STRATEGY RESEARCH PROJECT

LOGISTICS TRANSFORMATION

BY

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ABSTRACT

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The United States Army is undergoing one of its most comprehensive transformations in history. Key to this transformation is a comprehensive logistics transformation. Joint Vision 2020 calls for a reduction in logistics mass, with an emphasis on focused logistics. To support focused logistics, reducing the logistics footprint in theater, the logistics transformation process must include: maximizing the use of all available means of transportation, maximizing the use of information systems, and maximizing joint and combined operations. Recommendations in these areas include: manifesting less supplies and equipment by air and more by rail, sea and truck; forming a task force to explore standardizing logistics systems throughout the services; conducting more joint and combined exercises; and revising logistics training by combining it with other services and emphasizing joint operations. This logistics transformation process will take a dedicated effort by all Army logisticians working in harmony with their sister service counterparts, in order to be truly successful.

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LOGISTICS TRANSFORMATION

The Army is in the midst of one of its most revolutionary transformations in its history. The Army Chief of Staff, General Eric Shinseki, has articulated a vision of transformation for the United States Army that will require all branches of the Army to be active participants. "Leaders say that Army Transformation is a total overhaul of training, doctrine, equipment and institutional thinking – a burnishing of the Army down to bare metal, piece by piece, and rebuilding it while never taking it off-line."[1] Logistics is no exception; it requires a significant amount of transformation, to reduce the logistics footprint in theater while also reducing the amount of strategic lift required, in order to be able to support a more mobile force. And this transformation must take place while still providing uninterrupted, first class customer service to the warfighters.

So, why is it so important to transform logistics? The answer to this question is easily illustrated by the fact that most of the Army is not composed of combat fighting systems, but rather what goes into supporting those combat fighting systems. "When we throughput the entire Army, only 20 percent of it is in its combat fighting systems. The other 80 percent is Combat Support to help it fight, and Combat Service Support to help it sustain it.[2] The large percent of strategic lift required to move Combat Support and especially Combat Service Support serves to demonstrate the need to reduce our logistics lift requirement. "The goals for the logistics transformation process are daunting. These goals require an "80% fuel reduction, 50% less ammunition, 50% parts commonality, and 50% less log footprint."[3] There are many changes that need to occur in order to reach these goals. To reduce fuel consumption by 80% requires more fuel efficient equipment, and to reduce ammunition by 50% requires more efficient weapons delivery platforms. Both of these concepts, although also key to the logistics transformation process, are beyond the scope of this paper. However, this paper will address how to reach the goal of less log footprint. The exact figure of 50% will not be examined, but the key concept of reducing the logistics footprint, in theater, will be. The issue of 50% parts commonality can actually be a subset of 50% less log footprint. If there is parts commonality among equipment and services, less storage space is required to store parts in theater, thereby reducing the logistics footprint.

This paper will begin with a background on the logistics themes in the Quartermaster Vision, Joint Vision 2020 and Army Transformation. Next will be a definition of focused logistics as discussed in Joint Vision 2020, followed by an examination of how the following three areas support focused logistics: maximizing the use of all available means of transportation,

maximizing the use of information systems and maximizing the use of joint and combined logistics. Finally, recommendations will be presented for how to implement logistics transformation successfully.

BACKGROUND

The Quartermaster Corps, one of the key logistics branches in the Army, addresses changes required to support Army Transformation. The Quartermaster Vision, created to support the Army Transformation process states that "What Quartermasters do will not change: how we do it will. We will move from a supply-based system that relies on logistics mass, to a system which relies more heavily on information supremacy and distribution agility and exploits improvements in logistics velocity and automation."[4] This vision applies not only to the Quartermaster Corps, but to all logisticians. If the Army is not going to rely on logistics mass, then it must rely on focused logistics, providing the required supplies where required and when required. Distribution agility refers to maximizing the use of all available means of transportation, in order to be able to shift supplies and equipment quickly, from where they currently are, to where they are most needed. Information supremacy combined with exploiting information is also addressed in the vision, and key to the logistics transformation process. But the vision is not all encompassing; it has left out the critical aspect of maximizing the use of joint and combined logistics. Why joint and combined logistics is not addressed in the Quartermaster Vision is unclear. Perhaps this area was not addressed, because it will require the most effort in the change process, and an effort that will encompass a broader scope than the responsibility of just the Quartermaster Corps. But, joint and combined logistics is arguably the area that best supports focused logistics, enabling the Army to be able to reduce the size of the logistics footprint.

Joint Vision 2020 emphasizes the need for joint and combined logistics. Joint Vision 2020 states "Our objective in implementing the joint vision is the optimal integration of all joint forces and effects. To achieve that goal, the interdependence of the Services requires mutual trust and reliance among all warfighters and a significantly improved level of interoperability – especially in the areas of command control and sustainment."[5] Here, sustainment is highlighted as one of the two areas that are the most important for joint interoperability. Joint Vision 2020 also devotes an entire section to multinational operations, as well as to focused logistics as the key to success for logistics in the nation's military future. Focused logistics will be addressed in the next section of this paper.

As part of the Army Transformation process, logisticians have to "enhance strategic responsiveness, reduce [the] logistics footprint in battle space and transform doctrine, procedures and force structure."[6] Enhancing strategic responsiveness can be accomplished, at least in part, by maximizing the use of all available means of transportation and therefore having the ability to be able to respond with the right supplies and equipment when needed. A big aspect of Army Transformation is reducing the size of the logistics footprint in theater, a common thread with reducing logistics mass as stated in the Quartermaster Vision and the focused logistics theme in Joint Vision 2020. Agility and a smaller footprint in theater are the keys to supporting the Army Transformation concept.

The Quartermaster Vision and Army Transformation both emphasize eliminating logistics mass and reducing the logistics footprint in theater, two themes that are summed up in Joint Vision 2020 as focused logistics. To make focused logistics a reality, the Quartermaster Vision discusses exploiting automation and utilizing distribution agility. Joint Vision 2020 emphasizes the need for joint interoperability especially in the area of sustainment, and the importance of multinational operations. Hence, the three key concepts that will be explored; maximizing the use of all available means of transportation, maximizing the use of information systems, and maximizing the use of joint and combined logistics capabilities, were derived from the Quartermaster Vision, Army Transformation and Joint Vision 2020.

FOCUSED LOGISTICS

Joint Vision 2020 states that "Focused Logistics will provide military capability by ensuring delivery of the right equipment, supplies, and personnel in the right quantities, to the right place, at the right time to support operational objectives."[7] Logisticians must continue to reduce large stock piles of supplies and tailor the supply packages to fit the specific mission. These tailored supply packages will help reduce the amount of transportation, especially strategic lift, that is required, as well as reduce the logistics footprint in theater. Focused logistics is an important part of the transformation process. Since focused logistics is singled-out in Joint Vision 2020 as the future of logistics, it will be addressed throughout this paper, illustrating how maximizing the use of all available means of transportation, maximizing the use of information technology and maximizing the use of joint and combined logistics support the concept of focused logistics, and therefore contribute to reducing the logistics footprint in theater.

Focused logistics involves a precise application of logistics, using rapid response and distribution. A reduced logistics inventory, footprint and response time are essential. Total

asset visibility, intransit visibility and information fusion are all critical elements in reducing the logistics footprint. The following real-time situational awareness is planned through FY04:

1) FY01 – Optimize logistics process to minimize customer wait time (CWT)

2) FY02 – Build customer confidence in a simplified priority system with time definite delivery

3) FY04 – Total asset visibility through the use of AIT, a shared data environment and other applications

4) FY04 – Real-time actionable web-based logistics information systems.[8]

These four aspects of situational awareness help show the importance of maximizing all available means of transportation, maximizing the use of information systems and joint and combined logistics.

MAXIMIZING THE USE OF ALL AVAILABLE MEANS OF TRANSPORTATION

Maximizing all available means of transportation is essential to focused logistics and therefore also essential to logistics transformation. Not everything has to be flown into the area of operations. The importance of trucks, trains and ships must be recognized and exploited, in order to achieve the needed distribution agility. Logisticians must be able to get supplies to anywhere in the world, as quickly as possible. To move supplies quickly, and not consume all of the Air Force's strategic lift, logisticians must use all available modes of transportation. But, in order to maximize the use of different modes of transportation, equipment and supplies must be well prioritized. Equipment and supplies with the highest priority will be manifested on flights into the theater, while other, lower priority logistics may be divided among rail, truck and ship means of transportation. Using all available means of transportation will enhance distribution agility, enabling more efficient distribution of supplies and equipment across the battlefield.

The Strategic Distribution Management Initiative (SDMI) is a pilot program initiated by USTRANSCOM and DLA to eliminate current functional stovepipes and to create a synchronized and scheduled, integrated distribution management process. "Pre-SDMI customer wait-time (CWT) for air delivery of sustainment cargo to Bosnia averaged 15 days ... [with SDMI] customer wait-time [is] ...10.7 days."[9] "Containers are being lifted on the next available vessel instead of the next available lift. Containers now move up to seven days faster than pre-SDMI efforts."[10] Instead of all containers being manifested for air movement, some are being manifested for ship or rail movement resulting in some of the containers that were not sent by air reaching their destination faster than some of them that were sent by air. This example clearly illustrates that if you maximize the use of all available means of transportation,

supplies and equipment will actually reach the Area of Responsibility (AOR) quicker than if you try to send everything by air. In the past, there has been a tendency to try to send everything by air, thus delaying the delivery of key supplies and equipment which could have arrived sooner if the items had been divided among all available modes of transportation. The results of this SDMI effort show that the average transit time for containers sent by multiple means of transportation will be greater than if the containers are only sent by air. Competing for available aircraft can delay the movement of some containers. For example, there may not be enough room on an airplane for two weeks but there may be space on a ship that departs immediately with a transit time to the AOR of one week, causing the supplies to reach the AOR a week faster than by airlift. Furthermore, if the AOR is in Europe, for example, supplies can not only be sent by air and ship, but also over land by rail and truck.

Logistics transformation, however, is not just about inventing new systems, although that is an important part of it. But, improving existing systems must be closely examined and accomplished as well. These improvements will help to maximize current systems with minimal research and development, and without having to go through the cumbersome acquisition process to build and acquire totally new systems. "Army logisticians are also making improvements to the Time Phased Force Deployment Data –TPFDD --process....[Currently], if you want the PLS [Palletized Loading System] platoon out of a medium truck company, you can't do that. You get the whole medium truck company when you are building the TPFDD."[11] This refinement of the TPFDD process will save the logisticians a lot of time when planning contingencies. Because of the current limitations in the system, each TPFDD must be painstakingly built off-line, because the system will not support units that are composed of teams, squads and platoons. In fact, for planning purposes the logistics elements are sometimes eliminated from the TPFDD because you have to add an entire company or battalion when only a squad or team is needed. The combat arms personnel don't want to add that much Combat Service Support, because it reduces the amount of combat power brought to the battlefield. So, the plan goes on the shelf without the required amount of Combat Service Support to sustain the operation. If the operation really occurs, it is then a struggle on the logisticians' side to get the Combat Arms personnel to agree to add the needed Combat Service Support. If the logisticians were able to pick and chose from smaller sub-units the task would be easier to have the right amount of logistics added to the plan in the first place. Therefore, refining the TPFDD process is critical to the logistics transformation process in general.

Refining the TPFDD process is essential to being able to maximize all available means of transportation, because it is necessary to be able to identify accurately the size of the unit

(personnel and equipment) to be moved. Under the current process, in some cases, a much larger unit has to be put on the Time Phased Force Deployment Data List (TPFDDL) than is actually required for the mission. This erroneous identification can result in empty spaces on aircraft, ships and trains, as a result of a much smaller unit actually beingtransported, than what appeared on the TPFDDL. Or, at the opposite end of the spectrum, excessive personnel and equipment may be moved from one unit that prevents needed personnel and equipment being moved from another unit. If this situation occurs, all available means of transportation is not being maximized and focused logistics suffers.

One of the key concepts in focused logistics is minimizing customer wait time. Minimizing customer wait time will result from getting supplies to the customer in a shorter period of time. Getting supplies to the customer quicker, as demonstrated by SDMI, can be done by using all available means of transportation. Improving the TPFDD process will help to ensure that every available space, on the various modes of transportation, is effectively utilized. Thus, maximizing all available means of transportation enhances focused logistics.

MAXIMIZING THE USE OF INFORMATION SYSTEMS

Department of Defense Reform Initiative Directive (DRID) #54 highlights the importance of logistics automation to the transformation process. More specifically, two of the four intermediate objectives refer directly to logistics automation. These objectives are:

1) "achieving accurate total asset visibility and accessibility through the use of automatic identification technology/automated information systems and transformed business practices by FY2004 and

2) fielding a web-based, shared data environment providing seamless, interoperable, real-time logistics information for the Department by FY2004."[12] It is critical that logistics personnel from all services have access to the same information. A web-based shared data environment will allow all logisticians to see the availability of supplies and equipment throughout all services, and at inventory control points throughout the world.

Information systems are essential elements of the logistics transformation process. "Presently, there is neither an integrated logistics information system to support joint operations nor a repository of accurate, real-time, seamless logistics information on which to base a system."[13] In order to maximize cross-leveling supplies between different services, it is critical to know where all available supplies reside and their current on-hand inventories. Armed with this information, logisticians will know where the nearest supplies are stored for any operation. Once it is known where the nearest supplies are, then the information systems must be able to

"talk to each other" in order to be able to order supplies from that system. Being able to locate and order supplies from other services within the same theater of operations will save transportation costs and equipment downtime, versus obtaining needed supplies from CONUS which may be thousands of miles away.

"GCSS-Army [Global Combat Support System - Army] is the Army's initiative to ultimately reengineer the entire logistics business process into a single, seamless, modernized distribution-based system."[14] In addition to GCSS-Army, the Joint Staff J4 is the functional proponent for GCSS to be used by all the services. "The end state is a secure, intranet environment allowing DOD users to access shared data and applications, regardless of location, supported by a robust information infrastructure."[15] The GCSS effort will give logisticians a common operating picture for conducting operations. Just as a common operating picture is essential to Combat Arms personnel, so is it essential to Combat Service Support personnel. This common operating picture for Army logisticians is also being developed, as GCSS at the joint level. Having access to the same data is one step in maximizing the use of information systems, but being able to actually acquire supplies from other services is another critical step.

"[Joint Total Asset Visibility] JTAV is the capability to provide users with timely and accurate information on the location, movement, status, and identity of units, personnel, equipment, and supplies."[16] Asset visibility was a significant problem in Desert Shield and Desert Storm. Many supplies were sent to the wrong places because no one knew what was in the containers. Multiple supplies were sent to the same place, and because of the volume of containers it was impossible to crack them all open and unpack them all to see what was inside. Without being able to know which supplies were in which containers the re-supply system was very inefficient.[17] After Desert Shield and Desert Storm, logisticians recognized the need for an accurate tracking system to be able to locate supplies in the pipeline and on the dock, after the containers were offloaded from the ships in the AOR. Intransit Visibility (ITV) is a critical part of JTAV. "ITV specifically refers to the ability to track the identity, status, and location of DOD unit and nonunit cargo, passengers, and medical patients from origin to the foxhole, during peace, contingencies and war."[18] Knowing where supplies are in the pipeline is a very important aspect of JTAV and maximizing the use of information systems.

Automatic Identification Technology (AIT) "ensures the capturing of current and accurate source data for existing and future Service, Agency, and CINC automated information systems (AIS)."[19] AIT uses some of the latest commercial technology available for tracking supplies and equipment. Standardized data formats are being used to develop and implement joint AIT devices. "AIT devices include bar codes for individual items, optical memory cards for

multipacks and containers, radio frequency tags for containers and pallets, and a movement tracking capability using satellite links for convoys, trains, and barges."[20] Joint AIT technology is being implemented to gain total asset visibility. Once the same data can be seen by everyone, assets can be redirected or redistributed as needed to better accomplish the mission. More accurate forecasts can be given as to re-supply of stocks and readiness of equipment, based on where the supplies are in the pipeline. AIT plays a big part in focused logistics, and reducing the logistics footprint in theater. In the past, not being able to know exactly where supplies were in the pipeline, or on the container dock, often resulted in units re-ordering the same supplies multiple times, and thus increasing the supply footprint in theater. By being able to track supplies and equipment accurately, multiple orders of the same item can be greatly reduced, and confidence in the logistics system can be restored.

"Joint Decision Support Tools (JDST) will aggregate, categorize, and depict data elements in a format easy to use and understand."[21] Accurate, real-time, easy to understand information is needed at all levels. The Joint Office for Logistics Technology (JOLT) "has four primary objectives 1) ensure joint tools support all of the Services, Agencies, and warfighting CINCs; 2) provide close linkage to DARPA and their initiatives...; 3) develop joint tools within the GCSS environment; and 4) continue to support existing joint decision tools already deployed in theaters of operation ..."[22] These tools will aid interoperability among the Services. All Services will be able to have access to the same logistics information. This access to information is one step in focused logistics. Units must first be able to know what other units have in the AOR, before they can request those supplies that the other Services already have in theater.

There are many joint logistics initiatives ongoing. The key is to ensure that these initiatives are adequately funded and that they receive the recognition and support they deserve. Then, these initiatives must be distributed to the field and aggressively implemented. Having the technology available is one thing, aggressively implementing that technology is a whole other matter. This implementation must come in the form of a complete package, training and tutorials included. Too often new equipment or programs are fielded without any instruction, and the equipment sits around collecting dust because no one knows how to properly use it. Logistics transformation is too important to let this happen. Shared information, through the use of information technology, must be maximized.

Maximizing the use of information systems clearly supports the on-going initiatives of focused logistics. Focused logistics initiatives include a shared data environment and real-time actionable web-based logistics information systems. In fact, focused logistics relies on the use

of information systems to provide a common logistics operating picture. This common logistics operating picture will ultimately reduce the logistics footprint in theater by preventing over-stockage of items that are otherwise readily available from nearby supply sources.

MAXIMIZING THE USE OF JOINT AND COMBINED LOGISTICS

Joint and combined operations have become the standard for current military operations. The United States Army rarely, if ever, operates on its own, except during unit training exercises. Major military operations such as Desert Shield / Desert Storm, Task Force Eagle in Bosnia and operations in Kosovo have all been part of a large joint and combined operation. Additionally, the United States Army no longer operates in only areas that are well established. Many of these operations are now conducted in austere, bare-based environments. Because the environments are so austere, it means that the United States Army either has to bring a lot more supplies and equipment with it or rely more heavily on joint and combined operations. With Army Transformation, comes the requirement to have focused logistics and a reduced logistics footprint. One way to reduce the amount of supplies and equipment the Army brings to the theater of operations is to maximize the use of joint and combined logistics, from units located in the theater of operations.

The common logistics doctrine that has prevailed throughout history is that each service and each nation provides its own logistics. In fact, Joint Pub 4-0 states that the, "CINC has directive authority for logistics but each service is responsible for logistics support of its own forces."[23] When a slow build-up of forces met the requirement, because the military was deploying into developed nations, this common logistics doctrine was workable. However, the Cold War has ended and more and more frequently the military is deploying to bare-based theaters as part of a coalition force. As stated in Joint vision 2020, "Interoperability is a mandate for the joint force of 2020 – especially in terms of communications, common logistics items, and information sharing."[24] By using common logistics items from other services and nations, logisticians can reduce the deployed Army Combat Support/Combat Service Support footprint in theater.

"Present retail supply systems are stovepiped within each service and cannot access inventory information of other Services."[25] For example, a Marine Corps unit co-located with an Army unit on the same peacekeeping operation cannot access the Army supply system in order to determine if the Army has the needed part for a downed piece of equipment. One service's mission could fail due to the lack of a part that the co-located sister service unit had on hand all the time. The Marine Corps retail supply systems: Supported Activities Supply System

(SASSY), Asset Tracking and Logistics Supply System (ATLASS) and ATLASS II+ do not currently interoperate with the Army's Standard Army Retail Supply System - Objective (SARSS-O) supply system. This failure to be able to communicate between systems exists not only between the Army and Marine Corps, but also between the Army and the Navy, and the Army and the Air Force.

Initiatives are underway to allow all services to be able to share a common logistics operating picture. One such initiative is the Joint Logistics Warfighting Initiative (JLWI). "JLWI is a series of demonstrations and experiments designed to enhance warfighter readiness through the insertion of new and emerging technologies and reengineered business processes to reduce human intervention, capture real-time asset visibility, and simplify and accelerate the requisition process."[26] The Army has embraced this initiative, with the Marines right behind. "JLWI is not a new system development; rather, it leverages [Commercial off the Shelf] COTS solutions through demonstration and experimentation to enhance readiness."[27] The fact that JLWI leverages readily available COTS solutions means this system will save research and development money and be interoperable with other systems, because it is not proprietary.

In addition to joint logistics operations, today's logistician must also be well versed in coalition logistics and capabilities. The military can get supplies faster and without using strategic airlift capabilities if it relies more heavily on coalition partners and host nation assets for some of its supplies. The key here is interoperability. For example, when United States Forces deployed to Albania for Task Force Hawk, France agreed to supply all necessary fuel. Two interoperability problems arose. First, United States Forces did not originally have the necessary NATO hose couplings in order to be able to pump the fuel from the storage bags into their tankers. Second, the fuel needed to be mixed with chemicals in order to bring the fuel grade up to the level required for American military aircraft. The Americans overcame these interoperability issues and were able to use the fuel provided by the French. But, an important lesson here is for the logisticians to carefully study availability, cost and interoperability of allied and coalition forces, in order to be able to maximize the use of their supplies.

Maximizing the use of joint and combined logistics is one of the keys to focused logistics, and reducing the Army's logistics footprint in theater. Being able to acquire needed supplies from neighboring joint and combined units helps to eliminate the need for a large stockpile of Army logistics on the ground. Customer wait time can also be drastically reduced by obtaining supplies from other units in theater, rather than having to get the supplies through the Army supply system in CONUS. Joint and combined logistics fully supports focused logistics and is the trend for the future.

SUCCESSFULLY IMPLEMENTING LOGISTICS TRANSFORMATION

More joint programs and exercises need to be developed to reinforce joint logistics operations, and to ensure logisticians are properly trained and remain trained. These joint and combined exercises need to be conducted with actual forces, supplies and equipment. Unfortunately, more and more military exercises have become computer exercises conducted in the form of a Command Post Exercise (CPX). In those exercises, logistics is usualy slighted because the warfighters don't want logistics to, in any way, detract from the battle. Well, it is now time to "train as we fight". The appropriate resources need to be dedicated to conducting live exercises in order to work through the issues and difficulties in sharing logistics resources among the services. Additionally, the services need to commit more money to improving the logistics portion of the computer simulation model to make the CPXs more rigorous and accurate.

A Task Force should be formed to look at standardizing logistics systems among all the services. This task force should be headed by the Joint Staff and composed of logisticians, communications and information systems personnel from all the services. Why have so many different supply systems evolved? Why does each service need its own unique supply system? The systems are stovepiped and do not allow the ability to share information about supply quantities on hand or to requisition supplies from other services. Separate systems are more expensive and less inter-operable. The systems are more expensive because of the separate research and development, and acquisition process that goes into building and acquiring each system. Instead of having unique supply systems in each service, all services should use the same one. More time and money could then be devoted to improving that one system.

Training must be revamped to emphasize interoperability and joint operations. Currently, very little emphasis is placed on joint training, yet virtually all deployments these days are to joint theaters of operations in support of contingency operations. In fact, logistics training among the services should be consolidated with only a small portion of the training being dedicated to service unique training. Consolidating training among the services will not only ensure a joint emphasis with standardized training, but also save money by being able to consolidate training at only one location, rather than multiple locations. The Army discovered the merit in combined logistics training, when they consolidated the officers' advanced course for several logistics branches. This course, known as Combined Logistics Officer Advanced Course (CLOAC) consolidated the Quartermaster, Ordnance and Transportation Officer Advanced Courses into one, leaving only one small service unique portion to the course. Highly

successful, this combined Officer Advanced Course demonstrated the importance of consolidated logistics training.

Maximizing the use of other services' logistics capabilities and supplies will be no easy task. To use other services' logistics, joint and service logistics doctrine will need to be re-written to change the over-arching supply doctrine to say that services will utilize sister service supply systems, to maximize the availability of parts in the AOR. Budgets will have to be revised, in order to allow ease of accounting and billing across the services. Currently, every service has their own money for their supplies. Billing sister services for requisitioned items is currently very difficult, if not impossible. Perhaps a portion of each services' logistics budget should be fenced as joint money to be used when acquiring supplies, like repair parts and food, from sister services. Additionally, all services should switch to the same logistics and accounting systems, so that parts can easily be ordered and billed between services. All services being on the same systems will reduce accounting errors, aid interoperability and add expediency to the requisition process.

Focused logistics, maximizing the use of all available means of transportation, and maximizing the use of information systems will affect not only the Quartermaster Corps, but also the Ordnance Corps, the Transportation Corps, the Acquisition Corps, the Air Force, the Navy, the Marine Corps and systems automation personnel. While the above list is not all inclusive, it represents multiple organizations and systems that will be affected by logistics transformation. This transformation cannot possibly happen in a vacuum. Strategic leaders must be cognizant that this transformation transcends many organizations, and will require a great deal of coordination with, and transformation of, these other organizations. Transforming logistics, however, involves not only the efforts of a myriad of branches of the United States Army and all branches of the American Armed Forces, but of all logisticians throughout the world.

Maximizing joint and combined logistics will require more contracting for supplies with the host nation, in which we are performing our mission. It will require a change in doctrine to be able to use common logistics items, instead of each service and each nation providing their own supplies. Using other nations' resources will also require more quality control inspectors, to ensure we are getting the same quality product that we would get from our own nation. Financial accounting methods must be streamlined in order for other services and other nations to be easily and properly charged procured logistics. Clearly, there are many second and third order effects that must be considered and addressed as logisticians embrace the transformation process.

The logistics transformation process must be engrained throughout the military. The vision must not only be communicated and understood, but also internalized. "Vision is usually communicated most effectively when many different vehicles are used; large group meetings, memos, newspapers, posters, informal one-on-one talks."[28] The key to communicating effectively and instilling a new vision is to ensure that the word reaches all levels, and that it becomes a way of life. Communicating the vision and transformation plan must start at the highest level. Just like General Shinseki, who has personally carried the Army Transformation message to field grade officers throughout the Army, senior logisticians must personally disseminate the logistics transformation vision. The transformation process must then be taught in the Officer and Enlisted education system. But, the process does not end there, logistics units must then work hard at continuing to instill the vision and make it a reality.

There must be buy-in at all levels, in order to realize a full logistics transformation. Communicating and instilling the vision is one step, but there are many other steps that must be accomplished in order to make a permanent organizational change such as logistics transformation. Professor John P. Kotter, in his book Leading Change, required reading at the Army's Senior Service College, describes the following eight phases required for an effective organizational change:

1) "Establish a sense of urgency;
2) Create the guiding coalition;
3) Develop a vision and strategy;
4) Communicate the change vision;
5) Empower employees for broad-based action;
6) Create short term wins;
7) Consolidate gains and produce more change;
8) Anchor new approaches in the culture."[29]

These phases of implementing organizational change are presented to outline the complexity of the transformation process. Some of these phases, such as: developing a vision and strategy and communicating the change vision have already been done, at least to some extent, but other phases, such as: creating short term wins and consolidating gains are yet to be accomplished or clearly articulated. Permanently transforming an organization is a slow, deliberate process that takes a large investment of time and energy on the part of the organizational leadership, and buy-in at all levels.

CONCLUSION

Logistics transformation has a vital role in the successful transformation of the United States Army. Logisticians must concentrate on focused logistics, maximizing all means of transportation, maximizing the use of information systems, and exploiting the use of all available resources by maximizing joint and combined logistics. But most importantly, the logistics transformation process cannot be accomplished by the Army in a vacuum; it must be done as a comprehensive joint effort with our sister services.

Recommendations presented in this paper are as follows: more joint and combined exercises should be conducted; a task force should be formed to look at standardizing logistics systems throughout the services; and logistics training should be revamped and combined with other services to emphasize joint operations. Additional recommendations include: fencing a portion of each services' logistics budget as joint money to be used when acquiring supplies, like repair parts and food, from sister services; switching all services to the same logistics and accounting systems; and having senior logistics leaders out front selling the logistics transformation story in order to get buy-in down to the lowest level. These recommendations should be carefully and more thoroughly evolved, in order to better address logistics transformation.

This transformation is no small task, and will require everyone's effort in order to be successful. Strategic leaders in all logistics disciplines, starting with the J4, must instill the new transformation vision throughout the services and incorporate transformation into the officer and enlisted education system. This paper has barely scratched the surface on what changes logisticians must make, what the effects of those changes will be, and how logisticians should implement those changes. The logistics transformation process will take a dedicated effort by all logisticians, over an extended period of time, in order to be truly successful.

Word Count = 6014

ENDNOTES

[1] Dennis Steele "The Army Magazine Hooah Guide to Army Transformation: A 30-Minute Course On the Army's 30-Year Overhaul," Army(Headquarters Department of the Army, 2001) reprinted in US Army War College Selected Readings, Academic Year 2002, Course 1 Strategic Leadership, Volume II (Carlisle Barracks, US Army War College)134.

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