

INTEROPERABLE LOGISTICS - A FOCUSED MILITARY SOLUTION

BY

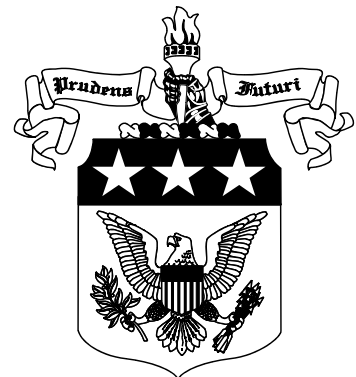
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USAWC STRATEGY RESEARCH PROJECT

INTEROPERABLE LOGISTICS – A FOCUSED MILITARY SOLUTION

by

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ABSTRACT

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The U.S. military logistics management process has a difficult challenge in supporting the war fighter in a volatile, uncertain, complex, and ambiguous environment. In response to this challenge, each Service has created a diverse and intricate logistical system that meets the specific Services obligation to support the fight and the war fighter. Service-centric requirements for logistical support have led to multiple variations and some commonalities in logistics management procedures. In a Joint environment, these logistics management processes must converge to allow for common support for the fighting force. This paper will show that the U.S. military must take a joint approach to establish a focused logistics process that provides for the varied Service logistical functions.

INTEROPERABLE LOGISTICS – A MILITARY SOLUTION

My logisticians are a humorless lot...they know if my campaign fails, they are the first ones I will slay.

—Alexander¹

From the earliest known times, military commanders have embraced an unquenchable desire to achieve victory on the battlefield. Alexander the Great was one of the most successful military commanders in history. Undefeated in battle, Alexander the Great quickly gained an avid appreciation for the importance of battlefield logistics and the value of the professional logisticians who produced this battlefield enabler. Along with historical leaders like Hannibal Barca, Alexander the Great was considered to have been a phenomenal tactician, but more importantly, a logistical genius. “Hannibal excelled as a tactician. No battle in history is a finer sample of tactics than Cannae. But (Alexander) was yet greater in logistics and strategy.”²

Integrated Logistics

Carl von Clausewitz was a renowned and valued military theorist. Although his views on logistics from the early 1800s were colloquial since they only supported his grand theories of the overall conduct of war, he maintained that logistics was separate and distinct from the strategy and conduct of war. In his work, *On War*, he refers to logistics as the maintenance or supply of troops. He regards logistics as important but ineffectual to the overall plan. As an influential leader in early military thought and theory, Clausewitz incorrectly categorizes logistics as completely separate from the conduct of war. He views the business of supply as a required action that permeates all battle; as an activity that remains separate from the use of troops in battle.³ Although

his views illustrate the realities of logistical support during his time, they stray far from the realities of modern warfare.

Many military leaders closely followed the theories of Clausewitz and chose to limit the integration of logistics into the total conduct of war. This chosen lack of logistical integration proved to be their downfall. One can largely attribute the defeat of Erwin Rommel in World War II to logistical failure. In Rommel's case, he maintained an ultra-aggressive approach to tactics with no conscientious concern for logistics. He based his North Africa campaign on the realization that attrition could only result in a German defeat caused by Allied materiel superiority. To mitigate any defeat by attrition, Rommel's focus was to exploit the speed of tactical gains at the expense of logistical safeguards. It is likely that Hitler only wanted Rommel to occupy and hold the North African landscape, in which case he hired the wrong person and the wrong personality. Rommel's military philosophy was too aggressive for any logistically constrained campaign. As a result, Rommel quickly outran his logistical support. In addition, Hitler further limited Rommel's tactical desires by providing only limited theater airlift. Hence, the mismatch between operational ends and logistical means created a huge disparity in the North African strategy resulting in Rommel's defeat.

Regardless if armies win or lose, warriors, strategists, and historians continue to grapple with the concept of logistics and how to use it on the battlefield. In 1836, the French General, Antoine-Henri, baron de Jomini, studied war and wrote a groundbreaking book, the *Précis de l'Art de la Guerre*, or the *Summary of the Art of War*. "The *Précis* became a model for European military textbooks, and was widely used for the teaching of military theory in the plethora of military academies which sprouted up over

the Western world between 1800 and 1850.”⁴ In this work, Jomini points out the importance of logistical planning and application during war. He defines logistics as simply the “practical art of moving armies.”⁵ Proclaimed by many as a logistics advocate, Jomini declares that logistics is in a domain above the tactical level of war. For Jomini, “Strategy decides where to act; logistics brings the troops to this point; grand tactics decides the manner of execution and the employment of the troops.”⁶ He describes logistics as a matter for the strategic planner that extends war to a limiting point where tactical combat begins. “The word *logistics* is derived, as we know, from the title of the *major général des logis*, (translated in German by *Quartiermeister*,) an officer whose duty it formerly was to lodge and camp the troops, to give direction to the marches of columns, and to locate them upon the ground. Logistics was then quite limited.”⁷ Thus, Jomini describes logistics as an important matter that influences the battle from the strategic level.

At the close of World War II, General Dwight D. Eisenhower summarized the importance of logistics for our military. During that war, Eisenhower verified that there was a definite connection between victory on the battlefield and logistical expertise throughout the military. “You will not find it difficult to prove that battles, campaigns, and even wars have been won or lost primarily because of logistics.”⁸ It was at this point in history that the U.S. military readily accepted the need for logistics and its value as an integrated part of our military doctrine. Leading up to this point, logistics was commonly viewed as an individual or small unit action necessary for resupply of food and ammunition. With the advent of new technologies, the military began to increase its

capability to support new systems and learn to integrate support structures and concepts across the forces.

What is Logistics?

With this established need for integrated logistics, it is important to assess the current military logistics picture. By establishing a logistics baseline, one can determine if logistics processes and systems should change or remain status quo. Depending upon the viewpoint of the logistical structure, the logistics term has different meaning which impacts on this baseline understanding. Logistical processes and systems in today's joint military stem from diverse thought and meaning. For the joint military community, the Joint Staff published Joint Publication 1-02, Department of Defense Dictionary of Military and Associated Terms, which provides a detailed and complex definition of logistics.⁹ The military further delineates logistics into combat logistics and peacetime military logistics. Combined with this complex definition of joint logistics, combat logistics further emphasizes the criticality of support without regard to cost while peacetime military logistics is rooted in fiscal requirements and acquisition system constraints.¹⁰

These definitions correlate closely with Service logistics requirements, but military logistics has broader implications in today's military. The definition of logistics must expand to include the entire logistics community. The International Society of Logistics (SOLE) developed their definition of logistics that incorporates the entire professional logistics sphere of military and civil support: "The art and science of management, engineering and technical activities concerned with requirements, design, and supplying and maintaining resources to support objectives, plans, and operations."¹¹ The civilian

logistical business practices associated with the Council of Logistics Management venture further with their logistical definitions through the discussion of costs, uses of raw materials, and overall customer satisfaction. Overall, the definition that seems to focus on the purpose of logistics can be associated with a commonly accepted view that the right product at the right place at the right time in the right condition for the right cost to the customer is the ultimate goal for any logistical process or system. Although this informal definition has not been formalized in official publications, it seems to emphasize “the crucial elements of the military logistics system.”¹² In final scrutiny, the definition of logistics fits the needs of the organization, whether it is military or commercial in nature. Above all, the definition of logistics always relates to the basic elements of the Joint Publication definition to meet customer requirements.

With U.S. technological advances, the military began charting a new course and logistics was at the forefront of many vast and rapid changes. Along with change, disparities appeared within the logistical strategies. With the developing technologies and changing missions, the Services developed some unique support strategies that would strengthen their individual Service. Some of these changes were good for the overall military, while certain changes degraded the overall military logistics goals.

Although changes in our operational environment have spurred changes in our military and our military logistics processes and systems, it is important to understand how the military reorganized to achieve success. In 1986, the Goldwater-Nichols Department of Defense Reorganization Act redesigned the structure of our military and the way the United States fights. The Goldwater-Nichols Act placed the Joint Chiefs of Staff in a military advisory role and gave the Unified Combatant Command direct access

to the Secretary of Defense and the President. It provided a stronger unity of command for joint forces and strengthened the role that each Service had for organizing, training, and equipping their respective forces in support of the joint force commander. As a result of the Goldwater-Nichols Act, the joint force commander held the responsibility for mission success while the Services had a responsibility to provide forces that were capable of achieving that success. This Act essentially promoted joint operations while constraining efforts to integrate logistics at the joint level. Each Service continued to organize, train, and equip their own forces with the understanding that they had to succeed in promoting their own Service's welfare and future even at the expense of other Services.

The overall priority to achieve joint logistics synergy resides in the ability of the Services to merge efforts with the goal of successful support to the Joint Force Commander (JFC). Services provide the backbone for all logistical support. By virtue of United States Code Title 10, the Services have the responsibility to train, equip, and maintain their respective force in a ready state for the JFC. The Services, by merging their logistical might with all the elements of the joint logistical community or domain, provide the JFC with the logistics capability to effectively fight and win wars. When the Services decide to turn inward with their logistics actions, innovations, and processes, they neglect the synergistic requirement for logistics to support the JFC, the warfighter. The Services, together with the Defense Logistics Agency (DLA), are the team that forms the heart of the joint supply support to the JFC. USTRANSCOM, as the DOD distribution process owner, and United States Joint Forces Command (USJFCOM), as

the DOD deployment process owner, unite in the support efforts of the Services and DLA to comprise and complete the joint team of logistical support for DOD and the JFC.

Logistical Pursuit in the Army

One of the greatest impacts on our military's logistical integration is the Army's transformation of its logistical automation. This Army's drive to independently change its logistical automation has enormous impacts on how the overall military will integrate. Being our largest military Service, the Army is more than justified in its aggressive stance to modify and upgrade its logistics automation. In 1997, the Army drafted its vision for 2010 where it focused on logistical changes to include "the fission of information, logistics, and transformation technologies to provide rapid crisis response, to track and shift assets even while en route, and to deliver tailored logistics packages and sustainment directly at the strategic, operational, and tactical level of operations."¹³ This was the Army's definition for our future logistics plan which became known as the Army's focused logistics. This new direction led the Army from its former Air-Land Battle doctrinal approach to its transformational modular logistical approach.

With a focus on its people and a goal to keep pace with the Army's transformation effort, Army logisticians directed their attention on developing modular support forces that could provide expeditionary and campaign support to joint and Coalition forces.¹⁴ "Since 2004, the Army has redesigned and activated three of four new theater sustainment commands (TSCs), five expeditionary sustainment commands (ESCs) and 11 sustainment brigades."¹⁵ With the transformation of its units on track, the Army was able to focus its attention on automation systems.

Now, Army logisticians center their analysis of automation reform on an entire system of systems called the Global Command Support System – Army (GCSS-A). GCSS-A, the Army's enterprise of logistical automated systems, is the heart for all other Army logistical systems. GCSS-A is the enabler that allows the Army to integrate and fuse logistical information from the factory to the foxhole.¹⁶

GCSS-A is the foundation for an evolutionary logistics enterprise. It is built from existing processes and systems in a modular approach using shared data base techniques. Therefore, the enterprise can develop and change through module management and incorporate all the logistical functions necessary to support the transforming Army and the military as a whole. Through continued development of GCSS-A, the Army gains a compatible logistical system that integrates with other military Service systems through its modular structure. By focusing on the needs of the transformational Army and the success of the joint force commander, Army logisticians can continue to develop a logistical automated capability that integrates well with the transforming Army and other military Services. "GCSS-Army, as the CSS component of the Army's warfighting systems, complements the Army Battle Command System and provides commanders with the full logistics picture."¹⁷

With the constant improvements in GCSS-A modules, Army logisticians are building on the momentum of GCSS-A with an improved logistical enterprise called the Single Army Logistics Enterprise (SALE). The Army's focus on logistics automation will bring SALE to the forefront of technological implementation.¹⁸

Logistics for the Sea

The Marine Corps epitomizes the fervor of our military Services with its ability to quickly and decisively impact success in the most austere environment. To continue to successfully perform this feat, the Marine Corps has revitalized its organizational structure to provide a logistical element that is as fluid as it is strong – the Marine Logistics Group.¹⁹ Formed in 2005, the four Marine Logistics Groups are designed to meet the strategic long term needs of the Marine Corps through 2015. This logistics structure supports the Marine Corps 21 Strategy by pursuing four primary objectives:

- Facilitate rapid and seamless task organization and deployment operations
- Facilitate strong habitual working relationships between supported and supporting units
- Facilitate practiced and experienced Command at the Group, Regimental, and Battalion level to ensure effective operations and planning capability
- Reorganize and realign with standing Direct and General Support subordinate units.²⁰

This new logistics organization provides greater flexibility from the old Force Service Support Group (FSSG) structure and allows logisticians the flexibility to successfully complete diverse and changing missions. Thus, the Marine Corps logistical reorganization is poised to support the Marine Corps 21 Strategy with the ultimate goal of projecting naval power ashore in the 2015-2025 timeframe.

As exemplified by the transition to the Marine Logistics Group, Marine Corps logistics support is focused on the Marine Air-Ground Task Force (MAGTF). To keep this fighting organization successful, Marine Corps logisticians are concentrating on new

information technological solutions. In particular, Marine Corps technological enhancement is spearheaded by the Global Combat Support System - Marine Corps (GCSS-MC) that provides a single point of entry to access logistics data. GCSS-MC will have the most impact on logistics modernization initiatives.²¹ Not unlike the Army's GCSS-A, this system will perform as the logistics enterprise for the Marine Corps, with a major goal of reducing logistics response times.²² Although this system will be joint by design as the Marine Corps proclaims, there should be no doubt that GCSS-MC is dedicated to the Marine Corps and its mission to perform as a land force and as the Navy's sea-based projection force.

Together with the Marine Corps, the Navy proceeded with a new strategy that focuses on the future direction of the Navy, Marines, and Coast Guard. The logistical effort to maintain this strategy is targeted at sea and sea-based operations and has minimal impact on the logistical community at large. This naval strategy embraces several strategic imperatives that all relate directly to the maritime services and their internal interoperability. Thus the Navy, in conjunction with the Marine Corps and the Coast Guard, combined to focus naval logistical efforts toward emergent strategic missions involving sea and sea-basing operations. As described in the Navy's Sea Power 21 strategy, the Navy will use its internal logistical prowess to focus on the benefits of Seabasing enabled by expeditionary warfare developments, aircraft upgrades, maritime prepositioning enhancements, and combat logistic improvements.²³

Also, the Navy has partnered with the Marine Corps in a Naval Logistics Integration Initiative (NLI) which will set the course for logistical enhancements associated with the 2015 Seabasing strategy.²⁴ These capabilities expand operational

maneuver options and facilitate assured access and entry from the sea. Although this logistical improvement is labeled as a joint program, the actual initiative is focused on maritime operations with concentration on naval and Marine Corps integrated logistics.²⁵ The Navy and Marine Corps have spearheaded the NLI to promote mutual logistical actions that enhance maritime logistics systems, inventory management, and general naval distribution operations.

The Air Force Logistical Enterprise

Logistical programs in the Air Force are generally technical in nature and focus on the successful accomplishment of strategic air warfare. As Air Force defense policy adjusts to twenty-first century war strategy, the logistical foundation will change extensively requiring technological advancements in support capabilities.²⁶ Therefore, Air Force logistical systems and programs will need to satisfy the technological peculiarities of a hi-tech service.

To maximize logistical systems capabilities, the Air Force is in the process of transitioning to a refined logistics enterprise. Air Force logistical systems will begin transition to a logistical enterprise that promotes better use of existing systems and provides an efficient and effective logistical support structure for future Air Force equipment requirements. With dwindling resources, the Air Force Logistics Management Agency (AFLMA) set the Air Force logistics vision for the future. By supporting the Air Force Smart Operation for the 21st Century, or AFSO21, all Air Force logistics systems and processes are “focused on the mission, eliminating non-value added efforts and ultimately resulting in sharpened agile combat support.”²⁷

Expeditionary Logistics for the 21 Century, or eLog21, is the logistics transformation

campaign for AFSO21. ELog21 provides the overarching logistics direction and priorities that meet the vision for the Air Force logistics enterprise. Currently, eLog21 has identified over 400 aging and disparate Air Force logistical systems that the Air Force intends to discontinue, replace, or revise in keeping with AFSO21 strategic initiatives. One of these primary Air Force logistics systems is the Global Command Support System – Air Force (GCSS-AF). GCSS-AF performs as a comprehensive supply management system for the Air Force, not unlike its counterparts in the Army and Marine Corps. Because of the technical and specialized nature of some Air Force equipment, the Air Force relies on GCSS-AF to support its unique logistical supply functions. The Air Force has accepted the Expeditionary Combat Support System (ECSS) as its enterprise system of choice and the primary component of the eLog21 campaign. ECSS is the transformational logistical system of systems that will incorporate most of the 400 disparate logistical systems, including GCSS-AF, into a common operating enterprise. ECSS will adopt commercial best practices and commercial off-the-shelf (COTS) products and processes to enhance its overall logistics business. ECSS by its intended nature “will affect virtually every Air Force logistics process—changing most of them.”²⁸ The Air Force expects ECSS to improve Air Force logistical support to the warfighter and, in the process, revolutionize its logistical systems with a substantial cost savings to the Air Force and the government.

Bringing Jointness into Logistics

The Department of Defense, in conjunction with the Joint Staff, continues to refine the ability for U.S. forces to administer joint logistics for the military. The Joint Staff, in an effort to provide definitive, doctrinal guidance for all Services, published fourteen

Joint manuals in the 4-0 series that delineate and discuss the military's joint logistical processes, concepts, and systems. In particular, Joint Publication 4-0 emphasizes that the joint commander must apply a joint logistics approach to warfighter planning while addressing "the prevention or elimination of unnecessary facility duplication, overlapping of functions among the Service component commands, and the acceptance of operational risk of foregoing logistic implications."²⁹ The Joint Staff Director for Logistics J-4, LTG C. V. Christianson, recognizes that the U.S. military needs to reduce duplicate systems and programs across the Services to gain the logistical benefits of cooperation, sharing, and cost savings. He defines joint logistics as "the deliberate or improvised sharing of Service logistics resources to enhance synergy and reduce both redundancies and costs."³⁰ He also identifies the importance of the wise use of all military resources as a means to produce a stronger military capability through Services that are working in a joint cooperative effort. "By sharing, we can optimize the apportionment of limited resources to provide maximum capability to the supported commander. The overall purpose of joint logistics is to achieve logistics synergy—getting more out of our combined resources than they offer individually."³¹

The 2006 Department of Defense (DOD) Quadrennial Defense Review Report lauded DOD innovations and improvements with military logistical infrastructure and joint systems. This report addressed the successes reached through improved supply-chain logistics and the development of a distribution process owner. The direct affect of this logistics innovation points to the increased success and improved support for the joint warfighter. United States Transportation Command (USTRANSCOM), operating in its role as DOD's Distribution Process Owner, established Deployed Distribution

Operations Centers (DDOCS) at strategic combatant command locations. These innovative centers created unforeseen opportunities and subsequent advances in supply-chain logistics resulting in enormous cost savings, better logistics synchronization across the Services, and greater flexibility in support to the joint commander. Progress for the DDOC in Kuwait reached new levels with on-time delivery rates at over 90 percent and cost savings of \$268 million in Acquisition Fiscal Year 2004 because of cost cuts for more efficient and synchronized joint transportation operations.³²

The joint logistics imperatives - unity of effort, domain-wide visibility, and rapid and precise response - help to measure the effectiveness of all elements within the logistics domain. Unity of effort, "the coordinated application of all logistics capabilities focused on the JFC's intent", requires the integration of logistical agencies and logistics providers and is the most critical imperative.³³ Per Joint Publication 4-0, "unity of effort is best attained under a single command authority" such as the JFC.³⁴ This is especially important throughout the interaction of active, Reserve, and National Guard logistical activities.³⁵ Unity of effort focuses the logistics work of the Services and agencies toward one common goal. General Leon E. Salomon, Commanding General, U.S. Army Materiel Command, from 1994 to 1996, commented on the counter-productive nature of Services that constrain their respective Service with concentrated efforts on stovepipe logistics. "Stovepipes, with their single functional focus, create unnecessary layers that are often more procedure oriented than consumer oriented."³⁶ Service stovepipe logistic thoughts and practice often create duplication of effort and squander limited resources. Through the measure of the imperative of unity of effort,

disparate logistical systems and efforts only decrease the momentum and successful accomplishment of the logistics goal in support of the JFC.

The second imperative, domain-wide visibility is “the ability to see the requirements, resources, and capabilities across the joint logistics domain.”³⁷ It centers on a global logistics automated enterprise that must provide a common and connected logistical picture for the warfighter. This imperative warns against the proliferation of multiple logistical systems across the Services that provide the same information to the warfighter.

Rapid and precise response is the final imperative. It relates to the effectiveness of the supply chain and its ability to adjust to the needs of the joint force. Under this imperative the effectiveness of the supply chain is measured against four criteria – speed, reliability, visibility, and footprint. Speed balances the need for a quick supply response based on the importance of the particular supply item. Reliability measures the delivery capability of the supply chain. The joint logistics supply systems must deliver supplies, or estimate the delivery of supplies, to the warfighter in a predictable manner. Visibility enables the warfighter to track supplies through the domain-wide supply system. The footprint of the supply chain is the ultimate measure of its efficiency. The resources required to overcome inefficiencies in the supply chain process increase this footprint. In all, this imperative of rapid and precise response is essential to build the warfighter’s confidence in the logistical systems and processes.

The logistics imperatives expose the vital and primary concern of logistical interoperability which extends throughout the logistics domain and deep into the heart of all joint logistics processes. The Chairman of the Joint Chiefs of Staff, in his CJCS

Guidance for 2007-2008 emphasizes the importance of “the interoperability and cooperation among the Services, the interagency, international partners, and non-governmental organizations.”³⁸ It is clear that the Chairman is dedicated to the spirit of Jointness while the military continues to engage in the war on terror and face the challenges of different facets of transformation. His specific direction for Services and other agencies to engage in the pursuit of interoperability and cooperation is not a new concept. In June 2000, the Chairman of the Joint Chiefs of Staff published Joint Vision 2020 as a guide toward future force development, warfighting concepts, and joint force support. This document specifically emphasizes the importance of logistics interoperability for the success of our joint force.³⁹ The Joint Staff Director for Operations also expresses the importance of a joint and interoperable focus as a foundation upon which all of our doctrine and systems have to be based in order to achieve Joint Vision 2020.⁴⁰ This is the joint, interoperable goal that the Services must strive to accomplish.

Focus on Holistic Military Logistics

Although the Services are fulfilling their legal requirement to man, equip, and train the force as discussed earlier, the whole military will not realize total success with the overarching military mission unless it combines efforts to fight and win logistically as a joint military. U.S. Code Title 10 mandates drive the Services to new innovative heights in the logistics domain. Unfortunately, Services are only focused on their respective shortfalls and requirements. They are not always focused on the overall logistics picture for the military. It is critical that all Services and agencies integrate their logistics programs and systems into a holistic logistical approach across the joint community. It

is paramount that the logistics community strives for a total joint, integrated and interoperable logistics system for all our Services.⁴¹ To accomplish this task, the logistics community will have to establish the leadership necessary to focus the goals of each Service.

To correct these identified deficiencies in the military logistics domain; the entire military community will need to incorporate drastic changes. Any revolution or evolutions in military logistics would take extremely dedicated planning and implementation to overcome the consequential barriers to change. First, changes to military logistics systems and processes are extremely difficult and would provoke serious challenges from the Services. Service challenges would threaten and slow the ability for leadership to inflict prompt logistical changes. By slowing the change process, the effect of change would lose momentum and create dissension for support in any revised logistics systems or processes. Although the military may overcome and accept slow changes in peacetime, it must be able to quickly react and effect changes in wartime to increase the chances for success for military and national survival.⁴²

Second, changes to the military logistics structure would require a devout effort by the highest level of military personnel. It would be inconceivable to believe that staffers could implement military-wide changes in logistics structure and processes. Senior leaders across the military, in addition to senior logisticians, must accept the risk to standardize processes and institute common systems throughout the military. Since the military logistics domain includes distribution and deployment operations affecting combat and support materials and systems throughout the military, it is essential that combatant leaders support logisticians with implementing change. The support of the

four-star leadership for USTRANSCOM, as the DOD's Distribution Process Owner (DPO), and USJFCOM, as the Joint Deployment Process Owner (JDPO), is essential to institute any change in the overall military logistical system. As proponents of logistics changes for the military, these senior leaders could lead the logistics community in an effort to focus the logistics systems and processes for the good of the whole military. Even with the help of senior logisticians as catalysts for change, logisticians alone cannot fix the problems.⁴³ The entire military logistics enterprise would need to integrate with the support of leaders at every level.

Third, change in logistics needs to address first and second order affects throughout a vast array of logistical systems and processes within many logistics domains to include transportation, supply chain distribution, warehouse and depot operations, and deployment and distribution automation systems. The holistic view of military logistics is tremendously complex. Change in any domain area has immediate and subsequent changes throughout other logistics systems and processes. The intention of change within the military logistics domains is to correct disparate and inefficient systems and processes without creating future challenges and problems. The solution to these logistics challenges resides in an integration of existing military systems and processes. "The logistics community needs to place less emphasis on developing new software systems and more on integrating the prolific number of separate programs that currently exist."⁴⁴ A detailed plan for change through the integration of existing programs creates a solution to the problem with less of an impact on competing military budgets. Rather than expending Service budgets on new

logistics systems, programs, and architectures, this approach allows senior leaders to influence a common logistical solution to complex logistics domains.

To initiate this logistical paradigm shift, the military has instituted a prominent logistical theme that impacts the support structure and processes of all Services. Focused Logistics is the military's joint, logistical venture that accepts the military's logistics mission as a combined effort for all Services. From the military supply chain's distribution depots down to the individual Soldier, Airman, Sailor, or Marine, Focused Logistics allows the military to communicate its logistical needs and process logistical requirements across all logistical domains.

A key attribute of Joint Vision 2020, Focused Logistics is the concept for providing global sustainment to warfighters operating in joint, interagency, and multinational (JIM) environments. Focused Logistics continues to explore evolutionary logistics processes, and requires "...support systems that are efficient and effective," incorporating integration as a key characteristic.⁴⁵ Two initiatives constitute the building blocks of Focused Logistics: Logistics Transformation and the Future Logistics Enterprise. Together, according to the plan, they "represent a shift from supply-based logistics to a leaner, more agile distribution-based logistics system."⁴⁶

Logistics transformation is a key building block in the establishment of a focused logistics process. Although transformation connotes the expectation of revolutionary changes, logistics transformation relies on the evolutionary integration of systems and processes. Effective logistics transformation requires a system of real-time, information databases that allow logisticians to create and analyze a realistic picture of current and future logistics conditions. These technological innovations will help to improve four

fundamental logistics practices to transform overall logistics for the military.

Measureable logistics improvements in customer wait time, time-definite delivery, total asset visibility, and the web-based, shared-data environment will breach an important path for logistics transformation.⁴⁷ Logistics transformation will make the evolution of logistics practices possible and help to achieve a productive system of Focused Logistics.

In addition, the Future Logistics Enterprise (FLE) is another key building block to a fully interoperable focused logistics process. The FLE is a DOD program that builds upon and accelerates the logistics initiatives of Services and Agencies with the ultimate goal of enhanced support to the warfighter. The FLE focuses on integration of systems and processes that already exist and combines them into stronger, more efficient and effective processes. The FLE concept is a concentrated effort that projects short term improvements in the military logistics process through six distinct initiatives. Initiatives in depot maintenance partnership, condition-based maintenance, total life cycle systems management, end-to-end distribution, executive agents, and enterprise integration will integrate and improve for the whole military under the FLE.⁴⁸ This enterprise of logistics initiatives formed under the FLE provides for a faster solution to enhanced Focused Logistics for the military.

The progressive direction of logistics integration and interoperability as outlined in Joint Logistics 2020 leads the military through a difficult period of change. The improvements provided by the military's Focused Logistics concept, combining logistics transformation and Future Logistics Enterprise, will help the military to progress from to an ultimate goal of collaborative logistics planning and execution.⁴⁹ Focused Logistics

predominate goal is the deliverance of the right equipment, supplies, and personnel in the right quantities, to the right place, at the right time to support the warfighter's requirements. Service and Agency innovative advancements to improve information systems, common operational and situational awareness, and logistical end-to-end processes must be combined into a focused logistics enterprise of systems and processes. Logistics enhancements by themselves may be good, but difficult decisions must be made to incorporate changes throughout the military for the good of the entire military. Changes in logistics measures and improvements in logistics processes will sustain the test of time as Focused Logistics links functions and units in an integrated, real-time, visible operation.⁵⁰ With the ultimate goal of better support for the joint force commander, Focused Logistics will provide a more seamless connection throughout the entire logistics system, with precise real-time control of the logistics pipeline.⁵¹ The Services and Agencies must focus on the greater good and the future of the military logistics structure.

An Integrated and Interoperable Logistics Picture

The course of military logistics progression can provide a clear picture about the positive future direction for logistical improvements, systems, and processes. Historical leaders quickly found that logistics was a key part of success on the battlefield. Strategists wrote of the importance of planning and enabling logistics in support of the battle. Many historical leaders, though they were true warriors, were defined as outstanding logisticians and used their logistical genius to influence their fate during battle. Some leaders, such as Rommel, discovered that logistics was always important no matter what picture the tactical situation presented.

Although the Services and Agencies have their separate, valid logistical focus, it is more important with limited resources to focus on the entire military logistical system. By U.S. Code Title 10, the Services must endeavor to fulfill the mission of training, equipping, and maintaining their respective forces. While this mandate requires the pursuit of innovative approaches to Service logistical challenges, it does not relieve the Services from the responsibility to work together and combine efforts for efficient and effective solutions to common logistical challenges. It is the responsibility of the Joint Staff J4 to corral disparate logistical systems and processes and focus the logistical effort to a cohesive and effective enterprise. Combined with limited resources, the military constantly experiences a changing operating environment that demands our attention to optimize joint logistics to enhance our capabilities for tomorrow.⁵² Each Service's pursuit of logistics excellence, although admirable, creates unnecessary duplication of effort as well as needless waste of resources. One must apply and enforce a fundamental principle of unity of effort in support of a joint logistics solution. A strong Focused Logistics program consisting of expert joint oversight in logistics transformation and a functional Future Logistics Enterprise is key to an interoperable logistics system that is effective and efficient for the entire military. Never to forget the ultimate goal of logistics, Clausewitz reminds all that "the end for which a soldier is recruited, clothed, armed, and trained, the whole object of his sleeping, eating, drinking, and marching is simply that he should fight at the right place and the right time."⁵³ Focused Logistics can meet this requirement for the military.

Endnotes

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