

The Joint Logistics Enterprise of the Future

■ By Maj. Gen. Kenneth D. Jones



Soldiers from the 25th Sustainment Brigade and 2nd Brigade Combat Team, 25th Infantry Division, offload rigged low-cost, low-altitude supply loads from a palletized load system and move them to a waiting CH-47 Chinook helicopter on Dec. 12, 2017, during an air delivery exercise. (Photo Sgt. Ian Ives)



Data analysis is critical to the joint logistics enterprise's ability to use capabilities and resources to advance U.S. national interests.

The National Military Strategy (NMS) establishes five distinct problem sets and five mission areas with the greatest risk of having peer and near-peer adversaries. The NMS characterizes the joint operating environment (JOE) as an emerging battlefield of great power competition.

Predicated on the NMS and the emerging JOE, the joint logistics enterprise (JLEnt) addresses adversarial challenges through global, cross-domain, and multifunctional logistics solutions. These solutions defy legacy phasing and require global integration to manage scarce resources with greater efficiency and to balance capability, capacity, and readiness.

What Is the JLEnt?

The JLEnt is a globally integrated network of responsive logistics providers structured to achieve a common purpose. It is globally postured with geopolitical access and ready organizations and underpinned by a global command and control architecture. By design, the JLEnt encompasses an assortment of collaborative agreements, contracts, policies, legislation, and treaties designed to make it function in the best interest of the joint force commander.

The Joint Staff J-4 influences and advises the JLEnt for strengthening the joint force readiness posture, improving warfighting capability, and enabling globally integrated operations. Key Department of Defense organizations in the enterprise include the services, the combatant commands, the Defense Logistics Agency, the U.S. Transportation Command, and the Joint Staff J-3 and J-4.

The JLEnt also includes other government departments and agencies and nongovernmental organizations. Inextricably linked to commercial industry, these organizations represent an end-to-end value chain for countering adversaries and sustaining warfighter resilience and survivability.

Lt. Gen. Stephen R. Lyons, the director for logistics on the Joint Staff, recently said that “the purpose of today’s JLEnt is to project and sustain military

power, enable global reach, and provide a full range of flexible and responsive options to joint force commanders.”

The JLEnt enhances military readiness and presents multiple dilemmas to adversaries who seek to challenge the commitment and capabilities of the United States abroad. The JLEnt enables the United States to project power across oceans at any time and place. Moreover, the JLEnt gives the United States a comparative strategic advantage and enables it to remain a global superpower to support its allies and partners throughout the world.

The JLEnt of the Future

The emerging JOE, characterized by great power competition, will challenge the JLEnt to reassess its previous planning assumptions regarding permissive and semipermissive domains. To achieve and sustain a high level of readiness and project the force from the industrial base forward, the JLEnt must further access capabilities from all components to penetrate contested environments.

Furthermore, the JLEnt should expect to operate without 100 percent system readiness and compatibility with allies and host nations. Instead, the JLEnt must expect to fight at the end of long and contested lines of communications while competing in all five domains (land, maritime, air, space, and cyberspace). The JLEnt will continue to develop readily accessible capabilities in joint force formations to achieve mission success.

Visualizing the emerging JOE should drive realistic planning assumptions and influence important investments in force sizing, JLEnt capacity, network resilience, and comprehensive readiness to respond to major combat operations. Lt. Gen. Lyons emphasized that the increasing logistics demand underscores the need in a globally integrated environment to adjudicate scarce resources at the speed of war.

Also, the JLEnt cannot underestimate competition short of armed conflict in the so-called “gray zone.” Adversaries are attempting to identify significant vulnerabilities through

in-depth cyber reconnaissance and infiltration of commercial information networks. Adversaries may deny access to precious or rare mineral resources and monopolize global manufacturing capabilities. These activities, sometimes under the guise of economic investments, can undermine the security of the United States and its allies. As a result, the JLEnt should strengthen partnerships with commercial industry and allies to preserve mission assurance and readiness.

As the JLEnt advances into the future, the United States must balance international concerns with operational requirements in contested areas. In most operations, joint reception, staging, onward movement, and integration and host-nation support (HNS) requirements define what is possible regarding force size, speed, and timeliness. HNS will remain a key enabler to support the JLEnt and enhance its capabilities.

A small but credible force quickly put in place on crucial terrain can have a greater impact than a more substantial force weeks or months later. Leveraging HNS as part of the joint reception, staging, onward movement, and integration process enhances international cooperation while supporting the JLEnt in globally contested environments.

Data Analysis

The JLEnt is a repository of logistics data. Data is a key enabler to improve readiness and lower the risk associated with managing finite resources and sustaining the joint force. Data access, analysis, and protection, therefore, can be a force multiplier to provide a competitive edge, minimize industry risk, and bolster the JLEnt.

Improving the analysis of JLEnt “data lakes” (storage repositories that contain raw data) helps to enhance joint force readiness. This analysis increases the nation’s comparative strategic advantage by improving logistics from the industrial base to the point of need. As with any comparative strategic advantage, the JLEnt must expect challenges to this status. Adversaries

are likely to exploit significant vulnerabilities to throttle the JLEnt’s ability to project military power.

The JLEnt must continue to evolve its global resource allocation process so it can best respond at the speed of war. Shifting priorities and paradigms have potential global implications, and geopolitical factors will continue to change with advancing technologies. These future changes will significantly affect industry capabilities to manufacture and deliver innovative solutions to future battlefield challenges.

The analysis of JLEnt data lakes and machine learning capabilities will drive the JLEnt to remain competitive over most adversaries. These emerging capabilities are a way for multiple agencies to validate investments in improving logistics and sustaining force readiness.

Today, internal processes, computer systems, and computer chip-enabled devices can generate more data than ever, in volumes too large and complex for humans to analyze without computer assistance. The emerging field of data science (extracting knowledge and insights from large and complex data sets) requires specialized skills to see patterns and recognize trends or potential gaps.

Machine learning can assist the JLEnt in addressing these complex questions and gaining a competitive edge over adversaries. The JLEnt will benefit from improved qualitative and quantitative decision-making that addresses complex sustainment requirements using data analysis tools and techniques. Recognizing data science as a valuable confluence of mathematics, computer science, and communication supports the JLEnt’s vision for improved learning and qualitative decisions for winning the nation’s wars.

Investments in big data support the NMS by improving global force projection, enhancing national security, and developing alliances. An emphasis on analysis will enable the JLEnt to deliver the right items, on time, and in the precise quantities needed.

The JLEnt needs to invest in off-the-shelf technology for combining multiple agency data lakes and leverag-

ing machine learning. This technology will enhance the JLEnt’s ability to accelerate decisions with better accuracy, predict the positioning of sustainment forces, build critical infrastructure, deliver logistics efficiently, and make the JLEnt more responsive and agile.

Through data analysis, the future JLEnt will mobilize or surge the right kind of capability regardless of the conflict or challenge the joint force encounters. Strategically, it is important for the JLEnt to have consensus on a vision of the future. In fact, it is fundamental to everything it considers in its effort to build a more responsive and informed enterprise.

Multiple entities have formal or informal responsibilities for parts of the JLEnt. Government representatives, industry associates, allies, and international partners are vital to supporting the joint and combined forces. Think tanks, policy centers, and academic institutions and individuals are also involved in the industrial preparedness of the JLEnt.

As the future unfolds, the JLEnt will strive to maintain and ensure a high state of readiness and responsiveness for contingency operations, humanitarian assistance, disaster relief, major conflicts, or related activities short of hostilities. Big data offers the greatest potential for accelerating change in logistics readiness and support to the joint force and U.S. allies.

In the face of these daunting challenges, only a dynamic, nimble, and well-informed JLEnt can make accurate and effective logistics assessments. Analysis is necessary to ensure the optimal deployment of capabilities and employment of resources required to advance U.S. national interests.

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