Section 1

Organization
United States Marine Corps

Unit
Marine Air Ground Task Force (MAGTF) Distribution Center (MDC) Company
2nd Supply Battalion
2nd Force Service Support Group (FSSG)
II Marine Expeditionary Force (MEF)
Marine Forces Atlantic, Camp Lejeune, North Carolina

Mission Description
II MEF has recently taken a fundamental look at internal processes and how we are organized to support materiel distribution in a deployed environment. With this basic concept in mind, 2nd FSSG has recently established a Marine Air Ground Task Force (MAGTF) Distribution Center (MDC) Company within 2nd Supply Battalion. This company integrates the functions of supply, transportation, shipping, receiving, and packaging Marines together under a single distribution process owner, for the Marine Expeditionary Force. The milestone activation of this company provides a dedicated focus on last tactical mile of distribution and supports the creation of a logistics common operating picture through the incorporation of in-transit visibility initiatives, process improvements, and radio frequency identification technology. These capabilities will deploy for the first time to Iraq and Kuwait in support of II MEF in February 2005. The mission of the MAGTF Distribution Center (MDC) is to provide a consolidated distribution focal point and facilitate in-transit visibility in order to maintain throughput velocity and sustain operational tempo.

Award Category
Award for Supply Chain Operational Excellence

Description of the Supply Chain and Processes
Our experiences in Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) have once again brought home the fact that the greatest logistics challenges we face are in the realm of tactical distribution of materiel. Our ability to see and control the movement of supplies, people and equipment on the battlefield is paramount as we wage the Global War On Terrorism (GWOT). To that end, we have

undertaken significant initiatives and processes changes to improve warfighter support. The MDC is responsible for providing visibility and the ability to influence the physical movement of sustainment materiel within the distribution pipeline.

This process can be represented in part, by the shipping and receiving processes within the **Supply Chain Operations Reference (SCOR)** model's, ***Deliver and Source*** process types. The SCOR process type of ***Return*** must also be considered since it represents movement of materiel backwards through the logistics chain. This reverse flow or "reverse logistics" while an aspect of the Return process type, still corresponds to the basic shipping and receiving processes.

Stakeholders and Partners

External Partners:

Headquarters Marine Corps
Mr. Steve Thien
Mr. John Chandler

II Marine Expeditionary Force
Colonel Hales
LtCol. Scott Erdelatz

Marine Corps Base Camp Lejeune
Ms. Nancy Kalm

2nd Force Service Support Group
Colonel Otto

Force Service Support Group, Forward
Colonel Wissler

2nd Supply Battalion
Colonel Talleri

2nd Transportation Support Battalion
Colonel Robert Destafney

2nd Marine Division
Colonel Rudolph

2nd Marine Air Wing
Colonel Drummond

Internal Partners:

Supply Battalion

Supply Management Unit (SMU)
LtCol. Rubino

Packaging, Preservation, and Packing (P3)
Master Gunnery Sergeant

Transportation Support Battalion

Operations
LtCol. Kelleher

Beach and Terminal Operations Company
Major Michael Lepson

MCB Camp Lejeune Traffic Management Office
Major Paul Smith

Section 2

Operation Iraqi Freedom (OIF I) revealed major tribulations with the Marine Corps' materiel distribution process. 1st Marine Division identified class IX repair parts re-supply, as the principal logistics failure of OIF. The movement of class IX was hampered by the need to source individual parts in a deployed environment and to track those parts through an extended pipeline and multiple agencies back into a combat theater where USMC units were moving an average of 27 km per day. A year after the conclusion of combat operations, a sequential, stovepiped distribution process still took 23 days to acquire critical parts from Camp Lejeune to Marine units deployed in Haiti.

There were a number of causes for these problems. Distribution planning and execution were not well coordinated. There was no single distribution process owner within the MEF to synchronize distribution and ensure distribution management all the way through to the tactical level. Customers were often responsible for coordination and executing their own distribution support generating disjointed and competing requirements. Different processes, organizations and systems were used in a garrison environment as compared to those used in a deployed environment. There were also numerous distribution chains depending on the source or class of supply. This created a lack of demand and shipment visibility.

Poor in-transit visibility (ITV) and lack of distribution integration further hampered effective distribution to forward units. Multiple and redundant processes and organizations within the MEF were responsible for various aspects of distribution. Associated functions such as packaging, deployed support, shipping & receiving, and traffic management were vested in different command structures. Commanders and supported units suffered from a lack of in-transit visibility created by gaps in information technology and processes.

To begin addressing the dilemma, II MEF initiated a logistics modernization (LOGMOD) initiative so that the end-to-end distribution process was organized and resourced to provide supported combat units the absolute confidence that required support will be provided when and where needed. Logistics modernization is effected by a hierarchy

of working and advisory groups that develop and recommend initiatives for improving logistics to Marine Corps senior leadership. The scope of II MEF distribution includes an End-to-End (E2E) focus for managing, coordinating and executing the logistics functions of transportation, traffic management, material handling/ packaging, transshipping, in-transit visibility, and flow of information necessary for effective and efficient management of responsive distribution to the operating forces. The MDC concept was selected based on the awareness by Marine Corps senior leadership that changes must be made to the Marine Corps distribution process to better support the warfighter. The MDC provides a materiel distribution planning and execution focal point for the MEF and facilities the implementation of process changes and information technology enablers.

The initiative was initially approved in July 2004 and the MDC was activated up in September 2004. The MDC is currently operating at Camp Lejeune, North Carolina and will be the II MEF materiel distribution planning and execution focal point during operations in Iraq. Upon activation of the MDC, an immediate reorganization took place involving two major commands within the 2nd FSSG, and numerous subordinate organizations. This reorganization coincided with the implementation of information technology required to enable process changes.

Five separate organizations supported principal aspects of the distribution process. Portions of these organizations were placed under the MDC's control, in order to ensure a single process owner was created for materiel distribution. The integration of these organizations required the involvement of several staffs at various levels and effective change management.

The fusion of various specialties and skill-sets has increased the effectiveness of distribution personnel and eliminated redundancies. One new feature of the MDC is the placement of distribution liaison cells at key distribution nodes. These cells work with the distribution centers to maintain visibility and throughput velocity of Marine Corps cargo. Another feature of the MDC, is the establishment of an Integrated Shipping Office (ISO). The ISO provides a "one stop shop" to unit requiring freight services. Units were previously required to coordinate individually with four separate providers. Units are now able to have all

packaging, preservation, hazardous materiel, documentation and freight needs met by one organization.

IT was implemented to support the creation of one logistics common operation picture for timely distribution management and decision support using real-world information. This effort was supported by the expanded use of active radio frequency identification (RFID), vehicle tracking systems and the employment of the Battle Command Sustainment Support System (BCS3). This system has been integrated within the MDC as the centerpiece of the Materiel Distribution Operations Center (MDOC).

RFID technology supports content-level detail of all shipments. The MDC has taken the lead within the Marine Corps in the use of these tags and the supporting interrogator network (Figure 1). The DoD vision for RFID is to utilize RFID to facilitate accurate, hands free data capture in support of business processes in an integrated DoD supply chain enterprise as an integral part of a comprehensive suite of AIT technology.

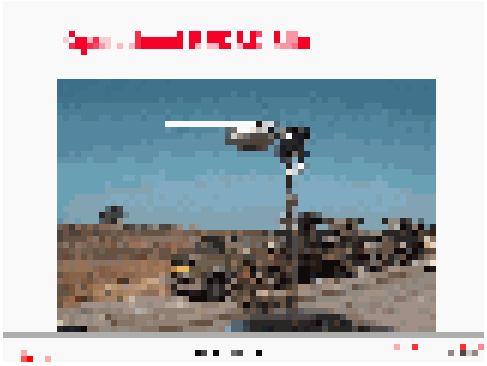


Figure 1 –RFID Technology

Additional consideration was given to the physical movement of materiel between logistics nodes as well as within those nodes. Vehicle tracking systems provide the MDC and commanders with visibility of the vehicles transporting cargo.

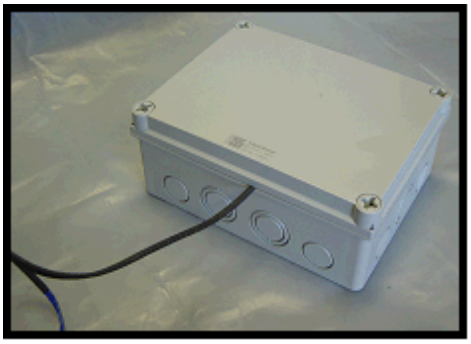
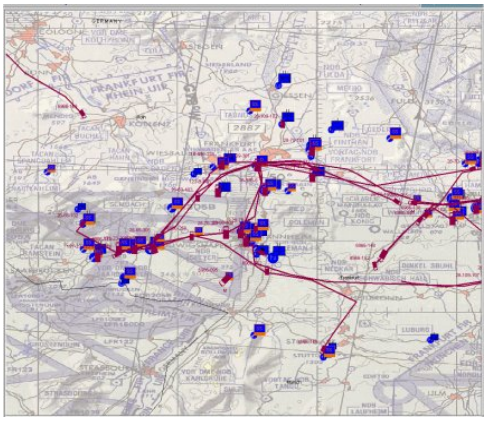


Figure 2 – Vistars and Iridium Vehicle Tracking Systems

BCS3 provides real-time in-transit visibility of cargo movement via RFID and vehicle tracking systems (Figure 3). Real time updates are provided for all materiel moving within an area of operations. Alerts can be established to determine the location of “lost” or frustrated cargo. The MDC has served as the principal agent within II MEF for the implementation of these enabling capabilities and the education of partners and supported units.



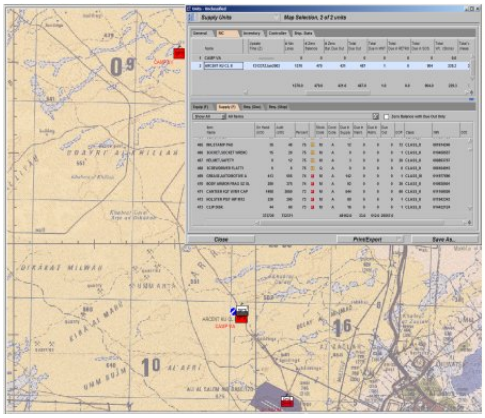


Figure 3 – Battle Command Sustainment Support System

The Marine Corps Logistics Balanced Scorecard is the basis for measures of progress and success. The balanced scorecard measures volume demand of customer, process and resources. The reliability, readiness, flexibility and reliability of the distribution process inherently reflect the success of the MDC.

Cost can be measured in infrastructure, systems procurement, integration, and change management and training. Infrastructure includes such items as RFID tags,

vehicle tracking systems and interrogators. The integration of systems includes the cost of implementing IT enablers and developing logistics common operating picture.

The MDC initiative has generated efficiencies that resulted in reductions in inventory, infrastructure, transportation assets, personnel, and time. These reductions were generated by eliminating redundant processes, documentation, providing more visibility and associated trust in the supply system, and more efficiently allocating transportation assets. Distribution velocity has reduced the need for large inventories and reduced the probability of units submitting multiple requisitions for the same item. More importantly, the MDC has proved effective in ensuring that the right parts get to combat units based on the commander’s priorities and needs.

Fundamental business process improvements, organizational integration and IT enablers support the MDC concept of synchronizing distribution in order to maintain throughput velocity and sustain operational tempo. Logistics chain accuracy will improve when “what is moving” and “where it is moving” are recorded accurately and efficient processes support the visibility of the materiel. A focus on MEF end-to-end-distribution planning will facilitate the flow of materiel through the logistics chain and ensure the effective distribution of sustainment to “where it is needed,” “when it is needed.”

Section 3

Our experiences in OEF and OIF have driven home the fact that the greatest logistics challenges we face are in the realm of distribution. Our ability to see and control the movement of supplies, people, and equipment from the "factory to the foxhole" is critical to success on the battlefield. To that end, the MDC initiative has been the genesis for process changes to improve warfighter support.

Headquarters Marine Corps (HQMC) is aggressively engaged with USTRANSCOM, as the Distribution Process Owner (DPO), to ensure that their distribution modernization initiatives, at the strategic and operational levels, mesh smoothly with our tactical level distribution modernization efforts within the framework of Global Combat Support System – Marine Corps (GCSS-MC). The MDC is one of the principal initiatives for the implementation of this vision.

Key to our efforts is the establishment of the MAGTF Distribution Center. This initiative improves in-transit visibility and greatly enhances the velocity of cargo from major theater nodes to our forward combat elements. We now have the capability to generate RFID tags, track transporters, influence cargo and synchronize the distribution process.

The MDC, as part of 2nd Supply Battalion, 2nd FSSG and in concert with HQMC, has also supported the efforts of the Office of the Secretary of Defense, Acquisition, Technology and Logistics (Supply Chain Integration) for developing passive RFID technology. 2nd Supply Battalion remains the only tactical level unit involved in a passive RFID pilot.

The fusion of business process improvement and technology integration provides a model not only for elements of the Department of Defense, but for the commercial sector as well. The expansion of distribution networks on a global scale has significantly increased the requirement to plan, synchronize, and effect distribution efficiently. The business models are changing as IT provides greater capabilities for in-transit visibility, inventory and transportation capacity management. Distribution managers must take into account inventory placement, packaging, shipping & receiving, mode, tracking and customer feedback.

In summary, I firmly believe our distribution modernization efforts will significantly improve warfighter confidence in logistics and ultimately, greatly improve our overall readiness posture. Leveraging RFID to the fullest extent possible will improve the ability to get the warfighter the right materiel, at the right place, at the right time, and in the right condition.