CAN APPLYING ORGANIC AND INDUSTRY BEST PRACTICES IMPROVE FOREIGN MILITARY SALES SUPPORTABILITY?

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This article provides a brief overview of Foreign Military Sales (FMS), its role in the ever changing dynamic environment that we live in, and finally how some of the specific FMS processes can be improved through the application of logistics best practices and initiatives. The ultimate goal is to continually improve the processes associated with FMS to create a win-win scenario for the Department of Defense and affected stakeholders. The best practices within the framework of the ten integrated logistics support (ILS) elements discussed within this article should be merged into the current acquisition or logistics support strategy.

Keywords: Foreign Military Sales (FMS), Defense Reform Initiative (DRI), Defense Security Cooperation Agency (DSCA), Defense Institute of Security Assistance Management (DISAM), Integrated Logistics Support (ILS), NATO, South Korea, Japan, Taiwan, China, Cooperative Logistics Supply Support Agreement (CLSSA), Defense Reutilization and Marketing Service (DRMS), Defense Transportation Network (DTN)
Most civilian and military Department of Defense (DoD) employees have heard the term “FMS” sometime during their career. At first glance, the concept of Foreign Military Sales (FMS) appears simple and straightforward—sell military hardware, software, services, or training to a friendly nation. FMS can be a valuable tool to supplement military cooperation efforts and improve security cooperation with friendly nations. But most notably, FMS is most often seen merely as the way we sell military material to other countries. This perception, however, is misleading—there is a lot more to FMS than meets the eye. It is a complicated process managed by numerous agencies, laws, and regulations. FMS falls under the umbrella of United States Security Assistance, authorized by the Foreign Assistance Act (FAA) of 1961, and the Arms Export Control Act (AECA) of 1976. The receiving country provides reimbursement for defense material and services transferred from the United States.

FMS Management History

The FMS program is that part of Security Assistance authorized by the AECA and conducted using formal contracts or agreements between the U.S. Government and an authorized foreign purchaser (DoD, 2003). The Defense Reform Initiative (DRI) of 1997 first coined the term Security Cooperation. Since the introduction of DRI, the overarching management responsibilities for many of the DoD-authorized international programs have for the most part been centralized and transferred to the Defense Security Cooperation Agency (DSCA). The DSCA was formerly known as Defense Security Assistance Agency (DSAA), which primarily was responsible for many of the Department of State's Security Assistance programs authorized by the FAA and the AECA (DISAM, 2007). The DRI centralized various aspects of foreign Security Assistance and delineated key responsibilities between the State Department and the DoD. The activity of selling weapon systems to friendly foreign governments becomes a leveraging tool of U.S. foreign policy and provides the United States with an avenue to conduct joint operations with the receiving nation (House, 2000). Executive Order 11958 (1977) allocates authority and responsibility for Security Assistance principally to the Secretary of Defense and the Secretary of State. The Secretary of Defense authority is further delegated to the Under Secretary of Defense for Policy and to the Director, DSCA, in DoD Directive 5105.65 (DoD, 2000). The Under Secretary of Defense for Acquisition, Technology, and Logistics (USD[AT&L]) supports and consults only with DSCA, and USD(AT&L) ensures its strategic goals complement the two organizations’ Security Assistance objectives. Bottom line: FMS is a crucial tool in promoting U.S. foreign policy and national security interests.

During the cold war, U.S. Security Assistance programs revolved around the need to contain the Soviet Union. To this end, American Security Assistance programs provided military training and other support to countries that U.S. policy makers viewed as essential to success in the fight against Communism.
This Security Assistance approach changed after the fall of the Berlin Wall in 1989. The end of the cold war brought with it a phased downsizing of the U.S. military starting in the early 1990s. As a result, the numbers of FMS agreements have steadily increased in the last decade. The total FMS annual funding increased from $8 billion in 1997 to $21 billion in 2006 (DSCA, 2006, pp. 1-17). As we can see from this statistic, the growth of FMS would also create a growth in the potential impact of best practices and initiatives—specifically, as noted in this article, to the logistics support elements.

Figure 1 provides not only an interesting trend in FMS growth, but an increased opportunity to realize savings and efficiencies “if” organic and industry best practices are applied. Although we only address three of the ten logistical elements, the opportunities and impacts discussed in these three elements indicate the potential for additional savings when applicable best practices are applied over the remaining seven elements.

As seen in Figure 1, and based on research conducted by the authors, it was found that the enhancement of logistics has significantly enhanced the effectiveness of the DoD operations, as well as those FMS cases that have chosen to incorporate the enhanced method. Where are the results you may ask? Figure 1 also reflects real savings to be gained by using economies of scale for order quantities, incorporating either organic or industry capabilities for maintenance,
and using Federal Express, United Parcel Service, or DHL International as a source for parts delivery. As the Naval Aviation Logistics Process Improvement Team (LPIT) found out during an effort to improve supportability of newly procured weapon systems in the domestic and international markets—both commercial and military—the prime aircraft manufacturer began offering hybrid support concepts, which some call Enhanced Contractor Initial Support (ECIS), for supporting the introduction of new systems. Per Bernard (2003), the ECIS combined both the aspects of what would be considered a traditional U.S. Government support concept with the Original Equipment Manufacturer (OEM) maintenance, supply support, in-service engineering support, and training options. If we are able to successfully create an environment of support for the FMS customer, this could create a cyclical process where the FMS customer returns to request either an increase of systems or other available systems. In this case, improved logistics support could improve FMS supportability but also result in new or follow-on FMS agreements.

Due to the continued and expanded role of FMS, the Defense Acquisition University entered into an agreement with the Taiwanese Ministry of National Defense to provide several courses related to life cycle logistics during 2009, and possibly beyond. This type of agreement to provide and receive training will only improve support to our allies and provide economies of scale to our defense industry, making it more efficient. Also, through this type of partnership, the Taiwanese government became aware of the DoD’s effort to incorporate Performance-Based Logistics (PBL) as a preferred support strategy, and they are also looking to incorporate it into their weapon systems (J. Cain, personal communication, May 28, 2009).

Potential FMS Benefits

There can be substantial benefits in using FMS as part of security cooperation applicable to DoD and the partnering country. An example of the potential benefits came to light when the former administration announced the latest potential U.S. Middle East FMS opportunity. The administration offered more than $60 billion in new weapons and military assistance to Egypt, Israel, Saudi Arabia, and other U.S. allies in the Middle East (Houska, 2007). These potential agreements can offer potential benefits in a variety of areas including strategic partnerships, mutual good will, as well as a boost to the U.S. industrial and economic base.

Some of the tools that might be used to support a potential FMS agreement include: subject matter expert exchanges, conferences, large multinational exercises, where all of these fall under the larger umbrella of “Security Assistance” and “International Cooperation” (Van Horn, 2007). As we have now shown, FMS is not simply selling hardware to a friendly nation.
The Need to Improve FMS

Improving cooperation with friendly nations can be brought about in numerous ways. One way would be to provide a more effective and supportable FMS program. As previously discussed, the general approach of any FMS program should be to: 1) provide a faster and more efficient output performance that meets or exceeds the requirements set forth by the international customer; 2) take advantage of potential initiatives and existing best business practices; and 3) improve life cycle support. One approach might be to incorporate the FMS case into an existing or new PBL agreement. According to Weinberger (2007), the U.S. military can recount successes where a PBL is established to support the international customer’s platform using a metric that produces an outcome of most benefit to the customer. Several international PBLs exist today; two worth mentioning are the F/A-18E/F Integrated Readiness Support Teaming (FIRST) contract that holds a single OEM integrator responsible for the reliability and availability of numerous systems; and an In-Service Support Contract (ISSC) with Boeing, which brings together common air vehicle sustainment support efforts for the Navy and seven FMS international customers.

The DSCA has been working to transform FMS since the turn of the millennium. The agency started off in 2000 with ten initiatives under the leadership of Lt Gen Tome H. Walters, Jr., USAF, [then] director of DSCA. The initiatives included the Civilian Workforce Initiatives, Standby Letter of Credit in Lieu of Termination Liability Prepayments, Improved Payment Schedule Methodology, and Team International. The main objective of the initiatives was to improve the FMS process for both the international customers and U.S. defense industry alike. While some of these initiatives have been implemented and others are ongoing, there is always room for continuous improvement. These improvements will leverage advanced informational technologies and enhance the professionalism of the FMS workforce (Beauchamp, 2002). Informational technologies are the backbone of the DoD logistics systems, which aid in the management of programs and help calculate requirements through use of various database systems.

The need to improve FMS was also evident from the Navy’s perspective. Naval Air Systems Command has a Naval Aviation FMS LPIT to integrate and streamline the processes that logistically support Naval Aviation FMS programs. The LPIT consists of the FMS Logistics Steering Committee, the International Logistics Enterprise Team, the FMS Customer Advisory Group and Industry Advisory Group, and the Logistics Support Office. The various groups work together at conferences and in separate meetings to create and enhance the Navy’s FMS support (Bernard, 2003). This is a classic example of supporting the user through improved logistics support.
Improving FMS Through Logistics

As revealed in the previous paragraphs, initiatives at the macro level are available to improve FMS. Also, mentioned earlier was the fact that Security Assistance and FMS constitute a complex beast, touching legal statutes, funding constraints, and competing agendas from different stakeholders, similar to the three DoD decision support system processes of the Joint Capabilities Integration and Development System (JCIDS); Defense Acquisition System; and the Planning, Programming, Budgeting, and Execution (PPBE) process, which make up defense acquisition.

Per DoD 5105.38-M (2000), the Department of Defense shall take reasonable steps to support systems that have been phased out of DoD inventory and acquired by foreign nations, including items that were never adopted by U.S. Forces. Something that can be addressed in a relatively tangible way is improving the logistics support to foreign countries, and creating a climate of mutual support and cooperation among the U.S. Government, the U.S. defense industry, and the FMS countries. Logistics can also be construed as a complex process, depending on how it is defined. For purposes of this article, we use the Defense Acquisition University’s ten Integrated Logistics Systems (ILS) elements (Figure 2), consisting of maintenance planning; manpower and personnel; supply support; support equipment; training and support; technical data; computer resources support; facilities; packaging, handling, storage, and transportation; and design interface. The highlighted Integrated Logistics Support (ILS) elements (Figure 2) will be discussed to show that advancements

FIGURE 2. INTEGRATED LOGISTICS SUPPORT MODEL

Note: From the Defense Acquisition University, Fort Belvoir, VA (2000). Intermediate Acquisition Logistics course material.
in defense supply support; maintenance planning; and packaging, handling, storage, and transportation processes can improve FMS.

As noted by senior leadership at the Office of the Secretary of Defense level, post-production costs of operations and maintenance make up approximately 60–70 percent of the life cycle costs of a major system.

**SUPPLY SUPPORT**

As former military logisticians, we would be remiss if we did not start by mentioning the ever-present supply and parts shortages, which fall under the ILS element of supply support. The list of reasons why parts are not available is endless. In every Supply Chain section of the Defense Acquisition University’s LOG 236 (Performance Based Logistics) class (DAU, 2009), whenever a question is asked of the students as to why a system is not available due to parts, no shortage of explanations is forthcoming. The litany of explanations includes poor forecasting, low inventory level, inaccurate demand history, funding shortfalls, long lead items, unforeseen surge or failures, sudden increase in demand, high cost, obsolescence, diminishing manufacturing source, and material shortages.

Forecasting affects all aspects of logistics, whether it be spares requirements, warfighter needs, projected funding, flying hours, technology improvement, rate at which experienced workers will retire, or even the types of conflicts that war planners project—all are at best mostly educated guesses. While we have gotten better at forecasting and developing models to improve forecasts, forecasting is still an inexact science. Factors such as poor communication due to a language barrier or cultural differences, even with the friendliest of allies, can magnify the forecasting error exponentially.

One of the lesser known options to improve logistics support for FMS is use of the Defense Reutilization and Marketing Service (DRMS). With the advent of the Internet, finding spare parts has become lightning fast, and many Web sites are available. However, the main advantage of DRMS is that it receives over $18 billion worth of excess property each year from all armed services, which is then sold in an “as-is” condition at 5–50 percent of original value. FMS is one of the programs qualified to receive DRMS property, subject to the rules and regulations of the AECA and the FAA, and all cases are congressionally notified (Schillinger, 1999).

So we have discussed the F-18 FIRST program, the success of that particular program, and identified the flexibility, efficiencies, and economies of scale that PBL brings to a program; however, program success and a successful logistics strategy are not a be-all/end-all panacea. Since the Department of Defense sets the requirement to define the supply support strategies, prudence dictates that the Program Management Office investigate any and all organic industry and non-DoD industry solutions. Other issues have surfaced that will need to be addressed with international customers, specifically the repair and return of their equipment. Cases have been reported wherein FMS customers turned in a specific serialized item, expecting that the same exact repaired item would be
returned. This strategy can not be supported when the PBL metric requires a quick replacement of the component.

Other successful cases include the F/A-18 “FMS Spares Call” that brings together individual country procurements to receive the financial benefit of larger “economies of scale” procurements; and the AIM-9X combined procurement that saved the U.S. DoD over $3 million in cost avoidance. The United Kingdom Ministry of Defence (MoD), through a partnership with Raytheon, uses the best business practices of single integrator to support their F/A-18 aircraft by employing a strategy whereby incentive mechanisms drive supplier performance and cost reductions.

The basis of any U.S. Government-sponsored sale of defense articles or services is the letter of offer and acceptance (LOA), an agreement between the two governments (seller and the purchaser). The LOA is commonly referred to as an FMS case. As a point of reference, three types of spares support are available to FMS countries (Figure 3). First is the Defined Order case, which is most commonly used for sale of major end items that require security controls throughout the sales process. This is commonly referred to as a standard sales or firm order by the U.S. Army and U.S. Air Force, respectively. Another option is the Blanket Order case, which is an agreement between a customer and the U.S. Government to purchase a specific category of items or services at a set dollar amount with no definitive listing of the exact items or quantities desired. Customers may requisition against a Blanket Order case as long as the case has funds available. The final and best method of obtaining spares support from the United States is the use of the Cooperative Logistics Supply Support Agreement (CLSSA). This arrangement is designed to provide responsive follow-on spare part support for U.S. military hardware owned by foreign countries.

The main advantage of CLSSA for a customer is that it allows support for the purchaser on an equal basis with U.S. units having the same force activity designator (FAD), which relates to the mission of the activity and the urgency or
need. The caveat to this statement is that even our allies usually receive a lower FAD. But even with a lower FAD, using the CLSSA spares support approach far outweighs the other two support types. If the Defined Order case approach is taken, then the FMS customer might pay a higher price instead of enjoying cost avoidance due to economies of scale, and may expect an extended awaiting parts (AWP) time. The Blanket Order case approach finds the FMS customer having to provide a substantial amount of cash to cover the cost of components not yet needed. There may be some FMS customers that do not have the ability to front large quantities of money to cover unknowns, or perhaps this approach may be resisted for cultural reasons. The Blanket Order case approach also leaves the FMS customer with an extended AWP time. So the bottom line benefit to the CLSSA approach is that the FMS customer receives support on an equal basis with U.S. units having the same FAD; thus, it shortens requisition fill times (Figure 4) for items that come from DoD stock (DISAM, 2007).

**FIGURE 4. REQUISITION FILL TIMES LESS THAN 180 DAYS**

![Diagram showing fill times comparison between AF Rep Non-CLSSA, AF Rep CLSSA, DLA Non-CLSSA, and DLA CLSSA](source: Air Force Security Assistance Center, 555th ILS/Supply Flight, CLSSA Performance Brief, August, 2007)

The logistical element of supply support, which in this instance includes the art of forecasting and spares support approach taken, has been shown to be a best practice that, if managed properly, can be a significant readiness and maintainability enabler for the FMS country. With the training that is inherently tied to most of the ILS elements, education and better communication with FMS customers will serve the best interests of DoD, its allies, and affected stakeholders. The obvious benefit of the FMS customer using CLSSA is the consolidated larger purchase, resulting in lower per unit cost for the customer.
MAINTENANCE PLANNING

As acquisition and logistics practitioners, we all understand that when designing an aircraft, all the maintenance planning aspects are considered up front and early regarding what the maintenance requirements will be to support the system. However, when a legacy system is sold to an FMS customer, how does this apply after the production effort is complete? So let’s take a moment to look at several examples where maintenance planning efficiencies were improved.

Maintenance planning was used to improve FMS logistics support in Naval Air Systems Command’s In-Service Support (ISS). The F/A-18 community wanted to ensure that post-production logistics and engineering support would be available for out-of-production F/A-18 FMS customers. ISS was established as a means to keep the fleet modern and operationally viable, while continuing to develop ways to reduce maintenance costs and overcome the normal obsolescence of components and systems. The ISS program has become the standard method that enables the F/A-18 FMS communities to provide FMS customers with access to the U.S. Navy and the prime contractor for long-term support to the F/A-18 weapon system (Chamberlain, 2000). In this case, it needs to be part of the FMS case to capitalize on the efficiencies that can be captured by this approach.

The AV-8B Harrier is another area that capitalizes on commonality. Both the U.S. Marine Corps and the Italian Navy operate the AV-8B using the same maintenance practices and concepts. The approach of having the same manuals, inspection intervals, and maintainer qualifications enables the FMS customer to deviate from an individual maintenance concept that could increase support costs. The Navy C-40 Clipper, a modified Boeing 737 platform, is another example where best commercial practices used by commercial airlines were adopted by the Navy. This means that C-40 Clippers and their crews can travel worldwide, confident that the aircraft can be serviced and maintained.

What we’ve shown under maintenance planning is that despite the fact that a platform was not designed with potential FMS applications does not mean that efficiencies cannot be gained by using a variety of organic government, industry, or Federal Aviation Administration best practices. Thus, in the area of maintenance planning, providing the FMS customer with long-term support from the OEM (possibly via the use of a Sustaining Engineering Contract) could produce the framework to build a long-term sustainment support program. Key to a successful FMS support program is avoiding the loss of system assets due to a deficiency of maintenance repair technical support. Again, we can see the potential for improvements applicable to the FMS arena.

PACKAGING, HANDLING, STORAGE, AND TRANSPORTATION

When talking about transportation, we first must understand what is available from the air and sea under the Defense Transportation System (DTS).
The U.S. Transportation Command (USTRANSCOM) consists of three elements. The Air Mobility Command transports material and personnel around the world through both organic and commercial contracted air carriers. The Military Sealift Command transports material around the world through organic and contracted commercial surface ships. The Surface Deployment and Distribution Command operates the military ports in both the United States and overseas. These three elements are referred to as the DTS (Figure 5).

**FIGURE 5. USTRANSCOM AND THE DEFENSE TRANSPORTATION SYSTEM**

USTRANSCOM is responsible for the movement of about 560 tons of freight per day. However, actual FMS shipments comprise only about 6 percent of USTRANSCOM’s annual business. For a variety of reasons, in-transit visibility is not consistently available to FMS customers, as noted by the Defense Institute of Security Assistance Management (DISAM, 2007). The DoD prefers not to be involved in the movement of FMS material and encourages customers to be self-sufficient in arranging for transportation and obtaining in-transit visibility data. USTRANSCOM has come up with a solution for better visibility and accountability for FMS material through the Enhanced Freight Tracking System (EFTS). Per DSCA Memorandum (2008), EFTS is a secure Web-based application that provides in-transit visibility of FMS shipments. Resident in the Security Cooperation Information Portal, EFTS serves as a consolidated source for FMS in-transit information. Ultimately, EFTS applications will evolve to provide visibility of the FMS distribution pipeline for all classes of supply and modes of transportation, with tracking visibility of outbound cargo from the United States to the FMS customer’s country or cargo returning to the United States or a U.S facility overseas.

Now that we have an understanding of what is available within the defense and transportation sectors, what of the transportation experts that support the global economy? Can the advantages that they bring to transportation be harnessed and capitalized on to benefit not only the Department of Defense systems, but also FMS? We need to understand the capabilities that FedEx,
UPS, or DHL might bring to this equation. These commercial delivery services may serve as strong enablers in moving requirements to and from major staging areas. But in actuality, the supporting program office must understand the entire transportation scope in order to apply the commercial/industrial capabilities in an effective manner. Anyone now has the capability to go online, order an item, and have it shipped to their location from practically anywhere in the world, quickly and conveniently. In many cases, tracking visibility is also offered online. Obviously, the potential of increased efficiency of transportation can be gained by applying the best aspects of the DTS and the global transportation carriers.

Conclusions

This article provides a broad overview of FMS and its importance to the U.S. Government, defense industry, and allied nations; and how FMS processes can be improved, specifically through logistics. While only three of the ten ILS elements were addressed—supply support; maintenance planning; and packaging, handling, storage, and transportation—any of the other ILS elements can be leveraged to improve FMS support. This article shows that FMS support can be improved through logistics via advancements in both organic and commercial capabilities. The authors’ intent, however, is that it serve as a catalyst for program managers, their allied counterparts, and affected stakeholders to pursue improvement in logistics processes, thereby increasing weapon systems supportability and accelerating support to joint warfighters.
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