

In Search of Logistics Visibility

Enabling Effective Decision Making

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Joint force commanders (JFCs)—and by extension, their logisticians—require timely, accurate, and relevant information to make effective decisions. This requirement is especially critical in the joint logistics environment (JLE). The joint logistics community must continuously execute processes, effectively coordinate the allocation of limited resources, and clearly understand the supported joint commanders' requirements across the broad range of military operations. To execute these functions effectively and efficiently, joint logisticians must have visibility.

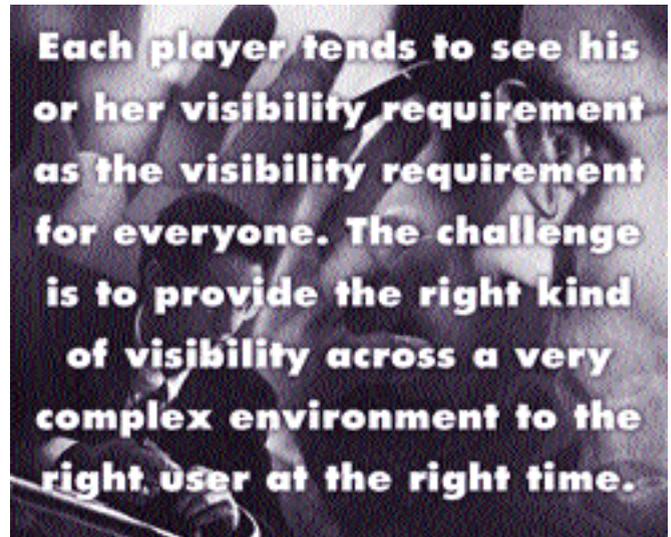
This article serves as a reference point for discussion, a framework for concept development, and an integrating tool for the countless efforts across the Department of Defense and industry to improve logistics visibility in the broadest and most holistic sense of the term. It offers a proposed definition of visibility, highlights key issues and concepts for consideration, and presents ideas for future efforts based on where the most pressing requirements for visibility lie within the JLE. Complete, system-wide access to all information is clearly not attainable or even desirable; given that, I will also broadly describe the types of visibility required by different elements within the JLE.

What is Logistics Visibility?

Current definitions of visibility focus almost entirely on asset visibility. In order to provide effective logistics support across the operating environment, the joint logistician must “see” more than just assets. He or she must fully understand the requirements for logistics support (who needs what) and the resources available (what there is to work with). The logistician also must be able to monitor joint logistics performance within the JLE (whether or not the logistics processes are in place and working). Without this kind of knowledge, the logistician cannot plan or execute effectively or efficiently.

For the purpose of this article, logistics visibility is defined as “access to logistics processes, resources, and requirements to provide the knowledge necessary to make effective decisions.”

A process is a series of actions, functions, or changes that achieves an end or a result. Multiple processes occur across



and within the JLE—for example, depot repair, patient movement, force deployment, and the delivery of contingency contracting support. Before we can effectively develop visibility applications, we must clearly understand the end-to-end processes that deliver an outcome for the joint force. Mapping these processes is critical to knowing where and when to place visibility “sensors” that give us the knowledge we need to deliver those joint outcomes.

Resources can be defined by using the term “total assets.” Total assets are defined as the aggregate of units, personnel, equipment, materiel, and supplies that are brought together in time and space to generate joint capabilities and their supporting processes. We must be able to see Service-component logistics, multinational logistics, and other logistics assets in a way that provides integrated resource visibility to the joint warfighter.

Requirements are what the joint force needs to accomplish its mission. Requirements can originate from anywhere and can result in a tasking for anyone in the JLE. Requirements also change over time, based on plans, current operations, and changes in the environment.

Collectively, visibility of processes, resources, and requirements comprise the information that logisticians need to accomplish their mission; without each of these

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elements, they cannot prioritize effort. Logistics visibility provides the ability to plan, synchronize, and monitor operations to optimize outcomes. The ultimate effect we are trying to achieve is sustained logistics readiness.

Some think that visibility should extend across the entire logistics domain and should include complete real-time access for everyone within the system. While it is true that every aspect of the enterprise must be visible to planners, operators, or managers at some level, it is also clear that not everyone needs to be able to see everything all the time. At some point, too much information may be a hindrance and can actually detract from effective decision making. Consequently, we should ask these questions about visibility: Which members of the JLE need visibility, and why do they need it? What do they need to see? Finally, where do they need visibility? These questions have significant implications for systems design, operational planning and execution, and resource allocation.

Who Needs Visibility and Why

Everyone within the JLE has a requirement for some type of visibility. However, the ultimate purpose of achieving visibility resides at the tactical level, where operational requirements form the basis of all efforts across the JLE. The joint logistician's customer is at the tactical level! Each component of the JLE needs visibility to support the end user at the tactical level.

The JFC needs visibility to execute directive authority for logistics. Without visibility of JLE processes, resources, and requirements, the JFC cannot integrate Service-component capabilities to achieve mission objectives.

The joint logistician matches resources with anticipated requirements to provide supportability assessments to the JFC. The supportability assessment determines if the JFC's operational concept can be sustained. As operational requirements change, the joint logisticians also must have visibility so that they are able to reassign resources rapidly.

The Services are responsible for delivering well-prepared forces and equipment to the JFC. At the strategic level, this mission demands different information and uses different processes from those employed at the operational or tactical levels. In order for the Services to deliver the forces and equipment necessary for mission accomplishment, they need visibility of the JFC's requirements. The Services also need visibility of the processes that support the efforts of their theater components.

Planners and decision makers at the DoD-staff level require visibility to provide responsive and relevant policy guidance and ensure that the DoD's strategic resources are applied appropriately. Their goal is to ensure that re-

sources are used to achieve efficient and effective outcomes.

Finally, the DoD's interagency, multinational, and commercial mission partners require visibility of processes, requirements, and resources that are necessary to support their participation in DoD operations.

What They Need to See

Your position within the JLE affects what you need to see. What the end user wants to see is different from what the manufacturer, supplier, or distributor wants to see. Each player in the JLE tends to see his or her visibility requirement as the visibility requirement for everyone. The challenge is to provide the right kind of visibility across a very complex environment to the right user at the right time. Depending on the situation, we need visibility of processes, resources, or requirements.

Process visibility provides process owners and decision-makers with the ability to evaluate the effectiveness of a particular process. They must be able to answer the question, "Are we delivering what is expected?" The deployment and redeployment processes, the force reception process at a major port, or the depot repair process are all parts of a system that relies on visibility. Joint logisticians and process owners need visibility to control and optimize the outcomes of processes.

Resources must be visible by item, person, or unit, individually or as a group. In some cases, visibility by a unique identifier (such as a serial number, lot number, national stock number, Social Security number, or unit identification code) is required. Some individuals or items are so important—politically, operationally, or tactically—that, by their very nature, they require real-time, 100-percent visibility across the logistics enterprise. Examples of such items include fissionable material, human remains, and vaccines. In other cases, visibility of groups of items, persons, or units is needed to determine the status of a particular capability and its ability to achieve the JFC's mission; for example, a specific force module, a port-opening capability, or a medical treatment capability.

Requirements must also be visible by item, person, or unit, individually or as a group. Ultimately, visibility of requirements—which are usually designated by the JFC—is necessary to initiate support efforts across the JLE. The Services, supporting combatant commands, and Defense agencies require visibility of those requirements to better support the JFC's mission. DoD must have visibility over those requirements to ensure the effective and efficient use of DoD resources.

Where Visibility is Needed

Where visibility is needed depends on where you sit. End users will mainly want to know when they will receive

their items and will be less concerned about every step along the way to final delivery. Visibility is needed while elements are in transit from the point of origin (commercial vendor, unit, storage activity, or maintenance facility) to the destination (unit, storage activity, or maintenance facility); in storage (at a unit, DoD site, commercial site, or disposal activity); in process (that is, acquired from a source of supply but not yet shipped, or under repair, at an intermediate- and depot-level organic or commercial maintenance facility); or in use.

Visibility priorities and needs may change over time or across the phases of an operation. For example, planners might see joint force requirements as their most critical need, while available resources might take precedence during the sustainment phase of an operation. During the initial phases of expeditionary operations, visibility of processes might be most important to ensure that limited resources are being optimized as planned. That said, each of the three elements of visibility—processes, resources, and requirements—is needed to make effective decisions.

Several barriers inhibit DoD efforts to enhance and share visibility. First, authoritative data are not always available to the joint logistician. The only thing worse than not having data is having two different sets of data. The inability to provide trustworthy data impedes quality decision making. Second, it is unlikely that the DoD will have unity of command over the entire spectrum of joint logistics. So, one of our major challenges is to achieve unity of effort without unity of command. This is particularly an issue as logisticians share information across different commands, agencies, systems, and processes to develop a common operating picture.

Another major dilemma is how to ensure adequate security for sensitive information while simultaneously offering the maximum possible ease of access to all members of the community. Operational partners, both inside and outside DoD, including international friends and allies, need to have confidence that their information will be handled properly by our systems. Finally, the desire for information often drives users to want to see everything all the time. However, no one in the JLE needs to see everything all the time. Knowing what is really needed becomes the key to an information environment that effectively supports quality decisions.

The Way Ahead

Senior logistics managers, planners, and system developers must enhance visibility for everyone within the JLE, and we must allocate resources and focus our efforts to achieve that effect. From our perspective, we see four areas where we think we can make major improvements to visibility in the months and years ahead.

Map the processes. Joint logisticians must understand, define, and document the processes within the JLE, leveraging the ongoing work of the Joint Logistics Portfolio Management Test Case and the U.S. Transportation Command Distribution Process Owner (DPO). We also must use the base realignment and closure initiative to further our understanding of the defense supply chain and develop an integrated process as an outcome of that initiative.

Identify existing visibility capabilities. The joint logistics community should continue to capitalize efforts already under way within the DPO and other activities. We must document and integrate those existing or emerging efforts that contribute to increased logistics visibility, and we must align visibility requirements with our process-mapping to eliminate redundancies and gaps.

Develop a JLE data architecture. With the Defense Information Systems Agency as the lead, we must define the data framework, identify authoritative data sources, and influence and guide the joint logistics community's network-centric data strategy. The goal is to develop a JLE data architecture campaign plan.

Deliver a joint logistics software application. The joint logistics community should successfully employ a program that enables visibility for the joint logistician, such as Global Combat Support System-Joint. We must ensure that GCSS-J turns data into information and enhances the ability of the joint logistician to effectively plan and execute joint logistics operations.

The Means, Not the End

Visibility is not an end in and of itself but a means to make better decisions, gain efficiencies, and improve effectiveness across the JLE. It is also an objective we will continually strive toward; as the logistics environment continues to change, there will always be additional information requirements or demands for enhanced timeliness and accuracy. As logisticians, we continually strive to improve the quality of our decisions and optimize the logistics readiness of the joint force. Enhanced visibility will lead to increased logistics readiness and improved user confidence.

We are all partners in delivering visibility across the JLE, and we all have a critical role to play in helping to deliver sustained logistics readiness to the JFC. The logistics community and those who interact with us must all work together to develop this capability to enhance support to the JFC and, above all, to the Service men and women who depend on us.

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