Converging DOD Logistics and Distribution Systems Into a Unified Platform for Greater Collaboration and Tailoring to Unique Needs

THE CHALLENGE
Modernizing and converging a distribution supply chain with 50 distinct stove-piped information systems, nearly 500 user-unique systems for logistics operations, and 240 commercial carriers, such as air, truck, rail, and ocean shipping companies, which help comprise the distribution pipeline.

THE SOLUTION
Converge information from these supply and distribution systems to make it more collaborative and cost-effective and enable the Defense Department to improve the end-to-end supply visibility, responsiveness, and logistics processes.

Last year, Lockheed Martin began an ambitious multi-year effort that will help to enhance the performance of the Department of Defense’s logistics distribution network—the world’s largest and, arguably, most diffuse and demanding supply chain.

The task at hand was the converging of two defense logistics system stalwarts, the Defense Logistics Agency’s Integrated Data Environment with the US Transportation Command’s Global Transportation Network—each of which tracks millions of logistics transactions daily—into a unified platform called IDE/GTN Convergence, or IGC. The difficulty of the effort was heightened considerably by the war-time imperative to integrate the systems in a manner transparent to its users and with no disruption to current processes.

The implications of the effort are huge. IGC will provide a common information platform that enables the military to more collaboratively and cost-effectively improve end-to-end visibility, responsiveness, decision-making, service, and logistics processes. The platform includes a single repository and universal access to logistics data so that any user or developer can easily find, access, or manage supply chain information.

This is a watershed event, not so much for the massive integration of commercial products and technologies that are involved, but because this represents an acknowledgement by the DOD’s key distribution chain stakeholders that the convergence of these stove-piped distribution and supply chain systems—theirs and others—is an operational and economic imperative for DOD.

POSITIONED FOR SUCCESS
Having developed and managed the GTN system for USTRANSCOM the past 14 years, Lockheed Martin is well positioned to spearhead the IGC initiative. Prior to the effort, Lockheed Martin executed a series of complex development spirals providing specific distribution metrics by applying advanced data warehousing system applications and integrating commercial products into the highly complex DOD distribution chain environment.

The Corporation’s experience with logistics systems brought an understanding of the technical challenges in merging distribution systems. There is also the potential for efficiencies that could be realized from a new service-oriented architecture that gives users a common, yet tailored, end-to-end visibility of the Department of Defense distribution pipeline.

CRAFTED FOR COLLABORATION: WIDGETS AND “MASH-UPS”
Distinguishing the IGC system from its forbearers is what it offers users: an ability to adapt the system for their unique preferences and use it as a collaborative platform. The payoffs of what might be termed a “Web 2.0” orientation of the IGC architecture have been highlighted during Lockheed Martin’s extensive in-
user can readily install—and “mash-ups,” the Web applications that combine data sources into a single integrated tool.

Allowing—with in reasonable bounds—for such modifications by user communities, allows those closest to the problem to tailor the system to meet their needs and to share these solutions with others. It pushes the power of the system closer to the tip of the spear by enabling program managers, developers, data partners, and the warfighter to build, discover, and customize.

The result, as envisioned, is the establishment of a dynamic service-oriented architecture platform that will grow and develop through best practices at the pace of challenges confronting it. While this is not necessarily a new approach in the commercial sector, it does represent a significant departure from standard Department of Defense practices.

**MOVING FORWARD**

With the IGC system’s “task one” accomplished and the IDE and GTN logistics systems now already operating as a system-of-systems, the Lockheed Martin-led team has focused on the orderly retirement of the GTN system. That the Corporation will continue to manage GTN through its retirement next year will ensure a seamless transition. Users will continue to have access to GTN while they become familiar and comfortable with IGC.

[The author notes that her team’s experience to date is that users throughout the Department of Defense are readily adapting to the IGC system, particularly its flexibility for the ad-hoc reporting and dashboarding capabilities.]

In coming months, the focus of the effort will turn to sustainment and growth operations of the system architecture through a series of new task orders. This means, among other things: growing the depth and breadth of the IGC system by synchronizing the architecture with new data sources; creating new logistics applications and tailoring them to user preferences within the IGC system; and establishing even more diverse levels of security and access within the platform.

**BEYOND DOD?**

The prospect of converging the DOD logistics system into a single architecture has raised the prospect that perhaps the IGC platform could be expanded and leveraged by other federal users, international partners, and even the government’s commercial supply chain partners.

As for industry, there is hope: Suppliers benefit from asset visibility as much as the government does. It is our hope that someday federal partners will also be able to benefit from this type of information to enhance the speed and efficiency of their support to the warfighter.  

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