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A Supply Chain is Not a Chain – It is a Network

David P. Stephens

EVP & GM, Government, Aerospace and Defense

One Network

Abstract:

The US Department of Defense, like private industry, has been challenged with the same debacles and have tried to solve their logistics challenges in traditional ways. Just look at IT sustainment budgets. They have grown over time, yet modernization of the embedded solutions, including ERPs, have not delivered a resilient modernization path. Enterprise implementations have neither been on budget nor on time, and when eventually deployed, address only a portion of their expected benefits, further increasing costs and time and often never reaching the original objective. Joint and combined operations suffer from the lack of cohesive collaboration, requiring more manpower to deal with both repetitive and misaligned data/information, a growth in systems just to get and analyze data, and then no real integrated infrastructure to effectively execute the plans that have been developed. Lack of compute power “at the edge” places a burden on tactical operations.

The crux: Defense is a true multi-tier, multi-party operation. A chain is only as strong as its weakest link. Critical Defense missions cannot afford a “weak link”. A digital supply chain network enables not just real-time visibility across all mission partners but provides execution actionability on that same single version of the truth while gaining interoperability with existing systems. Defense gains a clear modernization path while enhancing mission processes, with the ability to shrink the existing infrastructure, often in a self-funding manner. Everyone in the network (services, suppliers, transportation providers, industrial base(s), and joint mission partners) gains benefits and advantages across that network. This has been impossible to do with today’s existing infrastructure.

A digital supply chain network provides the following benefits:

- Supply and Transportation Agnostic – Manage all supply classes and transportation scheduling and tracking on a single platform.
- Enhanced Capability – Complete visibility of managed assets, including assets managed by other services, and knows the true value of inventory stocks.
- Increased Flexibility – Works with military processes as needed and is easily configured to meet specific military doctrinal and congressional / legislative mandates.
- Enables Joint Services – The Platform is multi-party, multi-echelon, allowing military services to build on each other’s investments and collaborate more closely.
- Never Goes Legacy – Adaptable and scalable while meeting both today’s and future war fighter needs globally.

- Rapid configuration – Low-code DevNet SDK enables solutions to be adapted, extended, and built from scratch.
- Disconnected Operations – For austere and contested environments.
- Publish and subscribe MDM solution with complete integration/migration toolset
- True Multi-Level Operations – Multi-tier control towers and visibility/execution layers for real time assessment and actionability. Prescriptions drive autonomous logistics.
- Real-time Digital Twin of the supply chain with complex configuration forecasting and demand sensing.
- Auditability – “Cradle to Grave” ledgering.
- Configurable – Reports, dashboards, and analytic tools.
- Dual Platform – Operates/integrates with existing ERP and legacy systems, allowing business functions to migrate from siloed legacy into a modernized solution.
- Cradle to Grave – End-to-end capabilities, allowing organizations to manage raw materials through production, down to the end user, including maintenance and transportation functionality in support of full spectrum operations across all Air, Sea, and Land forces.
- Secure – Cloud agnostic, supports multiple hosting and support options with ATOs.
- Partner friendly – Provides partner configuration, development, deployment and support options.

Multi-party relationships and interdependencies increase risk and constrain agility and resilience. Variability exists at all nodes in today’s Defense Supply Chain (demand, logistics and supply/transportation) across all Defense partners. A digital supply chain network provides a framework that unlocks growth and enhances mission success. Think about the benefits.

- Breaking down silos both within each service and across services, where any Defense organization can take advantage of what another Defense Organization deploys.
- Being able to integrate legacy data and systems and harmonize both the data and business process to manage an extended enterprise outside the traditional four walls.
- Distributed bill of materials (BOMs) and demand/supply match to ensure effective and efficient utilization, driven by advanced prescriptive analytics to turn any situation into an actionable one.

“Control Towers” can provide a real time “digital twin” of the entire “supply network” synchronizing all components, data and actionability. These control towers can be thought of as a “Command Center”. Each tier of operations can see and take actions that are meaningful to them...all on the same version of real time data.

But it doesn’t have to stop there. Pushing enterprise-level capabilities “to the edge” allows missions to be conducted in a “disrupted, disconnected, intermittent and low-bandwidth (DDIL)” environment. Whether it is pick/pack/ship, inspections, maintenance actions where both data and functions are

available on a mobile device, or full enterprise capabilities that are disconnected for long periods of time (think ship/submarine or even small ground elements), being able to conduct your full mission and getting “synchronized” to the enterprise when bandwidth is available. This guarantees no gaps in logistics activities that are needed to support critical missions in austere environments.

Addressing an age-old challenge within the Department of Defense is the concept of “Never Legacy”, where any implementation can be supported as “COTS”, and modernizations are available to deploy as a customer chooses, assuring organizations of never having to go down a one-way street with no path of return. The Digital Supply Network gains some of the highest audit results of any system deployed, with customers receiving awards for their success in auditability. FIAR and FISCAM along with DLMS and IUID Registry are supported. A recent report identified only a small percentage of systems across DoD have achieved audit success.

The Digital Supply Network accelerates that path to unqualified auditability. In operation today in multiple DoD Services organizations with multiple Authority to Operate (ATOs), all enhanced security capabilities that are put into the platform, or any remediation activity that is required either due to changing DoD Security requirements or security scans are quickly made available to all Defense customers. Although reciprocity is available but not always leveraged across DoD, this approach puts “velocity” into the cyber accreditation process with continuous ATO (cATO) capabilities.

The secure network is an innovative, modernized, and transformative solution that matches agnostic demand to supply to transportation instantly, resulting in immediate increased velocity, agility, transparency, and resilience. This equals increased synergy, true value optimization, and increased mission effectiveness and efficiency. The network allows users to onboard one time, and connect instantly with anyone, while maintaining a state-of-the-art permissibility security framework ensuring access to data is strictly controlled and secure.

The solution will never go legacy with consistent updates, and has a modular architecture giving users flexibility to add new capabilities when and how they see fit. With multi-party workflows and backward compatibility, combined with a federated multi-party publish and subscribe master data management solution, the network empowers users to drive the lifecycle of logistics processes, with precision and integration.

The result is the world’s first and only real-time decision-making and execution logistics network, providing unprecedented interaction and collaboration between users at multiple levels, and the ability to both see and action instantly and simultaneously.

The US Department of Defense deserves this capability now.