

Advancing Combat Support to Sustain Agile Combat Employment Concepts

Integrating Global, Theater, and Unit Capabilities to Improve Support to a High-End Fight

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ISSUE

For many years, absent a peer adversary and in the face of tightening budgets, the joint logistics enterprise moved from a focus on effectiveness (i.e., where the priority is enabling combatant command combat operations, with less attention on costs and resource utilization) to a focus on efficiency.¹ The focus on efficiency has driven peacetime logistics and sustainment processes to be more centralized in the U.S. Air Force (USAF) and, in some cases, at the U.S. Department of Defense level. In some instances, the centralization placed decision authorities associated with the allocation and reallocation of resources outside the control of warfighting commands. Additionally, the move toward efficiency has created a lean supply chain that relies on assured transportation to rapidly deliver resources where needed based on demand signals from end-users. Capable adversaries, however, can disrupt the supply chain by degrading communications and limiting access to forward locations.



APPROACH

As Pacific Air Forces (PACAF) pursues evolving operational concepts of employment (CONEMPs) designed to improve operational resiliency, questions about the fragility of the combat support (CS) enterprise persist. How should the CS enterprise operate if communication networks are degraded and requests for resources cannot be transmitted to supply sources? What actions can be taken to mitigate against uncertainties in supply chain performance in contested environments? In light of these questions, Headquarters PACAF asked RAND Project AIR FORCE researchers to assess the CS enterprise holistically, including base, theater, and global resources, and explore different concepts that could be integrated in theater sustainment plans to support operations.

Our analysis was conducted in two parts: (1) decomposing the CS enterprise from decision authority and resource characteristic perspectives and (2) analyzing differences in CS enterprise posture performance in the

¹ Joseph F. Dunford, Jr., "Institute for Defense Analysis Study," information memorandum to the Secretary of Defense, April 30, 2018.

context of the evolving operational CONEMPs.² The first part of the analysis (covered in this report) informs a framework that PACAF can use to consider the necessary elements of the CS enterprise for operating in a hybrid push-pull system as a means to mitigate uncertainty and adversary actions that challenge logistics support. This report also presents the cost of various resource buffer strategies for spare parts.



KEY FINDINGS

Our analysis revealed the following:

- The CS enterprise, built on efficiency, relies on timely communication of asset requirements and on assured and responsive transportation, which today fails to achieve desired readiness rates and will likely be more challenged in a conflict with a near-peer adversary.
- Processes for communicating resource status and replenishment needs will aid in mitigating CS enterprise disruptions resulting from adversary attacks; however, other actions will likely be necessary to support operational missions in a contested environment.
- Operating the CS enterprise in conflict will require logisticians above the unit level to be fully aware of planned sortie demand and able to forecast required replenishment based on that demand.
- Planning factors used to make posture decisions during competition may not accurately reflect the expected intensity of operations in a conflict with a near-peer adversary.



RECOMMENDATIONS

In light of our findings from this analysis, we recommend that USAF consider the following mitigation strategies:

- Each PACAF CS functional area, in coordination with its enterprise functional community, should develop and practice tactics, techniques, and procedures for executing the logistics support plan in a communications-degraded environment.
- PACAF should adopt a methodology to determine which assets in the CS enterprise should be pushed to forward operating locations and the rate and quantities that should be pushed if it becomes necessary to temporarily shift from a pull to a push system in a communications-degraded environment. We propose the basis for such a methodology in Chapter 4 of this report.
- USAF and PACAF should consider a “partial buyout” buffer stock strategy to mitigate expected resource shortages for planned operations.
- USAF should review the War and Mobilization Plan–Volume 5 planning factors used to compute readiness spares packages to ensure these factors reflect the intensity of operations outlined in PACAF’s operations plan, including expected attrition.

² The CS enterprise performance in the context of evolving operational CONEMPs is addressed in a companion report, which is not available to the general public (Katherine C. Hastings, James A. Leftwich, Vikram Kilambi, and Ronald G. McGarvey, *Maneuvering Beyond Support: Application of the PLATO Model to Determine Sufficiency of Munitions, Fuel, and Spare Parts Required to Support a Pacific Maneuver Operation*, RAND Corporation, forthcoming, Not available to the general public).



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