

# Chapter 4

## Challenge of Integration

---

### INTRODUCTION

In large part, the success of the JTAV strategies hinges on successful integration. This chapter presents major JTAV components and complementary efforts that require integration. The environment in which JTAV capabilities will be used is affected by local, national, and international events. For ease of reference, these events can be characterized as internal and external integration challenges. The internal integration challenges include the JTAV system components (for example, Army TAV, Navy TAV, GTN, and Defense Automatic Addressing System). The internal components are both the sources and receivers of data and serve as the building blocks for developing JTAV capabilities. The external integration challenges include events, plans, and strategies outside the JTAV scope and different in mission and purpose, which influence the success or direction of JTAV's implementation. Examples include the *Defense Planning Guidance (DPG)*, *Quadrennial Defense Review (QDR)*, and *Joint Vision 2010*.

JTAV's desired objective is the same as *Joint Vision 2010*—supporting the warfighter from a source of supply to a point of need, whether the location is a foxhole, cockpit, deck plate, or base, while maximizing the benefits of information superiority and technological innovation—also called *full spectrum supportability*. This chapter describes the supporting component efforts and the national context in which those efforts reside. This chapter also draws from related strategic plans, projects, studies, and initiatives.

### EXTERNAL INTEGRATION

For many people, the term *integration* has connotations of bringing computer databases together. That view is not valid in relation to JTAV. With some exceptions (e.g., GTN and the Joint Medical Asset Repository), JTAV aims to access data in place at the source and integrate data elements from one system with data elements from other systems. On the other hand, when discussing the external elements that affect JTAV implementation, the term *integration* has a broader meaning. It means the integration of concepts, ideas, and basic principles. JTAV is working in concert with, and not against, the basic premises of other DoD initiatives.

---

## National Objectives and Strategy

The 1990s have seen dramatic changes in U.S. national and military strategy. The reunification of Germany, end of the Warsaw Pact, and demise of the Soviet Union changed the threat facing the United States. The changing threat precipitated a shift in the focus of military strategy from a global war to diverse major regional conflicts. The new focus requires a leaner, more flexible, and more agile logistics force. Coincident to that change in threat is a realization that the world is becoming more economically interdependent. Coupled with logistics outsourcing and a decreased national industrial base on which a majority of logistics support depends, the potential exists for diminishing domestic sources of supply and a transfer to offshore sources.

## National and DoD Plans and Guidance

The *National Performance Review* (NPR) is the U.S. government initiative to reform the way the federal government operates. The NPR submitted its original report, *Creating Government That Works Better and Costs Less* in September 1993.<sup>1</sup> Its primary principles are to put customers first, cut red tape, empower employees, and get back to basics. JTAV is a perfect example of a program designed with NPR objectives. JTAV puts customers first by providing answers to questions about assets in the logistics pipeline, and JTAV empowers employees by providing the necessary information to push decision-making down to the individual best suited to make the decision.

The DPG is published yearly and provides the annual guidance by the Secretary of Defense to DoD. The DPG lists seven strategic goals. JTAV directly applies to the following three goals:

- ◆ *Provide flexible, ready military forces and capabilities.* JTAV is a tool to increase flexibility and agility by providing accurate and timely information to improve the speed and accuracy of decisions.
- ◆ *Ensure the readiness, training, equipment, and sustainability of U.S. Armed Forces are sufficient to conduct all assigned missions successfully.* JTAV will improve readiness and sustainability by providing data to developers of tools to improve the timeliness and accuracy of logistics support.
- ◆ *Ensure exemplary management performance throughout all DoD mission areas while reducing costs.* JTAV will improve efficiency of inventory control point, depot maintenance, and retail operations by facilitating more informed and timely decisions.

---

<sup>1</sup> National Partnership for Reinventing Government, *Creating Government That Works Better and Costs Less*, September 1993, available at <http://www.npr.gov>.

The QDR was required by the Military Force Structure Review Act, which was included as part of the National Defense Authorization Act of FY97. The QDR reviewed all aspects of U.S. defense strategy and programs, including force structure, infrastructure, readiness, intelligence, modernization, and personnel. The review was a comprehensive assessment of the nation's defense requirements, based on emerging threats to U.S. security during the next two decades. JTAV was specifically mentioned in the QDR report as a key strategy enabler.

The Chairman of the Joint Chiefs of Staff developed *Joint Vision 2010*, a template for how America's Armed Forces will fight in joint military operations. *Joint Vision 2010* embraces the following four new operational concepts: dominant maneuver, precision engagement, full-dimension protection, and *focused logistics*. *Joint Vision 2010* describes focused logistics as the fusion of logistics information and transportation technologies. The vision focuses on rapid crisis response; deployment and sustainment, tracking and shifting units and materiel, and delivery of tailored logistics packages directly to the warfighter. Logisticians need to demonstrate the ability to tailor forces and resources as the nature of the threat changes from a large-scale major theater war to smaller contingencies. JTAV will be a critical enabler to accomplishing that goal.

## DoD Logistics Strategic Plan

The *DoD Logistics Strategic Plan* is designed to focus attention and resources for improving logistics support to customers. Increased attention and resources will improve readiness and sustainability significantly. Additionally, the plan identifies targets of opportunity to reduce the life-cycle cost of logistics. This focus is consistent with the following long-term, overarching JTAV goals:

- ◆ Improving operational flexibility
- ◆ Reducing operating costs.

JTAV objectives are fully integrated with the *DoD Logistics Strategic Plan*. JTAV has been identified as a key objective to satisfy the DoD plan's first strategic goal—to provide timely and responsive support to warfighters and other customers.<sup>2</sup>

## Operational Systems

The JTAV capability will be able to provide data of interest to operations personnel as well as logisticians. For the JTAV capability to be fully exploited, the data need to be integrated into operational systems, such as the Global Status of Resources and Training System (GSORTS) and JOPES. JTAV will provide the most

---

<sup>2</sup> U.S. Department of Defense, Deputy Under Secretary of Defense (Logistics), *DoD Logistics Strategic Plan*, 1998 edition, p. 20.

---

accurate information available on logistics assets and personnel available in the units—the same information that serves as the backbone of GSORTS reporting. Additionally, JTAV will provide the most accurate information available concerning logistics assets and personnel that have deployed—information necessary to be incorporated into JOPES. The GCSS COP will be a primary logistics interface with operational systems. JTAV support to COP is key to the full integration of logistics information into the operational picture.

## INTERNAL INTEGRATION

Asset visibility requirements are affected by the way each DoD component performs its mission. For example, the Air Force usually deploys to a location that supports aircraft and subsequently remains contained to that area supporting flight operations. Navy units usually deploy on a ship, and operations remain associated with the ship. The Army, on the other hand, deploys to a location and disperses to engage in combat. As a result, the ability to provide asset visibility is more difficult. The Marine Corps has similar visibility difficulties as the Army. Consequently, each DoD component is developing an internal JTAV capability to meet its needs in relation to its assigned mission. However, the JTAV needs of the JTF commander include rapid access by a single joint user to the component initiatives. Therefore, the military services should develop their initiatives in concert with the overall JTAV concept and ensure that the data provided are as timely and accurate as possible.

### Army Total Asset Visibility

The Army has been a leader in identifying visibility deficiencies and developing capabilities. ATAV is an automated capability to provide total visibility of Army assets and aid strategic decision-making by providing a single authoritative source of asset information. ATAV assimilates data from as many as 42 data sources to provide users with a correct and complete response. ATAV provides the following information:

- ◆ *Asset quantity and condition.* On-hand quantity, due-in quantity, due-out quantity, and condition.
- ◆ *Force structure* (down to company level).
- ◆ *Authorizations.* Authorized quantities for major items and retail requirement objectives for repair parts.

- ◆ *Item information.* On-line information from the Army Master Data File and Federal Logistics Information System.
- ◆ *In-transit visibility (ITV) information.* Assets by document number, stock number, voyage and flight number, transportation control number, and radio frequency tag.

## Navy Total Asset Visibility

In 1992, the Navy expanded DoD's capabilities for wholesale and retail asset visibility with its Virtual Master Stock Item Record (VMSIR) program. VMSIR linked Navy wholesale, retail, and residual assets into one virtual database that enables item managers to use and redistribute assets efficiently. The Navy also worked with DLA to provide DLA access to Navy materiel. Today the Navy has achieved numerous TAV capabilities as outlined in the *Navy TAV Strategic Plan*,<sup>3</sup> and is developing many new initiatives that will achieve Navy, NPR and *DoD Logistics Strategic Plan* goals for TAV. The following areas are targeted for TAV:

- ◆ Afloat asset visibility for operational shipboard assets
- ◆ Sponsor-owned materiel and government-owned materiel controlled by hardware system commands and program managers
- ◆ Navy ICP and Defense Reutilization and Marketing Service (DRMS) link that permits reviews of disposal assets by an integrated materiel manager to offset procurements automatically
- ◆ Assets under repair for piece parts at both organic and commercial repair activities
- ◆ Web-based tools that educate users and expand user access to emerging DoD TAV initiatives.

Additional Navy TAV programs and initiatives are in the *Navy TAV Strategic Plan*.

## Air Force Total Asset Visibility

The Air Force has been a leader in efforts to provide visibility of consumables to DLA item managers for the purpose of cross-leveling between military services. In addition, the Air Force performed two studies to establish an Air Force JTAV

---

<sup>3</sup> The *Navy TAV Strategic Plan* is available at <http://www.ntav.navy.mil>.

---

strategy. The first study culminated with the publication of *Total Asset Visibility—Improving Logistics Capabilities*.<sup>4</sup> It documents the evolution of TAV capabilities by DoD and identifies requirements for the Air Force. A follow-on study, *Total Asset Visibility—Roadmap to the Future*, specifies an execution strategy to invest in three areas—policy, education and training, and systems development and integration—to achieve an Air Force TAV capability.<sup>5</sup> For those areas, the Air Force has identified the following 12 initiatives (listed in priority):

- ◆ Establish a cross-functional JTAV management structure in the Air Force
- ◆ Train Air Force logisticians at technical schools on procedures related to JTAV
- ◆ Educate Air Force logisticians on how to apply JTAV and benefits it provides
- ◆ Develop an Air Force policy and procedural framework to support JTAV
- ◆ Develop Air Force procedures to distribute assets in theaters of operation efficiently and effectively
- ◆ Improve the visibility of the logistics pipeline
- ◆ Improve asset visibility between the base transportation community and base supply
- ◆ Improve the Air Force's Standard Base Supply System interface with DLA's Standard Automated Materiel Management System
- ◆ Improve the visibility of assets in storage at base level
- ◆ Implement a suite of AIT devices with the other military services to improve asset visibility
- ◆ Provide an integrated source of asset visibility data generated by base maintenance activities
- ◆ Improve the visibility of assets being repaired at depots.

## Marine Corps Total Asset Visibility

The Marine Corps has embraced TAV concepts by including TAV requirements in the FY98 Installations and Logistics Campaign Plan and making TAV a

---

<sup>4</sup> U.S. Air Force, *Total Asset Visibility—Improving Logistics Capabilities*, HQ USAF/LGXX, October 1995.

<sup>5</sup> U.S. Air Force, *Total Asset Visibility—Roadmap to the Future*, HQ USAF/LGXX, December 1995.

required operational capability in the Marine Corps Master Plan. The Marine Corps has invested much time and many resources in developing wholesale and retail TAV programs as well as solidifying their integration with JTAV. The following initiatives encapsulate Marine Corps efforts:

- ◆ Testing and development of interservice visibility and redistribution of reparables and consumables
- ◆ TAV requirements incorporated in the Asset Tracking Logistics and Supply System, the future Marine Corps materiel management system
- ◆ Web application prototype of internal Marine Corps visibility from wholesale to consumers
- ◆ Asset visibility capability for retail use, secondary item sourcing, and redistribution
- ◆ Logistics Bases Inventory Visibility, a Web application that gives asset visibility and the ability to make redistribution decisions to wholesale activities
- ◆ An extensive education process to solidify field “buy-in” and set the foundation for TAV expansion.

## Defense Logistics Agency

DLA was a leader in developing the first retail-to-retail redistribution effort facilitated by JTAV. DLA developed the Personal Computer Logistics Information Network (PC LINK), a Windows-based software package designed and developed by the Defense Automatic Addressing System Center (DAASC) and the Defense Logistics Services Center. PC LINK provides access to many logistics databases, both inside and apart from DLA, from one entry point using one user identification and password. For example, PC LINK can access the following DLA systems:

- ◆ Interrogation Requirements Information System for items available from all defense reutilization and marketing offices
- ◆ DAASC Inquiry System for communication routing identifiers, DoD activity address codes, and military assistance program address codes
- ◆ LIPS for requisition status by document number of items ordered by all military services
- ◆ Standard Automated Materiel Management System for wholesale item inventory and supply management information at DLA supply centers.

---

In addition, PC LINK can also access the following systems and records external to DLA:

- ◆ ATAV for the visibility of stock levels in Army commands
- ◆ VMSIR for the visibility of stocks at Navy stock points
- ◆ Worldwide Port System for the visibility of military cargo through common-use ocean ports
- ◆ General Services Administration Multi-Use File for Interagency News for the visibility of requisitions in the past 12 months.

## U.S. Transportation Command

OSD assigned USTRANSCOM the responsibility to develop and implement an ITV capability. GTN is the primary tool for providing that visibility; however GTN is more than ITV. GTN is primarily the command and control system for USTRANSCOM. As a result, ITV and JTAV have no effect on the bulk of the GTN mission. Conversely, JTAV includes a broader focus than ITV (i.e., in-storage, in-process, and in-theater). As a result, JTAV and GTN have complementary capabilities. One of GTN's principles is to operate ITV source systems in a shared data environment to support real-time access to information. GTN achieved this objective in its initial operating capability in March 1997 when it became available to customers of the Defense Transportation System.

The second principle is to provide accurate, automated source data and rapid transmission to users. Several efforts, such as the Defense Transportation Electronic Data Interchange Program and Web access to GTN, address those challenges. When fully operational, GTN will access data from a variety of systems that support the Defense Transportation System. These systems include DTRACS, Transportation Coordinator's Automated Information for Movement System II, Worldwide Port System, and Global Air Transportation Execution System. The *Defense Intransit Visibility Integration Plan (Revised 1997)* provides more information on ITV.<sup>6</sup>

## Medical Logistics Total Asset Visibility

The medical logistics community has been a leader in efforts to provide visibility of medical logistics assets in field and fixed facilities and in the commercial sector. Medical Logistics Total Asset Visibility is the ability to provide timely and accurate information on the location, status, and identity of medical equipment and supplies, including blood. This capability also includes commercial asset visibil-

---

<sup>6</sup> U.S. Transportation Command, *Defense Intransit Visibility Integration Plan (Revised 1997)*, May 1997.

ity—the capability to provide timely and accurate information on the location, movement, status, and identity of government-furnished materiel and equipment and noncontractual (commercially owned) materiel and equipment. The Joint Medical Asset Repository, the medical logistics shared data server, is the authoritative source for medical logistics data.

## BUILDING THE INTEGRATED ENVIRONMENT

Building the integrated data environment for JTAV requires strategies that address the primary areas that influence the JTAV mission. Areas requiring focused effort are system development, information environment, customer support, and technology. The following focus areas and companion strategies are relevant.

### Focus Areas

To enhance the JTAV capability that has been developed, the following areas need to be addressed:

- ◆ *JTAV development and fielding.* The primary thrust behind the underlying JTAV concept is to integrate and make data available to all parties who require them. The JTAV initiative is one of the largest integration efforts undertaken by DoD and will take a coordinated approach to accomplish. The JTAV system architecture takes advantage of the latest technology and architectural concepts.
- ◆ *Large number of information-sharing initiatives.* In the last several years, a large number of information and data-sharing projects have been initiated by DoD. Some initiatives set data-sharing standards as their primary goal, and some strictly promote the sharing of information. JTAV needs to leverage data standardization programs and data-sharing initiatives to expedite a complete, timely asset visibility capability.
- ◆ *Increased customer expectations for custom support.* Closely paralleling the private sector, DoD customers are beginning to expect suppliers to tailor their product to meet special needs. In many cases, customers also need assistance in determining the best way to use the data provided by the JTAV capability.
- ◆ *A dynamic, rapidly changing environment.* Today's environment is characterized by rapid change and the rate of change is accelerating. The JTAV initiative needs to identify opportunities for change early and provide the procedures to implement changes rapidly and effectively. JTAV facilitates the integration of functional, operational, and business processes that operate independently.

---

## Strategies

To meet the challenges offered by the four focus areas in accomplishing the JTAV mission, the JTAV Office will implement the following four companion strategies:

- ◆ *Strategy I. Continue to develop and field the JTAV capability incrementally by taking advantage of emerging technologies.* Source data will be obtained through AISs that support functional areas and will be accessed incrementally. Fielding schedules to the CINCs will be phased to allow for rapid prototyping, customer feedback, and testing during each deployment. The architectural configuration has been revised to exploit Web technology and support direct, on-demand access to data at the source.
- ◆ *Strategy II. Integrate the JTAV capability into the overall GCSS and other DoD data-sharing initiatives.* The JTAV capability will be a key component of the overall GCSS. JTAV will provide the capability to access distributed data across DoD, including data on nontraditional supply assets, such as program manager materiel, unit-level operations and maintenance assets, and contractor or vendor-managed materiel. JTAV development will be used to define requirements for the DoD shared data environment necessary to achieve GCSS.
- ◆ *Strategy III. Provide tailored customer support.* JTAV's incremental building block design and adherence to DoD and commercial standards allow JTAV to be tailored to meet a variety of customer needs. To support the customers, the JTAV capability can be used alone or as a data feed to customer-developed applications. Each user community can tailor applications to improve their processes. Additionally, JTAV will support access to data for decision support applications, such as the Advanced Logistics Program, Advanced Concept Technology Demonstration, and COP.
- ◆ *Strategy IV. Institute a continual quality improvement program.* In today's dynamic environment, a key to success is to modernize by implementing change effectively. The JTAV Office will institute a shared data quality improvement program that emphasizes data quality and technology insertion that is consistent with DoD guidance.

Appendix A lists the key activities, organizational responsibilities, and milestones necessary to implement the strategies. The milestones are not intended to provide all the information necessary for implementation. Implementation plans will be required as well as numerous meetings and conferences. The milestones serve as a strategic guide for developing the detailed plans.

Appendix A consists of two tables. The first table lists the actions required by the JTAV Office. This table is organized to coincide with the major phases of the

JTAV “to be” system architecture as described in the JTAV “*To Be*” *System Architecture Implementation Plan*. The strategies are cross-referenced to each milestone. The second table consists of actions required by organizations external to the JTAV Office to implement the strategies. These milestones are at a high level. Each organization tasked with a milestone responsibility should carefully review the underlying requirements and establish a plan of action.

## SUMMARY

Despite significant changes in national and military objectives, JTAV continues to be developed with national, DoD, logistics, and information management plans and strategies. JTAV shares common principles and objectives with the DPG, QDR, and *Joint Vision 2010*. JTAV capabilities are part of the vision in the *DoD Logistics Strategic Plan* and a key objective of that plan’s goal to reduce logistics response time.

Four areas that require special attention to ensure JTAV success are system development efforts, the information environment, customer expectations, and technology change. The following four strategies address those areas:

- ◆ Continue to develop and field the JTAV capability incrementally by taking advantage of emerging technologies
- ◆ Integrate the JTAV capability into the overall GCSS and other DoD data-sharing initiatives
- ◆ Provide tailored customer support
- ◆ Institute a continual quality improvement program.

