Defense

Delivering Public Service for the Future

Apps, Analytics and Automation:
The New Digital Age of Defense Logistics

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The new digital age of defense logistics

Business leaders often describe the environment they deal with as VUCA—volatile, uncertain, complex and ambiguous—and the term describes the realities faced by defense organizations today.

From peacekeeping deployments and confronting amorphous terror organizations through to border protection activities, today's military engagements require fast-changing, rapid respond-and-reset capabilities. This specifically includes the need to quickly surge, deploy and sustain military assets, rather than assuming a decade-long build-up towards possible conflict.

Transformation required to support a modern fighting force

The reality is that today's defense logistics environments were designed and built to deliver 20th century capabilities.

Simply replacing old technology with new is both inadequate and a missed opportunity. The current information revolution demands a more holistic transformation—the integration of new digital technologies and business thinking to deliver superior logistics capabilities.

Militaries slow to adopt digital logistics opportunities—incorporating analytics, mobile and cloud—risk being unable to effectively support a modern, integrated fighting force.

This need not be the case. By embracing four specific trends highlighted in Accenture's 2014 Technology Vision[1], leaders can achieve more with less and build a more effective, future-ready defense logistics domain.

Digital–Physical Blur - The imperative here is to combine the physical with the digital, bringing awareness of key military assets to the appropriate person or device. This is about embedding a new layer of connected intelligence to the defense supply chain. By doing so, defense personnel at all levels and locations can operate a truly integrated defense logistics capability with greater visibility, accuracy and awareness.

By digitising the supply chain, defense forces will vastly increase the capture and use of relevant data that can in turn fuel predictive capabilities. This is significant: public sector organizations that implement predictive asset maintenance initiatives have realised 15% to 30% cuts in their total maintenance costs, providing a ten-fold return on investment. Even more crucially, such initiatives have reduced breakdowns by up to 75%—a potentially vital gain in performance if replicated in defense.[2]

A relevant example from the corporate world is Caterpillar, which now embeds numerous sensors into its heavy mining equipment.[3] These sensors constantly report on the status of the machinery in the field, providing a live view of their performance.

Combined with analytics to mine the data feeds generated across thousands of assets, the company is able to develop predictive failure models and breakdown forecasts. In turn, this allows more responsive and effective preventative maintenance schedules to be developed, helping avoid unplanned breakdowns, cut maintenance and inventory costs, streamline the supply chain, and optimise the availability of key assets.

Business of Applications - The second major technology trend that will impact defense logistics is the change in the way software is being developed and deployed. Already, private sector organizations are moving to overlay their ERP systems with rapidly prototyped, tested and deployed mobile applications, designed to simplify business processes by unleashing the data held within their enterprise systems.

The case for this is easy to imagine. Apps are already helping private sector logistics organizations transform their effectiveness, such as DHL's SmartPOD app that gives vehicle drivers and others a means of capturing real time data and electronic proof of delivery.[4]

This in turn also creates a real-time data feed that can be used to monitor and optimize operations to continuously meet the changing needs of their customers.

The airline industry provides another useful example here, having already rolled out a host of apps aimed at supporting pilots, operations staff and ground maintenance crews. These range from digitizing bulky repair manuals, through to providing context-specific checklists and guidance, and of course workflow, job planning and real-time feedback designed to support decision making.[5]

Data Supply Chain - The next trend lies in unlocking the information held within multiple defense logistics and industry silos. The overall aim is to create a data supply chain that enables data to flow easily and usefully throughout the organization.

Through this, logisticians will gain far greater insight into the needs of military assets, even in advance of any specific materiel demands being placed. For example, with predictive analytics, maintenance crews can better forecast issues and start to proactively prepare. Simultaneously, inventory systems can become 'aware', collaborating with supply chain partners to prime inventories ahead of requirements or automatically triggering procurement activities for forecasted deficiencies.

By freeing data and valuing it as an enterprise asset, defense logistics agencies can start to realise the potential of their information.

Harnessing Hyperscale - Enabling digital defense logistics has implications. Most obviously, having a massive volume of logistics data flowing through an organization requires significant storage and rapid processing capabilities. To deliver on this, defense logistics need to harness hyperscale—tapping the impressive advances underway in hardware systems today.

This will provide the scalability and flexibility to support a digitally integrated defense environment, providing a raft of business benefits. A recent data centre migration project within Australia's Department of Defence is expected to lead to savings on support and equipment costs, enhance the delivery of information and communication services and reduce energy consumption by the Department.[6]

Adopting digital logistics for mission success

These trends and their underlying digital logistic technologies are powerful in isolation, but transformative when combined and aligned to support the modern warfighter.

Picture a technician, deployed to a remote location, responsible for the maintenance of critical military assets. Wearing Google Glass and streaming (via secure military CIS) a live feed to both their home base and industrial partners, the technician is able to operate with no degradation in technical support. As repair options are developed, the technician receives a live feed of in-theatre and home-base spares availability, also, via HR data, the availability of appropriately skilled personnel within their location.

At the same time, operational commanders are fully aware of any constraints that exist within the logistics environment and the actions being taken to overcome them. This enables true collaboration to take place across the entire defense logistics spectrum.

This scenario, and the number of industry examples before it, highlight that – far from being fantasy – a digitally-driven logistics domain is fast becoming the reality for defense logisticians.

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About Delivering Public Service for the Future

What does it take to deliver public service for the future? Public service leaders must embrace four structural shifts—advancing toward personalised services, insight-driven operations, a public entrepreneurship mindset and a cross-agency commitment to mission productivity. By making these shifts, leaders can support flourishing societies, safe, secure nations and economic vitality for citizens in a digital world—delivering public service for the future.

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