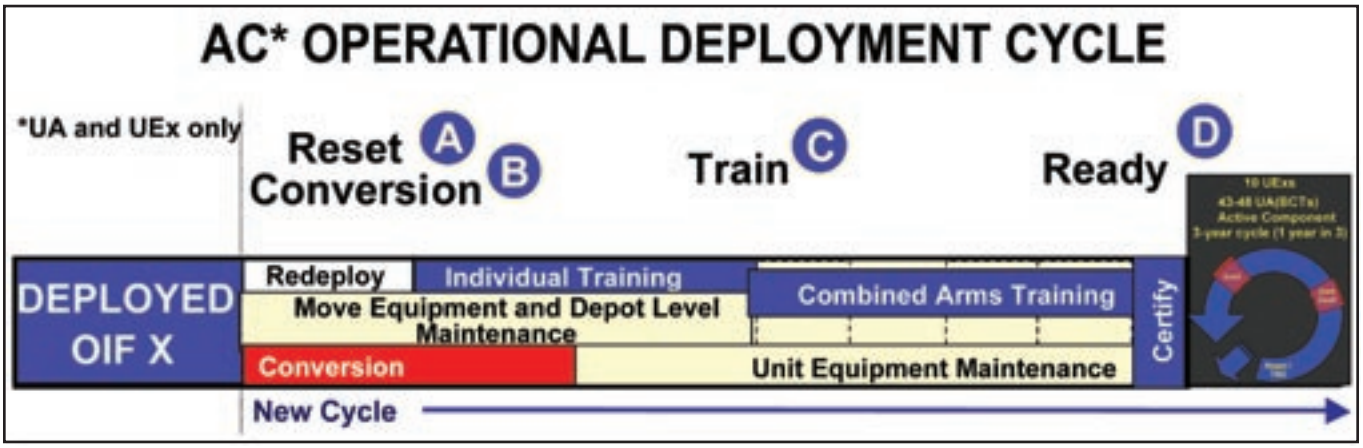

Figure 3-20. Active Component Operational Deployment Cycle

Framework components are described in detail within the text and are referenced by the letters shown.

ments, unit operational tempo and transformation or modernization efforts. When a unit redeploys from an operational deployment, it enters the reset phase. Damaged equipment is repaired or replaced, programmed personnel changes occur, and the unit's incoming personnel are stabilized for the next operational cycle. Soldiers remaining in the unit from the previous cycle are likewise stabilized for the complete three-year cycle.

B. **Modular Conversion:** Units that have not converted to the unit of action or unit of employment design will enter a conversion process. Conversion usually starts concurrently with reset for many units. Before the converted unit's modified table of organization becomes effective, the Army prepositions the necessary equipment at that unit's base. The actual conversion process minus training is usually completed 30 to 60 days after the completion of reset.

C. **Train Phase:** During this phase, the unit trains on individual training tasks through full collective capabilities required of its directed mission, when assigned, or unit core competencies in the full spectrum when a specific mission is not assigned. The training phase concludes with a validation and certification exercise, which transitions the unit to the ready phase. The actual length of the training phase may be adjusted due to operational requirements.

D. **Ready Phase:** For the remaining period of the operational cycle, the unit continues to improve its collective readiness. During this phase, the unit will receive an annual package of personnel to replace unprogrammed losses — approximately 5 percent of the unit's total authorized strength.

2. Army National Guard UA and UEx Operational Readiness Cycles

Army National Guard units of action follow the same progression through phases as the Active Component; however, the ARNG cycle occurs over six years:

A. **Reset:** This occurs after the completion of a deployment or when deemed necessary by the Army. RC units will recruit to fill shortages and losses after deployments.

B. **Modular Conversion:** The equipping sequence is identical to the Active Component, but the unit has broader time lines to convert to the new modified table of organization and equipment.

C. **Train Phase/Title 32 Availability:** ARNG units are available to conduct Title 32 support during the train-up phase when not

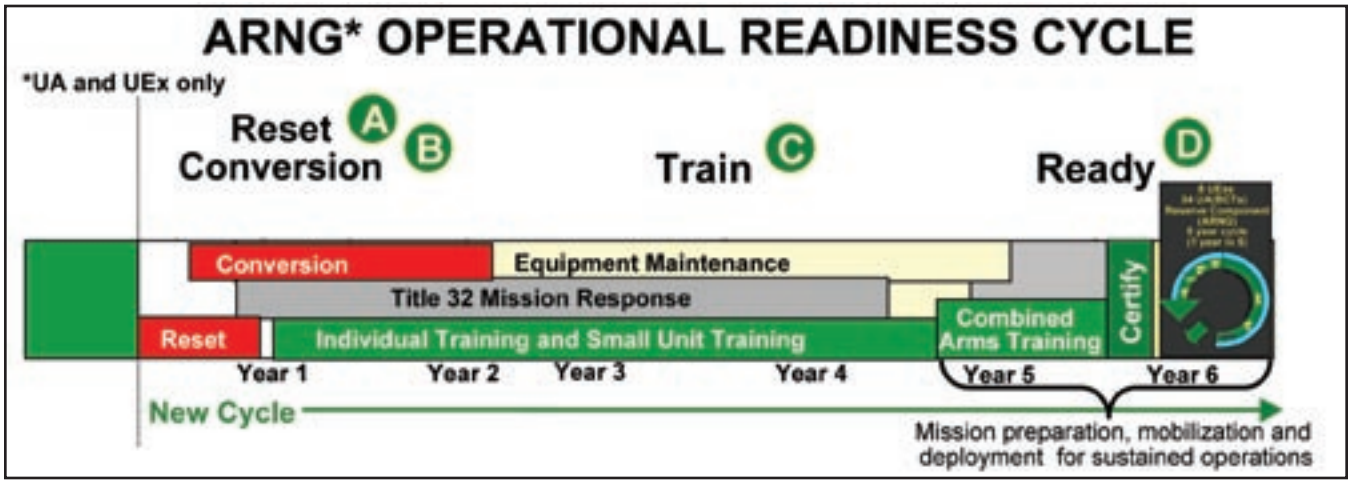

Figure 3-21. Army National Guard Operational Deployment Cycle

Framework components are described in detail within the text and are referenced by the letters shown.

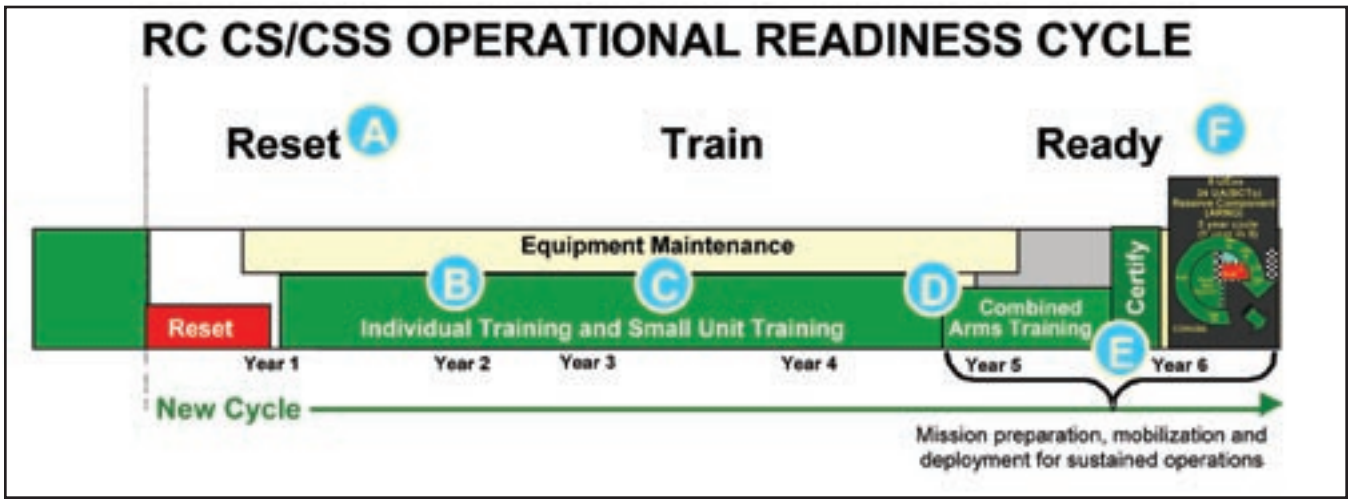

Figure 3-22. Reserve Component CS/CSS Operational Deployment Cycle

Framework components are described in detail within the text and are referenced by the letters shown.

alerted for immediate deployment to an operational requirement. During this phase, the unit trains to full collective capabilities required for its directed mission, when assigned, or unit core competencies in the full spectrum when a specific directed mission is not assigned. The training phase concludes with a validation/certification exercise, which transitions the unit to the ready phase.

D. **Ready Phase:** The unit is available for deployment or utilization for one year. During this phase, the unit continues to improve its collective readiness. Upon redeployment or completion of utilization tour, it resets to Phase 1 of the operational cycle.

3. U.S. Army Reserve Operational Cycles

Army Reserve and Army National Guard CS/CSS forces follow a similar cycle with more discrete progressions than the AC or ARNG UA and UEx. Each cycle is designed to allow up to 40 percent of RC CS/CSS forces to surge for a contingency while still maintaining constant levels of support to ongoing operations:

A. **Reset:** This phase is the same as ARNG UA and UEx.

B. **Individual Training:** This phase is the same as during the AC and ARNG UA and UEx Train Phase.

C. **Detachment/Platoon Training:** Because CS/CSS capabilities are modular and designed around detachments and platoons, they will begin collective training at this level.

D. **Collective Training:** This phase is the same as during the AC and ARNG UA and UEx Train Phase.

E. **Validation:** During this period, the unit continues to conduct training on the full collective capabilities required for its directed mission, when assigned, or unit core competencies in the full spectrum when a specific directed mission is not assigned. Collective training is followed by a pre-programmed validation and certification process that enables it to enter the Ready Phase.

F. **Ready Phase:** The unit is available for deployment or utilization for one year. During this phase the unit continues to improve its collective readiness. Upon redeployment or completion of utilization tour, it resets to Phase 1 of the operational cycle.

Army Reserve Expeditionary Force

The Army Reserve Expeditionary Force (AREF) concept provides USAR-resident capabilities to support sustained expeditionary operations. The objective of the AREF concept is to provide operationally ready organizations and to give Soldiers predictability in deployments. The Army will continue to refine the AREF concept and supporting Army Reserve Expeditionary Package (AREP) processes.

The AREF will consist of 10 pools of units called Army Reserve Expeditionary Packages that maintain staggered states of readiness according to which AREP they are assigned. Under a steady state of Presidential Reserve Call-up, each AREP is eligible for a nine-month mobilization one time in a six-year period. Operational requirements and a unit's AREP assignment determine which units in the package actually mobilize. Surges such as major combat operations in operational tempo will require the Army to surge AREPs to meet those needs. This may require partial mobilization and/or extension of the mobilization period.

However, most deployment requirements will be predictable, and Soldiers and their families will know when they are subject to a deployment window. Based on current plans, each AREP will be available to be mobilized for nine months once every five or six years. This force management process cycles units over time, and each deployed unit resets after each expeditionary mission. Each AREP contains capabilities whose readiness will be formally validated prior to entering its employment window. The unit must achieve a full-readiness rating and must maintain that level of readiness throughout its employment window.

BALANCING ACTIVE AND RESERVE COMPONENT FORCE STRUCTURE

Currently, neither the AC nor RC is optimized for today's rapid deployability requirements. Over the past year, the Army has implemented several actions to increase the readiness, responsiveness and deployability of both the Active and Reserve Components. In order to continue generating sufficient forces to meet global commitments, the Army

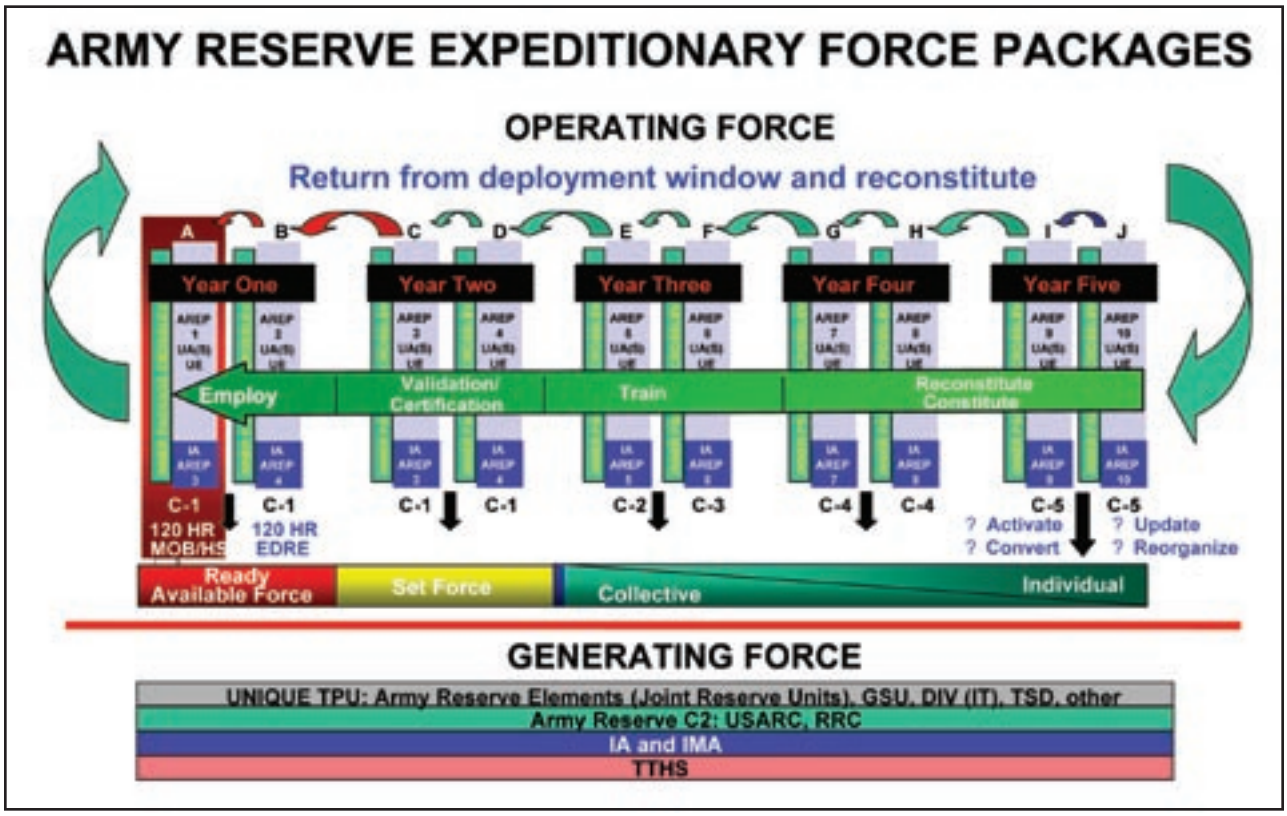

Figure 3-23. Army Reserve Expeditionary Force Packages

will continue to restructure forces to mitigate stress and better align forces to projected security requirements. At the same time, the Army will ensure that it provides the responsiveness and depth required to achieve its strategic and operational objectives, while simultaneously defending the homeland.

The Army's work to restructure and rebalance over 100,000 AC and RC Soldier authorizations began in 2002. The Army programmed and funded structure changes in the fiscal 2004 through 2009 Program Objective Memorandum (POM) to address high-demand (HD) unit shortages, as shown in Figure 3-24. The changes affect approximately 30,000 members of the force structure across all three components and include the following initiatives:

- Fill shortages in select HD capabilities: military police, military intelligence, special forces, chemical, civil affairs and psychological operations
- Migrate select HD units from the RC to the AC
- Resource additional petroleum, oil and lubricants handling; port operations; and select medical capabilities
- Fill units to 100 percent of personnel authorizations with 100 percent deployable Soldiers
- Establish Trainees, Transients, Holdees and Students (TTHS) accounts for the USAR that will be fully implemented by end of fiscal 2007
- Establish TTHS accounts for the ARNG that will be fully implemented by fiscal 2008
- Optimize selected RC units for homeland security missions
- Examine the use of smaller RC packages to provide depth to AC units

AC/RC BALANCE EFFORTS

Phase I – The Army programmed and funded structure changes to address high demand (HD) unit shortages such as military police, military intelligence, special forces, chemical, civil affairs and psychological operations.

Phase II – Per secretary of defense memorandum on rebalancing forces, the Army submitted program change packages (PCPs) to reduce the need for Army RC units in the first 30 days of rapid response operations. The PCPs will enable the Army to limit involuntary RC mobilizations — placing them on the operational cycles discussed in Chapter 3.

Phase III – The Army develops resourcing concepts for increasing all AC and RC units to ALO 1 and filling units to 100 percent with deployable Soldiers. In Phase III, the ARNG and USAR will also develop TTHS-like accounts. Phase III also restructures other HD/LD capabilities to provide better AC/RC balance.

The Army also addressed the concerns of the July 9, 2003, secretary of defense memorandum on rebalancing forces, as part of the above conversion. Following detailed analysis, the Army submitted program change packages in the fiscal 2005 through 2009 POM that transferred 5,550 CS/CSS force structure requirements to the AC to reduce involuntary mobilization. It rebalanced 4,400 positions within the RC to mitigate stress on selected RC unit capabilities. The Army is committed to reducing the need for RC units in the first 30 days of rapid response operations, and seeks to limit RC mobilization to not more than one year in every six years. Though the Army does not expect the RC to deploy within the first 30 days of a conflict, it is configuring RC forces to respond within hours for security and defense of the homeland.

When coupled with modularity and stabilization efforts, this rebalancing effort will enhance the Army's ability to provide relevant and ready expedition-

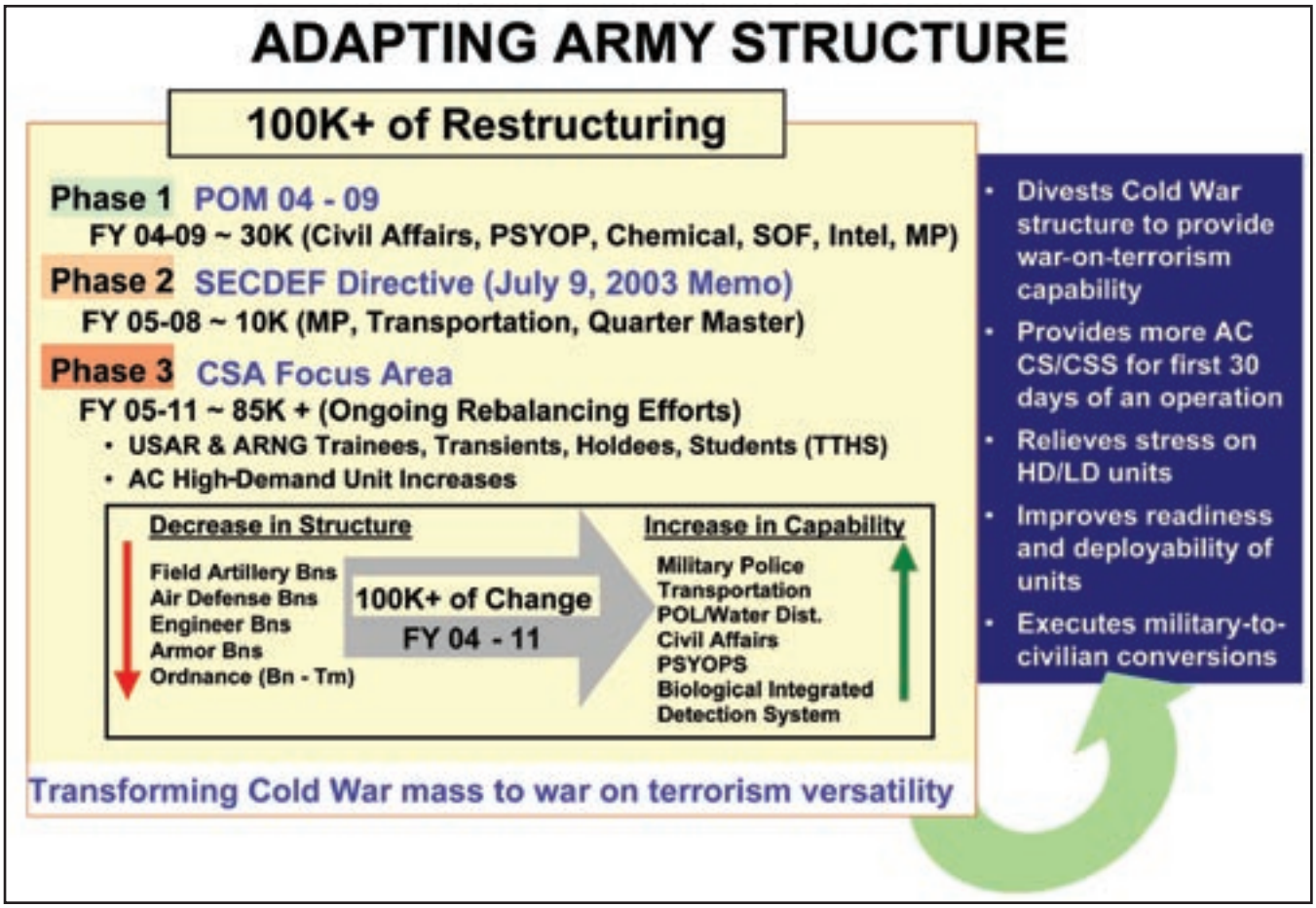

Figure 3-24. Changes Affecting Army Force Structure

Temporary Operating Strength Increase

In January 2004, the secretary of defense approved the Army's plan for a temporary increase of 30,000 Soldiers in the Active Component operating strength to accelerate Army transformation and fight the war on terrorism. The Army is using its increased resources and unusually high operational tempo to facilitate transformation to a modular, brigade-based, campaign-quality Army with joint and expeditionary capabilities.

In order to retain its increased capabilities at its normal operating strength, the Army will implement programs such as military-to-civilian conversions, additional table of distribution and allowances reductions, Title 10 reductions, reposturing of forces in Europe and Korea, and other reductions in the Trainees, Transients, Holdees and Students account.

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CHAPTER 4

FUTURE COMBAT SYSTEMS

FUTURE FORCE

The primary goal of Army transformation is the development of the Future Force — a strategically responsive, precision maneuver force that is dominant across the range of military operations. Balanced across a mix of light, medium and heavy formations and optimized for strategic versatility, this lighter and more agile force will dominate land operations in any future conflict. It will also perform seamless transitions from peacetime readiness to smaller-scale contingencies or major theater warfare. The ultimate measure of success of the Future Force, therefore, will be its contribution to future joint operations, in concert with interagency and multinational partners. In keeping with this fundamental guideline, the force is being designed to sharply expand the options available to the joint force — whether that is to swiftly defeat the efforts of regional aggressors, win decisively in extended conflict, or execute lesser contingency operations. The full-spectrum quality of this force will ensure its long-term relevance to adaptive, sophisticated threats and the frequently changing requirements of the emerging operating environment.

The Future Force concept is founded on six main operational themes:

- **Operational Maneuver from Strategic Distances** is the rapid projection of modular, scalable, combined arms formations, tailored in force capability packages to meet the requirements of each contingency. Employing advanced lift platforms not dependent on improved ports, the Army will deploy much more rapidly into multiple points of entry and along parallel force flows to increase deployment momentum and close the gap between early-entry and campaign forces.
- **Entry and Shaping Operations** seize the initiative, shape the battlespace and set the conditions for decisive operations. Use of multiple entry points will help overcome enemy anti-access points, enhance surprise, reduce predictability, and, through the conduct of immediate operations after arrival, produce multiple dilemmas for the enemy.
- **Intratheater Maneuver of Mounted Forces** circumvents prepared defenses, extends the operational reach of the joint force commander, and exploits opportunities.
- **Decisive Maneuver**, as conducted by the Future Force, will rapidly achieve strategic ends. Decisive maneuver operations encompass:
  - Simultaneous, distributed operations within a noncontiguous battlespace framework will fundamentally change the geometry of the enemy's defense and enables the Future Force to dislocate and defeat the enemy.
  - Direct attack of key enemy strike and maneuver capabilities will accelerate the disintegration of the enemy defensive integrity.

- Continuous operations and increased operational tempo will overwhelm the enemy's capability to respond effectively, resulting in the physical destruction and psychological exhaustion of enemy forces.

- **Network-Enabled Battle Command** provides the required base of situational understanding for the most effective application of combat capabilities and forces and enables self-synchronizing forces to respond quickly to changing battlefield conditions.
- **Distributed Support and Sustainment** ensures freedom of maneuver with a minimum support and sustainment footprint throughout the battlespace.

FUTURE COMBAT SYSTEMS

Although the Future Force will be a hybrid force, one of the key future elements of the hybrid mix will be the Future Combat Systems-equipped unit of action. The FCS-equipped unit of action encompasses more than a new set of capabilities. Rather, this organization reflects a fundamentally transformed method of combat. The core of the Future Force's maneuver unit of action is the Future Combat Systems, comprised of 18 manned and unmanned platforms centered around the Soldier and integrated by a battle command network. FCS will provide Soldiers with significantly enhanced situational awareness — enabling them to see first, understand first, act first and finish decisively.

The Future Combat Systems comprise a family of advanced, networked air- and ground-based maneuver, maneuver support and sustainment systems. FCS employs a revolutionary, integrated architecture to help meet the commander's requirements. These networked capabilities include networked communications, networked opera-

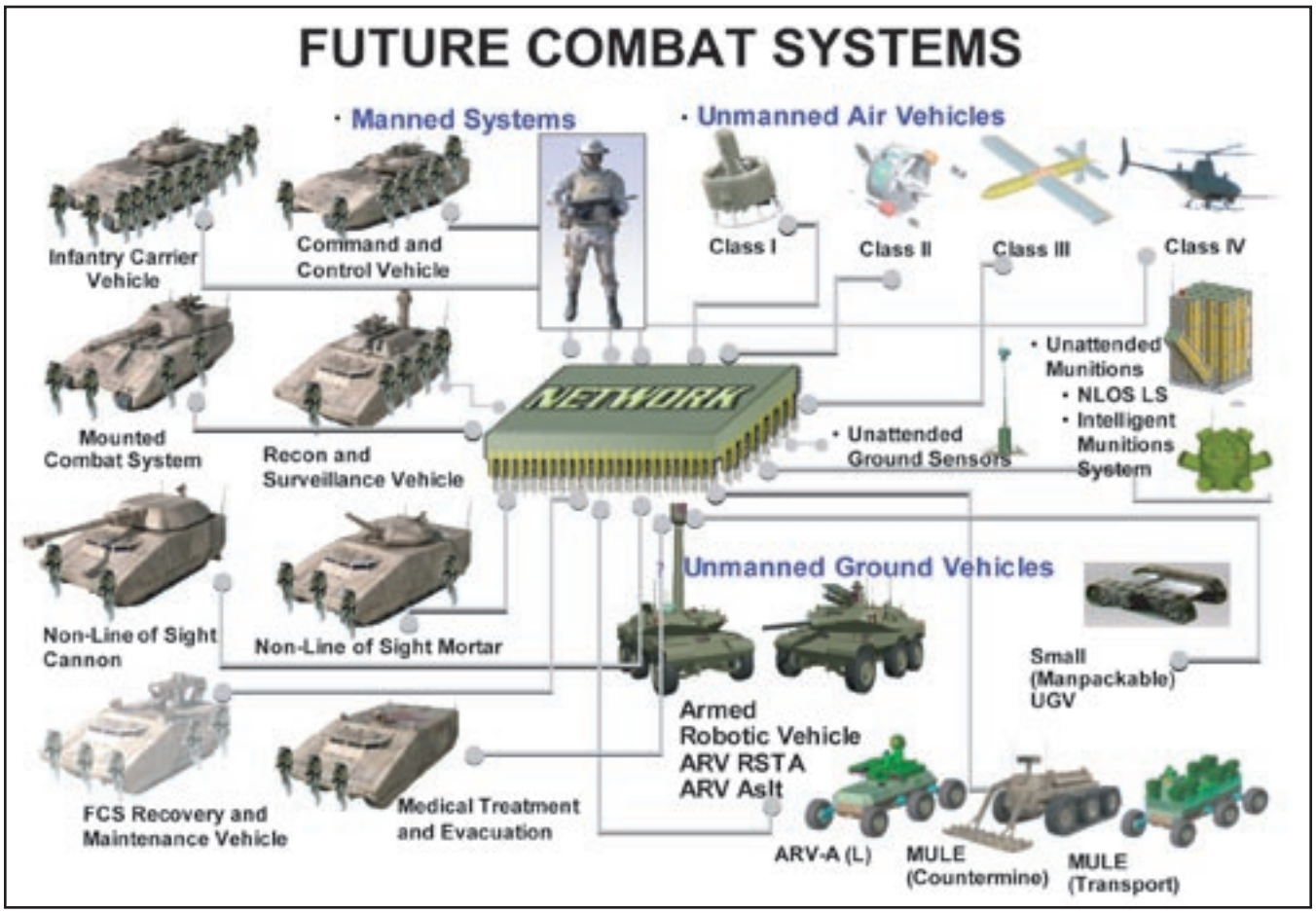

Figure 4-1. FCS Family of Systems

tions, sensors, battle command systems, training platforms, and both manned and unmanned reconnaissance and surveillance capabilities. These will enable improved situational understanding and operations at a level of synchronization heretofore unachievable. The FCS family of systems is shown in Figure 4-1.

Future Combat Systems will operate as a system of systems that will network existing forces, systems already under development, and complementary systems to be developed. The network will enable improved intelligence, surveillance and reconnaissance (ISR); enhanced analytical tools; joint exchange of blue and red force tracking down to the tactical level; battle command; real-time, sensor-shooter linkages; and increased synergy between echelons and within small units. It will also enable the UA to connect to units of employment, the next higher Army echelon; joint capabilities; and national assets. FCS will enable the networked maneuver unit of action to develop the situation in and out of contact, set conditions, maneuver to positions of advantage, and to close with and destroy the enemy.

The Future Combat Systems-equipped force represents a capability crucial to the Army's Future Force and the accomplishment of Department of Defense transformation goals. When fielded to the UA, FCS will provide the Future Force with unprecedented military capability for full-spectrum operations. Future Combat Systems are the key to achieving a strategically responsive, precision maneuver force that is dominant across the range of military operations as outlined for the Army's Future Force within the joint operations concepts (JOpsC).

FCS-Equipped Unit of Action

The FCS-equipped UA is not just a unique brigade combat team built around a family of systems. Rather, it is the cornerstone of Future Force capabilities that demonstrates a new fighting concept. This formation provides the Joint Force with dominant land-power capability that is decisive in any operation, against any level threat, in any environment. The UA balances the capabilities for strategic responsiveness and battlespace dominance.

The UA can be tailored with additional capabilities for specific missions during a campaign. It allows command and control of up to six combined arms battalions by one commander. It is also able to employ a range of supporting capabilities to perform a variety of missions such as reinforcing fires, engineering operations, military police tasks, air and missile defense, psychological operations and civil affairs.

The UA is designed to ensure a campaign-quality Army. Although it has the responsiveness and deployability to achieve Army deployment goals, it is designed with the durability, endurance and stamina to fight battles and engagements for the duration of a campaign. Given its inherent tactical mobility, it can land at points removed from its objectives and out of range of enemy defenses, then move by land to complete its mission. This capability applies not only to entry operations, but also to theater operations throughout the campaign.

The FCS-equipped UA will be optimized to develop the situation out of contact, throwing the enemy off balance by destroying his high-payoff systems before forces are joined and maneuver to a position of advantage. The FCS-equipped UA sets the conditions and isolates enemy formations to enable it to close with and destroy the enemy at a time and place of its choosing.

Though the FCS-equipped UA will be optimized to develop the situation out of contact, it will be capable of finishing engagements decisively. FCS will be capable of providing the needed protection to ensure survivability. By the time FCS technologies mature, the Army expects to develop armor and other systems capable of defeating or mitigating emerging, improvised explosive device and man-portable anti-armor threats. Also, FCS will enable the Army to rapidly adapt and field improved survivability systems in response to emerging threats.

The FCS-equipped UA is a network-enabled force. Its vast sensor array will dramatically im-

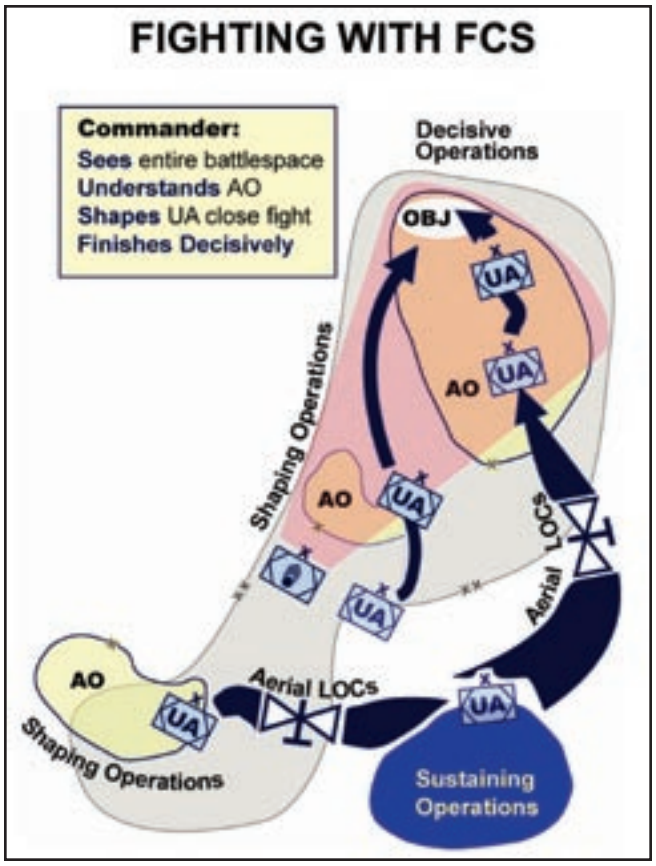

Figure 4-2. FCS-Equipped Unit's Operational Context

prove a commander's situational awareness. Sensor-shooter relationships begin with the Soldier and exist throughout the formation, allowing the UA to accurately direct internally generated effects or those generated from supporting units and joint assets. This ability to cooperatively engage targets with tactical, operational and strategic level assets will be accomplished in seconds rather than minutes. The UA presupposes platform superiority and emphasizes teaming of teams to achieve combat power synergy. FCS in its operational context is shown in Figure 4-2.

FCS — The Way Ahead

FCS completed the Milestone B decision during May 2003 and moved into the systems development and demonstration phase. This phase focuses on developing and evaluating prototypes for FCS platforms and network capabilities. The Milestone B decision confirmed the feasibility of the technology and initiated a coherent and integrated strategy to move toward an initial operational capability. During November 2004, the Army will conduct a Milestone B update with Office of the Secretary of Defense and will update Milestone B documentation to include the operational requirements document and key performance parameters. Starting in fiscal 2008, the Army will create a unit that will serve as the evaluation unit for all FCS-equipped unit of action products. This unit will start with a battalion-sized element with brigade-level command and control, and transition to a maneuver brigade over the succeeding years. The unit will also serve as the means to validate all DOTMLPF products within each set of capabilities spiraled out to operational units.

In July 2004, the Army announced that it would restructure the FCS program to accelerate crucial capabilities to operational forces while continuing to develop and field an FCS-equipped unit of action in 2014. In 2008, the first spiral will provide the FCS evaluation unit with key capabilities from which the Army will garner lessons across DOTMLPF domains. The second spiral will build on the first and field additional capabilities to seven modular BCT(UA)s. Spiral 3 will continue the building process and field selected capabilities to 19 modular BCT(UA)s. Finally, Spiral 4 will provide the first complete FCS-equipped unit of action as well as expanded capabilities to 31 modular BCT(UA)s, as depicted in Figure 4-3.

The Army's plan to adjust the FCS program is based on the fact that a nation at war must provide operational forces the best possible capabilities. Additionally, the program adjustment reflects the Army, as a learning institution, has heeded the counsel of several prestigious review panels. FCS remains at the heart of the Army's strategy to adjudicate risk using the Current to Future Force construct. Under this construct, the Future Force informs development of the Current Force. The Army has used the FCS-equipped unit of action operational and organizational plan as the starting point to create a modular, brigade-based Army. Through its modularity efforts, the Army is rapidly moving its Current Force towards the charac-

teristics envisioned for the FCS-equipped UA, and this will enable the Army to transition into FCS-equipped units and FCS-enabled methods of operation. Furthermore, the modular design improves the Current Force's versatility, agility, information superiority and full-spectrum capabilities that are paramount to the FCS-equipped UA. At the same time, the Army is accelerating select technologies to reduce operational risk by improving the Current Force's survivability; intelligence, surveillance and reconnaissance; and joint interdependence, as discussed in Chapter 5 within Army science and technology. Just as emerging FCS capabilities enhance the Current Force, the Current Force's operational experience informs the FCS program, further mitigating future challenges and risk.

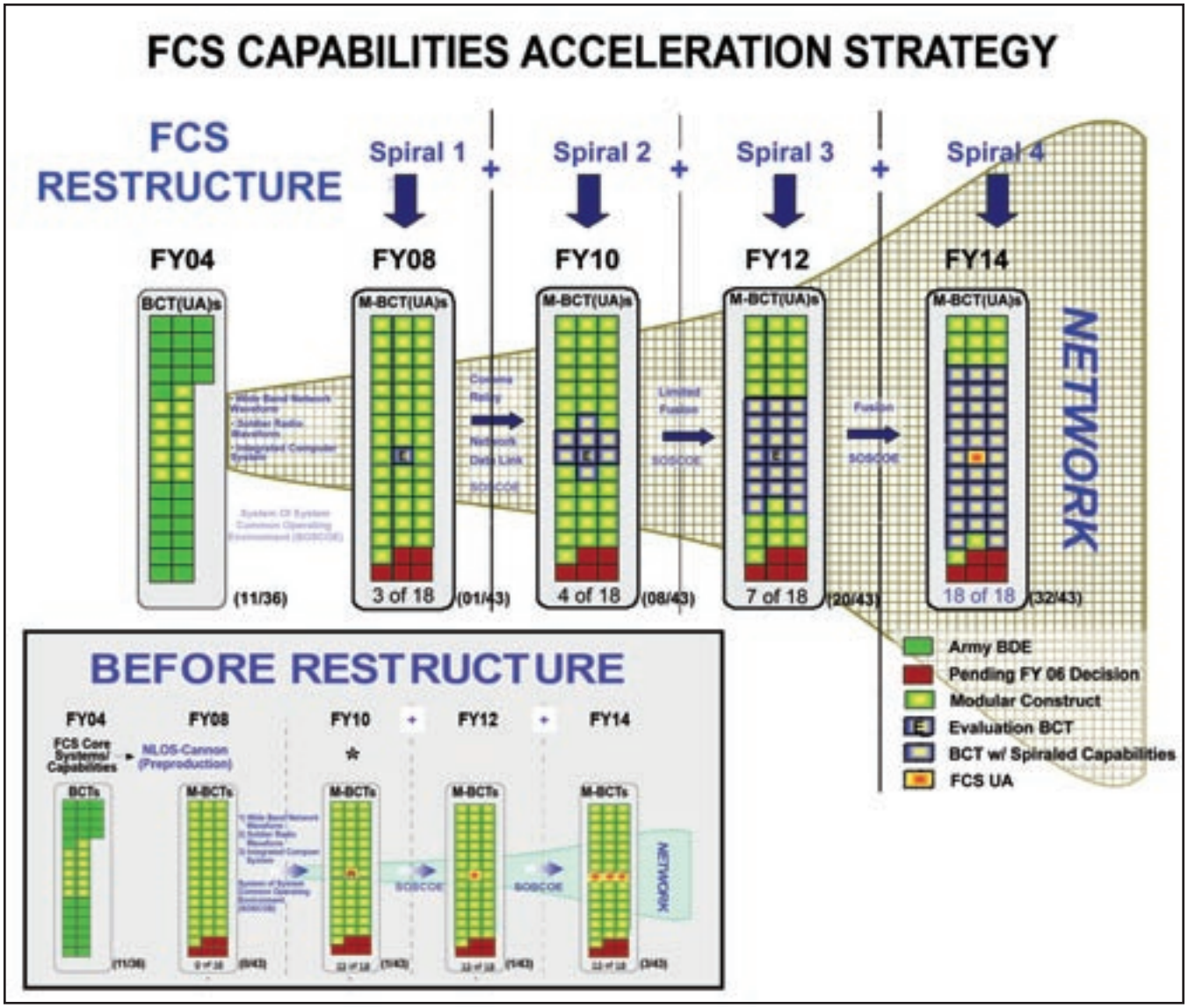

Figure 4-3. Accelerating FCS Capabilities Throughout the Army

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CHAPTER 5 INSTITUTIONAL TRANSFORMATION AND OTHER INITIATIVES

THE SOLDIER

The American Soldier remains the centerpiece of the Army's combat systems and formations. Adaptive, confident and competent Soldiers — infused with the Army's values and warrior culture — fight wars and win the peace. Making Soldiers more effective and increasing their ability to thrive and survive in the most adverse environments are the first requirements of adaptation to a joint and expeditionary capability. The Army transforms with the understanding that people are always more important than hardware and quality is more important than quantity. Because of this, the Army focuses its efforts on recruiting, selecting, leading, training, equipping and retaining the best Soldiers.

Transforming Personnel Processes

Army Human Resources Command is adapting personnel systems to support Army transformation efforts and to improve readiness. These personnel changes will enhance individual and unit readiness across the Army — Active, Reserve and civilian.

During fiscal 2003, the Army activated the Human Resources Command (HRC), merging the Army's Active Component (AC) and Reserve Component (RC) personnel commands. This started the task of combining the two components through synchronous personnel policies and systems. Currently, the Army National Guard's personnel operations are spread over 54 regions and will also join where possible. In early fiscal 2005, the HRC will also absorb the Civilian Human Resources Agency.

Army civilians manage vital government functions, provide institutional knowledge and supervise Army civilians and contractors in operational theaters. The Army is considering implementing a senior Army work force initiative to sustain an experienced corps of civilian leaders who are multifunctional, highly skilled and more responsive to mission requirements. The National Security Personnel System will deliver a more effective system for managing Department of the Army civilians in support of current and future military operations and the global war on terrorism. This new personnel system will enable civilians to better reinforce an Army at war and embrace the joint and expeditionary mindset.

The acting secretary of the Army and the Army's chief of staff have directed the conversion of 15,000 military positions to civilian ones by fiscal 2006 to support the increase in combat brigades and modularity. These conversions will free Soldiers to support the war on terrorism by using civilians to do missions

that are more appropriate for civilian employees. This is crucial to ensure the newly formed units of action are fully staffed and ready for worldwide deployment.

Transformation will move all Army components to the Defense Integrated Military Human Resources System (DIMHRS). Implementation of DIMHRS has been significantly accelerated to the fourth quarter, fiscal 2005. This system is accompanied by the development of the enterprise Human Resources System (eHRS). It will focus on crucial war-related requirements such as personnel accounting, strength management, replacement operations and medical surveillance.

The Army's transformed HR system is further institutionalizing personnel support for a lifetime of service — the new Army continuum of service initiatives. These and other OSD initiatives will enable Soldiers to serve within the Army in different components or on different statuses of continuing service throughout a lifelong career. This will allow trained and experienced Soldiers and leaders to serve continuously from entry to the service through different components to service as a civilian employee and even as a retiree.

Finding and Preparing the Right Volunteer

How the Army attracts and recruits the right volunteer will evolve over the next several years. Army research will expand to identify volunteers who have a desire to serve and who are challenged by and proud of the work the Army does. This research will define where they are located, what motivates them, and how best to communicate with them. The Army's marketing strategy will transition from general audience messages to messages targeted to the volunteers the Army wants. Recruiters armed with improved screening tools, improved lead information and Web-enabled point-of-sale technology will attract the best from the pool of potential volunteers.

Initial military training (IMT) transforms volunteers into Soldiers. This training instills Army values, develops the Warrior Ethos and creates flexible, adaptable, confident and competent Soldiers and leaders who can fight, win and survive in the challenging operating environments. IMT prepares the new Soldier for an immediate, positive impact at the first unit of assignment. Changes to increase rigor and other lessons learned now are being incorporated into IMT. Further transformation of IMT will incorporate concepts such as the experiential learning model, a smaller leader-to-led ratio to increase feedback, increased combat and confidence training, expanded weapons training and rotating leadership opportunities. Approved changes to Basic Combat Training, One Station Unit Training, and Advanced Individual Training will begin during fiscal 2005. The Officer Basic Course will change to the Basic Officer Leader's Course in late fiscal 2006.

Training and Leader Development

The human dimension of the military remains the crucial link to both the realization of future capabilities and the enhanced effectiveness of current ones. The Army supports joint transformation by developing innovative and adaptive leaders who are comfortable operating as part of the Joint Force, or leading a joint force while conducting full spectrum operations. The Army's doctrinal definition of leadership and the leadership framework, "Be, Know, Do," is relevant to the Current Force and remains relevant in achieving Future Force capabilities.

Leader development is the means for growing leaders prepared for the challenges of the future in combined-arms, joint, interagency and multinational operations. The Army must re-engineer leader development and training programs to gain better experience for its leaders, sustain that high level of experience, and combine that experience with the skills essential for operating and integrating the technologies of the future. Current and Future Force leaders must operate comfortably within the joint, interagency, multinational (JIM) environment.

The Army will transform leader development using educational and informational technologies

Figure 5-1. Army Training and Leader Development Model

and transforming the various domains of leader development as shown in Figure 5-1.

Professional military education (PME) will be transformed through the integration of structured programs of instruction across officer and NCO training and education that capitalize on a common scenario. For example, officers and NCOs at resident institutions, as well as those at home stations or deployment locations, will be linked together and conduct interactive training via a distributed learning system. They will train simultaneously with each other within the common training scenario, planning and executing full-spectrum operations to include nontraditional training topics such as the Logistics Civil Augmentation Program.

Assignment-oriented training and education will better prepare leaders for their next assignments by tailoring training and education to meet the immediate requirements of their next units of assignment. PME will continue to be universal, progressive and sequential, with renewed emphasis on continuous, life-long learning. Current career paths will evolve to include Future Force developmental requirements. Future requirements mandate existing developmental phases that link developmental time lines out 30 years and beyond.

Units under the force stabilization concept will benefit from reduced personnel disruptions. Unit training can progress from basic through more advanced tasks and capabilities since the unit does not have to revisit the basic-level tasks quarterly or semiannually. Life-cycle-manned units start their operational cycle with a phase specifically focused on building collective capability. Once the unit's capability has been certified and validated in a major readiness exercise, the unit continues to build to higher, collective capabilities over subsequent training events. Life-cycle manning maximizes a unit's training capability. Units can train the full team, and newcomers can be more rapidly integrated into the team.

COMBAT TRAINING CENTERS

The Army's combat training centers (CTCs) — National Training Center (NTC), Joint Readiness Training Center (JRTC), Combat Maneuver Training Center (CMTC) and Battle Command Training Program (BCTP) remain engines of change for the current and future Army. The pri-

mary purpose of the CTCs is to develop self-aware and adaptive leaders and units ready for full-spectrum JIM operations. CTCs accomplish this by integrating a contemporary and joint operational environment (COE/JOE) into all training. As a result, the Army will explore exportable CTC capability with deployable instrumentation and AAR enablers to support a joint and expeditionary mindset.

The Army's CTC program is expanding training in a joint context. Battles on the ground at the Army's three maneuver CTCs are linked with simulation-supported training at Fort Leavenworth, Kan., the Joint Warfighting Center, Suffolk, Va., and other simulation centers. Real Soldiers with real equipment, real Soldiers in simulators, and simulated entities in a constructive environment are integrated into a robust training exercise to prepare units to operate as part of a JIM force.

The Army will further enable this distributive training network by supporting the Joint National Training Capability (JNTC). The Army has integrated combined arms training at its combat training centers for years. Joint Forces Command, in concert with the services, is now integrating joint training in a similar manner through JNTC. Instead of constructing another training center, the Department of Defense is combining live, virtual and constructive training to create a joint training capability.

The JNTC became a reality in January 2004 at the Army's National Training Center, Fort Irwin, Calif., and other services' western ranges. This integrated exercise included an NTC brigade rotation, Air Warrior at Nellis Air Force Base, Nev., U.S. Marine Corps Combined Arms Exercise at 29 Palms, Calif., and Navy Strike Group exercise in San Diego. Centered at the NTC, the exercise integrated participants in 11 states and included special operations forces training and joint training enhancements at 12 other sites. This milestone underscores the Army's commitment to facilitating and enhancing the JNTC as specified by Defense Department training transformation.

CONCEPT DEVELOPMENT AND EXPERIMENTATION

Army concept development is nested in the context of the joint concepts described in Chapter 2 and the Army Future Force concept described at the start of Chapter 4. Through Army collaboration in joint concept development and careful coordination of Army conceptual work within the context of joint concepts and Army foundational and operational themes, Army concepts are inherently joint. Army concept development and experimentation is outlined in Figure 5-2.

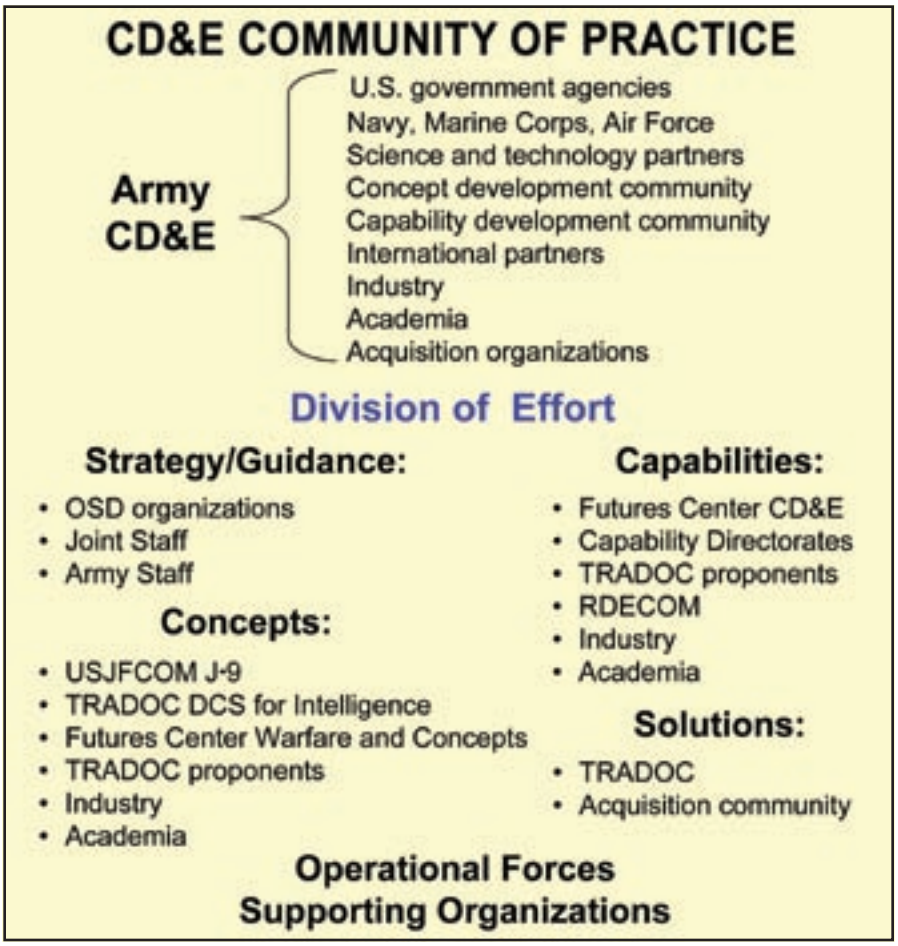

Figure 5-2. Army Concept Development and Experimentation

The Future Force will conduct full-spectrum operations to meet traditional, irregular, catastrophic and disruptive challenges in concert with other services. The Army's family of Future Force concepts describes the role and function of a campaign-quality land force that is both joint and expeditionary. This will be accomplished by continually fielding Future Force capabilities to the Current Force.

Army experimentation uses the resources of a diverse, Department of Defensewide community to refine concepts and develop capabilities. Army Concept Development and Experimentation strengthens Army transformation by:

- Providing actionable recommendations for decision making
- Prototyping DOTMLPF capabilities in order to satisfy crucial operational needs
- Testing compelling technology
- Spiraling forward Future Force capabilities into the Current Force
- Informing Future Force development
- Reducing operational and institutional risks

Development of inherently joint solutions requires close collaboration across the wide community of practice. The Army Concept Development and Experimentation Campaign Plan (ACDEP) leverages this community to plan, prepare, execute and assess concept development and experimentation supporting the Army's campaign of learning.

The Army CD&E strategy spans two mutually supporting, yet distinct paths: prototyping and concept development, shown in Figure 5-3.

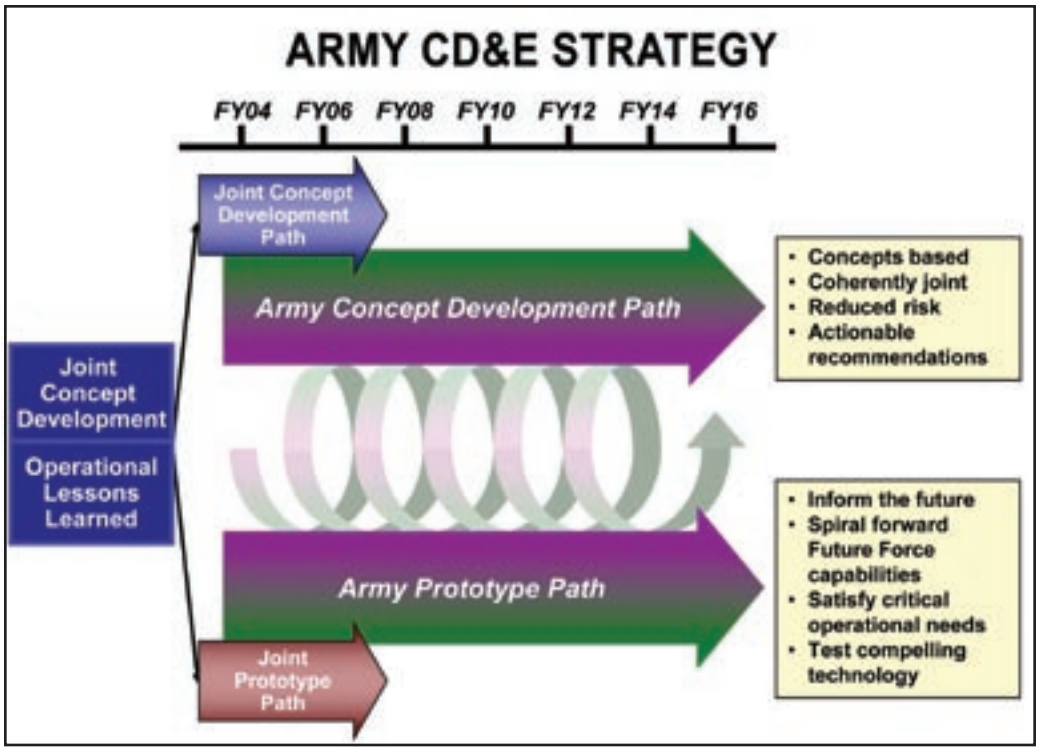

Figure 5-3. Army Concept Development and Experimentation Strategy

Prototype Path

Semiannually, prototype experiments address Current Force capability gap areas. Additionally, prototype experiments will examine networked lethality and survivability of modular units through the Air Assault and Expeditionary Force Experiment, fiscal 2005 through 2008. The Army will also examine the sea-basing concept in a joint fiscal 2006 experiment using this method. At any point in time, the Army will be a hybrid of new and existing capabilities. One example of this is the ongoing reorganization of Army units into smaller, modular brigade combat teams. Prototyping also informs the Future Force and supports the Future Combat Systems (FCS) acceleration strategy by prototyping FCS spiral capabilities to support development and validation of DOTMLPF products for FCS spirals, assessing spiral out systems, and assisting with systems of systems and Current Force integration, shown in Figure 5-4.

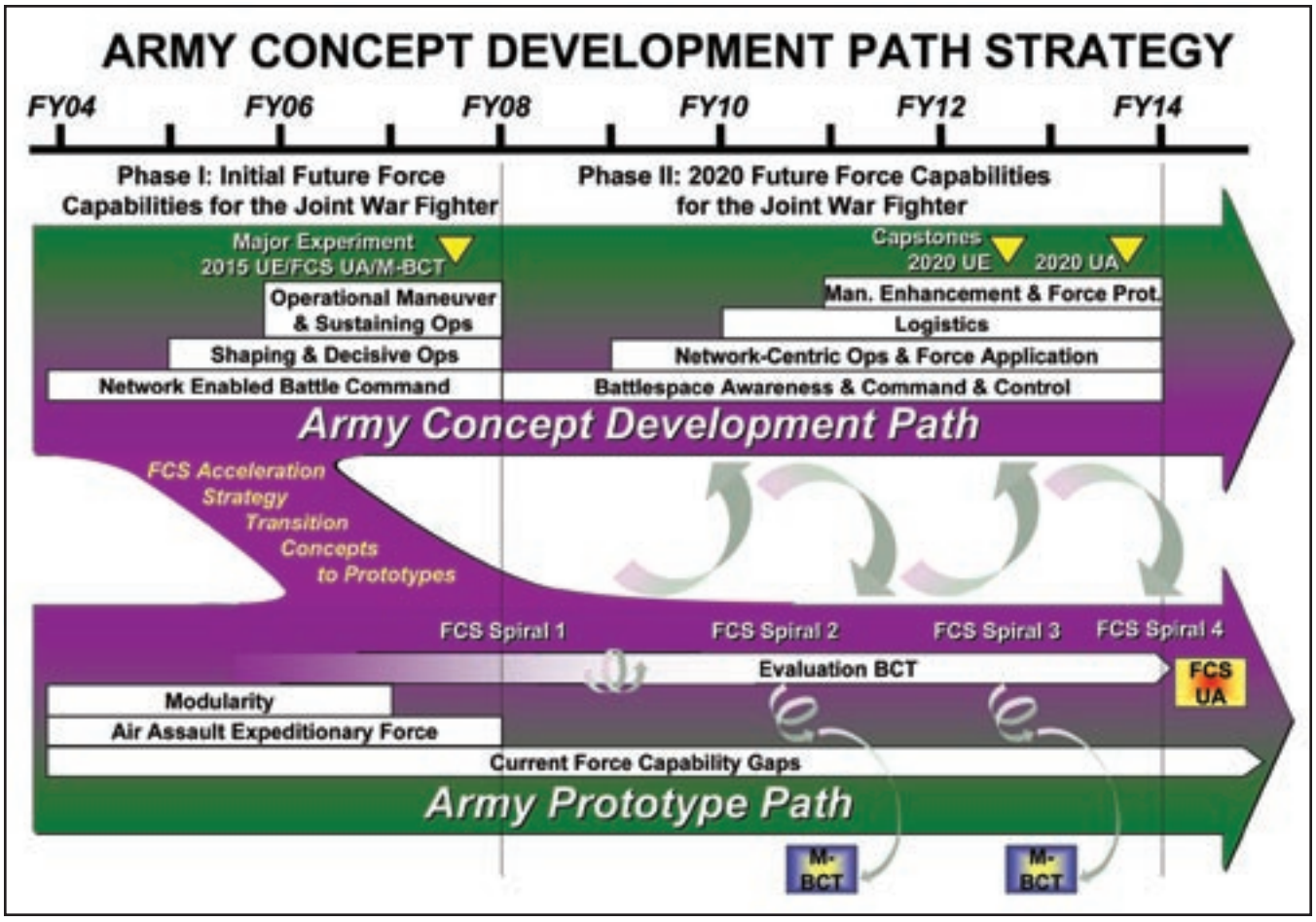

Figure 5-4. Army Concept Development Path Strategy

The Army will partner with USJFCOM and its sister services in prototyping efforts. These experiments will address joint functional capability areas and prototypes such as USJFCOM's standing joint force headquarters, collaborative information environment (CIE), operational net assessment (ONA), Joint Fires Initiative, Joint Interagency Coordination Group, effects-based operations and logistics common relevant operating picture.

Concept Development Path

Army transformation stems from a family of war-fighting concepts describing Future Force operations. Concept development and experimentation reflects the six foundational operational themes used to focus concept development and experimentation efforts in Phase I as shown in Figure 5-4.

- Network-centric Battle Command (fiscal 2004)
- Entry and Shaping Operations (fiscal 2005)
- Decisive, Simultaneous and Distributed Operations (fiscal 2005)
- Intratheater Operational Maneuver (fiscal 2006)
- Operational Maneuver from Strategic Distances (fiscal 2006)
- Sustained, Continuous, Simultaneous and Distributed Operations (fiscal 2006)

The concept development pathway must address attaining fundamentally new capabilities such as an FCS-equipped BCT as well as the seamless integration of select FCS with those capabilities into the total force.

ACDEP Phases

To accomplish concept development and prototyping goals, the ACDEP is three-phased:

- Phase I, 2004 through 2007, began with the fiscal 2004 Army Transformation Concept Development and Experimentation Campaign Plan (AT-CDEP) and will conclude with a 2007 experiment focused on 2015 Future Force capabilities for the joint war fighter. The focus of concept development is the maturation of Future Force concepts and introduction of initial Future Force capabilities into the total force. The prototype path will focus on near-term capabilities through the Air Assault Expeditionary Force (AAEF), modularity efforts and capability gap experiments. This phase will culminate with a joint 2007 experiment to demonstrate 2015 Future Force capabilities for the joint war fighter.
- Phase II, 2008 through 2013, will begin with the conclusion of ACDEP Phase I and continue until Future Force capabilities are fully integrated with the total force as an interdependent component of the Joint Force. The concept development path will continue to develop joint Army operational concepts to lead the process of change in the Army. The principal emphasis is on total force full joint interdependence with priorities for experimentation driven by joint functional capability areas. The prototype path will continue support for the FCS acceleration strategy by prototyping Spiral 1 through 4 capabilities. It will continue to address capability gaps through prototyping compelling capabilities. This phase will culminate with a joint, live, virtual and constructive capstone experiment to demonstrate the 2020 through 2025 Future Force capabilities in joint context.
- Phase III, 2014 and beyond, will be designed based on results of the prior phases. This phase acknowledges the continuing nature of transformation and will extend CD&E to address developments for the Future Force and beyond.

Army CD&E Successes during Fiscal 2004

Army CD&E has successfully responded to the need to accelerate new and enhanced capabilities to the Army's current fighting forces. Over the past year, Army CD&E has provided many benefits to the Current Force and to long-term Army transformation efforts. Army CD&E measures its success by the support it provides Army forces fighting the war and Army transformation:

Supporting the Army at War

- In the conceptual realm, CD&E assessed modular brigade combat team designs through CTC rotations to assist in development of the modular Army.
- In the materiel arena, CD&E developed beyond line of sight (BLOS) battle command and collaboration down to battalion tactical operations centers, providing rapid, secure communication to forward-deployed units as an interim capability for battle command on the move (BCOTM). It also provided a rapidly deployable BLOS network for TRANSCOM.
- For FCS/UA, it examined emerging C4 and ISR providing networked lethality and survivability for small modular combat units in the Air Assault Expeditionary Force Experiment — a collaborative effort between DARPA, CERDEC and TRADOC.

Supporting Transformation

- In the conceptual realm, CD&E developed and refined Future Force concepts. This included the battle command (C4 and ISR) concept and supported refinement of joint concepts by sponsorship or participation in service and USJFCOM war games and experiments such as the Army's Unified Quest, the Air Force's Joint Expeditionary Force Experiment, the Navy's Unified Course, and the Marine Corps' Sea Viking Experiment.
- In the materiel arena, it developed and refined robotic capabilities to provide and support force protection and ISR missions.
- For FCS/UA, CD&E conducted experiments to support refinements of the UA O&O (Change 3), FCS operational requirements document, FCS Battle Command System User Functional Description and other programs.

Science and Technology Linkage with Experimentation

Concept Development and Experimentation incorporates science and technology (S&T) through close coordination between the Futures Center; the Defense Advanced Research Projects Agency; the Army Materiel Command Research, Development and Engineering Command (RDECOM); industry; and academia. Experiment planning leverages RDECOM S&T experiments and embeds S&T solutions into TRADOC experiments.

Prototype experiments directly incorporate compelling technologies to address Current Force capability gaps. These candidate solutions are assessed, vetted and transitioned to rapid acquisition processes. Candidate S&T solutions are prioritized, using current force capability gaps, incorporating input from across the community of practices. The ongoing BCOTM effort cited above is an example of this process. In this specific case, the TRADOC battle lab integrated a set of emerging technologies and available commercial, off-the-shelf technologies (Direct Sequence Spread Spectrum/Code Division Multiple Access, Time Division Multiple Access Uplink, and small parabolic Ku Band antennas) to develop an interim capability for the Current Force. This effort also validated that battle command, collaboration and joint applications can be supported while establishing linkage and teaming within the CD&E community. This enables hand off of materiel solutions that can be procured and successfully fielded with supporting DOTMLPF products.

SCIENCE AND TECHNOLOGY — DEVELOPING TECHNOLOGIES TO ENABLE TRANSFORMATIONAL CAPABILITIES

The Army's science and technology investments are focused on the Future Force while, at the same time, seeking opportunities to provide advanced technology to the Current Force. This dual strategy requires a dynamic technology portfolio that is strategically aligned with the Army's future operational capability needs and that maintains an awareness of the lessons from current operations. Fundamentally, the Army S&T program is seeking to provide solutions that enable faster, lighter and smarter systems.

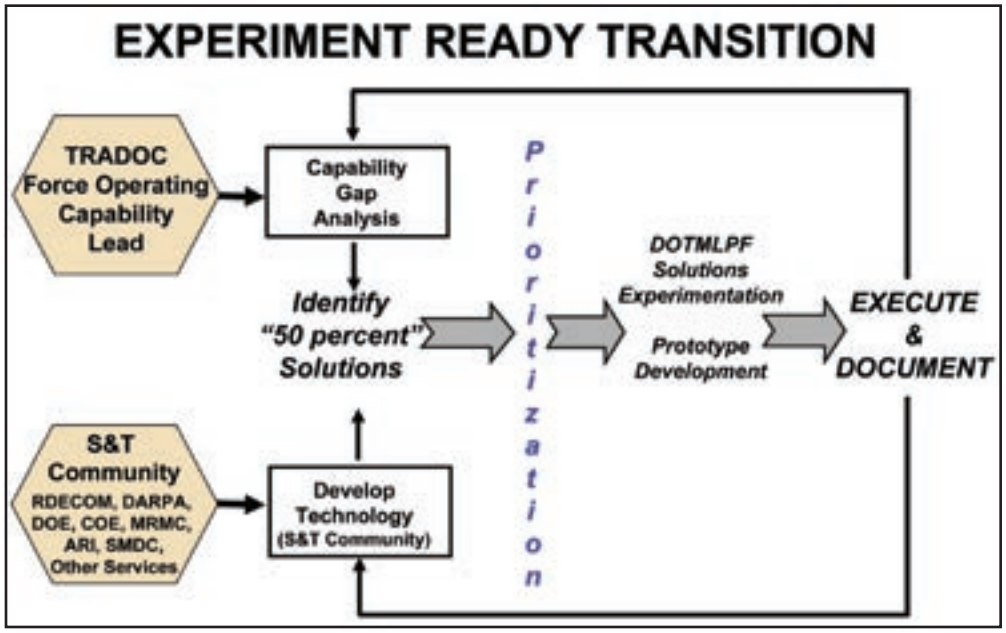

Figure 5-5. Army S&T and Experiment Life Cycle

Future Combat Systems

The single largest S&T investment over the POM time frame remains the pursuit of technologies for Future Combat Systems. While FCS has begun the system development and demonstration (SDD) phase of acquisition to field the first FCS-equipped unit of action in 2014, the S&T community continues to develop technologies for spiral insertion into the FCS experimental unit of action beginning during 2008. During this process, select

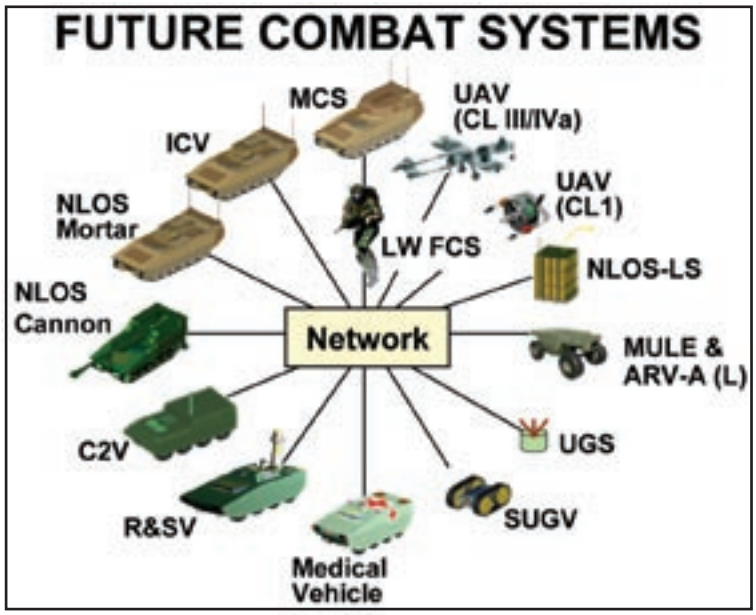

Figure 5-6. FCS Family of Systems

FCS component technologies will be spiraled forward to provide advanced capabilities to the Current Force. The FCS concept itself represents a significant shift in land combat operations. It is a family of systems that fights as a system of systems whose capabilities exceed the sum of its parts. The FCS has been designed so that each part is networked within the whole to achieve an unprecedented synergy. Key FCS technology investments include:

- Networked battle command systems to enable shared situational awareness and improved decision making
- Networked lethality through standoff precision missiles and gun-launched munitions
- Enhanced survivability through networked lethality, improved sensors to locate and identify threats, signature management, active and passive protection systems
- Semiautonomous and autonomous unmanned air and ground systems
- Low-cost, multispectral sensors to find and identify the enemy

FCS Unmanned Systems

The FCS-equipped UA will be the first Army organization designed to integrate unmanned systems and manned platforms into ground maneuver combat operations. Army S&T is developing a family of unmanned and robotic capabilities that include unmanned aerial vehicles, unmanned ground vehicles, unattended sensors and unattended munitions. These systems' capabilities will be modular in design for rapid adaptation to changes in mission needs.

The unmanned and unattended systems will be used in maneuver, maneuver-support and maneuver-sustainment roles to augment and, in some cases, replace Soldiers. The unmanned systems and technologies applications provide for capabilities that are not available today. They reduce risks to Soldiers while reducing logistics demand generated by human needs.

Specific impacts include:

- Increased standoff detection capabilities of FCS-equipped UAs to improve commanders' ability to shape the battlespace and set conditions for decisive operations in less time
- Increased capabilities of UAs during economy of force and distributed operations for extended periods
- Allocation of unmanned systems by UA forces alone in selected areas of the battlespace with lethal capabilities through networked battle command
- Sustained UA maneuver OPTEMPO through standoff mine detection and neutralization

Other S&T Initiatives

The S&T program pursues a wide range of technologies to enable the Soldier as a combat system. These include:

- Technologies to provide individual Soldiers with platformlike lethality and survivability
- Ultralightweight materials and nanotechnology to design materiel solutions for optimum Soldier applications
- Lightweight, long-endurance electrical power generation and storage

- Physiological status reporting and medical response technologies

The Army S&T portfolio invests in a range of technologies to provide solutions to enduring needs across a spectrum of desired capabilities for FCS, Soldier systems and other applications. Some of these are listed below:

- Mobile, secure, self-organizing networks for seamless joint operations
- Lightweight, multimission equipment packages for unmanned systems
- Simulations and virtual environment technologies for Soldier, leader and unit mission rehearsal and training
- Embedded prognostics and diagnostics to reduce logistical demands for materiel systems
- Area protection from rockets, artillery and mortars
- Genomic, DNA-based vaccines to sustain Soldier and unit combat effectiveness
- Countermine technology for high operational tempo combat and survivability in stability operations
- Advanced weapons including high-powered microwave, high-powered lasers and electromagnetic guns
- Biotechnology to obtain unprecedented materiel performance
- Medical technology for self-diagnosing and treating "uniform" ensembles

TRANSFORMING LOGISTICS

The Army delivers materiel readiness to the Current and Future Forces as the land-power component of the Joint Force. The successes enjoyed during OIF were the result of the integrated logistics team of Soldiers, civilians and contractors, who developed innovative solutions to a range of challenges caused by four major capability gaps in the current logistics system. To sustain combat power, the Army must have the ability to see the requirements on demand through a logistics data network. The Army requires a responsive distribution system enabled by in-transit and total asset visibility and a single owner with positive, end-to-end control in the theater. The Army needs a robust, modular force-reception capability — a dedicated and trained organization able to quickly open a theater and support continuous sustainment throughout the joint operations area. The Army needs an integrated supply chain that has a single proponent that can reach across the breadth and depth of resources in a joint, interagency and multinational theater. Current and future battlefield logistics functions are shown in Figure 5-7. The Army's logistics transformation is focused on meeting certain requirements:

- **Logistics Data Network:** Army logisticians will be an integral part of the joint battlefield communications network, with satellite-based communications that provide full-time connectivity on demand, enabling logisticians to pass and receive key data from the battlefield to the industrial base. These capabilities will allow joint force commanders to make decisions based upon accurate, real-time logistics information.
- **Responsive Distribution System:** The Army, together with the U.S. Transportation Command, will develop a distribution-based logistics system focused on guaranteeing on-time delivery. The distribution system must reach from the source of support to the Soldier in the front lines. Achieving this standard strengthens war fighter confidence by increasing visibility and establishing flexible, responsive distribution capabilities. Forward storage of large quantities of supplies is no longer necessary.
- **Robust, Modular Force Reception Capability**: To receive joint and expeditionary force flow and to facilitate immediate operational employment and sustainment, the Army will design an integrated theater opening capability that responds on extremely short notice and executes crucial sustainment tasks immediately upon arrival in theater.
- **Integrated Supply Chain**: The Army will develop an end-to-end enterprise view of the

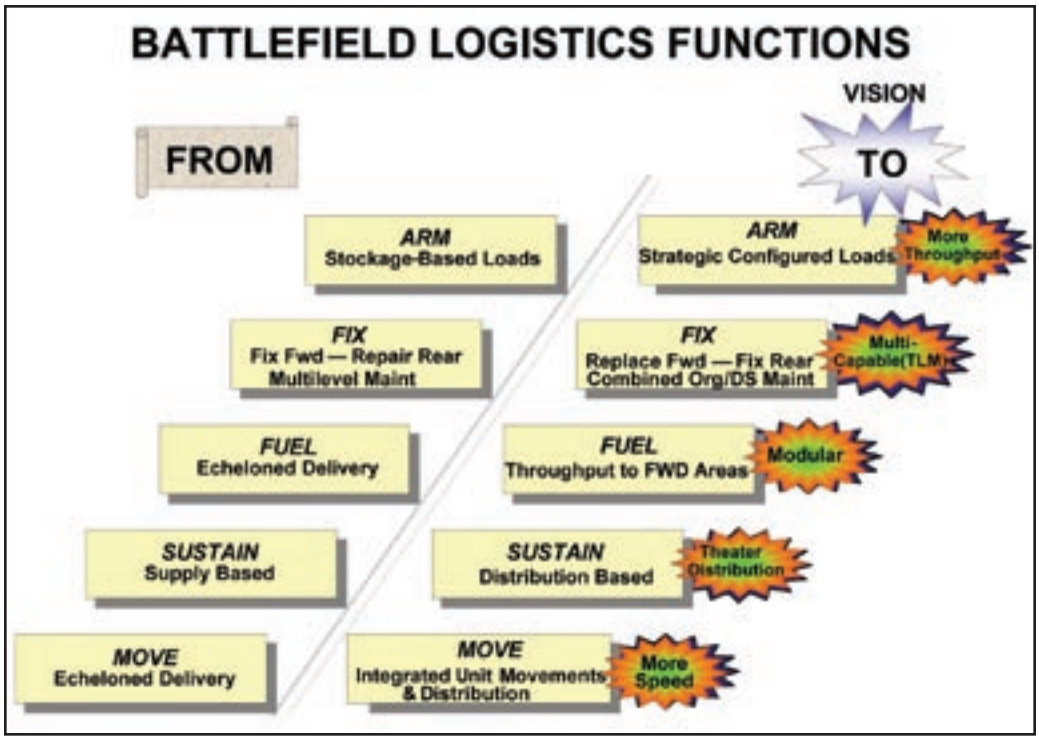

Figure 5-7. Battlefield Logistics Functions, Current and Future

supply chain and a service and agencies integration of processes, information and responsibilities. The Army will closely coordinate and align with the Defense Department's focused logistics initiative. The goal is to provide joint logistics data freely and automatically between strategic, operational and tactical level headquarters and agencies.

Modular Sustainment

As the Army transforms to a modular force, its logistics capability will similarly transform. TRADOC, AMC and units in the field are examining concepts for modularizing Army tactical and operational level sustainment units to provide the best possible support to Army units operating as part of a joint force. The effect of modularity on logistics will be characterized by more modular and capable sustainment organizations and reduced echelons that allow for increased throughput directly to forward locations. At the core of this shift is the development of a combat force with increased self-sustainment capabilities that can conduct sustainment operations internally while relying on the distribution system to enable logistics reach.

At the tactical level, each BCT(UA) will include an organic forward support battalion, designed with forward support companies that operate as part of the UA battalions.

At the operational level, the Army is designing logistics command and control (C2) capable of deploying small elements immediately and expanding as the theater develops. This guarantees a single logistics C2 within the theater from the beginning of any operation. The Army's C2 structure will be joint-capable and interdependent. The modular Army will be expeditionary and its logistics capability must enable the rapid employment of these forces. The Army is developing an operational-level theater opening capability to meet this need. This organization will be specifically designed, equipped and trained to quickly receive forces and prepare them for onward movement and employment. No longer will maneuver units be expected to devote their organic assets to receive themselves in an AOR.

At the strategic level, the Army is committed to an enterprise solution for integrated logistics processes, the ability to support collaborative planning and forecasting, and an overarching architecture integrated within the joint business enterprise. Using commercial off-the-shelf technology, the Army is integrating its strategic business processes with its tactical logistics systems, including development of a single data repository for seamless linkage from the national to the tactical level.

At all levels, the Army is prepared to contribute to and employ joint solutions for the joint force commander. The Army must provide combatant

commanders a campaign-quality force with joint and expeditionary capabilities that supports the full range of military operations at all levels. This includes a responsive logistics infrastructure with simultaneous deployment, employment and sustainment capabilities at the strategic and operational levels, complemented by a single, integrated and responsive end-to-end distribution system. These capabilities must integrate interagency and multinational resources and move to a single joint logistics command and control capability for joint force and regional combatant commanders.

The increase in forward logistics capability provided by modular designs requires changes in the specialized logistics support provided by AMC's Logistics Assistance Program. AMC is restructuring and building logistics support element teams from current support structures to provide modular technical assistance at the unit of action level. Additionally, AMC forward elements are being redesigned to ensure maximum system readiness, expedited supply and support actions, and better contractor accountability in the area of operations. Included in this effort is improved capabilities-based support provided by the Logistics Civil Augmentation Program further strengthening the Army's ability to support the combatant commanders.

TRANSFORMING INSTALLATIONS

Installations are an integral part of the deployed force from home station to the area of operations. Worldwide operational deployments and rotational assignments mean installation capabilities will transcend traditional expeditionary support requirements to mobilize, deploy and sustain the force. More than a jumping off point, installations minimize the deployed unit's footprint through connectivity and the ability to support reachback operations.

Installation facilities must readily adapt to changing, mission-support needs, spiraling technology and rapid equipment fielding. Installation connectivity must also support en route mission planning and situational awareness. Education and family support will use the same installation mission support connectivity to sustain the morale and emotional needs of Soldiers and their families.

One of the Army's focus areas, "Installations as our Flagships," calls for Army installations to project power and support families. Army installations support a campaign-quality Army with joint and expeditionary capabilities where Soldiers train, mobilize and deploy to fight and are sustained as they reach back for support. There are several key institutional transformation initiatives:

- Deployment and redeployment of facilities complements joint force projection with installations readily adaptable to changing mission support needs.
- "Fix our facilities" is part of the force stabilization and modular unit strategy described in Chapter 3, Providing Ready Forces. The Army's long-term strategies to improve installations will be accomplished through sustained and balanced funding to improve Soldier and family quality of life, while remaining focused on the Army's transformation to the Future Force.
- Army family housing privatization is the residential community's initiative and a crucial step for transforming Army installations and providing better housing for Soldiers and their families.
- Infrastructure transformation supports Army capabilities through effective environmental management and base realignment and closure. The convergence of defense overseas basing decisions, transformation and force structure changes affords the Army the opportunity to truly transform the Army's combat capability.
- Installation management has been centralized through changes in organization. This initiative brings a corporate structure for installations. New starts this year include building a standard garrison organization, which is a crucial step toward the transformation of installation management and will overcome the wide diversity of organizations and functions that exist today among installations.

- Utilities privatization is a part of business decisions on aging Army utility systems by using private sector expertise and economies of scale in order to divest non-core functions.
- Installation Information Infrastructure Modernization Program (I3MP) supports extension of the global information grid (GIG) throughout an installation. I3MP is being restructured and resequenced to support modularity. I3MP will provide the communications, computing and network defense infrastructure on the installation supporting common user services as well as classified communications for the priority C2 users. Units and activities being reset, refitted and deployed will have the highest priority, with the goal of having an updated infrastructure in place during crucial phases of transformation. New technologies are being employed to reduce the cost of the infrastructure, support mobile users and reduce the various networks on the installation.

SPECIAL OPERATIONS FORCES INTEGRATION WITH CONVENTIONAL FORCES

In today's noncontiguous battlespace, the mixing of special operations forces (SOF), coalition, other government agencies and Army and Marine Corps forces presents challenges and requires increased integration and interoperability between SOF and conventional forces (SOF-CF). The strategic plans of the Department of Defense and the Integration Interoperability Planning Guidance published by the department provide a strategic framework for conventional forces and SOF to integrate their capabilities in the current and future battlespace. The services and U.S. Special Operations Command (USSOCOM) are making changes to ensure more effective execution of the joint force commander's intent.

Major Initiatives

The combat training centers are implementing operational concepts that expose the friction points of Army SOF-CF integration, such as command and control, ISR operations, convergence of forces, operational security and its requirements, and use of nonlethal fires. The integration of ARSOF unconventional warfare and foreign internal defense and counterinsurgency missions within the CF area of operations provides the best opportunity to expose leaders to these friction points. Major initiatives are:

- Integration of ARSOF-CF activities at the CTC including:
  - Increased use of joint SOF at the CTCs
  - ARSOF-CF integration after-action reviews at the Joint Readiness Training Center and the National Training Center
  - Minimum CTC force lists with increased ARSOF presence
  - ARSOF capabilities brief to the Leader Training Program to better acquaint CF commanders with the skills ARSOF brings to the fight
- Assistance from the Center for Army Lessons Learned (CALL) with lessons learned in the CALL Web site, the quarterly CTC Tips Program, and an ARSOF-Conventional Force Integration Handbook
- Development of new civil affairs and psychological operations support packages to meet the revised doctrinal and organizational SBCT requirements
- Integration of a newly developed Joint Special Operations Task Force (JSOTF) Training Program at Fort Bragg, N.C., with the Battle Command Training Program joint-level exercises through constructive simulations
- Increased training for JSOTFs, forward operating bases, and special operations command and control element
- Allocation of civil affairs and psychological operations into UEx and UA designs
- Publication of a commander's handbook for delivery of crucial joint tactics, techniques and procedures regarding blue force situational

awareness, force asset employment, and collaboration and messaging scheduled for fiscal 2005

TRANSFORMING ARMY SPACE

The Army role in space operations is guided by five essential tasks: enable situational understanding and joint battle command en route, off the ramp and on the move; support precision maneuver, fires and sustainment; contribute to continuous information and decision superiority; support increased deployability by reducing in-theater footprint; and protect the force during all phases of operations. Space systems and services will require unprecedented levels of responsiveness, accuracy, timeliness, and dynamic interaction with other battlefield systems to achieve tactical relevance. Therefore, the Army is pursuing the following capabilities:

- Responsive, dynamic, space-based intelligence, surveillance, and reconnaissance sensors networked with land, sea, air and Soldier sensors that enable responsive in-theater tasking, rapid retasking, processing and exploitation through reach, forward downlink sites, and direct push-pull links to tactical forces
- Seamlessly integrated, dynamic bandwidth satellite communications
- Responsive, tactically relevant space control capabilities integrated with land, sea, air and information operations. Also, the Army needs the capabilities to ensure freedom of action in space and, when directed, deny an adversary freedom of action in space
- Assured, accurate, real-time missile warning and tracking capabilities distributed directly to affected forces and battle command systems.
- Effective Global Positioning System and augmentation capabilities.
- Enhanced sensor support

As the Army transforms to the Future Force, it refines, enhances and institutionalizes space-related capabilities, knowledge and tactics, techniques and procedures. Over the last fiscal year, Army Space and Missile Defense Command has executed a variety of initiatives in order to begin normalizing space within the Army's Future Force:

Supporting the Army at War

- Created the first space brigade (provisional) as a force provider
- Improved in support of combatant commanders:
  - Enhanced ground-based, in-theater space control operations
  - Adopted space-based blue force tracking (BFT) mission management center that coordinates BFT requests
  - Improved support by global and regional SATCOM support centers
  - Assumed O&M responsibility for and deployed Eagle Vision II for improved commercial imagery support

Supporting Transformation

- Embedded space support elements within UEx and UEy
- Graduated two classes of space officers from the Functional Area 40 (Space Operations) course
- Executed the Army Space Exploitation Demonstration Program (ASEDP) to educate tactical commanders on space-related capabilities and products
- Positioned the Army to employ future space-based IR data
- Inserted ground force requirements into the space-based radar JCIDS process
- Assigned as functional manager for high-altitude airship ACTD, a near-space asset

TRANSFORMING INTELLIGENCE

The goal of transforming intelligence is to provide "actionable intelligence" to enable relevant and ready combat forces. Actionable intelligence

provides shared situational understanding to commanders and Soldiers with the speed, accuracy and timeliness necessary to favorably influence current and future full-spectrum operations.

The core of this transformation effort centers on the evolution from traditional intelligence reporting to the creation of understanding and decision dominance. The overarching principle is that fused intelligence provides the commander superior battlespace knowledge enabling precise application of effects through informed decision making. Fundamental to achieving this capability is the development of actionable intelligence that is specific to the needs of decision makers across the full range of military operations. Actionable intelligence empowers greater individual initiative and self-synchronization among tactical units, thus accelerating the speed of decision making.

Four overarching and enabling concepts are central to this transformation:

- **Changing the Culture and Mindset**: Army intelligence transformation begins with changing the behavior and expectations of both intelligence producers and consumers as an essential and first step toward changing organizational and operational culture. For intelligence producers this means moving from current requirements orientation to an anticipatory approach to intelligence production. Intelligence producers must anticipate the next requirement and provide assessments and answers to relevant operational questions before they are asked.

  For intelligence consumers, cultural and mindset changes center on a shift from a passive posture of waiting for intelligence to make operational decisions to an active role in pursuing intelligence. Commanders must fight for knowledge by exploiting windows of opportunity. In essence, every Soldier serves as a sensor on the battlefield and has the best local situational awareness.

- **Enhancing Battlespace Capabilities**: Army intelligence transformation provides revolutionary advancements in force effectiveness to address the challenges of data processing, analysis and fusion. The objective is to reach a point where the commander receives relevant data that is presented in an intuitive manner. The primary challenges are separating relevant information from background clutter and fusing data from multiple, sometimes disparate, sources to arrive at a coherent and consistent picture of the battlespace. These capabilities will enable tactical formations to operate within an interdependent framework of action that is supported by a global grid of analytic and collective intelligence overwatch.

- **Implementing Overwatch:** In addition to changing Army culture and improving situational understanding within a unit's controlled battlespace, Army intelligence transformation identifies a requirement for tactical overwatch. It is a combination of TTP, networked communications and analytical capabilities that focus higher-echelon intelligence in direct support of tactical units during periods of limited situational awareness and high vulnerability. Tactical overwatch concentrates resources directly on the subordinate's area of responsibility.

- **Establishing the Network-Enabled Environment**: A network-enabled environment provides an integration and fusion framework, linking actionable intelligence to the supported war fighter. The intelligence enterprise provides information transparency, made possible by a common network that integrates people with shared databases, advanced analytical tools, knowledge centers, and sensors/collectors that are accessible by all. Surveillance and reconnaissance of the enemy will be continuous, with the resulting information and intelligence processed at or near the point of origin and moving across all echelons via the global information grid (GIG). For Army intelligence, the key enabler for this framework is the Distributed Common Ground System (DCGS-A).

In the near term, efforts are concentrated on improving the quality and quantity of sensors, re-

porting means and analysis — focusing initially on the UA. The acceleration integrating future capabilities into the Current Force, for example, is fielding an interim DCGS-A capability and achieving objective capability through spiral development. In the Future Force design, the Army pushes tactical intelligence capabilities forward, making them organic to maneuver forces so they have the necessary capabilities to develop the situation from the perspective of collection, processing, analysis and fusion. Several DOTMLPF solutions support Army intelligence transformation including:

- Moving appropriate Army intelligence collection capabilities forward into the tactical maneuver forces
- Providing additional analytic capability within maneuver units to enhance situational awareness, increasing the effectiveness of targeting, and setting the conditions for the commander's understanding
- Enhancing the intelligence capabilities of tactical formations by increasing the number of intelligence personnel organic to the lowest level war-fighting units, especially with counterintelligence and human intelligence
- Organizing and equipping tactical maneuver units to facilitate seamless access to relevant information and data
- Establishing the right mix and balance of capabilities between the BCT, UEx and UEy to provide complementary and reinforcing coverage and to ensure continuity

Ongoing and programmed initiatives include:

- **The Distributed Common Ground System-Army**: DCGS-A is a single, integrated intelligence, surveillance and reconnaissance ground processing system that facilitates operations from the unit of action up to the national level. It enables the commander to achieve situational understanding, execute battle command, synchronize fires and effects, and protect the force. The DCGS-A is network-enabled and fully interoperable within the GIG. Further, its modular architecture complements Army modular conversion efforts.
- **Future Combat Systems**: As described in Chapter 4, FCS provides crucial horizontal integration and fusion via its integrated network and enhanced reconnaissance and surveillance capabilities. The integration of DCGS-A functionality in FCS makes them crucial nodes in the intelligence, surveillance and reconnaissance enterprise.
- **Improved Counterintelligence and Human Intelligence**: This includes efforts to grow a CI and HUMINT force with a more tactical focus that provides more relevant reporting.
- **Project Foundry**: Project Foundry provides tactical intelligence organizations better regional and subject matter expertise by stationing select tactical intelligence Soldiers with strategic intelligence units and organizations where they can conduct daily, real-world intelligence operations.
- **Information Dominance Center**: The IDC supports ongoing operations while performing as a test bed for emerging technologies and business practices and applications for HLS/HLD. Capabilities that succeed are integrated into the Current Force.
- **Pantheon Project**: Army intelligence collaborates with scientists and scholars to identify and explore innovative approaches to information management challenges.
- **Red Teaming**: Red teaming enhances force protection through asymmetric threat war gaming against operational plans.

BATTLE COMMAND

Battle command is the art and science of applying leadership and decision making to achieve mission success. Enabled by C4 and ISR, battle command enhances the commander's ability to gain information and decision-making advantages over any adversary. Figure 5-8 portrays these relationships.

Figure 5-8. Battle Command

Fully networked battle command capabilities bridge from the Current Force to the Future Force and enable the JFC to conduct fully interdependent, network-enabled warfare. The Army views battle command as the essential operational capability that fundamentally enables the conduct of future joint operations. To implement the JOpsC and joint operating concepts (JOCs) and achieve decision superiority, the future Joint Force will exercise battle command within an inherently joint, top-down network that provides common situational awareness.

When networked battle command is fully implemented, forces will possess the capabilities to adjust rapidly to changing situations and synchronize their efforts during execution, with minimal intervention or direction. To achieve these and enhance the capabilities of the Current Force, the Army has developed and is implementing a battle command way ahead strategy.

This strategy encompasses the intent of joint battle management command and control (JBMC2) and applies lessons learned from OIF. The intent of the strategy is to provide improved capabilities through technology distributed across the Current Force. The intent is also to ensure that all units share the same capabilities and are interoperable throughout the Joint Force. The strategy provides for the standardization of battle command capabilities by unit type and echelon for both the Current and Future Force. Recognizing the hybrid nature of the Army and its Current and Future Force at any given time, it is important that capabilities of current forces will be interoperable with future forces.

Battle command is more than materiel solutions — spanning all DOTMLPF domains. Indeed, battle command requires skilled judgment gained from practice, reflection, study and intuition. Most of the activities previously discussed in this chapter improve Army battle command capabilities. The network capabilities, discussed below, provide significant improvements in the quality of shared situational awareness, acceleration in the speed of command, and the joint commander's ability to employ network-enabled capabilities.

LandWarNet

As part of the joint team, the Army's network architecture must seamlessly integrate with joint architecture through the GIG, shown in Figure 5-9. It does this through LandWarNet, which serves as the Army's portion of the GIG, analogous to the Air Force ConstellationNet and the Navy's ForceNet. LandWarNet provides for processing, storing and transporting of information across a seamless network that synchronizes and integrates the war fighting, Department of Defense portion of the

national intelligence and business mission areas. It provides both internal infosphere connectivity and external interoperability and integration.

LandWarNet faces several operational challenges as a part of the GIG, many of them symptoms of moving from a 20th century industrial mindset to a 21st century information-age mindset. The most important challenge deals with meeting commanders' needs and expectations while dealing with technological constraints. In the near term, commanders have identified 7+1 "Good Enough" capabilities that allow them to use command and control tools today. These "Good Enough" capabilities allow the Army to get information technology to the forces today and provide a base to spiral toward future capabilities envisioned for the Future Force. The 7+1 "Good Enough" capabilities are:

- Friendly locations
- Current enemy situation (ISR and Intel/FS/AD sensors)
- Running estimate (current combat power/future combat power/CCIR/BOS staff estimates)
- Graphic control measures
- Fragmentary orders
- Commander's SITREP
- FS coordination measures/capabilities overlay
- Joint and coalition interoperability

Joint Network Transport Capability — Spiral

Currently, few C4 and ISR programs of record are joint-capable. To ensure future capabilities are integrated into the Current Force as quickly as possible, an initiative called the Joint Network Transport Capability – Spiral (JTNC-S) has been developed out of an effort to remedy identified shortfalls. The Combined Arms Center's battalion-and-above battle command effort has provided a holistic solution that begins to solve the bandwidth and interconnectivity problems — now known as the JNTC-S.

Each JNTC–S improves on previous spirals' capabilities. Brigade combat teams are now able to act as joint task force headquarters without augmentation, and combat service support users now have access to an integrated satellite network. JNTC-S supports the Army chief of staff's vision of bringing Future Combat Systems transport capabilities to units as quickly as possible.

LandWarNet and Bandwidth

Currently, few C4 and ISR programs of record are joint-capable. To ensure that the Army's network capabilities are joint from the beginning, the Army must be an actively engaged partner in identifying not only joint requirements and capabilities but also in the acquisition processes of new equipment. Additionally, joint network program development is in its infancy, but the requirements for a joint network are absolute. Joint network development is shown in Figure 5-10.

While there are many technological challenges for implementing LandWarNet as a part of the GIG, two of the most crucial deal with bandwidth and applications. The

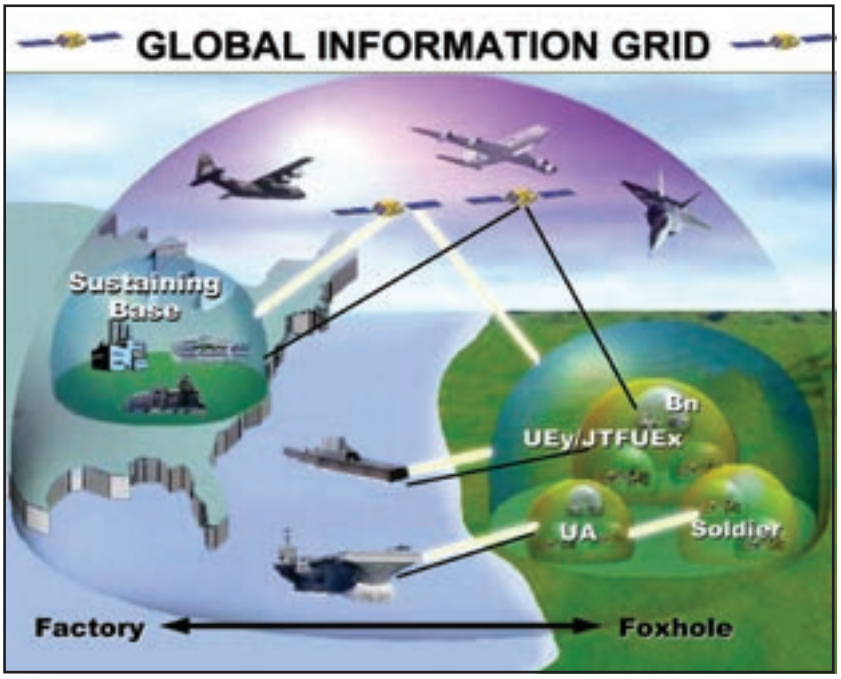

Figure 5-9. Global Information Grid

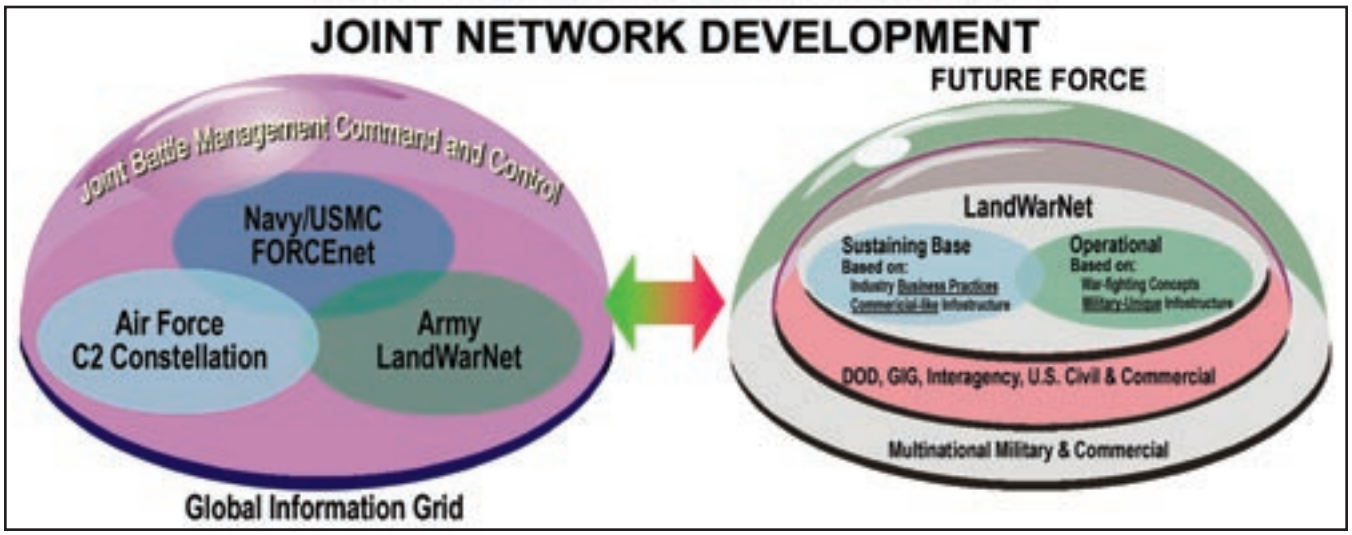

Figure 5-10. Joint Network Development

Army has a large demand for bandwidth to support LandWarNet. Additionally, the military competes with the civilian sector for bandwidth, making a scarce resource even scarcer. In the near term, the Army will rely on significant portions of commercial bandwidth at the same time optimizing this limited bandwidth through a series of materiel and process solutions until bandwidth expansion initiatives are in place. The future of bandwidth is shown in Figure 5-11.

Applications are part of the bandwidth problem. Currently there are over 4,000 applications used by the Army that use bandwidth in varying means. The Army is working with commanders in order to meet identified needs and certify applications for use within the network. As part of this effort, both the Army and the Marine Corps decided to converge systems in order to communicate with each other. Both services elected to use the Army FBCB2 system for brigade-and-below communications and the Marine Corps C2PC system for brigade-and-above communications. This decision standardized equipment, increased joint interoperability and blue force situational awareness, and

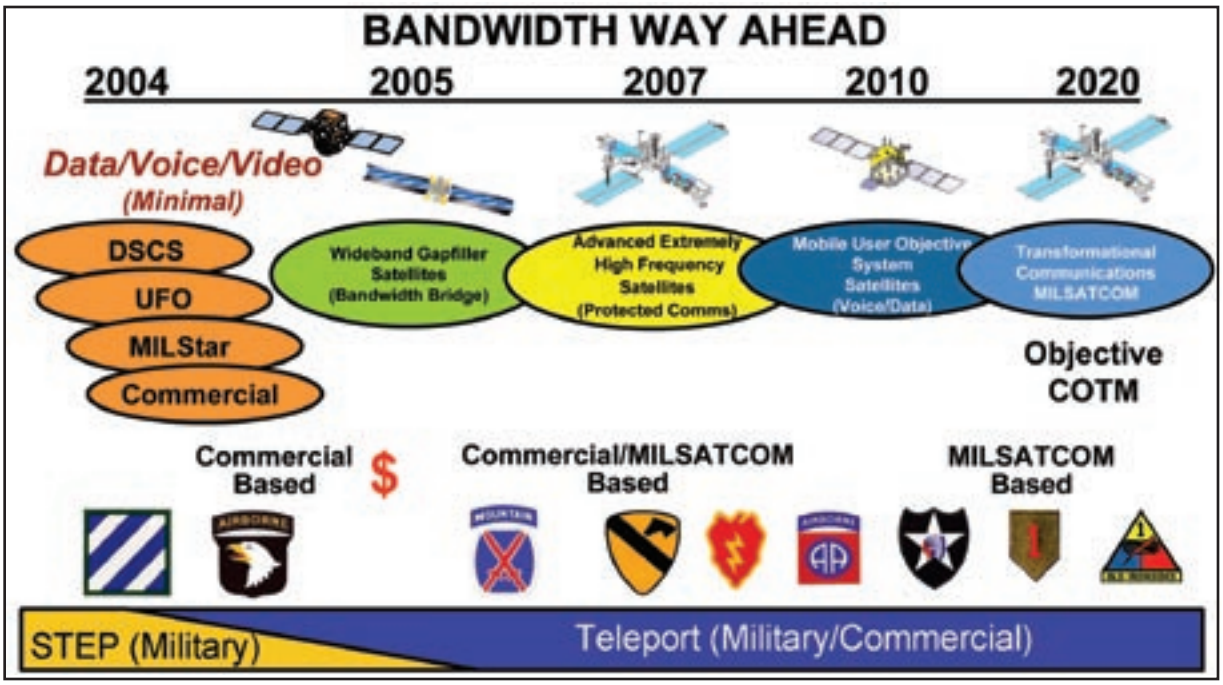

Figure 5-11. Bandwidth Way Ahead

made more efficient use of bandwidth through the standardization of equipment.

As part of its move toward a single, integrated network, the Army has identified gaps that it is working to mitigate. These gaps and mitigation strategies are identified in the following chart:

MEASURING ARMY TRANSFORMATION — THE STRATEGIC READINESS SYSTEM

Transformation inevitably requires trading off near-term possibilities for long-term gain. Leaders

	Capability	Gaps	Mitigation Strategy
Soldier	Situational awareness Training Dismounted secure voice/data Soldier Self-Service (AKO)	Dismounted joint BFT Distance learning Secure squad radio AKO access	FBCB2-BFT OIF level to key leaders over time JTRS waivers/ONS process
Battalion and Below	"Good Enough" Battle Command Baseline knowledge of enemy TTP at battalion and below relatively unchanged	Nonstandard CPs/BFT Limited distribution Limited mounted battle command on the move BFT limited distribution No integrated CONOPS/NETOPS for federated networks	FBCB2-BFT OIF level to key leaders over time Network ACR BC "Good Enough" initiatives Develop NETOPS/CONOPS Converge to WIN-T/JTRS
Unit of Action	Conduct full-spectrum operations in all types of terrain against any enemy Modular brigades have utility for stability, security and support operations	No integrated CONOPS/NETOPS for federated networks BC "Good Enough" Network ACR fields to "bare bones" level BCOTM antenna technology	Develop NETOPS/CONOPS BC "Good Enough" initiatives Network ACR solution (bridge to future network) Converge to WIN-T/JTRS Trojan Spirit/JNN Connect to logistician
Unit of Employment (X)	War-fighting HQ able to execute all operations Network connectivity to joint, interagency, multinational HQ Rapid deployment	Joint, net-centric operations, functional concept and architecture BCOTM antenna technology No integrated CONOPS/NETOPS for federated networks	J-8 Joint Integrating Concepts Trojan Spirit Develop NETOPS/CONOPS Connect to logistician Network ACR solution (bridge to future network)
Unit of Employment (Y)	Serve as C/JFLCC	Joint, net-centric operations, functional concept and architecture Network ACR fields to "bare bones" level No integrated CONOPS/NETOPS for federated networks Undefined force structure	J-8 Joint Integrating Concepts Network ACR (bridge to future network) Trojan Spirit Connect to logistician Realign integrated theater signal battalion (ITSB) to modularity Develop NETOPS/CONOPS Battle Command "Good Enough"
Sustaining Base	Support power projection Support mobilization Integrate with interagencies Force generation Support homeland defense	No integrated operational architecture for the sustaining base No single data repository No current multilevel access Global directory and storage services not yet established	Leverage emerging GIG-BE IP services and standards LandWarNet integration of installations, GuardNet, ARNet to the GIG Connect to logistician Army digital training strategy

must therefore consider whether the long-term gains are worth the short-term trade-offs and whether short-term actions accelerate or impede the attainment of long-term goals. Prior to the introduction of the Strategic Readiness System (SRS), the Army's readiness system focused solely on the current readiness of operational units. While it measured the ability of those units to perform the mission for which they were organized and designed, and, to a lesser degree, their current mission, it provided little insight into the Army's comprehensive ability to organize, train and equip land forces for prompt and sustained combat. Furthermore, it provided no insight into the force's ability to carry out that mission more than 90 days in the future.

Implementation of the Strategic Readiness System and the melding of SRS and unit status report data in SRS will greatly enhance the Army's ability to measure and manage these efforts. SRS is balanced, links resources to readiness and translates strategy into measurable objectives.

SRS is a combination of a strategy map, as depicted in Figure 5-12, and a scorecard with strategic objectives, strategic measures and targets. These objectives, measures and targets utilize both lagging and leading indicators for the comprehensive assessment and prediction of the Army's ability to achieve its long-term strategy and transformation goals. The Army recently updated its strategy map by incorporating the campaign objectives from the Army Campaign Plan (ACP) as themes. The Army is currently working to synchronize relevant SRS and ACP measurement, evaluation and reporting procedures. This integration will improve existing Army measurement and assessment processes — ultimately allowing the Army to better synchronize its transformation activities with other efforts.

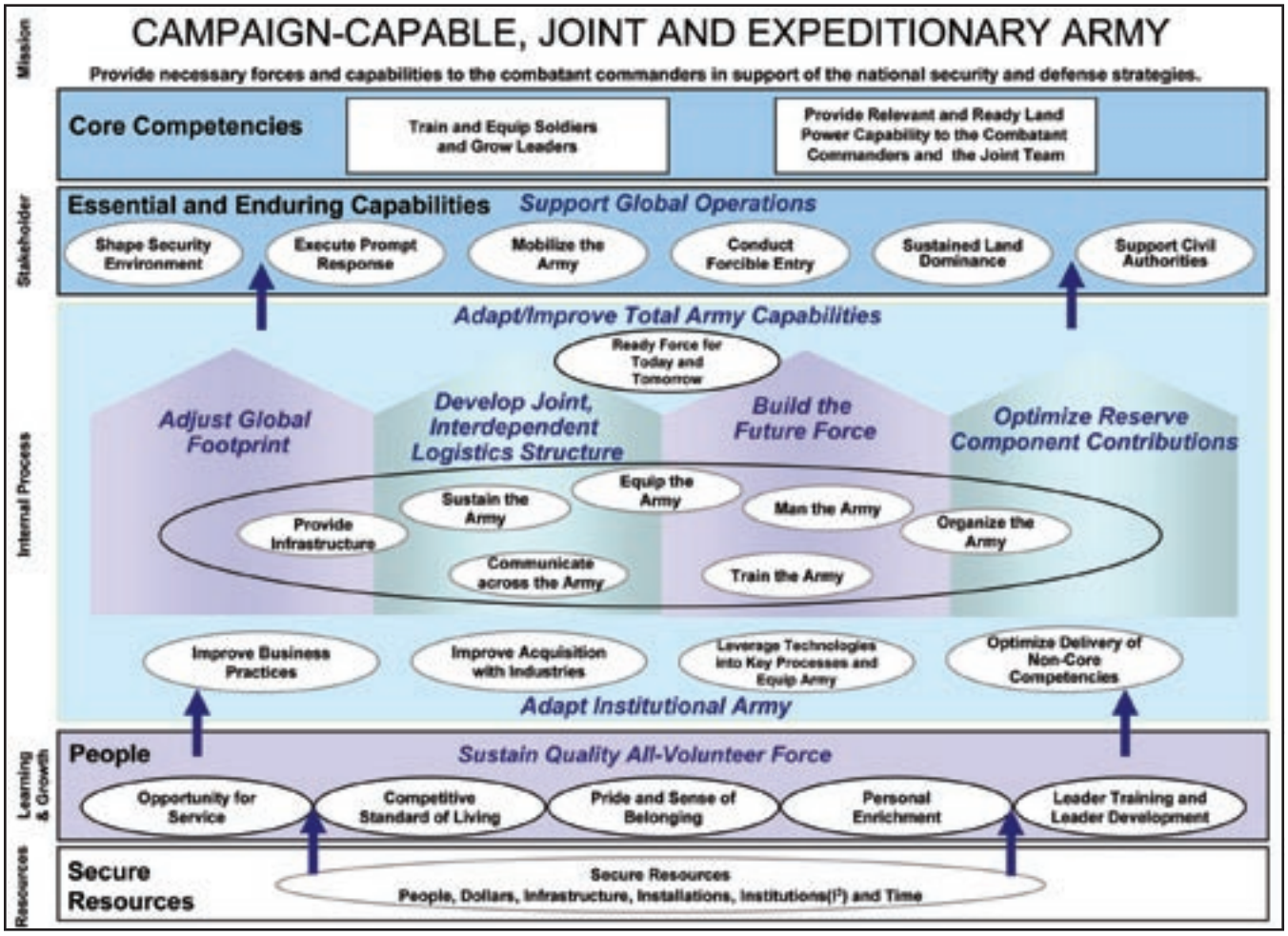

Figure 5-12. Strategic Readiness System

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CHAPTER 6 IMPLEMENTING CHANGE IN THE CURRENT FORCE

MAJOR TRANSFORMATION DECISIONS DURING FISCAL 2004

Since publication of the 2003 Army Transformation Roadmap, the Army has significantly accelerated the tempo of transformation — this while an average of 170,000 Active Component and Reserve Component Soldiers have been deployed in combat at any given time. Over the past year, Army leaders have made crucial decisions to influence transformation efforts:

- Execution of Army transformation directed in the Army Campaign Plan
- Design, number, mix and conversion sequence of brigade combat team (units of action)
- Design of units of employment
- Modular conversion of three maneuver brigades and the creation of a fourth maneuver brigade in the 3rd Infantry Division and its scheduled redeployment back to Iraq within one year
- Initiation of modular conversion for the 10th Mountain Division and the 101st Air Assault Division into the modular infantry design
- Divestment decisions equaling $17 billion in POM 2006-2011 to fund crucial transformation efforts
- Design and initial implementation of unit operational deployment cycles that maximize readiness and availability of forces while ensuring greater stability and deployment predictability for Soldiers and their families
- Restructuring of Army aviation
- Rebalancing decisions affecting over 100,000 Active and Reserve Component personnel positions that provide crucial capabilities to the joint force in the near term
- Rapid fielding and rapid equipping initiatives that provide Soldiers with enhanced force protection capabilities
- Enhanced resource and personnel management processes to reflect best practices in the private sector

3RD INFANTRY DIVISION MODULAR CONVERSION

The modular conversion of the 3rd Infantry Division reflects the pace and scope of Armywide transformation efforts. Within one year, the 3rd ID reorganized to a modular design while retaining its readiness for deployment and combat operations. The 3rd ID converted its support force structure and three maneuver brigades to the modular design and built a fourth maneuver brigade primarily with existing assets and some emerging transformational technologies. Further, it also conducted four National Training Center

rotations under the modular design construct. The lessons learned from 3rd ID's reorganization has enabled the Army to accelerate and improve its modular conversion efforts for other Army units. This year, the 10th Mountain Division (Light) and the 101st Airborne Division (Air Assault) will reorganize.

STRYKER BRIGADE COMBAT TEAM FIELDING AND DEPLOYMENT

During 2003, the Army's first Stryker brigade combat team, or SBCT, its first truly network-enabled maneuver unit, deployed in support of Operation Iraqi Freedom. The Stryker-equipped unit was fielded in less than four years from concept to deployment. The second SBCT has been completed, and the third of six is now under construction. Exceptional support from Congress and the Office of the Secretary of Defense, along with close collaboration between the Army and industry, made this achievement possible.

Stryker brigades demonstrate the Army's concept for the network-enabled force. Further, they fill the capability gap between light- and heavy-force units with an infantry-rich, mobile force that is strategically responsive. The improved battlespace awareness, battle command capabilities and survivability enhancements are providing crucial support for Operation Iraqi Freedom. Equally as important, the SBCTs are improving the Army's understanding of Future Force processes, helping the Army to formulate an advanced war-fighting doctrine that informs development of Future Combat Systems-equipped (FCS-equipped) units of action.

NEAR-TERM MATERIEL SOLUTIONS

The Army continues to improve and adapt its acquisition and fielding processes. Two major successes in fiscal 2004 were the rapid fielding initiative, or RFI, and the rapid equipping force, or REF. Both initiatives provide timely support to Soldiers deployed in combat while facilitating Army transformation.

The RFI program represents a dramatic improvement in the Army's traditional acquisition and fielding processes. Before the end of 2004, the Army will outfit over 100,000 Soldiers with improved combat gear as they deploy. By the end of fiscal 2007, some 840,000 Soldiers in 48 Active and 36 Reserve Component brigade combat teams and their associated support personnel will receive the enhanced capabilities provided by the basic RFI Soldier kit. The RFI kit contains about 50 essential items that provide the most up-to-date equipment to Soldiers at war. The items range from mission-essential equipment, such as improved boots, socks and "wick-away" T-shirts, to key force protection items, such as the advanced combat helmet and knee and elbow pads, among others. Also included are improved ammunition packs, team radios and advanced weapon optics. This initiative dramatically improves the lethality, survivability and endurance for the Army's centerpiece — the Soldier.

The Army also instituted the REF to provide commercial off-the-shelf or near-term developmental items to OIF and OEF forces. The REF fills materiel requirements that are not available through the Army's traditional supply and logistics system. Typically, the rapid equipping cycle is measured in weeks — sometimes days — from field commanders articulating a requirement to the Army providing a solution. Key items deployed into combat

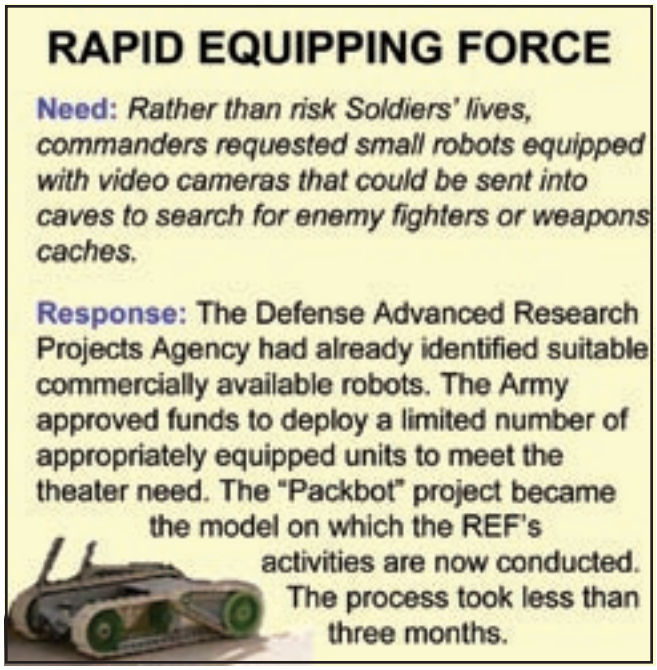

Figure 6-1. REF Success: The "Packbot"

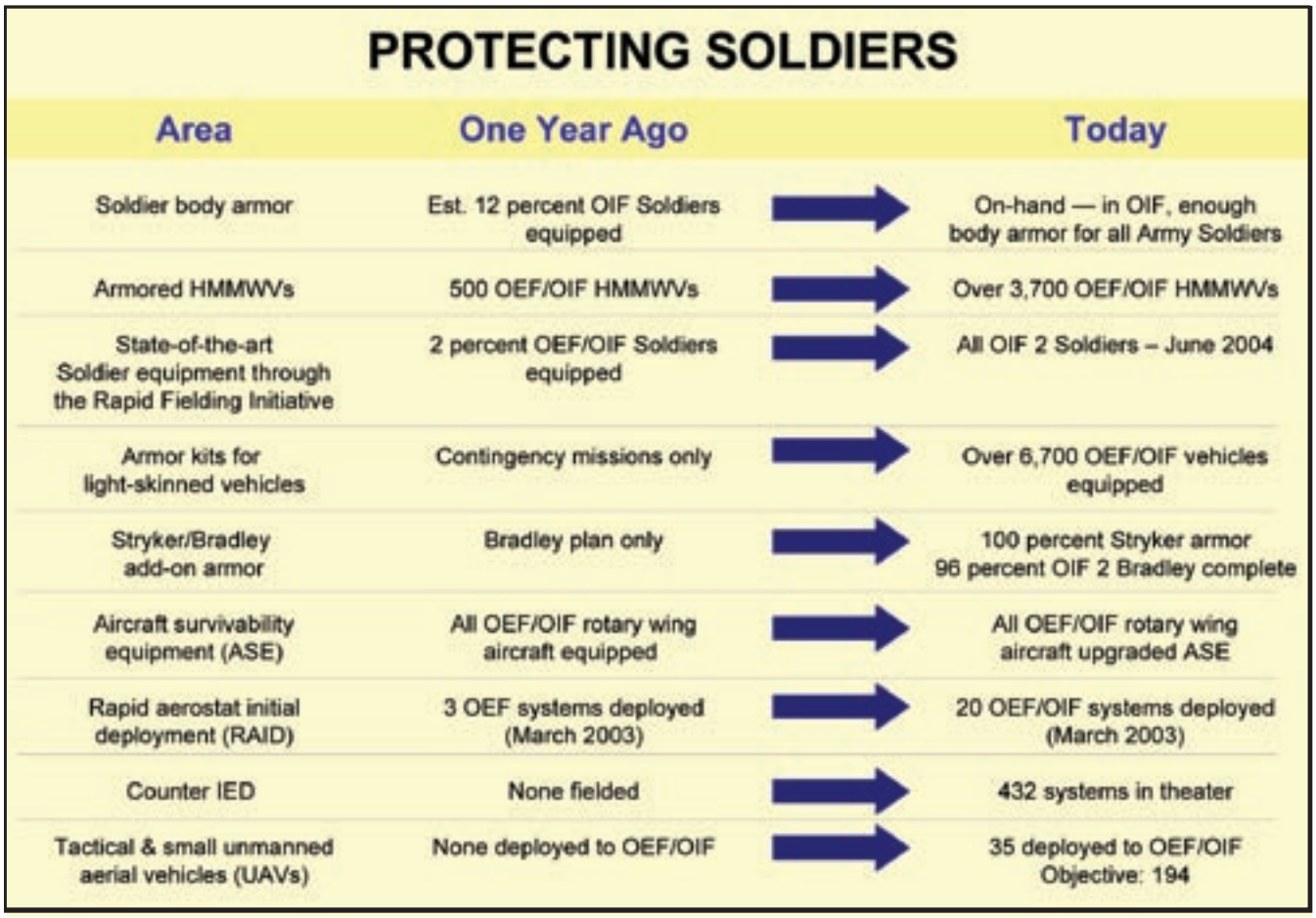

Figure 6-2. The Army Accelerates Resource Processes to Protect Soldiers

have included armored kits for vehicles, improvised webcams to assist in searches for weapons caches, systems for searching dangerous areas, and nondestructive devices to open doors during search operations. These items are explained in Figures 6-1 and 6-2.

The Army is also accelerating select Future Force capabilities to enhance effectiveness of the Current Force. Based on OIF/OEF operational experience, joint experimentation efforts, and TRADOC's refined approaches to CD&E, the Army is developing high-payoff technology solutions to reduce capability gaps:

Network Battle Command

- "Battle Command Good Enough" is based on CSA guidance to develop a top-down architecture and stop the development of the Army battle command system, or ABCS, software at a "Good Enough" capabilities solution to quickly field a system Armywide, top-down to the brigade level.
- Force XXI Battle Command Brigade and Below, or FBCB2, incorporates blue force tracking. FBCB2 is a digital battle command information system providing integrated, on-the-move battle command information to tactical combat leaders and Soldiers from brigade to platform level. It allows war fighters to pass orders and graphics to visualize the commander's intent and scheme of maneuver. FBCB2 is also a key component of the ABCS.
- Advanced robotic controller, or ARC, couples robots, sensors and weapons and employs Soldier-centric information networks. ARC software provides mapping, messaging, voice-over Internet protocol, sensor monitoring and the integrated automated fingerprint identifica-

tion system (IAFIS), as well as compliant biometric collection and identification.

Soldier Protection in a Counterinsurgency Environment

- Interceptor body armor improvements (Deltoid and Aux Device) have been instituted. Deltoid auxiliary body armor, made from a Kevlar blanket, provides explosive fragmentation protection for areas not covered by the standard interceptor body armor. The armor does not restrict movement.
- Change detection workstation, or CDWS, with its associated airborne sensors, is a user-friendly workstation that compares day-to-day thermal images to help identify and locate improvised explosive devices (IEDs) and/or land mines. The station automatically generates geographically referenced mosaics from video and metadata inputs and stores the mosaics on a network. Also, the station automatically synchronizes the mosaics from different days and displays them for analysis, notifying operators of changes from previous images.
- Explosive resistant coating is a low-cost coating system for protecting personnel, platforms and structures from explosive and/or penetrating ordnance.

Protecting the Force in Noncontiguous Battlespace

- Advanced Threat Infrared Countermeasures/ Common Missile Warning System consists of passive missile warning, active infrared jamming and improved countermeasure dispensers. The system is designated for installation on the AH-64, UH-60, CH-47, EH-60 helicopters and various special operations aircraft as well as tactical, fixed-wing aircraft.
- Full-Spectrum Active Protection System Close-in Layered Shield (FCLAS) is one of the available active protection systems. FCLAS provides lightly armored vehicles protection against rocket-propelled grenades fired from long or close ranges.
- Ground-based IED Jammer (Warlock/Self-Screening Vehicle Jammer, or SSVJ) is an electronic countermeasure system that provides force protection to convoys and at fixed sites or checkpoints. It also provides protection against booby traps and remotely detonated weapons. SSVJ is a low-cost, vehicle-mounted spot-jammer that simultaneously operates on different frequency bands to disable explosive device electronics.

Logistics in a High OPTEMPO, Noncontiguous Battlespace

- Blue force tracking (BFT) supports independent team and convoy level of CS/CSS.
- Leader/follower vehicles are remote-controlled and autonomous Polaris MV ATVs that can carry 400 pounds and tow 1,500 pounds. They require only one operator.
- Commercial very small aperture terminals (VSAT) for long-haul communications coupled with wireless combat service support automated information system interface (CAISI) equipment provide local area network connectivity and connect logisticians. This technology is being fielded as the Army converts to modular designs. Its success has been proved at the National Training Center. It has doubled the number of requisitions passed and eliminated the need for Soldiers to carry discs between logistics nodes.

Training the Force

- One Tactical Engagement Simulation System, or One TESS, is a family of tactical engagement simulation systems that support force-on-force and force-on-target training exercises. These exercises occur at the brigade level and below in all battlefield operating systems at home station, combat maneuver training centers and deployed sites.
- Engagement Skills Trainer is an indoor, multipurpose, multilane, small arms training simulator used to simulate weapons training events that lead to live-fire individual and crew weapons qualification.

- Home Station/Deployed Instrumentation Training System, or HITS/DITS, is a training enabler for home station and deployed force-on-force training that will provide the ability to support instrumented force-on-force combined arms/multi-echelon company team missions.

Responsive, Networked Precision Fires

- The universal observer concept provides a full-spectrum controller at the company level who is trained, equipped and qualified to employ air, sea and surface lethal and nonlethal effects. He is also authorized to provide targeting information and terminal guidance in support of Types 2 and 3 close-air support.
- Fire support sensor systems, or FS3, will give field artillery fire support teams the capability to detect, recognize, locate and designate targets and send digital location data to fire support computers. FS3 will enable the commander to attack targets with a variety of conventional and precision munitions (both GPS and laser-guided) at extended ranges with increased accuracy in both day and night operations.

Conducting Joint Urban Operations

- Advanced Robotic Controller provides Soldier-centric information sensors that are coupled with robots.
- Commercial off-the-shelf radios for dismounted Soldiers:
  - Sensoria is a low-cost radio used with the Advanced Robotic Controller (ARC) 802.11b WiFi-based network radio 2.4 GHz, three overlapping channels.
  - Portable Radio Communications-148 (PRC 148) weighs less than two pounds. The Multiband Inter/Intra Team Radio (MBITR) provides unprecedented interoperability with existing military legacy systems and commercial radios, while ensuring future operations with the next generation communication equipment. Seven programmable devices, supported by flash memory, are incorporated into the MBITR architecture, creating a truly software-based handheld radio.

Special Operations Forces and Conventional Force Integration

- The U.S. Army Special Operations Command's top integration concern is the integration of Army battle command and USASOC's role as the global scout for the Joint Force. Army special operations forces, or ARSOF, require the ability to pass crucial information to the joint force commander and share the common operational picture. Further, ARSOF global scouts must also be protected by blue force tracking that is beyond the horizon, meets lower probability of intercept/lower probability of detection (LPI/LPD) standards, and achieves ARSOF security requirements. USASOC is working closely with the Army to field ABCS "Good Enough," WIN-T, Joint Tactical Radio System (JTRS), DCGS-A, Soldier as a System (SaaS), FBCB2, and other systems to improve SOF interoperability and integration.
- AN/PRC-150, intended for civil affairs and psychological operations units, is a member of the FALCON II family of multiband tactical radio systems. It is an advanced HF-SSB/VHF-FM man-pack radio that provides reliable, long-range, secure, tactical communications. The transceiver's extended frequency range (1.6 to 60 MHz) in combination with 16 kbps digital voice and data enable fixed-frequency interoperability with other VHF-FM combat net radios.

Joint Interoperability

- Software-defined radio, or SDR virtual patch, provides radio interoperability among allied and coalition military, non-governmental agencies, emergency response agencies and city and state law enforcement by using a commercial laptop, an expandable systems architecture, and radio frequency/digital processing cards.

Timeliness of Analysis and Information Dissemination

- Command post of the future improves situational awareness of individual commanders, improves shared awareness across tactical military organizations, reduces planning and replanning times, increases speed and quality of command decisions, and improves situational understanding.
- Automated fingerprint identification system, currently in use in Iraq, provides the immediate capability for processing inked cards and conducting checks against Federal Bureau of Investigation and related databases. The project has a parallel research and development effort to provide hand-held devices to the individual Soldier for quick checking.

OTHER INITIATIVES

Army Improvised Explosive Devices Task Force

The Army Improvised Explosive Devices Task Force, or IED TF, prepares Soldiers and leaders to face the pervasive IED threat in the current operating environment. The task force orchestrates Army efforts to respond to and defeat IED threats. The IED TF is rapidly expanding to provide operational capabilities in support of commanders wherever the IED threat may be encountered. As the enemy's use of asymmetric attacks has evolved on the battlefield, the mission of this organization has been broadened to include countermortar and counterrocket propelled grenade programs. In addition to developing doctrine and training strategies, the task force directs the accelerated development and fielding of selected DOTMLPF solutions.

The IED TF is designed to integrate intelligence, training and materiel solutions into a holistic response. Figure 6-3 shows its structure. The operations cell, soon to be expanded with the addition of Army National Guard, Army Reserve and Marine Corps personnel, coordinates all operational matters and provides common support functions to ensure effective connectivity between all TF elements. The key operational arm of the IED TF consists of the forward-deployed field teams in Kuwait, Iraq and Afghanistan. Chartered to perform on-the-ground observation, information collection and dissemination, and IED training in-theater, these teams assist in collecting technical, operational and contextual details relating to IED events. They provide an immediate and vital link to theater intelligence and operations. Techniques, tactics and procedures developed from lessons learned form the basis of a multi-echelon, predeployment training program for units identified for future rotations.

The IED TF will continue to enlist multiservice and multinational participation. The IED TF can be viewed as a prototype of a permanent organization capable of conducting operations in support of Army and joint force commanders to mitigate and defeat identified asymmetric threats.

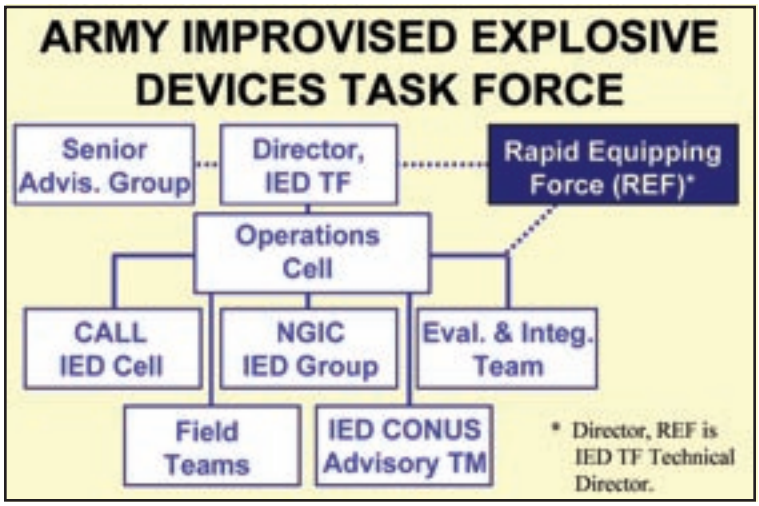

Figure 6-3. Improvised Explosive Devices Task Force

Center for Army Lessons Learned Realignment

In response to operational experience and requests from commanders in the field, the Center for Army Lessons Learned reorganized to provide joint and Army tactical and operational data collection, analysis and dissemination. Further, its reorganization al-

lows it to provide better support for the joint training activities and Army transformation efforts. Its capabilities include:

- Lessons learned collection and studies at the tactical through operational levels of war that can be sustained over ongoing and future combat and stability operations
- Enhanced direction, resourcing and monitoring of special collection activities and studies
- Situational awareness on Army key strategic issues specifically focused on covering the operational-strategic gap
- Liaison with service learning organizations such as TRADOC and the Marine Corps Warfighting Laboratory, and the USJFCOM Joint Center for Lessons Learned
- Joint operational assessment teams to support collection of Army observations and lessons during operations, joint and Army training events, and other exercises and experiments
- Input for JCIDS/CIDS process on crucial emerging observations, insights that support combatant commander operational needs statements, and other potential rapid fielding initiatives

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CHAPTER 7

RISK

RISK FRAMEWORK

Since the publication of the 2003 ATR, the Army has undertaken a significant shift in emphasis and prioritization of its near- and midterm focus. This shift is based on the 2004 Strategic Planning Guidance, or SPG, and operational necessity. Primarily, the Army is accelerating available, next-generation capabilities to the Current Force to carry out its part in the global war on terrorism. The SPG provides the general direction for developing capabilities to implement defense strategy and achieve directed priorities within fiscal, operational and technical constraints. Army capabilities development and resource processes are congruent with the framework defined in the SPG.

Managing risk is a central element of both defense strategy and the Army program. The Army manages risk using the defense risk framework. This risk management approach comprises four related dimensions that are translated into the Army's program: operational risk, future challenge risk, force management risk and institutional risk. These are defined in Figure 7-1.

DEFINING RISK

Operational Risk: Ensuring U.S. military and civilian personnel are ready at all times to accomplish the range of missions assigned them in the Defense Strategy. This is the Army's current readiness, which is maintained through unit training, Current Force modernization, recapitalization and sustainment.

Future Challenge Risk: Anticipating future threats and adjusting capabilities to maintain a military advantage against them. This is the Army transformation to the Future Force.

Force Management Risk: Providing a trained and ready force. These are the Army's People programs — Man the Force, Well-Being, Stabilization and Leader Development.

Institutional Risk: Developing management practices and controls that use resources efficiently and promote the effective operations of the Defense establishment. This is the Army's business and resource processes as well as its installations and infrastructure programs.

Figure 7-1. Defining Risk

Army risk policies promote achievement of priorities that are congruent with those established by the secretary of defense:

- Successfully engage in the global war on terrorism
- Strengthen joint and combined war-fighting capabilities
- Transform Army forces

- Optimize Army intelligence capabilities and improve Army forces' use of joint intelligence
- Provide unique Army capabilities to combat proliferation of weapons of mass destruction
- Improve force manning and balance Active Component and Reserve Component forces
- Implement new concepts for global engagement
- Strengthen the Army's ability in homeland defense
- Streamline acquisition and fielding processes
- Reorganize Army functions to deal with prewar opportunities and postwar responsibilities

SHIFTING ARMY PRIORITIES

Prior to the events of Sept. 11, 2001, the Army assumed greater risk in the Current Force as it built toward the Future Force. Due to the operational experiences of Operations Enduring and Iraqi Freedom, the Army is shifting resources to reduce operational risk and improve the capabilities of the Current Force. The imperative now lies in finding balance between sustained war-fighting requirements and transforming to meet future challenges. Figure 7-2 depicts the changes.

Operational Risk

Providing dominant land-power capabilities in support of the joint force in the global war on terrorism remains the Army's top priority. Over the past year, the Army implemented several initiatives to reduce operational risk:

- The creation of modular units is reducing operational risk through the conversion of 77 maneuver brigades, 43 Active and 34 ARNG, as well as Army Reserve Expeditionary Packages (AREPs). These modular units with expeditionary capabilities will allow the Army to rapidly tailor its capabilities to the requirements of the combatant commander. The Army may modularize an additional five brigades during fiscal 2007 based on operational requirements with the president's approval.
- The organization deployment cycles initiative, detailed in Chapter 3, demonstrates how the Army is using innovative techniques to ensure force availability, improve force readiness postures, and link resource processes to operational requirements.
- The Integrated Global Presence Basing Strategy, or IGPBS, will reduce operational

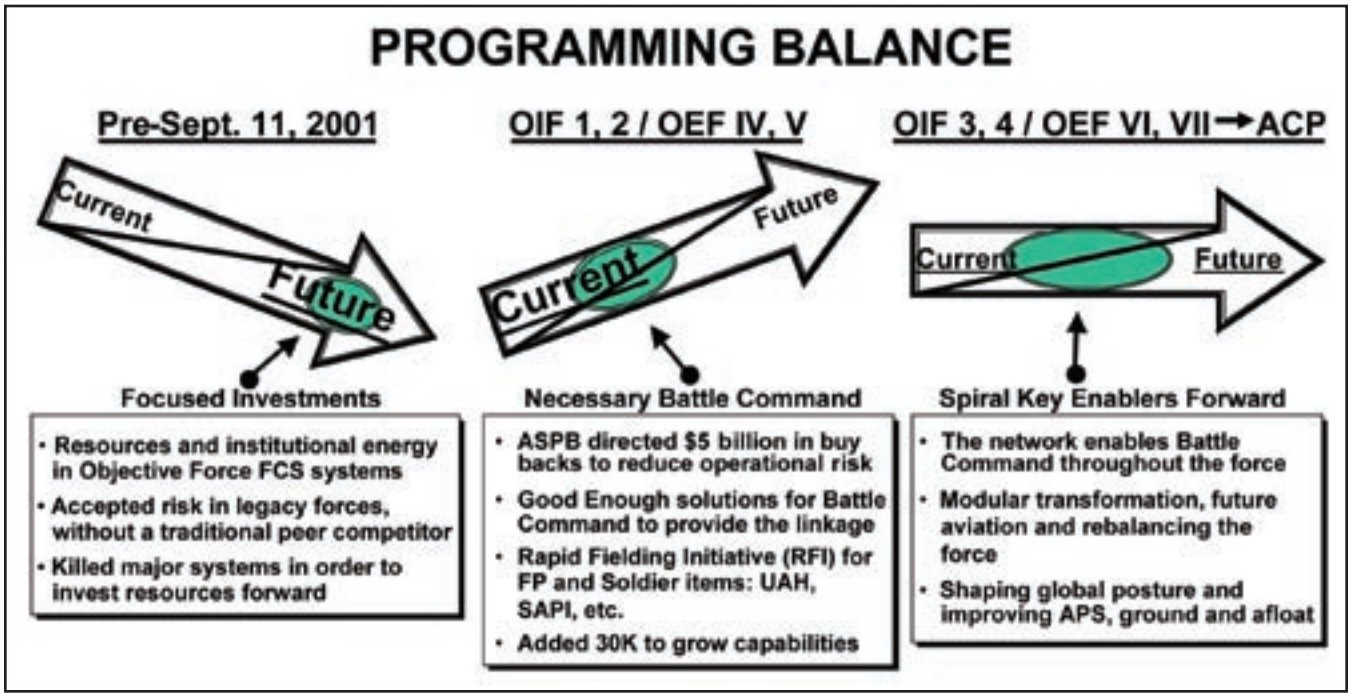

Figure 7-2. Finding Programming Balance

risk by stationing forces on operational requirements that can quickly deploy to meet the combatant commander's requirements.

- Fielding and deploying the Stryker brigades on schedule will reduce operational risk.
- Fielding FBCB2 and combat identification will increase situational awareness for the Current Force.
- Army aviation restructuring reduces operational risk by applying the resources from the now-cancelled Comanche program to aviation systems and technologies that will provide better capabilities to the Current Force.
- Rapid fielding initiative and the rapid equipping force significantly reduce risk in the Current Force. These efforts quickly refine requirements to solutions and accelerate equipment delivery to deploying and deployed Soldiers.
- Through the Setting the Force General Officer Steering Committee, the Army is quickly and efficiently preparing a recently redeployed unit for future combat missions as a modular organization. This effort quickly identifies requirements and produces rapid solutions to recapitalize, modernize and reorganize the equipment and organization of these units. During fiscal 2004, the 3rd Infantry Division is resetting, modularizing and preparing to redeploy. The 101st Airborne Division and the 10th Mountain Division have also started the process and will complete this during fiscal 2005.

Future Challenges Risk

As it transforms toward the Future Force, the Army is focusing on three crucial challenges within the Future Combat Systems (FCS) program: battle command and the network, spiral development and field experimentation, and the tactics and doctrine required for FCS-equipped forces. In this program the Army addresses future challenge risk by ensuring that the Future Force maintains its technological advantage over its future/potential adversaries:

- The Army is providing program stability for the FCS in both RDT&E and procurement.
- Through its effort to spiral capabilities forward, the Army is identifying promising technologies early in the acquisition process and spiraling these capabilities into the Current Force.
- In order to increase future strategic warning and actionable intelligence information, the Army is accelerating DCGS-A and increasing funding to aerial common sensor and UAV programs.

Force Management Risk

The Army is making significant strides in improving force management since publication of the 2003 ATR. Force stabilization and unit-manning initiatives are two examples of how the Army continues to reduce stress on the force while programming to meet currently authorized force levels.

- The Army is mitigating force management risk through the elimination of redundant capabilities, military-to-civilian conversions, force stabilization and AC/RC 100,000 personnel restructuring.
- The Army is converting nonessential military structure in headquarters to civilian positions.
- The Army is proposing elimination of overseas commitments and reduction of legacy basing locations that do not directly support the defense strategy.
- The Army will provide the necessary funding by fiscal 2007 to eliminate inadequate family housing both inside and outside the United States. The Army is revising master plans to provide suitable, adequate barracks for permanent party unaccompanied service members while taking into account base loading changes affected by transformation.
- The Army is transforming training. Through leader development, the Army is improving its ability to produce adaptive leaders at all levels capable of operating in uncertain circumstances. The Army continues to maintain joint national training centers to provide Soldiers and leaders unique opportunities to deploy and fight as part of a joint team in a nonhostile learning environment.

- Recruiting and retention initiatives will provide Soldiers in both the AC and RC appropriate and effective incentives so that the Army's most valuable asset, the Soldier, remains in the force.
- The 30,000-person temporary end-strength increase authorized by the president allows the Army to implement modularity and shape the force with the right Soldiers in the right grade and skill.

Institutional Risk

Over the past year, the Army has dramatically improved fielding and equipping processes to improve the effectiveness of forces deploying to fight the global war on terrorism:

- The Army is continually refining its resource processes to better meet the needs of deployed Soldiers and commanders. Over the past year, the Army has dramatically improved fielding and equipping processes to improve the effectiveness of deployed forces. These changes affect two primary areas: the acquisition system and the planning, programming, budgeting and execution system. The Army has streamlined these processes through the efforts of the Army Strategic Planning Board (ASPB) and the Setting the Force General Officer Steering Committee.
  - The ASPB links the near-term combatant commander demands to provide enhanced capabilities to Soldiers. The ASPB accelerates the requirements for the war fighter by reviewing these near-term demands and identifying year-of-execution and budget-year resource realignment to meet these demands. Examples of the ASPB's efforts are the rapid fielding initiative and Up-Armored HMMWV fielding into the U.S. Central Command's area of responsibility.
  - Setting the Force General Officer Steering Committee (GOSC) postures the Army for future operations. This GOSC returns forces to prehostility levels through reconstitution and reorganization to modular units, develops plans to reconfigure Army augmentation, sets and prepositioned stocks and, by applying lessons learned, prepares follow-on forces for deployment and employment. It has streamlined many of processes, such as quickly fielding the right equipment to deployed Soldiers through the rapid equipping force and the rapid fielding initiative.
- The Army is working with the Office of the Secretary of Defense to improve resource processes through the JCIDS implementation, functional capabilities boards and the enhanced planning process.
- The Army is also mitigating institutional risk through investment in the network to include the network at the installation level to provide reachback capabilities.

CHAPTER 8 CONCLUSION — AN ARMY TRANSFORMING

SUMMARY

The Army's commitment to the nation is absolute. While it fights the global war on terrorism, the Army continues to transform to better meet the challenges of the 21st century.

As described in the 2004 Roadmap, the Army is reshaping itself to conform to this new strategic reality. It will become an Army of campaign quality with joint and expeditionary capabilities — an Army capable of dominating the complex land environment and sustaining that dominance for as long as necessary.

This Army Transformation Roadmap describes how the Army will sustain and enhance the capabilities the Current Force while building Future Force capabilities to meet the requirements of tomorrow's Joint Force. It also shows how the Army is employing proven capabilities now to reduce risk and improve effectiveness for the frontline Soldier. This is reflected in the Army's transformation strategy of a transformed culture through innovative leadership and adaptive institutions, transformed processes, risk adjudication using the Current to Future Force construct, and transformed capabilities for interdependent joint operations through force transformation.

Soldiers remain the center of Army formations and, thus, its transformation focus. As the Army improves capabilities, it remains dedicated to the well-being of Soldiers, their families and the Army's civilian workforce.

THE WAY AHEAD

The changes ahead for the Army are significant, but they are neither reckless nor revolutionary. A continuous cycle of innovation, experimentation, experience and change enables the Army to improve capabilities and provide dominant land power to the Joint Force now and into the future.

The best way to anticipate the future is to create it. The incentive to transform is twofold: improved effectiveness in this protracted conflict and a more relevant force for the future operational environment. Today, the Army is pursuing the most comprehensive transformation of its force since World War II. This campaign-quality Army will be ready, if necessary, to defeat adaptive adversaries whenever and wherever they may arise.

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ACRONYMS

AAEF	Air Assault Expeditionary Force
AAR	After Action Review
ABCS	Army Battle Command System
AC/RC	Active Component/Reserve Component
ACDEP	Army Concept Development and Experimentation Campaign Plan
ACE	Anticoalition Element
ACIDS	Army Capabilities Integration and Developmental System
ACP	Army Campaign Plan
ACR	Armored Cavalry Regiment
ACTD	Advanced Concept Technology Demonstration
ADCON	Administrative Control
AFB	Air Force Base
AFIS	Automated Fingerprint Identification System
AKO	Army Knowledge Online
AMD	Air and Missile Defense
AMSAA	Army Materiel Systems Analysis Agency
AN/PRC	Army/Navy Portable Radio Communications
AO	Area of Operations
AOR	Area of Responsibility
APS	Army Prepositioned Stocks; Active Protection System
AR	Armor
ARC	Advanced Robotic Controller
AREF	Army Reserve Expeditionary Force
AREP	Army Reserve Expeditionary Package
ARF	Army Regional Flotillas
ARFOR	Army Forces
ARNG	Army National Guard
AROC	Army Requirements Oversight Counsel
ARSOF	Army Special Operations Force
ASA ALT	Assistant Secretary of the Army, Acquisition, Logistics and Technology
ASE	Aircraft Survivability Equipment
ASEDP	Army Space Exploitation Demonstration Program
ASPB	Army Strategic Planning Board
ATD	Advanced Technology Demonstrator
ATIRCM	Advanced Threat Infrared Countermeasures
ATR	Army Transformation Roadmap
AWRS	Army War Reserve Stocks

BAE	Brigade Aviation Element
BCOTM	Battle Command on the Move
BCT	Brigade Combat Team
BCTP	Battle Command Training Program
BCT(UA)	Brigade Combat Team (Unit of Action)
BDE	Brigade
BES	Budget Estimate Submission
BFT	Blue Force Tracking
BLK	Block
BLOS	Beyond Line of Sight
BM	Ballistic Missiles
BN	Battalion
BOS	Battlefield Operating Systems
BTB	Brigade Troops Battalion
BY	Budget Year
C2	Command and Control
C2PC	Command and Control Personal Computer
C3	Command, Control and Communications
C3D2	Camouflage, Cover, Concealment, Denial and Deception
C4	Command, Control, Communications and Computers
CA	Civil Affairs; Combined Arms
CALL	Center for Army Lessons Learned
CAS	Close-Air Support
CAT	CONUS Advisory Team
CAV	Cavalry
CBRNE	Chemical, Biological, Radiological, Nuclear and High-Yield Explosives
CCIR	Commander's Critical Information Requirement
CD&E	Concept Development and Experimentation
CDR	Critical Design Review
CDWS	Change Detection Work Station
CERDEC	Communications-Electronics Research, Development and Engineering Center
CERTEX	Certification Exercise
CF	Conventional Forces
CI	Counterintelligence
CID	Combat Identification
CIE	Collaborative Information Environment
CIV	Civilian
C/JTF	Coalition/Joint Task Force
C/JFLCC	Combined/Joint Force Land Component Commander
CM	Cruise Missile
CMTC	Combat Maneuver Training Center
CMWS	Common Missile Warning System
COCOM	Combatant Command
COE/JOE	Contemporary Operational Environment/Joint Operational Environment
CONOPS/NETOPS	Control Operations/Network Operations

CONUS	Continental United States
COP	Common Operating Picture
COSCOM	Corps Support Command
COTS	Commercial Off-the-Shelf
CP	Command Post
CPOF	Command Post of the Future
CS	Combat Support; Common Scenario
CSA	Chief of Staff, Army
CSS	Combat Service Support
CTC	Combat Training Center
CTS	Common Training Scenario
CY	Calendar Year
DA	Department of the Army
DARPA	Defense Advanced Research Projects Agency
DCGS-A	Distributed Common Ground System – Army
DCSINT	Deputy Chief of Staff for Intelligence
DE	Directed Energy
DIMHRS	Defense Integrated Military Human Resources System
DISCOM	Division Support Command
DITS	Deployed Instrumentation Training System
DMOSQ	Duty Military Occupation Skills Qualification
DOD	Department of Defense
DOTMLPF	Doctrine, Organizations, Training, Materiel, Leadership and Education, Personnel and Facilities
DPG	Defense Planning Guidance
EAC	Echelon Above Corps
EAD	Echelon Above Division
EDU	Early Deploying Unit
PEG	Program Evaluation Group
eHRS	enterprise Human Resources System
EOH	Executive Office of the Headquarters
EPP	Extended Planning Period
ERD	Explosive Resistant Coating
EST	Engagement Skills Trainer
FAA	Federal Aviation Administration
FBCB2	Force XXI Battle Command Brigade and Below
FCLAS	Full-Spectrum Active Protection System Close-in Layered Shield
FCS	Future Combat System
FD	Force Development
FDI/COIN	Foreign Internal Defense/Counterinsurgency
FOB	Forward Operating Base
FRAGO	Fragmentary Order
FS3	Fire Support Sensor Systems
FSA	Functional Solutions Analysis
FSB	Forward Support Base
FSC	Forward Support Company

FSE	Fire Support Element
FUE	First Unit Equipped
FY	Fiscal Year
FYDP	Future Years Defense Program
GCCS-A	Global Command and Control System – Army
GE	Good Enough
GIG	Global Information Grid
GNOps	Global Network Operations
GOSC	General Officer Steering Committee
GPS	Global Positioning System
GWOT	Global War on Terrorism
HD	High-Demand
HD/LD	High-Demand/Low-Density
HHB	Headquarter and Headquarters Battery
HHC	Headquarters and Headquarters Company
HITS	Home Station Instrumentation Training System
HLD	Homeland Defense
HLS	Homeland Security
HLS JOC	Homeland Security Joint Operating Concept
HLVTOL	Heavy-Lift, Vertical Take-off and Landing
HQ	Headquarters
HQDA	Headquarters, Department of the Army
HRC	Human Resources Command
HUMINT	Human Intelligence
HVY	Heavy
I3MP	Installation, Information, Infrastructure Modernization Program
IAFIS	Integrated Automated Fingerprint Identification System
ICD	Initial Capabilities Document
ID	Infantry Division
IDC	Information Dominance Center
IED	Improvised Explosive Device
IED TF	Improvised Explosive Devices Task Force
IGPBS	Integrated Global Presence and Basing Strategy
IMT	Initial Military Training
IN	Infantry
IOC	Initial Operational Capability
IP	Internet Protocol
IPAT	Integrated Process Action Team
IPD	Initial Production Decision
IPL	Integrated Priority List
ISR	Intelligence, Surveillance and Reconnaissance
ITSB	Integrated Theater Signal Battalion
J-8	Force Structure, Resources and Assessment Directorate
JAMD	Joint Air and Missile Defense
JBMC2	Joint Battle Management Command and Control
JCIDS	Joint Capabilities Integration and Development System

JEC	Joint Expeditionary Capabilities
JFC	Joint Functional Concept; Joint Forces Commander
JFCOM	Joint Forces Command
JFEO	Joint Forced Entry Operations
JFLCC	Joint Force Land Component Commander
JICs	Joint Integrating Concepts
JIM	Joint, Interagency, Multinational
JISR	Joint Intelligence, Surveillance and Reconnaissance
JNN	Joint Network Node
JNTC	Joint National Training Capability
JOA	Joint Operations Area
JOCs	Joint Operating Concepts
JOpsC	Joint Operations Concepts
JPADS	Joint Precision Aerial Delivery System
JROC	Joint Requirements Oversight Counsel
JRTC	Joint Readiness Training Center
JSOTF	Joint Special Operations Task Force
JSTARS	Joint Surveillance and Targeting Radar System
JTF	Joint Task Force
JTRS	Joint Tactical Radio System
JTTP	Joint Tactics, Techniques and Procedures
JWICS	Joint Worldwide Intelligence Communications System
LOGCAP	Logistics Civil Augmentation Program
LPI/LPD	Lower Probability of Intercept/Lower Probability of Detection
MBITR	Multiband Inter/Intra Team Radio
MCO	Major Combat Operation
MCO JOC	Major Combat Operations Joint Operating Concept
ME	Maneuver Enhancement
MEADS	Medium Extended Air Defense System
METT-TC	Mission, Enemy, Terrain, Troops, Time, Civil Considerations
MI	Military Intelligence
MILSATCOM	Military Satellite Communication
MOS	Military Occupational Specialty
MOSAIC	Multifunctional, On-the-move, Secure, Adaptive, Integrated Communications
MOUT	Military Operations in Urban Terrain
MRX	Major Rehearsal Exercise
MSE	Mobile Subscriber Equipment
MSO	Mission-Staging Operations
MTOE	Modified Table of Organization and Equipment
NCES	Net-Centric Enterprise Services
NGIC	National Ground Intelligence Center
NGOs	Non-Governmental Organizations
NLOS	Non-Line of Sight
NMMDR	Network Maturity Milestone Design Review
NMS	National Military Strategy

NORTHCOM	U.S. Northern Command
NSS	National Security Strategy
NTC	National Training Center
O&M	Operations and Maintenance
O&O	Organizational and Operational
OEF	Operations Enduring Freedom
OFT	Office of Force Transformation
OFT STA	Office of Force Transformation Strategic Transformation Assessment
OIF	Operation Iraqi Freedom
ONA	Operational Net Assessment
One TESS	One Tactical Engagement Simulation System
ONS	Operational Needs Statement
OPCON	Operational Control
OPSEC	Operational Security
OPTEMPO	Operational Tempo
ORD	Operational Requirements Document
OSD	Office of the Secretary of Defense
OTH	Over the Horizon
PA&E	Program Analysis and Evaluation
PBD	Program Budget Decision
PCP	Program Change Package
PCS	Permanent Change of Station
PDR	Preliminary Design Review
PEG	Program Evaluation Group
PM	Program Manager
PME	Professional Military Education
POL	Petroleum, Oil and Lubricants
POM	Program Objective Memorandum
PPBC	Planning Program Budget Committee
PPBS	Planning, Programming and Budgeting System
PRC	Presidential Reserve Call-up; Portable Radio Communications
PSYOPs	Psychological Operations
QDR	Quadrennial Defense Review
QFR	Quarterly Futures Reviews
RAM	Rocket, Artillery and Mortar
RCC	Regional Combatant Commands
RDECOM	Research, Development and Engineering Command
RDT&E	Research, Development, Test and Evaluation
REF	Rapid Equipping Force
RFI	Rapid Fielding Initiative
RJSC	Regional Joint Sustainment Command
ROMO	Range of Military Operations
RPG	Rocket Propelled Grenade
RSTA	Reconnaissance, Surveillance and Target Acquisition
S&T	Science and Technology
SA	Situational Awareness

SaaS	Soldier as a System
SAPI	Small Arms Protective Inserts (body armor plates)
SATCOM	Satellite Communications
SBCT	Stryker Brigade Combat Team
SD	Strategic Deterrence
SDD	System Development and Demonstration
SDHSS	Shallow-Draft, High-Speed Sealift
SD JOC	Strategic Deterrence Joint Operating Concept
SDR	Software-Defined Radio
SIAP	Single Integrated Air Picture
SIG	Signal
SIGP	Single Integrated Ground Picture
SIMP	Single Integrated Maritime Picture
SIPR	Secure Internet Protocol Router
SITREP	Situation Report
SJFHQ	Standing Joint Force Headquarters
SLAMRAAM	Surface Launched Advanced Medium Range Air
SO	Stability Operations
SOCCE	Special Operations Command and Control Element
SOF	Special Operations Forces
SOF-CF	SOF and Conventional Forces
SO JOC	Stability Operations Joint Operating Concept
SPG	Strategic Planning Guidance
SPT	Support
SRS	Strategic Readiness System
SRSP	SRS Predictive
SSO	Stability and Support Operations
SSTOL	Super-Short, Take-off and Landing
SSVJ	Self-Screening Vehicle Jammer
STF	Setting the Force
STRATCOM	U.S. Strategic Command
TAB	Target Acquisition Battery
TAP	The Army Plan
TBM	Theater Ballistic Missile
TDA	Table of Distribution and Allowances
TES-FWD	Tactical Engagement Systems Forward
TEU	Technical Escort Unit
TOC	Tactical Operations Center
TPG	Transformation Planning Guidance
TRADOC	Training and Doctrine Command
TRANSCOM	U.S. Transportation Command
TSC	Theater Sustainment Commands
TSV	Theater Support Vessel
TTHS	Trainees, Transients, Holdees and Students
TTP	Tactics, Techniques and Procedures
UA	Unit of Action

UAH	Up-Armored HMMWV
UAVs	Unmanned Aerial Vehicle Systems
UEx/UEy	Unit of Employment-X/Unit of Employment-Y
UGS	Unattended Ground Sensors
UGV	Unmanned Ground Vehicle System
U.S.	United States
USAF	United States Air Force
USAR	U.S. Army Reserve
USF	Unit Set Fielding
USJFCOM	U.S. Joint Forces Command
USMC	U.S. Marine Corps
USN	U.S. Navy
USR	Unit Status Report
USSOCOM	U.S. Special Operations Command
UW	Unconventional Warfare
WIN-T	Warfighter Information Network-Tactical
WMD	Weapons of Mass Destruction