Chapter 1
Introduction

Joint Total Asset Visibility (JTAV) is the capability to provide users with timely and accurate information on the location; movement; status; and identity of units, personnel, equipment, and supplies. JTAV also facilitates the ability to use that information to improve the overall performance of DoD's logistics practices. The ability to identify materiel and personnel assets and know their exact locations has long been recognized as a critical DoD need. The state of the art of today's information technology supports the development of a JTAV capability that extends worldwide to all DoD logistics and personnel activities.

PURPOSE

This plan is a guide for understanding JTAV, its major parts, their relationships, and implementation strategies. It serves as a corporate blueprint and accordingly is at a high level. This strategic plan

- reviews the background of the JTAV initiative;
- provides goals, strategies, and milestones;
- describes current capabilities; and
- presents planned improvements to the current JTAV capability.

BACKGROUND

In every major deployment in the 20th century, DoD has been plagued by one constant difficulty—the inability to *see* assets throughout the logistics pipeline. This deficiency degrades the ability to provide agile, flexible logistics. To ensure combat capability, the United States has resorted to *brute force* logistics. During Operations Desert Shield and Desert Storm, the United States shipped approximately 40,000 containers to the Middle East. More than 20,000 containers had to be opened, inventoried, resealed, and reinserted into the transportation system because personnel in theater did not know the contents or final consignees. More than 8,000 containers remained to be opened when the war ended. Until DoD institutes a comprehensive JTAV capability, similar problems will continue during future conflicts.

VISION AND MISSION

The JTAV vision is to provide a joint capability that provides access to timely, accurate, and useful data and information that enables users worldwide to accomplish their mission in full support of *focused logistics*.[1]

The JTAV mission consists of four activities:

- Complete the operational and system architectures in accordance with established guidance for the logistics and personnel segments of the Global Combat Support System (GCSS) data environment.
- Design, develop, field, and manage the JTAV logistics and personnel data environment and integrate the JTAV capability into emerging GCSS requirements.
- Work with various business areas to demonstrate the value of using the JTAV and GCSS data environment to reduce cost and increase readiness.
- Develop and implement a strategy to continually modernize the JTAV and GCSS capabilities.

JTAV SCOPE

JTAV includes wholesale and retail echelons of support as well as all military services, defense agencies, commanders-in-chief (CINCs), and commercial enterprises that use and support an item during its life cycle. The initial JTAV effort is limited to DoD, and federal agencies and commercial activities that support DoD. JTAV may eventually expand to other federal agencies, non-governmental organizations (NGO), and allied military organizations. When fully implemented, JTAV will also include visibility over blood supplies, munitions, and war reserve materiel. JTAV includes the following types of data:

- Units, their personnel, and equipment
- Personnel, equipment, and supplies in the DoD logistics system not assigned to a unit
- Supplies and equipment in supply (in-storage), transportation (in-transit), and maintenance and procurement (in-process) activities.

[1] Focused logistics is an operational concept of the Chairman of the Joint Chiefs of Staff's *Joint Vision 2010* that emphasizes the fusion of logistics information and logistics technologies.

SHORT-TERM GOALS

In the short term, JTAV will adhere to the following fundamental principles:

- Make data universally available through a standard mechanism and single access point.
- Use existing capabilities as much as possible.
- Maximize the use of commercial off-the-shelf practices, capabilities, and technologies.
- Support DoD readiness and sustainability objectives for weapon systems, equipment, and personnel.
- Provide high-quality products and services through a timely, flexible, and cost-effective worldwide capability that sustains integrated, joint, and multinational military and peacetime operations.
- Work with acquisition and maintenance managers to support total life-cycle management of weapon systems and equipment during development, production, fielding, and operational use through final disposition.
- Support the flow of logistics with relevant asset data as operations progress from peacetime to contingency and wartime.
- Focus improvement initiatives on process change and incorporate best business practices regardless of the source.

LONG-TERM GOALS

The long-term JTAV goals are to provide accurate and timely information within a specified, integrated context to enable business, functional, and operational processes to achieve benefits in the following three broad areas:

- More accurate operational planning
- Improved operational flexibility and increased combat readiness
- Reduced operating costs.

The categories are not mutually exclusive. In many cases, JTAV benefits apply to all areas. The following examples represent specific benefits that JTAV enables:

- Optimization of assets at maintenance and repair activities
- Declining backlogs at ports and depots
- More responsive supply support
- Reduced inventory levels
- More accurate operational assessment.

STRATEGIES

To meet the challenges of the JTAV mission, the JTAV Office will implement the following four strategies:

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

These strategies are fully discussed in Chapter 4.

CRITICAL SUCCESS FACTORS

Several factors are critical to the success of the JTAV effort. The following factors are outside the control of the JTAV Office and require cooperative support by the military services and defense agencies:

- *Communications*. The JTAV concept rests on assured and reliable communications. JTAV success will be constrained by the quality and capacity of communications lines.
- *Integration*. JTAV is primarily the integration of data, automated information systems (AISs), standards, and communications networks. JTAV can facilitate the integration of functional, operational, and business processes that have operated independently.
- *Security*. Maximizing JTAV capabilities requires supporting a wide range of information exchange needs. To support the needs, several security

issues need to be addressed. The exchange of unclassified information from highly classified systems to ones with lower classifications, access controls, encryption, and data aggregation are key security issues that need to be resolved.

- *Data quality*. JTAV success depends on the quality and timeliness of the data provided to users. Data availability and data accuracy are constrained by quality controls of source system data. Because data in JTAV are readily available and consequently widely used, data providers should feel a heightened sense of responsibility to provide data that are as timely and accurate as possible.

- *Business rules*. The following two types of business rules are relevant to JTAV:

  - *Visibility business rules*. Visibility rules govern what information is exchanged, how it is exchanged, and who has access to it. Although DoD policy considers data to be a corporate, shared asset and DoD 4140.1-R prescribes logistics policy, the data providers and users are responsible for implementation.[2] Accessibility to required logistics data necessitates cooperation of service and agency owners of logistics AISs. The JTAV Office serves as a facilitator.

  - *Functional business rules*. Functional rules determine how business processes are performed and how the information is used. Business processes may be improved by taking advantage of improved visibility capabilities.. Although these rules are the responsibility of the applicable functional offices, the JTAV Office can facilitate a revision of the rules.

REPORT ORGANIZATION

The remainder of this report is organized into three chapters and six appendices:

- Chapter 2, *Current Capabilities*. Strategies are often dependent upon how far a program has progressed along the implementation schedule. This chapter discusses fielding progress and how the JTAV capability is currently being used.

- Chapter 3, *JTAV Architectures*. The JTAV “to be” system architecture is the foundation on which the JTAV capability depends. Successful migration to the new architecture is a critical component of this strategic plan.

[2] U.S. Department of Defense, *DoD Materiel Management Regulation*, DoD 4140.1-R, January 1993.

This chapter describes the JTAV "to be" system architecture and contrasts it with the current architecture.

- Chapter 4, *Challenge of Integration*. In large part, the success of the JTAV strategies hinges on successful integration. This chapter presents the major components of JTAV and complementary efforts outside the JTAV scope that require integration. This chapter also includes a discussion of the recommended JTAV strategies.

The six appendices provide additional information on the JTAV strategies:

- Appendix A, *Milestones*. This appendix identifies actions needed to implement the strategies, including key activities, organizational responsibilities, and milestones.

- Appendix B, *Organization, Metrics, and Funding*. The success of any strategy is dependent on the organizational infrastructure and financial resources supporting the effort. This appendix discusses the JTAV organization, funding program, and how the JTAV initiative will be measured for success.

- Appendix C, *Requirements*. The strategies are an outgrowth of the requirements established by the customers. This appendix provides examples of JTAV requirements for all levels of support to assist readers in understanding some needs for the JTAV capability. The requirements identified are approved by the Office of the Secretary of Defense (OSD); future requirements will be identified, prioritized, and added. The primary source document for this chapter is the *Functional Requirements Document for Joint Total Asset Visibility*.[3]

- Appendix D, *Automatic Identification Technology*. The success of the JTAV capability depends on the ability of participating AISs to quickly and accurately capture and transmit data. This appendix discusses automatic identification technology, an automated method to accomplish those tasks.

- Appendix E, *JTAV in the 21st Century*. Strategies require periodic review and adjustment. This appendix looks at logistics in the 21st century and some possible impacts on the JTAV strategies.

- Appendix F, *Abbreviations*. A compendium of abbreviations is provided for the reader's convenience.

[3] JTAV Office, *Functional Requirements Document for Joint Total Asset Visibility*, July 1997.