

Collaboration Improves Warfighter Sustainment

Part II of II: Global Distribution SYNCHRONIZATION

This is Part II of a two-part series describing how collaboration improves the performance of the Department of Defense (DOD) distribution network that sustains the Warfighter. Part I introduced the enterprise metrics framework which was instrumental in measuring the global distribution system, and provided examples of focused initiatives that improved performance. Part II will shift to the application of the lessons learned from these initiatives into a global performance-improvement effort called Distribution Process Owner (DPO) Strategic Opportunities (DSO). This article will describe the framework for measuring distribution performance based on the Supply-Chain Operations Reference-model SCOR®, and the five DSO opportunities to improve distribution performance by 25% and reduce supply chain costs by \$500 million annually by 2012.

In its role as the DPO, the United States Transportation Command (USTRANSCOM) coordinates and synchronizes the activities of supply chain stakeholders in support of the Warfighter. As a part of its global efforts, the DPO commissioned DSO; an effort to identify five opportunities that can dramatically reduce costs within the DOD supply chain while simultaneously improving performance. These opportunities are (1) Process Improvement, (2) Strategic Surface Optimization, (3) Strategic Air Optimization, (4) Supply Alignment, and (5) Strategic Network Optimization. The DSO Team is comprised of experienced supply chain and process improvement subject matter experts from USTRANSCOM, Defense Logistics Agency (DLA), General Services Administration (GSA), Military Surface Deployment Distribution Command (SDDC), and Air Mobility Command

(AMC), and includes regular inputs from the Services and Combatant Commands (COCOMs). Through teamwork, common metrics based upon SCOR®, and a shared vision, the DSO Team is uniquely positioned to achieve unprecedented improvements in enterprise performance.

SCOR® Model Background. The SCOR® model is widely accepted as a framework that links business processes, metrics and best practices from the perspective of both the customer and the supply chain. SCOR® is organized around major process categories of Plan, Source, Make, Deliver and Return. The processes are organized into hierarchies of four levels: Level 1 is the enterprise, Level 2 is the major process category, and Levels 3 and 4 includes the process flows and tasks where improvements are made. USTRANSCOM, DLA and GSA share the same SCOR®-based metrics hierarchy for measuring and improving distribution performance. This enables collaboration across different organizations for improvement.

Supply Chain Attributes and Metrics.

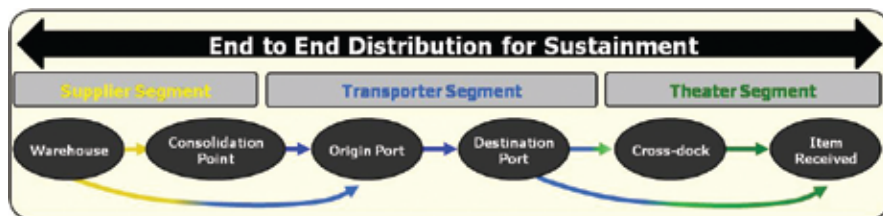
Attributes include the characteristics of an effective and efficient supply chain. The key attributes for DSO are Velocity (right speed and direction) and Efficiency (wise use of resources). Metrics focused on those attributes ensure the team is measuring the right things and can track progress towards shared objectives. Table 1 shows the DSO metrics and attributes and how they are linked to SCOR®. Metrics will be described in more detail later in this article.

DSO Genesis and Scope. The DSO effort began in the spring of 2008 after implementing the metrics and using the measures to identify and implement tangible improvements on focused initiatives. DPO leadership challenged the team with developing high-impact areas of opportunity on a global scale that can simultaneously improve performance and reduce cost. The DSO scope encompasses the entire DOD sustainment materiel distribution processes organized within the SCOR® framework of Plan and Deliver. The Plan construct includes distribution network design, such as stock positioning and route planning. The Deliver cycle is the execution of shipping required materiel to the Warfighter, and includes activities such as materiel handling, shipping, strategic transportation, reception, onward movement, and receipt. The distribution network is illustrated below in Figure 1 – General DOD Wholesale Distribution Process.

Table 1 – DSO Metrics and Attributes

DSO Metric/Attribute	SCOR® Level 1 Metric
Logistics Response Time/Velocity	Order Fulfillment Cycle Time
Total Supply Chain Costs/Efficiency	Supply Chain Management Costs

Figure 1. General DOD Wholesale Distribution Process



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Based upon the findings from the prior improvement efforts the five key improvement areas are:

- Process Improvement
- Strategic Surface Optimization
- Strategic Air Optimization
- Supply Alignment
- Strategic Network Optimization

The following section of this article provides an overview of each of these improvement areas.

DESCRIPTION OF OPPORTUNITIES

Process Improvement. Process Improvement removes “white space”—unnecessary slack time—from distribution processes and rapidly deploys those improved processes across the supply chain. White space often occurs at handoffs between process owners where materiel sits waiting for the next process.

By improving coordination at these handoffs, the delays can be minimized or even eliminated—improving the materiel Velocity to the Warfighter. In these activities, the key is to coordinate process improvement across the enterprise to ensure enterprise improvement versus local optimization.

Strategic Surface Optimization. By increasing container utilization and appropriately shifting cargo from 20’ containers to 40’ containers, the DOD can reduce supply chain costs while improving performance. As shown in Figure 3, Strategic Surface Op-

Figure 3. Consolidation and Deconsolidation

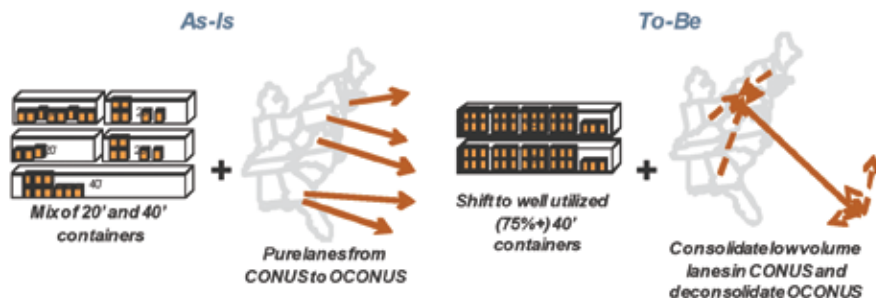
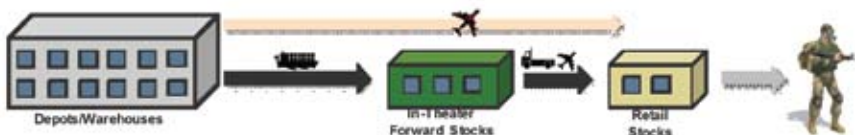


Figure 4. Supply Alignment



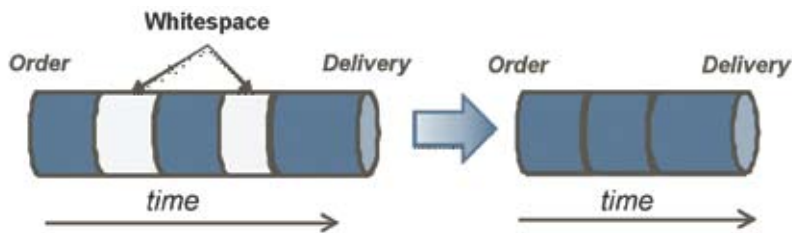
reduced from the previous method of shipping “pure” containers to each customer. This initiative requires a coordinated effort with DLA, GSA, USTRANSCOM, the Services and the COCOMs to identify the appropriate destinations and to implement the shipping and consolidation/deconsolidation around the globe.

Strategic Airlift Optimization. Utilizing the full array of airlift services, the DOD can better match capacity with demand; increasing airlift utilization and reducing total supply chain cost. These improvements are attainable by accomplishing the following two goals: (1) align air transport services with demand and (2) optimize aircraft utilization.

for a specific destination, one service may provide a substantial cost and/or service advantage over another. By implementing processes that select the optimal service for each shipment, the DOD can simultaneously reduce costs and improve customer service levels.

- Optimize aircraft utilization—By improving consolidation and routing processes, the DOD can improve round-trip aircraft utilization, pallet utilization and by extension reduce the number of flights required to provide service to customers—resulting in improved supply chain efficiency.

Figure 2. Reducing Whitespace in the Supply Chain



timization improves Velocity and reduces costs by consolidating cargo in Continental US (CONUS) for low-medium volume customers into well-utilized 40’ containers. The containers are then deconsolidated Outside Continental US (OCONUS) and delivered in the appropriate 20’ or 40’ container. By packing the same or greater number of items in fewer containers, costs are reduced. Total velocity is improved because the container consolidation times are

- Align air transport services with demand—The DOD has a number of airlift services at their disposal—“channel” flights operated by USTRANSCOM and Air Mobility Command (AMC), commercial “tender” service where full pallets are transported by commercial carriers, and parcel service. Based on operational requirements and the amount of traffic bound

Supply Alignment. Supply Alignment focuses on the use of properly configured forward inventories to minimize distribution costs and maximize service levels. As shown in Figure 4, the basic premise of Supply Alignment is stocking appropriate items forward in the optimal quantity to reduce the use of high cost over-ocean airlift and provide stocks at increased service levels to the customer. This effort also requires an enterprise view and significant coordination across USTRANSCOM, DLA, GSA, and the Services to balance the inventory and transportation costs.

Strategic Network Optimization. Strategic Network Optimization continually determines the optimal location of key distribution nodes (e.g., inventory locations, sources of supply, consolidation & deconsolidation locations, and transportation hubs & ports,) provides a high-level design of distribution lanes and routes, and identifies the high level

function and capacity of the nodes. This initiative requires enterprise optimization and coordination across supply chain partners.

Measuring progress toward objectives. DSO ensures enterprise optimization by aligning all organizations to the SCOR®-based metrics framework which focuses on measuring supply chain performance characteristics most critical to the Warfighter.

- Logistics Response Time (LRT) measures enterprise Velocity and the performance of the underlying processes. Total Supply Chain Cost measures Efficiency by integrating inventory receiving, handling, shipping, consolidation, transportation, and deconsolidation costs at the enterprise level.
- Metrics fit a clear and purposeful hierarchy. A hierarchy of measures from SCOR® Level 1-4 spotlights the key drivers of enterprise performance, which fixes responsibility to drive tangible improvements at enterprise level.
- Performance standards are negotiated

Figure 5. Strategic Network Optimization



- between customers and providers.
- Metrics are appropriately balanced to meet Warfighter Velocity needs while reducing supply chain cost.
- Metrics are shared among the partner organizations which enables collaboration towards shared outcomes.

The principles used in the DSO improvements are universal in nature and based upon leading practices in the DOD and commercial sector. Through the use of commonly understood SCOR®-based

metrics and a shared vision for enterprise improvement, other organizations can use DSO principles by transitioning their supply chains from pursuing local benefits to maintaining global optimization. The DSO team is well on their way of achieving the goals of \$500M in annual cost reductions and 25% improvements in service levels by 2012. We look forward to providing more updates on our progress as we work together to drive improvements to supporting our Nation's Warfighter. *DTJ*

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