Reorganization of Marine Corps Aviation Associated Logistics

MCWAR 1999

Subject Area Logistics

REORGANIZATION OF MARINE CORPS AVIATION ASSOCIATED LOGISTICS

by

Lieutenant Colonel M. G. Bolin
United States Marine Corps

12 May 1999

Submitted in Partial Fulfillment
Of the Requirements for the
Marine Corps War College
Marine Corps University
Marine Corps Combat Development Command
Quantico, Virginia 22134-5067

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
1999		**00-00-1999 to 00-00-1999**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Reorganization of Marine Corps Aviation Associated Logistics	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **United States Marine Corps,Command and Staff College, Marine Corps University,2076 South Street, Marine Corps Combat Development Command,Quantico,VA,22134-5068**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			
unclassified	**unclassified**	**unclassified**	**Same as Report (SAR)**	**37**	

ABSTRACT

Precision Logistics is the Commandant of the Marine Corps vision for supporting the Marine Corps of the 21st Century. In order to realize this vision Marine Corps logistics must become leaner, more agile and more responsive. Marine aviation associated logistics is complex, cumbersome and has a large footprint.

Contrary to what some may believe, Marine Corps organic units comprise only a portion of Marine aviation associated logistics. Marine Squadrons and the Marine Corps Aviation Logistics Squadrons are Marine Corps components within aviation associated logistics. Other components are organizations within the Navy Supply Command and the Defense Logistics Agency.

This research paper examines ways in which organizations within Marine aviation associated logistics could be reorganized to meet the Commandants vision of Precision Logistics. Areas of particular interest include: Moving supply trained individuals to the squadron level; combining Defense Logistics Agency and Naval Supply Command Inventory Control Points; consolidating inventory; and outsourcing various logistics functions.

CONTENTS

LIST OF FIGURES

CHAPTER ONE
REORGANIZATION OF MARINK CORPS AVIATION ASSOCIATED LOGISTICS FUNCTIONS

The topic of reorganizing various Department of Defense (DOD) functions is not new. The current fiscal climate within DOD, and all governmental agencies, has reinvigorated the quest for increased efficiencies. These increased efficiencies are equated to cost savings that in turn can be applied to discretionary spending accounts, theoretically allowing DOD to increase readiness and/or modernization efforts. While increased efficiency is usually linked to cost savings from a business view point, it may not be linked to increased effectiveness from a warfighting capabilities perspective.

Ideally, the objective is to increase organizational efficiency and reduce operational costs, while increasing warfighting capability. The purpose of this research paper is to examine the transfer of Marine Aviation Logistics Squadron (MALS) supply personnel to the organizational squadron level, consolidating Defense Logistics Agency level inventory control points and inventory, and the outsourcing of various logistics functions as ways in which select areas associated with Marine aviation logistics could be reorganized to meet this objective.

The Requirement for Reorganization

The 1997 Quadrennial Defense Review recommends the following:

> Reduce Logistics support costs by integrating organizations and functions (supply, financial, automated data processing, transportation, maintenance, and procurement) now being performed at multiple locations in a common geographic area. Each military department will reduce inventories and operating costs by sharing and linking consumer-level inventories and by eliminating redundant facilities and operations.
>
> Compete, outsource, or privatize military department infrastructure functions that are closely related to commercial enterprises. Most of these actions involve logistics and installation support functions. The military departments expect that these initiatives will eliminate 25,000 military and 30,000 civilian positions between now and FY 2003.[1]

Although unknown, some of the QDRs recommendations may be based on charts like Figure 1., which shows a comparison between DOD and the commercial industry response times with respect to certain logistics functions. Clearly the commercial sectors have

Process	DOD	Commercial Companies		
Distribution (for in-stock items)	**26 Days**	**1 Day** Motorola	**3 Days** Boeing	**2 Days** Caterpillar
Repair (cycle time)	**40-144 Days** (DOD Average)	**3 Days** Compaq	**14 Days** Boeing (electronics)	**14 Days** Detroit Diesel
Repair (Shop Time)	**8-35 Days** (Army tank/truck)	**1 Day** Compaq	**10 Days** Boeing (electronics)	**5 Days** Detroit Diesel

Figure 1.[2] DOD & Commercial Response Times Comparison

[1]Department of Defense. *Report of the Quadrennial Defense Review, (h*ttp://ww.defense1ink.mil.pubs.qdr/index.html, May 1997), VIII-4.

[2]Kenneth Girardinin and others, *Improving DoD Logistics: Perspectives from RAND Research,* (Santa Monica, CA: RAND, 1995), 26.

taken the lead in streamlining logistics functions and processes.

Although it is difficult to compare response times for organizations with different processes, Figure 1. includes a cross-section of various processes that could have DOD application. The disparity in DOD response times, as compared to commercial companies, is "compelling and costly to DOD in both effectiveness (readiness and sustainability) and efficiency."[3]

CHAPTER TWO

LOGISTICS DEFINED

The functional areas of logistics are: 1.) Supply systems, 2.) Maintenance, 3.) Transportation, 4.) General engineering, and 5.) Health services. Joint Pub 1—02 defines logistics as:

> The science of planning and carrying out the movement and maintenance of forces. In its most comprehensive sense, those aspects of military operations, which deal with: a design and development, acquisition, storage, movement, distribution, maintenance, evacuation and disposition of material.[4]

The Council of Logistics Management, a civilian organization, has defined logistics to be:

> The process of planning, implementing and controlling the efficient flow and storage of raw materials, in—process inventory, finished goods, services and related information from point of origin to point of consumption (including inbound, outbound, internal and external movements0 for the purpose of

[3]Kenneth Girardinin and others, *Improving DoD Logistics*, 26.

[4]Department of Defense, *Department of Defense Dictionary of Military and Associated Terms,* (Washington D.C.: March 1994), 221.

conforming to customer requirements.[5]

From the Commandant of the Marine Corps perspective, a civilian logistic activity can offer much in the form of "concepts, techniques and technologies of great interest to military logisticians, [yet] it lacks the warlike purpose and is thus fundamentally different."[6] This perspective seems somewhat inaccurate. Based upon the above definitions, it appears that civilian and military logistics functions are fundamentally the same. What is fundamentally different, at times, is the environment in which logistics must function.

MARINE AVIATION LOGISTICS SYSTEM

Marine aviation logistics is not a stand-alone logistics system, in fact far from it. Within the Marine aviation logistics system, functions such as supply, maintenance and transportation may be performed at as many as three different levels. These levels include: 1.) Organizational, 2.) Intermediate, and 3.) Depot. At the organizational and intermediate levels, Marine aviation organic assets comprise a significant portion of the logistics system. Above the

[5]Federal Express. *Logistics FAQ's*, (http://www.fedex.com/us/services/logistics/faq.html, 21 Feb 1999), 1.

[6]Marine Corps Doctrinal Publication (MCDP) 4, *Logistics*, (Washington, DC: Headquarters, U.S. Marine Corps. February 1997), 4.

intermediate level, logistics organizations at the Department of the Navy and Department of Defense levels, though not organic to

the Marine Corps, comprise a large portion of the Marine aviation logistics system.

Marine Aviation Specific Logistics

Although there are few organizational logistics functions within Marine aviation, the functions that do occur are performed at the flying squadron level. From a supply aspect, the squadron is the starting point for the requisition process, which will be detailed later. From a maintenance perspective, the squadron performs part removal and installation. From the transportation aspect the squadron has literally no involvement.

The Marine Aviation Logistics Squadron (MALS) is the focal point within the Marine Corps, at the intermediate level. The MALS performs aviation supply and maintenance functions. Organizational requisitions, for aircraft related parts, are passed from the flying squadron to MALS supply. If a particular part is in stock MALS supply will fill the requisition and issue the requested part to the unit. From a maintenance perspective, certain repairable parts can be repaired at MALS. When MALS cannot provide the requisite support, the requisition or repairable is passed "off station" to the next highest echelon.

Naval Supply Systems Command

The Navy has the overall responsibility for providing logistic

support for Marine aircraft and aviation ground support equipment. The Navy plays a significant role in the supply chain and an equally important role on the maintenance side, particularly in dealing with repairable components. Other. logistics functions of the Naval Supply Systems Command (NAVSUP) are shown in Figure 2. NAVSUP is directly responsible for fleet-wide support of all U.S. Navy and Marine forces. The many logistics services NAVSUP provides include: Supply operations, contracting, information systems, transportation and support services.

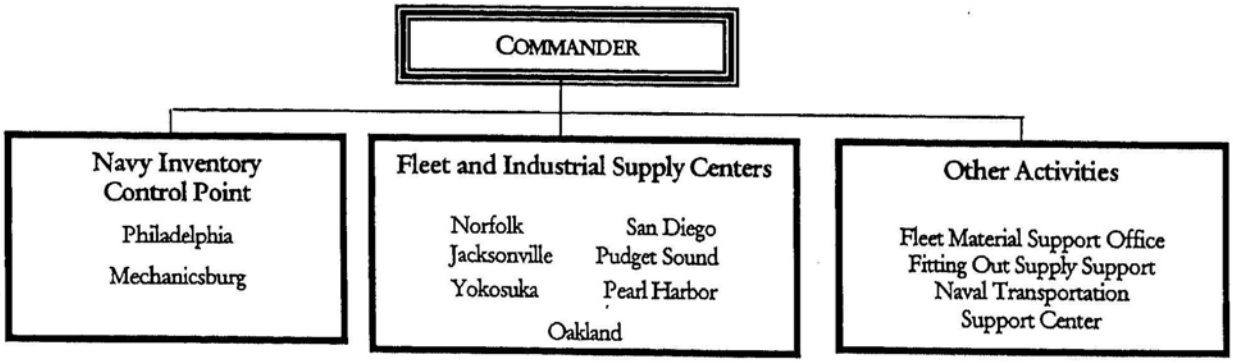

Figure 2. Naval Supply Command

Whereas NAVSUP plays a significant role, especially in repairables, the Defense Logistics Agency plays an equal role with respect to consumable parts.

Defense Logistics Agency

DLA, first established in 1962 as the Defense Supply Agency,

was restructured in the early 1990's when then Secretary of Defense, Dick Cheney, "directed that all the distribution depots of the military services and DLA merge into a single, unified material distribution system, designating DLA to manage it."[7] Thus a single agency was given tremendous span of control, albeit consolidation was a necessary move.

The Defense Logistics Support Command, the major component of DLA, manages over four million consumable items and processes more than 30 million distribution actions annually in support of DOD Departments and agencies. In order to perform its multiple logistics functions, the Defense Logistics Support Command has numerous components shown in Figure 3.

CHAPTER THREE

IMPROVING THE CURRENT LOGISTICS SYSTEM

The Commandant of the Marine Corps has stated: "Our first priority [in precision logistics] will be to improve logistics response time. We will focus on improving the performance of our order and ship and repair processes to generate quick and positive improvements to our Marine Expeditionary Forces, posts

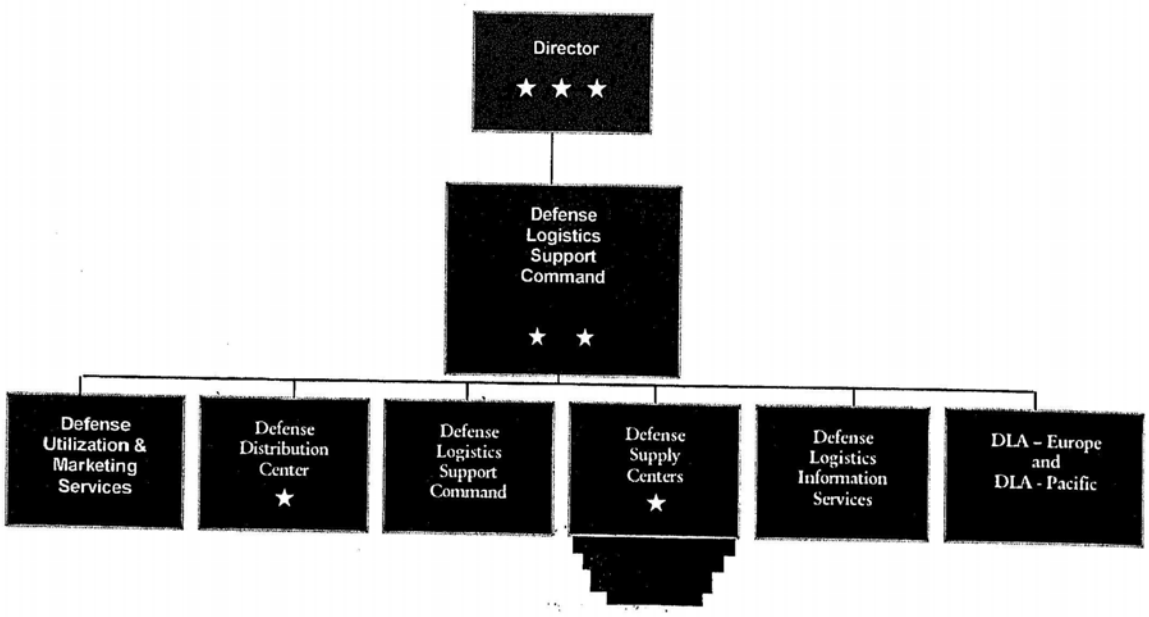

Figure 3. Defense Logistic Agency

and stations."[8] Part of the problem with Marine aviation associated logistics, as currently configured, is that the Marine Corps owns only a small fraction of the order, ship and repair processes. As Figure 4. depicts, the Navy and Defense Logistics Agency own a large portion of these processes. Therefore, any reorganization outside of organic Marine Corps units must take place at the NAVSUP and DLA levels. Yet, through some innovative reorganization, the Marine Corps can make improvements that will have an impact at the NAVSUP and DLA levels.

---

[7] Defense Logistics Agency, (http://www.dla.mil.history, 15 Feb 1999), 1-2

[8] White Letter No. 01-97, *Marine Corps Precision Logistics (Washington DC: Commandant of the Marine Corps, 16 Jan 1997), 1.*

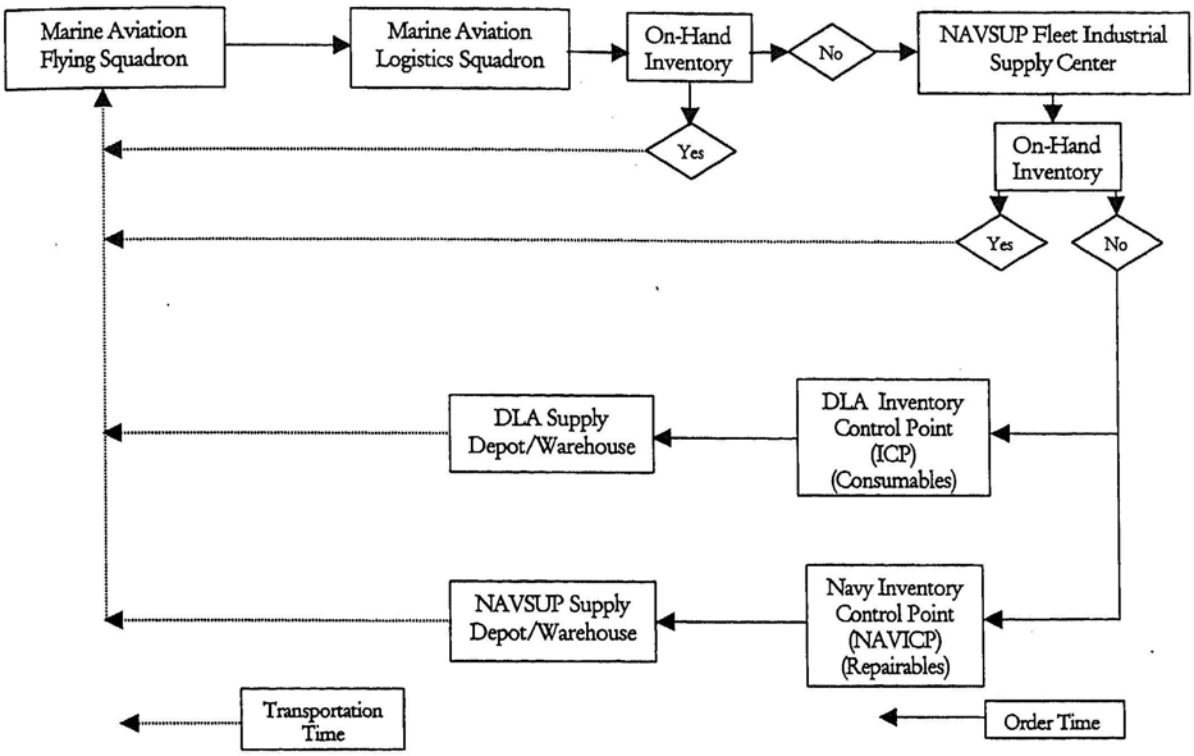

Figure 4. Marine Corps Aviation Associated Logistics

CHAPTER FOUR

IMPACTS ON MARINE AVIATION LOGISTICS ORDER MID SHIP TIMES

An important measure of an efficient and effective logistic process is *order and ship time* (OST). OST begins with a requisition and ends with the delivery of the requisitioned part. Although Marine aviation units own only a small fraction of the logistics processes, their actions can, and do, seriously effect overall OST. A recent RAND study of Marine Corps logistics processes indicated excessive OSTs within the Marine Corps.

There was also a large variance in OSTs between units within the same Marine Expeditionary Force (MEF). Excessive, variable OSTs are indicative of an unpredictable system. As RAND pointed out, while some items were shipped and received almost immediately, others took weeks.[9] Reorganization at the squadron level can favorably impact OST.

Squadron Level Reorganization

Perhaps a large contributor to excessive OSTs, and certainly to OST variability between like squadrons, is the non-existence of school trained aviation supply experts, either officer or enlisted, at the squadron level. Personnel who are responsible for making the original requisition, a critical first step, are often brought into the job with little or no experience. They are taken out of their Primary Military Occupational Specialty (PMOS), which is detrimental towards Military Occupational Specialty (MOS) credibility in their often-critical maintenance MOSs, and placed in a billet known as the "expeditor." The expeditor's job is to make initial requisitions and monitor the status of outstanding requisitions. There is no formal training, instead the expeditors learn through on-the—job training, often times under demanding conditions. This is not an efficient or effective way to begin a precision logistics process.

[9] Marc L Robins and others, Measurement of USMC Logistics Processes: Creating a Baseline to Support Precision Logistics Implementations, (Santa Monica, CA; RAND, 1998), 8.

Errors in squadron initiated requisitions can have an extremely adverse impact on the entire logistics system, not to mention aircraft readiness and mission capability. One wrong or misplaced character on a requisition can result in the squadron receiving a totally useless part. Not only does the squadron receive a useless part, perhaps after waiting days or even weeks, but the logistics pipeline is being burdened in having to locate and ship a useless part, leading again to excessive OSTs. Meanwhile, the aircraft sits in a non—mission capable status. This is a worst case scenario that occurs all too often. A scenario occurring just as often involves the supply system denying an initial requisition for improper documentation. When the squadron is notified that the initial requisition was in error and must be resubmitted, hours to days often have elapsed. As a result, precious OST time has been lost. The answer to this specific problem seems obvious, namely assign MOS trained supply personnel to the organizational level.

Within the Marine Corps this seemingly simple solution could face serious institutional opposition. In an era of right-sizing the force, there is limited ability to add force structure. This is a valid observation. As a consequence to adding trained supply personnel at the squadron level, the Marine Corps would need to find additional force structure within the Service. This net zero-sum gain situation leads to a second

source of opposition, namely the part of the Marine Corps that would give up force structure in order to source squadron level supply professionals. This opposition, probably based more on emotion and cultural bias, would no doubt be stiff. There is, however, a solution.

Marine Aviation Logistics Squadron Reorganization

The intermediate level for Marine aviation logistics is the MALS, which is divided into maintenance and supply departments. A potentially large number of trained aviation supply enlisted and officer personnel reside in this organization. MALS supply stocks are instrumental in providing parts to the organizational level. Of parts used in repairs, 70 to 80 percent are filled at the MALS level.[10] Arguing over the amount of support that MALS provides misses the point. The argument should center on reasons why MALS functionality, from a supply perspective, should be moved down to the organizational level.

If precision logistics are to occur, automation throughout the system must be as seamless as possible. Following that, and more importantly, the logistics system must be streamlined. In today's system, MALS supply acts as a middleman. MALS supply screens requisitions, fills the ones they can, and furthers the

[10] Marc L. Robins and others, *Measurement of USMC Logistics Processes: Creating a Baseline to Support Precision Logistics Implementation,* (Santa Monica, CA: RAND, 1998), vii.

ones they cannot up the chain. As MALS stocks are depleted they are refilled either directly by vendors or at the DLA/NAVSUP level. In order for a squadron to perform the same functionality as MALS supply a few changes are required.

The first step in the process is to move aviation supply stocks, currently held at the MALS, down to the organizational level. A departure point from which to develop the amount and type of stocks a squadron should maintain is the Aviation Consolidated Allowance List (AVCAL), used in determining stocking levels aboard aircraft carriers for deploying squadrons. Modification and optimization of an AVCAL model, as demonstrated in the *Carrier Based Air Logistics Study,* could provide an excellent template for the required level of squadron held supply stocks.[11]

Along with supply stocks, the supply personnel should be moved from MALS and placed at the organizational level. This would give the adequate level of expertise required to manage local stocks, stock requirements, and the requisition process. Moving the stocks and the people who manage them, from the MALS to the squadron level, requires an increased automation of logistics procedures.

---

[11] L B. Embry and R J. Hillstead, *Carrier Based Air Logistics Study: Supply and Transportation Analysis*, N-1785-NAVY (Santa Monica, CA: The Rand Corp., Apr. 1982), 69-74.

Automation will provide a seamless path from the squadron directly to a vendor or depot level warehouse facility. In the future, a squadron should be able to determine if a part is available, where to get the part from in the shortest amount of time, the transportation method, and ship and arrival dates.

Effects of Marine Aviation Organic Reorganization

Cutting out the middleman, as private industry has found, streamlines the logistics processes. Moving the MALS supply functionality, vis-a-vis transferring required supply stock and personnel from the MALS to the squadron, has several advantages. Force structure requirements are handled within Marine aviation, where aviation supply expertise is already resident, perhaps producing a smoother transition. MALS's infrastructure and footprint in material and personnel is significantly reduced, yet the squadron's footprint is not significantly increased due to the spread-loading of former MALS assets across several squadrons

From efficiency and effectiveness perspectives, MOS trained supply individuals at the squadron level will reduce the number of common errors in the requisition process, favorably impacting current order and ship times. Squadron on-hand stocks will further reduce order and ship times, for items that usually come from MALS, because they are already in the customers hands.

As order and ship times become smaller, there are less items

in the logistics pipeline. Additional spares once required to account for the length of the pipeline are no longer needed. As order and ship times become shorter, the Marine Corps will move closer to precision logistics.

Seamless automation is an enabler of precision logistics. It allows customer units, Total Asset Visibility (TAV). Units will know where their parts are coming from and when they will arrive. These facts alone will enable maintenance departments to become more effective in scheduling and performing maintenance functions. Effective maintenance, coupled with efficient logistics, means increased aircraft readiness. This begins an upward spiral that leads to increased training opportunities, ultimately culminating in increased warfighting capability for Marine Corps aviation.

CHAPTER FIVE

MARINE AVIATION ASSOCIATED LOGISTICS

As shown earlier, Marine aviation organic logistics actually makes up a small, albeit important part, of the entire system that is responsible for providing logistics functions for Marine aviation. When examining the entire system it becomes evident that:

> The structure of the entire distribution process is complex, segmented, and disjointed. It is complex because it involves

> many nodes and organizations. The process is segmented because the various functional aspects of distribution-e.g., storage, issue, transport-divide among various organizations. Further the process is not a well—integrated set of activities. Some fall to transportation organizations, others to supply agencies... The complexity and segmentation tend to give the distribution system a vertical rather than a horizontal focus. That is, each stage of the process tends to concentrate on its own function. The managers are interested in meeting their segment's performance measures, perhaps to the detriment of the overall system performance.[12]

Wholesale Supply Actions

Within Marine aviation associated logistics the Naval Supply Command and Defense Logistics Agency perform what is termed *wholesale* supply functions. A simplified version of various components of the wholesale system is shown in Figure 5. A basic understanding of these components will enable a better understanding of how they could be reorganized to gain efficiency and effectiveness. Ultimately this increased efficiency and effectiveness enhances warfighting capability through increasing the availability of full mission capable aircraft.

As pointed out previously, the initial squadron requisition is forwarded to the Intermediate level, or MALS. In cases where MALS cannot fill the requisition through existing on-hand stocks, the requisition is forwarded to a Fleet Industrial Supply Center (FISC) which is owned by the Navy. If the FISC has existing

---

[12] Nancy Y. Moore and others, Material Distribution: Improving Support to Army Operations in Peace and War, MR-642-A (Santa Monica, CA: RAND, 1997). xi.

stocks it will fill the requisition and arrange transportation

back to either MALS or the requisitioning squadron. If the FISC cannot fill the requisition, then it is electronically forwarded to an Inventory Control Point (ICP).

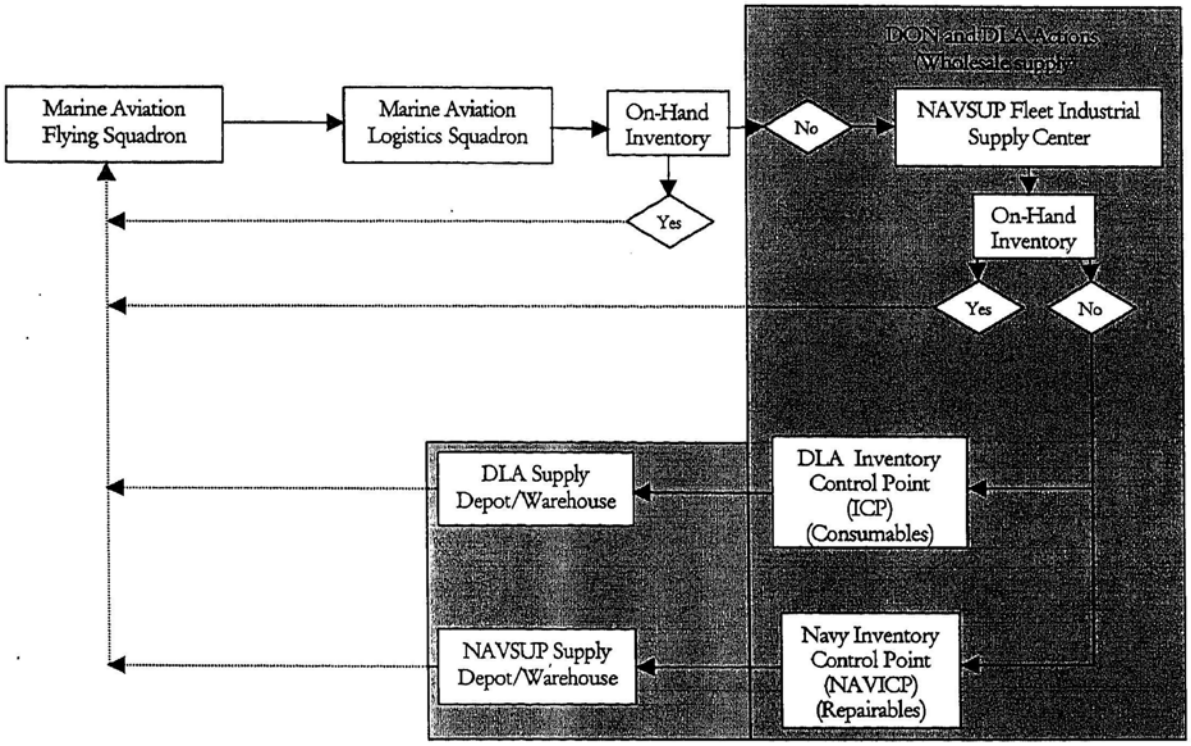

Figure 5. Marine Aviation Associated Logistics Wholesale System

The Navy and the Defense Logistics Agency both own ICPs. The Defense Logistics Agency ICP handles consumable parts requisitions whereas the NAVSUP ICP deals mainly with repairable part requisitions. While there is a difference between consumable and repairable parts, consumables are one time use and

repairables can be repaired and reused, this difference should be transparent to the inventory control process. Redundancy occurs as both agencies locate inventory within the supply depots and warehousing system. Once the inventory is located, the ICPs authorize release of stocks to fill the squadron requisition.

CHAPTER SIX

WHOLESALE SUPPLY REORGANIZATION

Whereas the DLA and NAVSUP play a somewhat significant role in the overall organization, we now examine how these agencies might best be reorganized.

Consolidating Wholesale Inventory Control Points

In 1990, the services were directed to *transfer the management* of all consumables to DLA. This resulted in all consumables now being managed by DLA at 5 geographically separated Inventory Control Points. The Services still maintain 11 different reparable ICP's that are located in 13 separate locations. Within the Services, NAVSUP maintains 2 geographically co-located ICPs.

Recent studies on combining the Service ICPs under DLA indicate a range of $2.2-$6.l billion dollars in savings.[13] Citing the difficulty in developing a single standard data base system, DOD

has resisted, along with the Services, any effort to put all ICPs under a single DLA manager.[14] Personnel involved in trying to develop the single standard data base cited, however, that the difficulty in creating such a system was due to incompatibilities among the Services. They further stated that these problems could be overcome by consolidating ICPs under a single organization.

It seems counter—intuitive not to consolidate all ICPs under a single management team. By definition ICPs are not warehousing facilities or Depots. Rather they are a clearinghouse for requisitions, locating stocks and authorizing release of stocks from the warehousing facilities to the customer. Additionally, they oversee stocking levels and contract for additional stocks when required.

To Marine aviation associated logistics the advantages of consolidating all ICPs under a single manager seems attractive. All requisitions would be passed using a single system, with a single manager. Instead of the current system, which uses DLA *and* NAVSUP, consolidating their functions under one team would

[13] United States Government Accounting Office, *Defense Infrastructure: Inventory Control Point Consolidation Saving Would Be Substantial*, (Letter Report, 08/13/97, GAO-NSIAD-97-157), 1-3.

flatten an otherwise stove piped organization. Such streamlining would reduce the number of different geographic locations of ICPs which, along with automation, would seemingly decrease order and

ship times, making response times quicker.

In the end, consolidating ICP functionality has the same effect as consolidating MALS supply functions under the cognizance of the Organizational level. Response time reduction, the Commandants priority for logistics, leads to parts getting to the flightline quicker. This ultimately results in more mission capable aircraft, increased aircraft readiness, and most importantly inc5ased warfighting capability.

Wholesale Inventory Consolidation

Maintaining an excess of stocked parts, known as excess inventory, requires excessive infrastructure to warehouse and manage the inventory. This translates into unneeded spending in order to maintain the infrastructure. Excess inventory also burdens the entire logistics pipeline, reducing efficiency and causing response times to increase. Also, excess inventory is a waste of precious procurement money that could be better utilized for other purposes.

A recent GAO study indicated that of the $67 billion currently in DOD stocked inventory, only $25.8 billion is required to meet

---

14 GAO-NSIAD-97-157, 8.

current operating and war reserve requirements, resulting in an excess of $41.2 billion in inventory. Put in other terms, 60% of the current inventory is not required. GAO also noted that DOD

currently has unaccounted inventory items and actually places redundant/repetitive orders for same item. Additionally, there is $14.6 billion in inventory that currently has no demands, is not projected to have any demands, and will likely never be used.[15] This is totally useless inventory, resulting in inefficiencies in the logistics pipeline and waste.

The Services estimates were smaller, yet still indicated excess inventory:

> Army, Navy, and Air Force records indicated that unneeded inventory items valued at $28.4 million had 20 years or more of inventory on hand and another $11.3 million of inventory on order; however, because the records for almost 40 percent of the reviewed items were in error (generally on-order quantities had been delivered but not recorded), these items, in fact, did not have additional stock on order; and, in cases where inventory was actually on order, the reasons included requirement changes, buys to cover the life of weapon systems, and adherence to minimum policy buys.[16]

Thus it is clear from either the GAO or Service's perspective that excess inventory exists. Even if the initial GAO estimate of $41.2 billion in excess inventory is halved, which Service records indicated, the need for reorganization of inventory management still seems to be mandated.

---

[15] United States Government Accounting Office, *Defense Logistics: Much of the Inventory Exceeds Current Needs* (Letter Report, 28 Feb 1997, GAO/NSIAD-97-71), 1.

[16] GAO/NSIAD-97-71, 1.

Excess inventory is the bane of commercial enterprise. Doing away with excess inventory is a main target of "Just—in--Time" logistics, a civilian equivalent to the Commandant's vision of

Precision Logistics. The benefits to Marine aviation associated logistics functions, of consolidating inventory, are numerous. Procurement dollars currently being wasted on unnecessary supplies could be refocused to purchase supplies for which shortages actually do exist. Excessive infrastructure needed to maintain inventory could be removed, again freeing up fiscal resources for better use elsewhere. The burden created on the logistics system by having to manage, store and transport excess inventory would be relieved, making the system overall more responsive. And after all, a more responsive system is the goal of Precision Logistics.

CHAPTER SEVEN

OUTSOURCING WHOLESALE LOGISTICS FUNCTIONS

In addition to reorganizing DLA and NAVSUP Marine aviation associated logistics functions, and maintaining those functions within DOD, another option exists. The term *outsourcing* implies:

> The transfer of a support function traditionally performed by an in-house organization to an outside service provider. Outsourcing occurs in both the public and private sectors. While the outsourcing firm or government organization continues to provide appropriate oversight, the vendor is typically granted extensive flexibility regarding how the work is performed. In successful outsourcing arrangements, the vendor utilizes new technologies and business practices to improve service delivery and/or reduce support costs. Vendors are usually selected as the result of a competition among qualified bidders.[17]

Outsourcing is not new to DOD or to the Marine Corps. For instance, "the Air Force used to operate a Log Air Service for delivering spare parts within CONUS. Several years ago it [outsourced] this function to overnight carriers and late deliveries were halved and costs dropped 70 percent, or $83 million per year."[18] These kind of savings would allow the Marine Corps to purchase two additional Joint Strike Fighters per year.

Outsourced Logistics Providers

Outsourced logistics, commonly referred to as "third party logistics" is proliferating the private sector:

> A third—party logistics firm (the terms "contract logistics" and "outsourcing specialists are synonyms) is best described as an external supplier that performs all, or part of, a company's logistics functions. Third-party logistics suppliers provide a range of services including transportation, warehousing, distribution, etc.[19]

There are numerous firms who specialize in contract logistics. In 1996, it was estimated that contract logistics firms accounted for $25 billion in revenue out of a total market of $421 billion.

---

[17] Defense Science Board, Report of the Defense Science Board Task Force on Outsourcing and Privatization (Washington DC: OUSD (A&T), August 1996), 7A.

[18] Nancy Y. Moore, 31.

[19] Federal Express Corporation, *Logistics FAQs (h*ttp//www.fedex.com/us/services/logistics/faq.html, 21 February 1999), 5.

Corporations such as FEDEX and UPS Worldwide Logistics are *asset—based* firms, meaning they have the transportation and warehousing assets to perform many logistics functions. Other firms are *non-asset* based, meaning they are management—based logistics providers who rely on other sources for transportation and warehousing. H*ybrids* are a combination and can provide the whole array of logistics functions.[20] Should DOD chose to outsource any portion of its logistics function there will be no lack of qualified competition.

Why Outsource Marine Avaition Associated Logistics

The Defense Science Board recommends that:

> To gain economies and achieve significant savings that can be diverted to improve DOD's force structure and modernization accounts, DOD needs to look at dramatic changes in the way it does business. DOD must change the paradigm, and it must get out of the material management/distribution and repair businesses.

To the Defense Science Board, achieving savings that can be applied to readiness and modernization accounts, is a driving factor in outsourcing logistics. Are significant savings really achievable?

---

[20] Shirley A. Bergman, "Outsourcing Logistics Functions," *Logistics Spectrum*, November/December 1996, 18.

In 1995, DOD inventory control points, distribution depots and installation organizations required 62,000 people to perform various associated functions. On the repair side, the maintenance

depots and installation activities required an additional 104,000 people. The combined cost associated with running the supply and maintenance logistics infrastructure was $14.1 billion dollars.[21]

The Board estimates investing approximately $6 billion in up-front costs would save the Department $6 billion a year by the year 2002. Of the $6 billion, $4.2 billion would be achieved by outsourcing the inventory control points, distribution depots, maintenance depots and installation supply and repair. The additional $1.8 billion in savings would be available through better business practices and equipment reliability.[22]

Effectiveness Gained Through Outsourcing

The Defense Science Board sees more benefits than just monetary associated with outsourcing:

> If DOD got out of the supply and repair business in CONUS, and to a lesser extent overseas, the Task Force sees efficiencies, improved readiness and reduced systems operating costs through direct Contract Logistics Support. DOD can also see faster response times for the requesting units, as well as leaner retail inventories needed by the fighting forces. In fact, for the Commander, this translates into a smaller logistics footprint in the theater. Another added, and critical benefit of this shift is the enhancement of DOD's wartime surge capabilities. The contractor/commercial enterprises that will be needed for the surge are providing services and support. Finally, this concept allows the military leadership to focus on their core obligation, defending the United States and winning its wars.[23]

[21]Defense Science Board, *Summer Study on Achieving an Innovative Support Structure*, II-11.

[22]Outsourcing DOD Logistics: Saving Achievable But Defense Science Board's Projections Are Overstated (Letter Report, 12/08/97, GAO/NSIAD-98-48), 5.

Marine Corps Organic Logistics Affected by Outsourcing

Up to this point it seems that only the wholesale side of Marine Corps associated logistics organizations are directly effected by outsourcing. While DLA and NAVSUP are the major benefactors of outsourcing logistics activities, Marine Corps organic logistics organizations would be similarly effected.

Under the contractor logistics support concept, also termed *Direct Vendor Delivery,* a single accountable private sector entity "essentially eliminates the need for Government personnel and facilities to acquire, manage, store, and distribute spare parts and would interface directly with, and provide spare parts to the soldier."[24] This concept would reduce operations and support costs associated with a particular weapons system. The Army is exploring applying the CLS concept to the Apache helicopter with the idea of applying the savings directly into modernization of the Apache. The Marine Corps is examining applying the same concept to the V-22 Osprey Tilt Rotor.

---

[23] Defense Science Board, *Summer Study on Achieving an Innovative Support Structure*, II-19.

[24] William M. Gavora, "Prime Vendor Support— The Wave of the Future," *Army* Logistician,Januaxy-Februaxy 1999,70-71.

In addition to benefits associated with cost reduction and enhanced logistics response, CLS would offer manpower structure savings as well. As previously noted, at the intermediate level the Marine Aviation Logistics Supply Squadron provides an

intermediate repair capability. The CLS concept would alleviate the Marine Corps from having to perform intermediate maintenance, shifting the requirement to the private sector. Not only would this be a potential significant savings in organic personnel currently utilized for intermediate level repair, but it would also provide the Marine Corps with a leaner forward deployed footprint.

CHAPTER EIGHT

MARINE AVIATION ASSOCIATED LOGISTICS REORGANIZED

Marine aviation associated logistics is a cumbersome system. It is vertically layered with organic Marine Corps organizations, Department of the Navy organizations and Defense Logistics Agency organizations. In today's environment of rapidly expanding information technology, many see improving information systems as the key to increasing organizational effectiveness. This is not case. The private sector has found that improving information systems, for cumbersome processes, results in only marginal gain.[25] Information systems, such as Total Asset Visibility (TAV) are not going to get supplies to the customer any faster. All TAV will do is give the logistics process a way of determining where a given part is when it is not in the hands of the customer.

What needs to occur is re-engineering of logistics processes, which includes reorganization, aimed at optimizing performance. Reorganization of Marine aviation associated logistics includes reorganization of organic Marine Corps organizational and intermediate levels, as well as depot levels including NAVSUP and DLA. All three levels must be reorganized with the other in mind.

Marine aviation squadrons should, at a minimum, be assigned supply professionals capable of requisition and inventory management. Structure within the Marine Corps intermediate level, MALS, is the likely source for these personnel. Such a move would enable squadrons to manage their own on-hand supplies, decreasing order and ship times and increasing aircraft availability. Automation and reengineering of information systems could enable ICP and depot level logistics managers to have visibility into organizational stocks, triggering a “push" of stocks to the organizational level when squadron stocks reach

[25] Kenneth Girardinin and others, *Improving DoD Logistics*, 58.

a certain level. This could all occur without a requisition ever even having to take place.

At the wholesale levels, where NAVSUP and DLA perform logistics functions, there seems to be existing commercial solutions to many DLA and NAVSUP shortfalls, particularly from CONUS based logistics. For instance, commercial distribution processes

involving requisition, warehousing and transportation could replace current DLA processes seemingly with little risk. DLA has in fact been adopting commercial logistics processes at an ever—increasing rate. If it "looks and smells" like a commercial process, chances are it could be outsourced to commercial industry with little risk.

Outsourcing at the higher levels, to include contractor supported logistics for repairable items, has a favorable impact at the Marine Corps intermediate level. Proper reorganization at the squadron and depot levels could result in result in no requirement to even have a Marine Aviation Logistics Squadron. Supplies could be directly ordered from the vendor and repaired by the vendor, without ever having to stop in between to be processed, warehoused, or await transportation to the next intermediate point.

Any and all changes have to be carefully scrutinized and organized with the total system in mind. The interdependence of system components is complex. Any change at one level will have an effect at another. The synergism of reorganization at all levels, however, could be remarkable.

Reorganization will not be easily accomplished at all levels. Aside from institutional opposition, there are congressional laws that would have to be rewritten, particularly in the area of outsourcing DOD repair capabilities. There would also be

institutional emotion and bias to overcome.

The dismal comparison between DOD and commercial sector logistics response times, as shown in figure 1., compels the Marine Corps, the Naval Supply Command and the Defense Logistics Agency to reengineer logistics processes associated with Marine aviation. Reorganizing the system is the place to begin the reengineering process.

BIBLIOGRAPHY

Bergman, Shirley A. "Outsourcing Logistics Functions," *LogisticsSpectrum.*. November/December 1996.

Blazer, Douglas, Ph.D. "Improving the Airforce Logistics System— Getting Back to Basics." *Air Force Journal of Logistics.* Spring 1996: 13-15.

Chambers, Scott D. Maj. USAF, Hughes, William D. III., Maj. USAF, Massengale, Shari L., Maj. USAF, Miller, Scott A., Maj. USAF, Mitani, Naoto, Maj. JASDF. "Unlikely Partners: Two-Level Maintenance and the Air Force Gold Program." *Air Force Journal of Logistics.* Spring 1996:1-4.

Cohen, William S., Secretary of Defense: *Achieving a 21st Century Defense Infrastructure.* "Report of the Quadrennial Defense Review." (May 1997): n. pag. Online. Internet. 18 February 1997. Available: www.defenselink.mil/pubs/qdr/index/html.

Defense Logistics Agency. "The DLA Story Stretches Back More than 50 Years.": n.pag. Online. Internet. 15 February 1999. Available: www.dla.mil/history.htm.

Defense Science Board, *Report of the Defense Science Board Summer Study on achieving an Innovative Support for 21st Century Military Superiority, Higher Performance at Lower Costs.* Washington DC: OUSD (A&T), November 1996.

Defense Science Board, *Report of the Defense Science Board Task Force on Outsourcing and Privatization.*
Washington DC: 0USD CA&I), August 1996.

Garamone, Jim. "Hamre Says DoD Building Agile Support Organization." *American Forces Information Service News Article* (October 1998) n. pag. U.S. Department of Defense. Online. Internet. 18 February 1999. Available: www.defenselink.mil/news/Oct1998/n10081998_9810085.html.

Gavora, William M. "Prime Vendor Support—The Wave of the Future," *Army Logistician.* January-February 1999: 70-71.

Girardinin, Kenneth and others. *Improving DoD Logistics: Perspective from RAND Research.* Santa Monica, CA: RAND, 1995.

Harrington, Lisa H.. "Quality and the Outsourcing Decision." *Distribution Magazine* 1999: n. pag. FedEx Worldwide Logistics. Online. Internet. 21 February 1999. Available: www.fedex.com/us/services/logistics/quality.html.

Hillested, R.J. and L. B. Embry, *Carrier Based Air Logistics Study: Supply and Transportation Analysis.* N-1785-NAVY. Santa Monica, CA: The Rand Corporation. April 1982.

Klein, Ron. "PEO Aviation Commercialization." *Program Manager.* November-December 1996: 16-20.

Krulak, C.C., General, USMC. "Precision Logistics., *White Letter No. 01-97:* n.pag. Online. Internet. 14 January 1999. Available: www.acq.osd.mil/log/mp/field/preclog.htm.

"Logistics Frequently Asked Questions. "FedEx Worldwide Logistics.": n. pag. Online. Internet. 21 February 1999. Available: www.fedex.com/us/services/logistics/faq.html.

Moore, Nancy Y. and others. *Material Distribution: Improving Support to Army Operations in Peace and War.* MR-642-A. Santa Monica, CA: RAND 1997.

Muczyk, Jan P., Dr. "Generating Needed Modernization Funds: Streamlining the Bureaucracy— not Outsourcing and Privatizing— is the Best Solution." *Acquisition Review Quarterly.* Summer 1998: 317-331.

Robins, Marc L. and others. *Measurement of USMC Logistics Processes: Creating a Baseline to Support*

Precision Logistics Implementation . Santa Monica, CA RAND, 1998.

Shalikaslivily, John M., General. Chairman, Joint Chiefs of Staff. "Joint Vision 2010." Washington, D.C.: GPO 1996.

Stipe, Paul, LtCol USAF. "Privatizing an Air Force Depot: Closure of Newark Air Force Base, Ohio." *Program Manager*. March-April 1997: 42-47.

Stone, Paul. "Defense Logistics Agency Capitalizes on Technology." *American Forces Information Services* (January 1998): n. pag. U.S. Department of Defense. Online. Internet. 18 February 1999. Available: www.defenselink.mil/news/Jan1998/n01081998_9801084.html.

United States Department of Defense "DoD Reform Programs." Defense Reform n. pag. DefenseLink. Online. Internet. 18 February 1999. Available: www.defenselink.mil /dodreform/programs.htm.

United States. Department of Defense, Joint Chiefs of Staff. "Logistic Responsibilities Within the Department of Defense," *Doctrine for Logistic Support of Joint Operations: n.* pag. Online. Internet. Available: www.jcs.mil.

United States. Department of Defense. *MAY 1997 Report of the Quadrennial Defense Review,* Online Internet. 18 February 1999. Available: www.defenselink.mil.pubs.qdr/index.html.

United States. Department of Defense. *Quote:* n. pag. Online. Internet. 18 February 1999. Available: www.defenselink.mil/dodreform/quotes.htm.

United States. Department of the Navy. "About Us." *Naval Air Systems and Command Web site: n.* pag. Online. Internet. 15 February 1999. Available: www.navair.navy.mil/aboutus/aboutus/cfm.

United States General Accounting Office. "Base Operations: Challenges Confronting DOD as it Renews Emphasis on Outsourcing." Report to the Chairman, Subcommittee on Military Readiness, Committee on National Security. United States House of Representatives. March 1997: 1-28.

United States. General Accounting Office. *Defense Logistics: Much of the Inventory Exceeds Current Needs.* Washington. GPO 1997.

United States. General Accounting Office. *Defense Infrastructure: Inventory Control Point Consolidation Savings Would be Substantial.* Washington: GPO 1997

United States. General Accounting Office. *Defense Outsourcing: Better Data is Needed to Support Overhead Rates for A-76 Studies.* Washington: GPO 1998.

United States. General Accounting Office. *Defense Outsourcing: Impact on Navy Sea-Shore Rotations.* Washington: GPO 1998.

United States. General Accounting Office. *Outsourcing DOD Logistics: Savings Achievable But Defense Science Boards Projections are Overstated.* Washington. GPO 1997.

Warren, David R.. Director, Defense Management Issues, National Security and International Affairs Division. "Defense Outsourcing: Challenges Facing DOD as It Attempts to Save Billions in Infrastructure Costs." *Testimony Before the Subcommittee on Readiness, Committee on National Security, United States House of Representatives.* Washington. GPO 1997.