Resilience and agility: supply chain requirements in military operations

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Abstract:

This article lectures the need to provide resilient and agile supply chains in support of modern warfare. In a less predictable operational environment, resilience and agility are vital requirements to military sustainment. To prove that, we observe shortfalls (*What is the problem?*) in large retailers supply chains and then we discuss innovative solutions adopted to improve the business efficiency. Further on, we use 3 column format (*Understand the problem and how it affects the military organization*) and we analyze how innovation in business environment impacts the military supply chains (*So what?*). In conclusion, we point out a series of aspects that military logisticians need to address during operation planning process.

Bottom-line-up-front:

We need to understand how large retailers use technological advance, so that the military logisticians can implement solutions to enhance resilience and agility in the supply chains.

Problem statement:

What solutions used by large retailers may be adopted by the armies, so that the military supply chains become resilient and agile, as critical requirements in less-and-less predictable operating environment?

So what?:

The military logistic planners should be aware of the use of the new technologies and incorporate innovative solutions into operational planning process, to meet the current and the future threats in the modern warfare.

Logistic operations evolved under the conditions of technological advance, with the main purpose to effectively sustain military operations. Today's tendencies require logistic operations being planned and conducted using informational tools that makes it harder for the adversary to hinder. With the operational environment being contested in multidomain, logistic planners must keep up with the reality. As the conflicts tend to develop much faster than before, the practices used in logistics need to be addressed in order to respond to the new war technologies.

In this paper we address the technological solutions adopted by large retailers in Supply Chain Management, that could be implemented in support of military operations. The purpose of the paper is to provide innovative solutions to improve the resilience and agility of logistic supply chains.

Large retailers like Schwartz[1], Renault, Morrisons[2], and many others, use a variety of advanced technologies to optimize supply chain management, including Artificial Intelligence, Machine Learning, Internet of Things, Blockchain Technology or Radio Frequency Identification. The use of these technologies helped the optimization of demand forecasting in goods and services, the increase of sustainability, thus reducing the wastes and logistic demand in transportation.

Military organizations need to prioritize resilience, agility and digital transformation to navigate through these difficulties. This article explores different theories and practices leveraging AI and machine learning, for enhanced visibility, predictive analysis, and data-driven decisions.

Endnotes

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[1] Shippeo Press release, 08/10/2024, last modified January 05, 2025
https://www.shippeo.com/press-releases/shippeo-wins-supply-chain-innovation-award-at-cscmp-edge-conference-2024

[2] Morrison Express, Supply chain solutions, last modified January 05, 2025
https://www.morrisonexpress.com/supply-chain-solutions/