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MBA PROFESSIONAL REPORT

**System Support/Sustainment Plan Platform for the Defense Enterprise
Accounting Management System (DEAMS)**

**By: Major Jarvis R. Baker
December 2006**

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**SYSTEM SUPPORT/SUSTAINMENT PLAN PLATFORM FOR THE DEFENSE
ENTERPRISE ACCOUNTING MANAGEMENT SYSTEM (DEAMS)**

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Submitted in partial fulfillment of the requirements for the degree of

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**NAVAL POSTGRADUATE SCHOOL
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Secretary of Defense Donald Rumsfeld, in a memo dated 19 July 2001, indicated that one of his highest priorities in transforming the Department of Defense (DoD) is to have reliable, accurate and timely financial management information. To facilitate this, Secretary Rumsfeld established the Business Management Modernization Program (BMMP). The BMMP is an implementation program charged with transforming the DoD's framework. One of the initiatives of the BMMP is to provide a modern financial management system that transforms business operations to achieve improved warfighter support while enabling financial accountability. The tool, the Defense Enterprise Accounting Management System (DEAMS) is a modified Commercial Off the Shelf (COTS) financial management system. DEAMS is expected to transform DoD financial management so that timely and accurate information supports effective decision-making. According to DoD guidance, to effectively develop, acquire, test, and support DEAMS it is critical that system resources are identified, tracked and evaluated. Through out this document, this process is referred to as a support/sustainment plan. To date, a viable system support/sustainment plan has not been developed for DEAMS. The focus of this MBA project is to create a platform for a support/sustainment plan. The support plan is a living management tool. Its purpose is to ensure the system performs to warfighters requirements and identifies system performance short-comings over its life cycle.

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I. INTRODUCTION

A. BACKGROUND

Secretary of Defense Donald Rumsfeld, in a memo dated 19 July 2001, indicated that one of his highest priorities in transforming the Department of Defense (DoD) is to have reliable, accurate and timely financial management information. To facilitate this, Secretary Rumsfeld established the Business Management Modernization Program (BMMP). The BMMP is an implementation program charged with transforming the DoD's framework.

One of the initiatives of the BMMP is to provide a modern financial management system that transforms business operations to achieve improved warfighter support while enabling financial accountability. The tool, the Defense Enterprise Accounting Management System (DEAMS), is a Commercial Off the Shelf (COTS) financial management system. DEAMS is expected to transform DoD financial management systems and processes so that timely and accurate business information supports effective decision-making. The goals are to (a) establish cost management and performance measurement capabilities, (b) provide for full compliance with Chief Financial Officer (CFO) Act and Government Management Reform Act requirements, (c) promote development of DoD-wide financial management solutions and processes and (d) improve financial management visibility. At a minimum, DEAMS will replace the following accounting and finance systems: ¹

- Airlift Services Industrial Fund Computer System (ASIFICS)
- Air Force General Accounting and Finance System (GAFS/R/BL)
- Integrated Accounts Payable System (IAPS)
- Automated Business Services System (ABSS)
- Wide Area Workflow (WAWF) - for receipt and acceptance processing

¹ Defense Enterprise Accounting and Management System Website. Accessed Oct 2006 from <http://deams.transcom.mil/>

- Surface Deployment and Distribution Command (SDDC) Financial System
- SDDC Billing System
- Military Sealift Command (MSC) Financial Solution (Transportation Working Capital Funds operations only)

According to DoD guidance, to effectively develop, acquire, test, and support DEAMS it is critical that system resources be identified, tracked and evaluated. Throughout this document this process is referred to as a support/sustainment plan, which is a management tool to be used for decision making at various levels. To date, a viable system support/sustainment plan has not been developed for DEAMS. The focus of this MBA project is to create a practical platform for a support/sustainment plan. The platform is the framework that declares the basic principles, format and process for devising the support plan. The suggested support plan is a living management tool and its purpose is to identify system performance short-comings and ensure that the system performs to warfighters requirements throughout its life cycle.

B. PURPOSE

The purpose of this MBA project is to create the foundation for a formal support/sustainment plan that can be used to support DEAMS and other similar business enterprise initiatives. In theory, the plan should be implemented as soon as the acquisition life cycle begins. DEAMS is approaching milestone B and therefore efforts to initiate the support plan should occur immediately

C. SCOPE

The scope of this MBA project includes literature reviews of: (1) documentation from the Functional Management Office (FMO) library, (2) guidance on DOD logistic supportability, (3) critical support factors and factor requirements necessary to sustain DEAMS, and (4) measures of evaluation (MOE), a means of measuring whether essential factor requirements are being met. The project also includes (5) an evaluation of essential factors to provide insight into their utility, (6) a MOE review to determine if indicators used to measure performance of essential factors are relevant, (7) metrics for each essential factor, (8) concerns and issues related to the support plan and (9) a recommended course of action to mitigate the risk associated with each identified issue.

D. RESEARCH QUESTIONS

Primary Question:

What are the characteristics of a practical platform for a support plan that will sustain DEAMS from its conception to its disposal?

Secondary Question:

What are the associated risk/issues with the support/sustainment plan?

E. METHODOLOGY

The research methodology used in this MBA Project consists of the following steps:

1. Conduct a literature review and analysis of DoD related guidance and support documentation of previous implemented DoD administrative systems.
2. On-site visit to the FMO and ongoing telephone interviews with FMO and Program Management Office (PMO).

F. BENEFITS OF STUDY

This MBA Project benefits stakeholders by providing a practical platform for a support strategy for the DEAMS program. The platform could also prove useful as a template that can be used to sustain business enterprise initiatives. This allows the DoD to utilize its resources more efficiently without sacrificing effectiveness.

G. CHAPTER OUTLINE

Chapter I of the MBA Project is the introduction. It provides a brief system background, introduces two research questions and explains the benefits of the study. Chapter II describes DEAMS' current stage within the Defense Acquisition Life Cycle. It identifies the phase, milestone and the anticipated actions needed to progress. Chapter III provides a literature review of policies, regulatory guidance and directives that govern existing DoD system support/sustainment plans. Chapter IV presents the recommended support/sustainment plan platform to be used as a management tool for PMs, stakeholders and decision makers. Chapter V analyses the existing plan and the suggested support/sustainment plan. Chapter VI introduces concerns of the suggested plan and

Chapter VII recommends options for each concern. The project report concludes in Chapter IX with conclusions, recommendations and directions for future research.

II. DEFENSE ACQUISITION LIFE CYCLE CURRENT STAGE ANALYSIS

A. INTRODUCTION

The purpose of this chapter is to introduce the defense acquisition life cycle and provide information on the status of the Defense Enterprise Accounting Management System (DEAMS) acquisition. More specifically, the chapter presents a brief description of the life cycle, addresses DEAMS's current phase and milestone decisions and identifies the steps necessary to enter the next phase and milestone.

B. OVERVIEW: DEFENSE ACQUISITION LIFE CYCLE?

As defined and established by the Department of Defense (DoD) Instruction 5000.2, the defense acquisition framework is an event-based process which acquisition programs progress through a series of milestones associated with significant program phases (see Figure 1). The five phases are Concept Refinement (CR), Technology Development (TD), System Development and Demonstration (SDD), Production and Deployment (P&D) and Operations and Support (O&S). The three major milestones are:

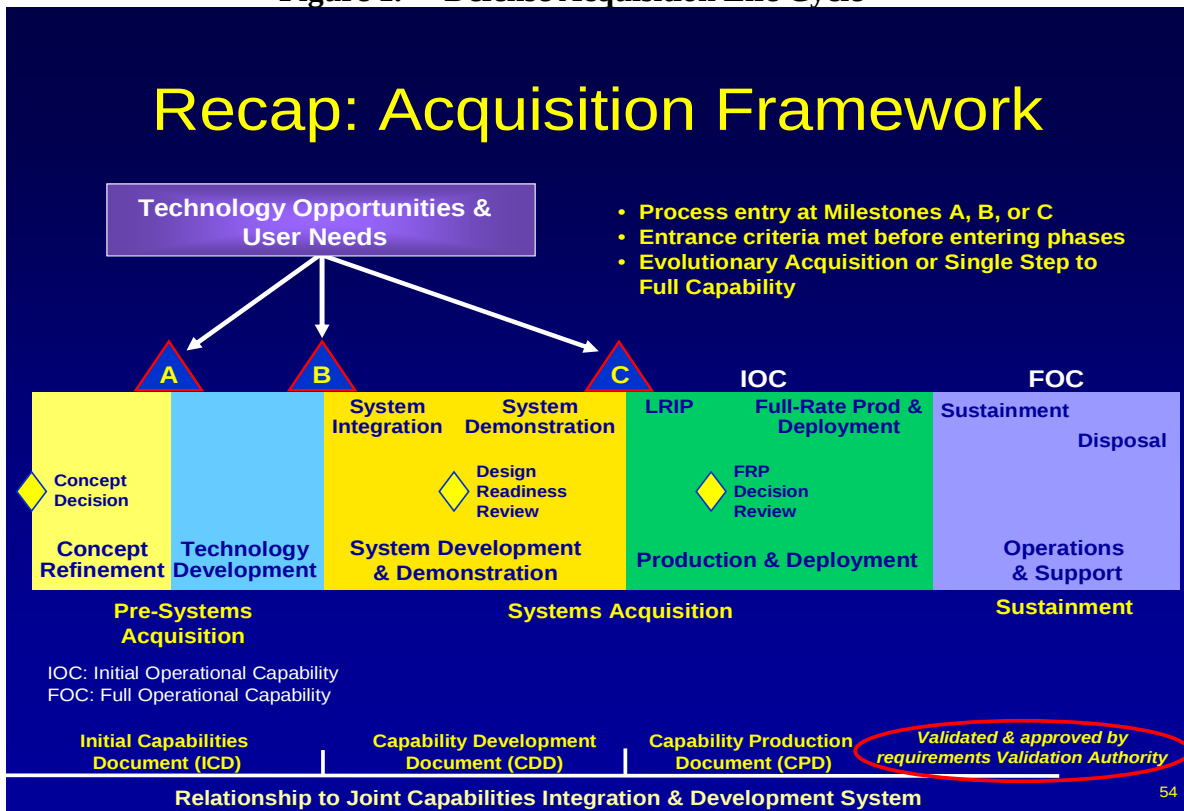
Milestone A - After the CR is complete; allows entry into TD

Milestone B – After the TD is complete; allows entry into SDD

Milestone C – After the SDD is complete; allows entry into P&D²

² (DoD) Instruction 5000.2, the defense acquisition framework

Figure 1. Defense Acquisition Life Cycle



3

C. CURRENT PHASE/MILESTONE

DEAMS is formally in the acquisition process. It has met milestone A and is entering the TD phase of milestone B. As part of the acquisition process, the Functional Management Office (FMO) has organized several working groups and Integrated Project Teams (IPT). Each IPT is comprised of experienced DoD personnel, project management and support service contractors, and various subject matter experts. The FMO is in the midst of converting required capabilities into system performance specifications and translating user-defined performance parameters of subsystems into a total system solution.⁴ The following subsystems are being integrated: general ledger,

³(DoD) Instruction 5000.2, the defense acquisition framework

⁴ DoD Instruction 5000.2, Operation of the Defense Acquisition System, Chapter 3, Procedures

funds control, billings and collections, accounts receivables, commitments and obligations, accounts payable, cost accounting, cost management, assets management and analysis/decision support⁵.

The DEAMS Program Management Office (PMO) confirmed that DoD officials verbally approved an accelerated acquisition schedule for the second phase of DEAMS. The revised schedule extends DEAMS capabilities throughout the Air Force approximately a year sooner than originally planned. The Air force increment will be implemented near the beginning of Fiscal Year 2009.⁶

D. STEPS NEEDED TO ENTER NEXT PHASE/MILESTONE

The PMO and FMO are focused on getting final approval of the Capability Development Document (CDD). This is crucial to moving into the next acquisition phase: System Development and Demonstration (SDD). The CDD supports a Milestone B decision review and is a condition of the Milestone Decision Authority's (MDA) approval. At the same time, the FMO must prepare for the SDD by continuing System Integration (SI) and System Demonstration (SD). A DEAMS Design Readiness Review (DRR) or assessment of its design maturity is forth coming. The DRR approval will allow DEAMS to move officially into SD and show that the program is progressing satisfactorily.⁷

In conjunction with the DRR, DEAMS must define its processes for managing and/or approving the development of reports, interfaces, modifications, upgrades and re-procurements.⁸ Finally, the FMO must begin development of its Information Support Plan (ISP). This brings us to the purpose of the project: to create a practical platform for a DEAMS support/sustainment plan. Key to creating the plan is an understanding of the existing guidance. The following chapter provides a literature review of the DoD regulatory policies, directives and instructions that are available to assist in creating a

⁵ Defense Enterprise Accounting and Management System Website. Accessed Oct 2006 from <http://deams.transcom.mil>

⁶ Defense Enterprise Accounting and Management System Current Account, Vol 1 No.11, Nov 2006

⁷ DoD Instruction 5000.2, Operation of the Defense Acquisition System, Chapter 3, Procedures

⁸ Newcome, Randy. DEAMS Deputy FMO, personal interview Jul 2006

support/sustainment plan. The literature review gives a brief overview of the DoD's policy, identifies numerous DoD programs and provides an update on the status of the current DEAMS's support plan.

III. LITERATURE REVIEW

A. OVERVIEW: SYSTEM SUPPORT/SUSTAINMENT PLAN

A Computer Resources Life Cycle Management Plan (CRLCMP) as described by Department of Defense (DoD) Instruction 5000.2, Air Force Supplemental 1, is a program management tool that describes the development, acquisition, test, and support plans of an information system over its life cycle. It focuses on identifying and evaluating resources that are critical to the support of an information system. Prior to the revision of the DoD 5000-series regulation, programs were required to prepare a CRLCMP for Major Acquisition Information Systems (MAIS). Currently, there is no strict policy that requires programs to create a CRLCMP. Despite this, the DoD has tried extensively to provide program managers (PM), stakeholders and decision makers guidance on the development of information system support/sustainment plans. The management tools are intended to identify major requirements, support risks, critical issues and metrics over the life cycle of an in-house developed system, a COTS system or a modified COTS system.

Policy

The only information system sustainment strategy currently mandated by policy is the Information Support Plan (ISP) introduced in the defense acquisition life cycle framework⁹. The “management tool” (formerly called the Command, Control, Communication, Computers, and Intelligence Support Plan (C4ISP) is intended to explore the information-related needs of an acquisition program in support of the operational and functional capabilities the program either delivers or to which it contributes.¹⁰ Regardless of acquisition category level, provided the program is a product of the Joint Capability Integration and Development System (JCIDS) process, all acquisition programs (except Defense Space Acquisition Board-governed programs) must

⁹ DAU, Ask a Professor, “ISP,” Accessed Oct 2006 from <http://akss.dau.mil/askaprof-aks>

¹⁰ DOD Defense Acquisition Guide, Chapter 7.3 Interoperability and Supportability of Information Technology and National Security Systems, Section 7.3.6

submit an ISP at Milestones B and C¹¹. Similar to the CRLCMP, it identifies resources for supportability. The ISP goes a step further. It documents dependencies and interfaces of the MAIS or modified COTS system, focusing more on interoperability and synchronization than basic sustainment.

Even though the ISP is mandatory for major acquisition programs, there is a waiver process. The Assistant Secretary of Defense for Networks and Information Integration/DOD Chief Information Officer has the authority to grant an ISP waiver. Also, the requirement for all programs initiated in the JCIDS process to have an ISP has been an area of contention. The area of contention is whether or not a program replacing a legacy system developed before the implementation of JCIDS and the acquisition life cycle framework is exempt from the ISP mandate. Furthermore, if an ISP has been developed it is not always used. There are no hard figures to how many programs go without a useable ISP, but it is significant enough that it has been recognized.¹² If the ISP mandate is waived, there is no policy “directed” support/sustainment plan available to the PM, stakeholders or other future decision makers. Fortunately, the DOD has recognized the importance of having a system sustainment strategy and in an attempt to aide the PM and other stakeholders has provided additional instruction and guidance on the subject.

One such document, the Project Management Body of Knowledge Guide describes a system sustainment plan as the tracking of support functions necessary to maintain the readiness and operational capability of systems, subsystems, and support systems. It encompasses all critical functions related to system readiness, including information management, technical data management, maintenance and training, configuration management, engineering support and system failure reporting/analysis.¹³ The source of the support may be organic or commercial, but its primary focus is to provide a management tool that optimizes sustainability while maintaining system

¹¹ DoD Instruction 5000.2, Enclosure 3, Regulatory Information Requirements, Table E3.T2

¹² DAU, Ask a Professor, “ISP,” Accessed Oct 2006 from <http://akss.dau.mil/askaprof-aks>

¹³ DoD Extension to Project Management Body of Knowledge (PMBOK), “PMBOK Guide,” June 2003.

availability at the lowest total ownership cost (TOC). In their most basic sense, support plans are no more than a platform for outlining, measuring and evaluating how TOC and support/sustainment of a system is managed over its life cycle. However, even though the DOD recognizes the importance of a support strategy, there is no one DOD management tool that is readily available, easily understood, simple to implement and useful to stakeholders that provide such a platform.¹⁴

B. SIMILAR DOD PROGRAMS

Numerous DoD resources, in the form of policies, guidebooks, directives and instructions governing system support/sustainment plans have been created and modified. For the most part, they are all closely related and provide similar direction. The following are some of the many programs that can be used to develop information system support/sustainment plans: Information Support Plan (ISP), Total life cycle systems management (TLCSM), Performance Based Logistics (PBL), Supportability Strategies (SS), Integrated Logistics Support Plans (ILSP), Acquisition Logistics Support Plans (ALSP), Users Logistics Support Summary (ULSS), Post-Production Support Plans (PPSP), Life Cycle Management Plans (LCMP), Computer Resources Life Cycle Management Plan (CRLCMP), and Product Support Management Plans (PSMP). Listed below are excerpts from resources that demonstrate the abundance and likeness of DOD governance available for system support strategies:

Defense Acquisition Guidebook section 2.3.12 – Product Support Strategy

The program manager should develop a product support strategy for life-cycle sustainment and continuous improvement of product affordability, reliability, and supportability, while sustaining readiness. The program manager should consider inviting Military Service and Defense Logistics Agency logistics organizations to participate in product support strategy development and integrated product teams. The support strategy describes the supportability planning, analyses, and trade-offs used to determine the

¹⁴ GAO, Information technology: DoD's acquisition policies and guidance need to incorporate additional best practices and controls, GAO-04-722

optimum support concept for a materiel system and identify the strategies for continuous affordability improvements throughout the product life cycle.

Defense Acquisition Guidebook section 4.1.3 - Total Life Cycle System Management (TLCSM) in Systems Engineering Cost

It is fundamental to systems engineering to take a total life cycle, total systems approach to system planning, development, and implementation. Total life cycle systems management (TLCSM) is the planning for and management of the entire acquisition life cycle of a DoD system.

Defense Acquisition Guidebook section 5.1.3.1 – Product Support

Product support is a package of logistics support functions necessary to maintain the readiness, sustainment, and operational capability of the system. The overall product support strategy, documented in the acquisition strategy, should include Lifecycle support planning and address actions to assure sustainment and continually improve product affordability for programs in initial procurement, re-procurement, and post-production support. Support concepts satisfy user specified requirements for sustaining support performance at the lowest possible life cycle cost for each evolutionary increment of capability to be delivered to the user.

Defense Acquisition Guidebook section 5.3.1 - Methodology for Implementing PBL

The Performance Based Logistics (PBL) methodology, which is further detailed in the Product Support Guide, is a tool for Program Managers and Product Support Managers as they design product support strategies for new programs or major modifications, or as they re-engineer product support strategies for existing fielded systems. It presents a method for implementing a PBL product support strategy. PBL delineates outcome performance goals of systems, ensures that responsibilities are assigned,

provides incentives for attaining these goals, and facilitates the overall life cycle management of system reliability, supportability, and total ownership costs.

Defense Acquisition Guidebook section 7.3.6 – Information Support Plan

The ISP (formerly called the Command, Control, Communication, Computers, and Intelligence Support Plan (C4ISP) is intended to explore the information-related needs of an acquisition program in support of the operational and functional capabilities the program either delivers or contributes to. The ISP provides a mechanism to identify and resolve implementation issues related to an acquisition program's Information Technology (IT), including National Security Systems (NSS), infrastructure support and IT and NSS interface requirements.

Designing and Assessing Supportability In DOD Weapon Systems: A Guide to Increased Reliability and Reduced Logistics Footprint (commonly referred to as the ‘Supportability Guide’), October 24, 2003

This is the DOD document that defines a framework for determining and continuously assessing system product support throughout its life cycle. It uses the Defense Acquisition Management Framework (as defined in DOD 5000 series policy) and systems engineering processes to define appropriate activities and required outputs throughout a system's life cycle to include those related to sustainment of fielded systems.

DODI 4630.8, Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)

The DOD instruction that implements a capability focused and effects based approach to advanced IT and NSS interoperability and supportability. This approach incorporates both materiel (acquisition or procurement) and non-materiel (doctrine, organizational, training,

leadership and education, personnel, and facilities) aspects to ensure life-cycle interoperability and supportability of IT and NSS throughout DOD.

Air Force Federal Acquisition Regulation (AFFARS) PART 5307 (Acquisition Planning), Part 5307.1 (Acquisition Plans), Subpart 5307.104-91

An Air Force instruction that outlines requirements and procedures for Air Force Life Cycle Management Plans (LCMPs)/Single Acquisition Management Plans (SAMPs)/Commodity Acquisition Management Plans (CAMPs)/Integrated Program Summaries (IPSs).

Air Force Policy Directive 20-5, 10 April 2001, Air Force Product Planning and Management

An Air Force directive that explains that Air Force product support strategies must focus on integrating effective logistics processes across all weapon systems throughout their life cycles while improving the warfighter's ability to perform the mission. Therefore, product support planning must begin early in the acquisition phase of a weapon system, preferably in the Concept and Technology Development Phase, and provide for a seamless transition to sustainment. Product support is defined as "the package of support functions necessary to maintain the readiness and operational capability of weapon systems, subsystems, and support systems. It encompasses all critical functions related to weapon system readiness, including materiel management, distribution, technical data management, maintenance, training, cataloging, configuration management, engineering support, test and evaluation, repair parts management, failure reporting and analyses, and reliability growth. The source of support may be organic or commercial, but its primary focus is to optimize customer support and achieve maximum weapon system availability at the lowest total ownership cost (TOC)."

**Air Force Policy Directive 33-4, Communications and Information
Enterprise Architecting, Section 2 - Policy**

IT and NSS interoperability and supportability needs shall be managed, evaluated, and reported over the life of the system using an Information Support Plan (ISP).

Summary

A closer look at the existing policies reveals the complexity and lack of practical application of the guidance. The intent is to provide a platform for outlining, measuring and evaluating how TOC, support and sustainment of a system are managed over its life cycle. The reality is that the measuring and evaluating process of the support strategies are convoluted, poorly explained in the context of which policy is applicable to which system, and complicated to the point that they lose their usefulness.¹⁵ The only sustainment strategy that is mandated by policy that is close to a “management tool” is the ISP and due to its complexity it can be waived or avoided if the system is not initiated in the JCIDS process or has been around longer the acquisition life cycle framework. To complicate matters more, there are numerous DOD resources, in the form of policies, guidebooks, directives and instructions governing system support/sustainment plans. And to make things worse, the strategies in the policies, guidebooks, directives and instructions are identified by different terms. Unfortunately, the instructions governing the oversight of system sustainment, to include the plans themselves, become no more than bureaucratic layers and obstacles instead of a true platform for determining and continuously assessing system support.¹⁶

C. DEFENSE ENTERPRISE ACCOUNTING MANAGEMENT SYSTEM (DEAMS) SUPPORT/SUSTAINMENT PLAN: CURRENT STRATEGY

Currently, a viable support/sustainment plan has not been developed for DEAMS. However, in accordance with the Defense Acquisition Guidebook, Chapter 7.3.6 all acquisition programs, regardless of acquisition category level are required to submit an

¹⁵ GAO, Information technology: DoD’s acquisition policies and guidance need to incorporate additional best practices and controls, GAO-04-722

¹⁶ DEAMS FMO Interview, June 2006

Information Support Plan (ISP) at milestones B, milestone C and an updated ISP for each major upgrade there after. As stated in the defense acquisition life cycle current stage analysis, DEAMS is yet to reach milestone B. Therefore, an ISP has not been created. In conjunction, it has not been determined by the DEAMS Functional Manager if the ISP, once created, will be the sole support/sustainment plan or if another strategy will be adopted to supplement the DoD mandate.

IV. SUGGESTED SUSTAINMENT STRATEGY PLATFORM

A. OVERVIEW

The suggested support plan platform is a straightforward user friendly management tool for tracking and anticipating system sustainment resources. Existing guidance on the Information Support Plan (ISP), Performance Based Logistics (PBL), Computer Resources Life Cycle Management Plan (CRLCMP) and other DoD support strategies were referenced and used to create this simplified approach to a useful and more practical support/sustainment plan. The critical elements, processes and responsibilities of existing DoD strategies that fostered timely and informed decision making remain a part of the suggested platform.

According to the defense acquisition life cycle framework, sustainment begins at milestone C. It overlaps the Production and Deployment phase with the Operations and Support phase.¹⁷ This suggested support/sustainment plan is intended to be initiated much earlier. The guidance in the suggested strategy calls for the support plan to be implemented at the completion of the Concept Refinement phase and prior to existing milestone A. The foundation of the strategy is to support acquisition and operational performance based requirements while maintaining visibility of resources cost over the life cycle of the system. Resources cost in this sense is more than just dollars. It is time, effort, and other intangibles that keep immature Major Acquisition Information Systems (MAIS), commercial of the shelf (COTS) systems, and modified COTS systems running. The overall strategy is intended to be flexible so it can evolve and be refined throughout DEAMS' life cycle, particularly during future developments, modifications, upgrades and re-procurements that have significant impact on people, systems and services.

The suggested sustainment strategy is flexible and performance driven. The strategy provides the PM and other stakeholders an avenue to view the system from an overarching stand point at any time. Stakeholders can interject focus, and most importantly, can draw from the information provided by the tool when faced with change.

¹⁷DoD Instruction 5000.2, Operation of the Defense Acquisition System, Chapter 3, Procedures

The strategy is designed so that an Integrated Program Team (IPT) creates, deletes, modifies and conducts reviews of essential factors that have been determined to be crucial to system sustainment. Currently, a DEAMS support plan IPT has not been formed and crucial factors in the context of a support plan have not been identified by the program manager. Therefore, the initial essential factors in the suggested support/sustainment plan are modeled after the System Operational Effectiveness (SOE) concept as described in the Designing and Assessing Supportability in DoD Weapon Systems Guide. The SOE concept is used to explain the dependency and relationship between system performance, availability, process efficiency and system life cycle cost. This approach requires proactive coordination and involvement from organizations and individuals from the funding, requirements, acquisition, functional, and user communities.¹⁸ This is fundamental to the success of the strategy. At this time, the DEAMS sustainment essential factors include, but are not limited to funding, supply, maintenance, sustaining engineering, data management, configuration management, manpower, personnel, training, environment, anti-tampering/hacking provisions, supportability, portability and interoperability.

The individual essential factors were derived from a number of resources: DoD Weapons Systems Guide, DoD Instruction 5000.2, CRLCMP, Functional Management Office (FMO) interviews and work and education related experiences. They are the initial elements identified by FMO personnel as critical to system sustainment. This is only a starting point. As explained later in the chapter, if deemed necessary by the evaluation IPT an essential factor may be added, deleted or modified.

Each factor has established performance expectations or requirements that are compared to actual performance measures. The sustainment strategy is in turn reviewed to reevaluate the usefulness of the essential factors, their performance requirements, their measurements of evaluation and if necessary, the steps needed to meet their performance requirements. The significance of the strategy is that it provides a single central repository that manages the history of all previous essential factors and how and why

¹⁸ DoD Designing and Assessing Supportability in DoD Weapon Systems: A guide to increased Reliability and reduced logistics footprint, Oct 24 2003.

they were measured, the methodology of present factors and the theory behind introducing new factors.

B. ESSENTIAL FACTORS

The purpose of the sustainment strategy essential factors is to identify characteristics of the system that are crucial to its effectiveness and maintainability regardless of future developments, modifications, upgrades and re-procurements.

Funding – Planned and budgeted funds required to support developments, modifications, upgrades and re-procurement of DEAMS and the systems impacted by the developments, modifications, upgrades and re-procurement.

REQUIREMENT:

Funds identified in the Planning Programming Budget and Execution (PPBE) process for DEAMS and systems impacted by DEAMS developments, modifications, upgrades and re-procurements.

Supply – The procurement, distribution, maintenance, and salvage of the system and its software and/or its software licenses, to include the determination of kind and quantity.¹⁹

REQUIREMENT:

Software and software licenses are available at the required site for the operating locations.

Operating locations are using software licenses that match the version of the software at the operating location.

Maintenance - Action necessary to retain or restore the DEAMS, its software and/or its software licenses to a specified condition.²⁰

REQUIREMENT:

¹⁹ DAU Glossary of Defense Acquisition Acronyms and Terms, 12th edition (plus updates since publication)

²⁰ DAU Glossary of Defense Acquisition Acronyms and Terms, 12th edition (plus updates since publication)

TBD

Sustaining Engineering (SE) - Technical effort required to support DEAMS in its operational environment to ensure continued operation and maintenance.²¹

REQUIREMENT:

24 hour on-line and/or telephone service is available for operational support.

Local system support personnel/administrators have expertise and authority to provide an acceptable level of technical support.

Data Management – Control and organize DEAMS’ data resources, develop information policies, maintain data, data quality standards, and develop data dictionaries (DISA).²²

REQUIREMENT:

Data resources are centrally maintained and are accessible at a single on-line location within the Defense Information System Agency (DISA) or other designated depository.

The designated depository for data resources are publicized on the DEAMS home page.

Configuration Management - Identify and document DEAMS’ technical and administrative actions taken to create and modify functional and physical characteristics of its processes.²³

REQUIREMENT:

TBD

Manpower - The total number of personnel available to sustain DEAMS.

²¹ DAU Glossary of Defense Acquisition Acronyms and Terms, 12th edition (plus updates since publication)

²² DAU Glossary of Defense Acquisition Acronyms and Terms, 12th edition (plus updates since publication)

²³ DAU Glossary of Defense Acquisition Acronyms and Terms, 12th edition (plus updates since publication)

REQUIREMENT:

Total number of users and support personnel are tracked annually.

Manpower numbers are tracked by categories: (1) Military, (2) Civilian and (3) Contractor.

Personnel – Manpower specialties available to operate and sustain DEAMS.

REQUIREMENT:

TBD.

Training - Level of learning required to adequately perform the responsibilities designated to operate and sustain the system.²⁴

REQUIREMENT:

Personnel assigned to use and support DEAMS are trained up to their expected level of service.

Environment - External and/or internal conditions to DoD that are either natural or self-caused that influence the performance and reliability of DEAMS.²⁵

REQUIREMENT:

Leadership is supportive of the acquisition, deployment, operation and maintenance of DEAMS

Leadership atmosphere is assessed at operating level, command level, service level, DoD level and up if deemed necessary.

Anti-tampering/hacking provisions – The SE activities intended to prevent and/or delay exploitation of critical technologies and information.²⁶

²⁴ DAU Glossary of Defense Acquisition Acronyms and Terms, 12th edition (plus updates since publication)

²⁵ DAU Glossary of Defense Acquisition Acronyms and Terms, 12th edition (plus updates since publication)

²⁶ DAU Glossary of Defense Acquisition Acronyms and Terms, 12th edition (plus updates since publication)

REQUIREMENT:

Review established approach for protecting personnel information.

Provide an annual risk assessment on system security vulnerabilities

Supportability - Design, technical support data, and maintenance procedures to facilitate detection, isolation, and timely repair and/or replacement of system anomalies.²⁷

REQUIREMENT:

- Data resources involving design, technical support and maintenance procedures are reviewed for completeness, readability and usefulness on an annual basis or as future developments, modifications, upgrades and re-procurements are deployed.²⁸

Portability - Design, technical support data, and maintenance procedures necessary to facilitate platform changes.²⁹

REQUIREMENT:

Develop and maintain a risk management document for future platform changes (Oracle to UNIX).

Interoperability - Ability of DEAMS to provide information and services to the user and other systems, accept information from other systems and use the information to enable the systems to operate effectively together.³⁰

REQUIREMENT:

List all systems DEAMS will interact with, identify the nature of the interaction (pull, push etc), provide a description of the information being shared and determine if the information can be found from another source.³¹

²⁷ DAU Glossary of Defense Acquisition Acronyms and Terms, 12th edition (plus updates since publication)

²⁸ DoD Designing and Assessing Supportability in DoD Weapon Systems: A guide to increased Reliability and reduced logistics footprint, Oct 24 2003

²⁹ DEAMS FMO Interview, June 2006

³⁰ DAU Glossary of Defense Acquisition Acronyms and Terms, 12th edition (plus updates since publication)

Identify and review future developments, modifications, upgrades and re-procurements of interacting systems.

Meet annually with interacting system's PMO

³¹ DoD Designing and Assessing Supportability in DoD Weapon Systems: A guide to increased Reliability and reduced logistics footprint, Oct 24 2003

C. METRICS AND MEASURE OF EVALUATION (MOE)

1. Description

Metrics are the measures that assess the DoD's essential factors described in the previous section. They are a way of quantitatively and periodically assessing a process that is to be measured, along with the procedures to carry out the measurement and the procedures for interpreting the assessment.³² A metric is simply a standard measurement of performance as it relates to the individual essential factor; whereas the MOE is the method that measures the ability to meet the established requirements of the individual essential factor. An essential factor may have multiple requirements and thus may have multiple MOEs. The metric explains what is being measured and the MOE explains how it is being measured (see the metric and MOE summary at the end of the section). The purpose of the metric is to provide service level decision makers with information to:

- Improve customer service
- Identify inefficient operations as early as possible
- Prevent external and internal fraud, waste and abuse
- Help identify needed training
- Plan for self-assessments

(Derived from the Quality Assurance program of the Air Force Under Secretary of Financial Management)

2. Relevance

The relevance of having a metric and a MOE is that they may potentially provide appropriate proactive versus reactive investments of time, effort and money. The MOE is a mechanism that provides information on the status of requirements and changes to the baseline of requirements. The metric provides a broad overview on the condition of the system and its supportability. Together, the metric and MOE may shed light on the root causes of delays, cost inconsistencies, deployment dilemmas and operational trends.

³² Wikipedia, The Free Encyclopedia. Accessed Nov 2006 from <http://en.wikipedia.org/wiki/Metrics>

3. Quantifiable Measurement

To ensure the metrics are quantifiable the SMART (Specific, Measurable, Actionable, Relevant, and Timely) approach is applied. Why SMART? Going along with the simple and practical theme, (1) SMART is an easy acronym to remember and (2) "SMART metrics" is a relatively simple concept to grasp and apply. (3) The idea behind SMART is that it helps avoid falling into these common pitfalls:

- Developing metrics for which you cannot collect accurate or complete data.
- Developing metrics that measure the right thing, but cause people to act in a way contrary to the best interest of the business to simply "make their numbers."
- Developing so many metrics that you create excessive overhead and red tape.
- Developing metrics that are complex and difficult to explain to others.³³

The following definitions come from the ProSci Business Process Reengineering (BPR) on-line learning center.

Specific: Metrics are specific and only target one requirement per essential factor. There may be multiple metrics/MOEs for an essential factor or no metric/MOE for an essential factor.

Measurable: Metrics and MOEs must provide data that is accurate and complete. Every requirement for an essential factor may not be measurable and therefore may not have a metric.

Actionable: The metric must be easy to understand. Over time, information gathered from the MOE must be clear enough to establish which direction in reference to the requirement is "good" and which direction is "bad".

³³ BPR Online Learning Center, Sponsored by ProSci. *How to Measure Success: Uncovering the Secrets of Effective Metrics*, Accessed Oct 2006 from <http://www.prosci.com/metrics.htm>.

Relevant: Metrics measure relevant requirements of essential factors as deemed by the IPT. As stated earlier, there may be multiple metrics/MOE for an essential factor or no metric/MOE for an essential factor.

Timely: Create metrics for requirements that are relevant at the time. Only create a metric for requirements that data can be collected when it is needed. Some metrics may be overcome by events, if so, discontinue the metric and provide a justification in the evaluation of requirements.

By utilizing SMART each Metric and MOE is designed to provide/ensure:

- Accurate and complete data is derived.
- Decision makers act in the best interest of the stake holder and not simply "make their numbers."
- Excessive overhead and red tape is not created.
- Analysis of information is not complex and difficult to explain to others.

(Derived from the Quality Assurance program for the Air Force Under Secretary of Financial Management)

4. Requirement Evaluation Results

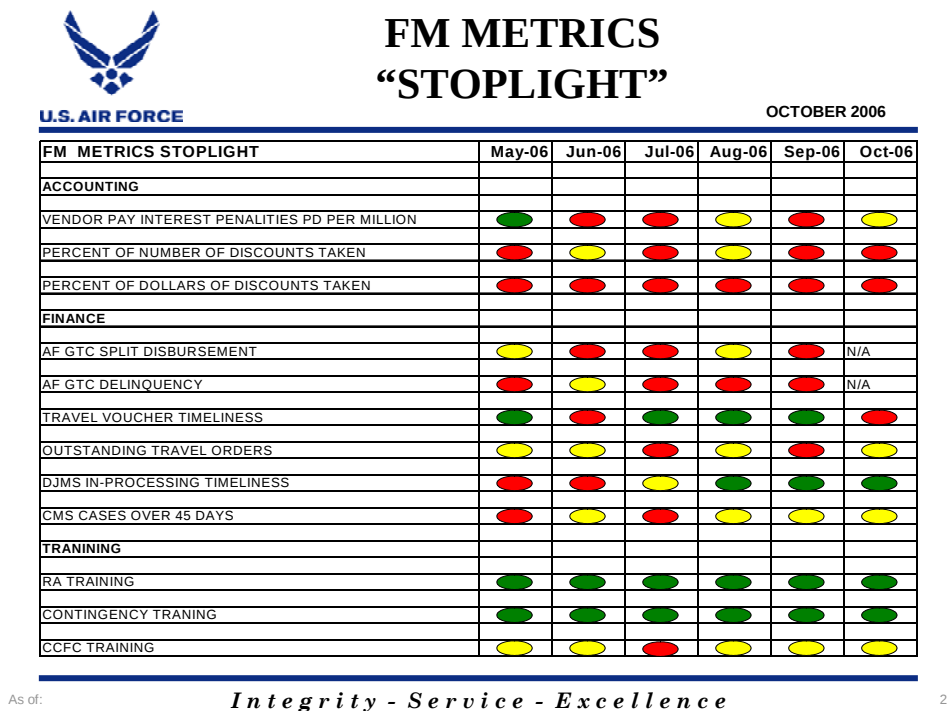
To continue the simple and practical theme, the “stoplight”: green, yellow and red standard for evaluating requirements is used (see Figure 2). At a glance the reader is able to ascertain whether or not the goal is met. It gives a quick "snapshot" of how the system is doing in comparison to its goals. After viewing the stoplight, the reader can go to the individual metrics charts to see detailed information on the metric.³⁴ The standard of results for computing MOEs:

Green	=	Goal met
Yellow	=	Within 10% variance of goal
Red	=	Greater than 10% variance of goal

³⁴ Air Force Portal, Air Force Accounting and Finance Office, Stoplight Metrics, Accessed Nov 2004 from <https://www.my.af.mil/gcss-af>,

(Derived from the Quality Assurance program for the Air Force Under Secretary of Financial Management)

Figure 2. Requirements Evaluation example

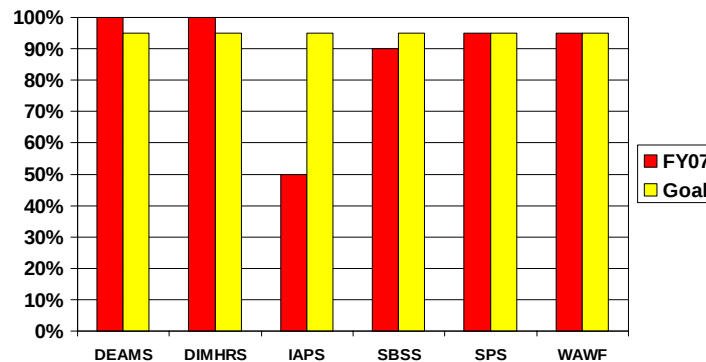


Below is an example of a metric and a metric summary. The summary is a part of each metric and should accompany the metric to provide additional information. Without the summary, the metric is not complete. In addition, to illustrate the difference in MOEs several other metrics are provided.

Table 1. System Funding Metric

System Funding

- Objective: Provide funding to support developments, modifications, upgrades and re-procurements
- Measurement Intent: Percent of budgeted funds allocated
- FY07 Goal: 95%
- POC: SAF/FMPT



System Funding

Essential Factor: Funding

Requirement: Funds identified in the Planning Programming Budget and Execution (PPBE) process for DEAMS and systems impacted by DEAMS developments, modifications, upgrades and re-procurements.

MOE: Percent of budgeted funds allocated

Purpose- Provide funding to support developments, modifications, upgrades and re-procurements.

Importance- Without funding for all interfacing systems, including DEAMS, information and services provided and accepted to and from the user and to and from other systems may not be sufficient or reliable. Moreover, it may impede the systems from operating effectively together.

Method of Computation- The dollar amount appropriated divided by the dollar amount allocated by service.

Source of Data: Defense Appropriation/Authorization Bill and service funds allocation document.

Goal: 90% of budgeted funds allocated in the FY planned and programmed.

Goal Met: Yes/No (highlight one or the other)

Causes: A full explanation as to why the goal was not met.

Baseline Trend: Up, Down or level

Fixes: If applicable, what is being done or planed to correct the downward trend.

Get Well Date (GWD): Estimated completion date for fix.

POC: Mr. Money Bags, SAF/FMPT, DSN 692-7653

Table 2. Required Software License Metric

Required Software Licenses

- Objective: Provide the necessary software licenses to support system operation
- Measurement Intent: Percent of software licenses available
- FY07 Goal: 100%
- POC: SAF/XCXP

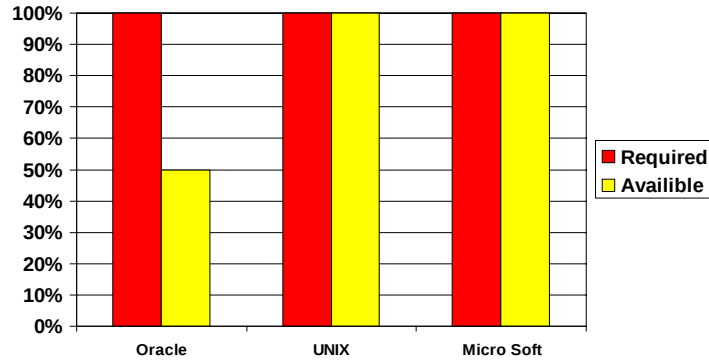


Table 3. System Engineering Support Metric

System Engineering Support

- Objective: Sustain system engineering support to ensure continued system operation and maintenance
- Measurement Intent: Number of trained system technicians
- FY07 Goal and Baseline: 100%
- OPR: PM

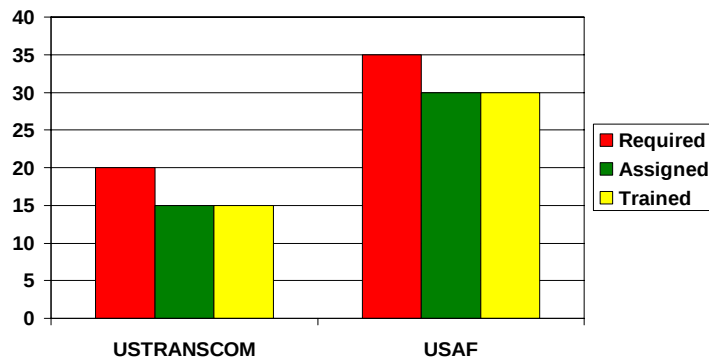


Table 4. Trained Government Personnel Metric

Manpower Support

- Objective: Sustain system manpower support to ensure continued system operation and maintenance
- Measurement Intent: Number of trained Gov personnel
- FY07 Goal and Baseline: 90% Assigned and 100% Trained
- OPR: PM

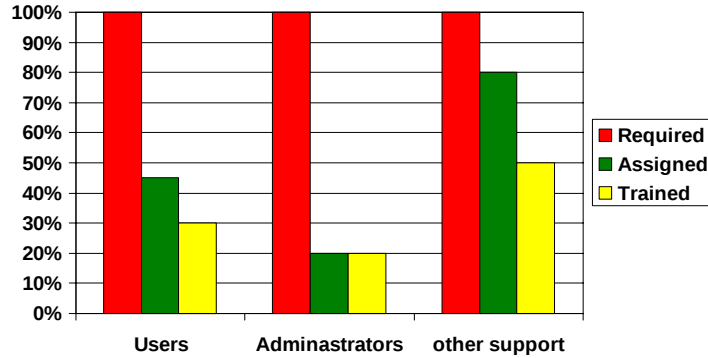
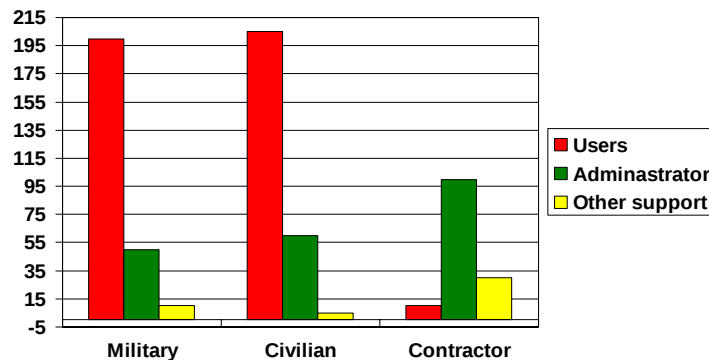


Table 5. Manpower Distribution Metric

Manpower Support

- Objective: Sustain system manpower support to ensure continued system operation and maintenance
- Measurement Intent: Track manpower distribution
- FY07 Goal and Baseline: Track manpower distribution
- OPR: PM



D. ESSENTIAL FACTOR EVALUATION

1. Description

The essential factor evaluation is critical to the suggested support/sustainment plan platform. It is an analysis of the characteristics of DEAMS that have been identified as crucial to its effectiveness and maintainability regardless of future developments, modifications, upgrades and re-procurements. All essential factors are reviewed by the evaluation IPT (see Evaluation IPT Composition for further explanation) to ensure that their continued oversight is necessary for system sustainability. The purpose of the evaluation is to provide appropriate proactive, versus reactive investments of time, effort and money for event driven phases, milestones and operational situations.

2. Relevance

The evaluation provides an avenue to discuss the importance of the essential factors deemed critical for cradle to grave sustainability. It is a means to modify, add or delete essential factors to and from the management tool on a scheduled or as needed basis.

3. Format

The evaluation IPT is to use the following format to list, define and justify all essential factors to be modified, deleted, or added. Regardless of the timing of its impact, review every factor in accordance with the process defined in Chapter IV, Section G.

Modify

Essential Factor:

None

Modification

No modification needed under this evaluation

Justification:

Not Applicable

Delete

Essential Factor:

No deletion needed under this evaluation.

Justification:

Not Applicable

Add

Essential Factor:

No additions needed under this evaluation.

Justification:

Not Applicable

Steps necessary to collect information:

Not Applicable

Feasibility:

Not Applicable

E. METRIC/MOE REVIEW

1. Description

The metric/MOE review is critical to the suggested support/sustainment plan platform. It is an analysis of the methodology used to measure the ability to meet the established requirements of the identified essential factors. As a minimum, the IPT will assess the validity of the (1) requirement, (2) MOE, (3) goal and (4) POC. As part of the MOE assessment, the IPT will evaluate the validity of the (1) purpose, (2) importance, (3) method of computation and (4) data source. All metrics and MOEs are reviewed to ensure that the measurement method provides useful information and the intended information.

2. Relevance

The evaluation provides an avenue to discuss the metrics and MOEs so that proper and intended information can be utilized to help provide oversight necessary for cradle to grave sustainment. It is a means to modify, add or delete metrics and MOEs to and from the management tool on a scheduled or as needed basis.

3. Format

The evaluation IPT is to use the following format to list, define and justify all metrics or MOEs is to be added modified or deleted. Regardless of the timing of its impact, review every metric and MOE in accordance with the process defined in Chapter IV, Section G

Modify

Metric:

None

MOE:

None

Modification

No modification needed under this evaluation

Justification:

Not Applicable

Delete

Metric:

No deletion needed under this evaluation.

MOE:

Not Applicable

Justification:

Not Applicable

Add

Metric:

No additions needed under this evaluation.

MOE:

Not Applicable

Justification:

Not Applicable

Steps necessary to collect information:

Not Applicable

Feasibility:

Not Applicable

F. EVALUATION PROCESS

1. Purpose

The purpose of the evaluation process is to provide a consistent review of essential factors, requirements, measures of evaluation (MOE) and their associated metrics. The process is a means of producing feedback to the PM and other stakeholders with the expectation of generating discussion on the availability and direction of resources. At a minimum the evaluation process must:

- Review essential factors and their associated requirements to ensure they are still critical to future developments, modifications, upgrades and re-procurements.
- Modify, delete and/or add essential factors that have been determined to be crucial to system sustainment. Document the justification for all actions.
- Modify, delete and/or add requirements of essential factors that have been determined to be crucial to system sustainment.
- Recommend a means of collecting information needed to support added essential factors and requirements.
- As required, create additional MOEs and metrics for added requirements.
- Review metrics and their associated MOEs to ensure they are still critical to future developments, modifications, upgrades and re-procurements.

- Modify, delete and/or add MOEs and metrics that have been determined to be crucial to system sustainment.
- Compare actual performance outputs of each metric with the expected output, baseline, or goal of the metric
- Review and as required, modify metric expected outputs, baselines or goals.

The evaluation process is to be initiated by an evaluation IPT. In the absence of an evaluation IPT the FMO or PMO should conduct the evaluation. The following section describes the suggested make-up and responsibilities of the evaluation IPT.

2. Evaluation IPT Composition

a. Description

The evaluation IPT should be comprised of representatives from all appropriate technical and functional disciplines at varying levels. The team may be primarily contractors, but it should have PMO and FMO representatives. The support/sustainment plan contractor may or may not be a part of the current FMO contractor support team. Technical and functional subject matter experts (SME) from the Air Force, DFAS and USTRANSCOM at the appropriate level to have visibility into impacted systems and the ability to provide input on the availability and direction of their resources should also be members of the team. Figure 3 illustrates that many of the desired personnel already exist within the DEAMS FMO.

Figure 3. FMO Government and Contractor Support Personnel

Who is Working on DEAMS?

Defense Enterprise Accounting and Management System

- **Functional subject matter experts (SME) from:**
 - Air Force, DFAS, USTRANSCOM
- **Technical experts from Air Force and USTRANSCOM**
- **Acquisition experts from Air Force**
- **Contractor support for:**
 - Program management (CACI)
 - Data cleansing (CSC and Bearing Point)
 - Change Management (Advanced Performance Consulting Group)
 - Communication (Booz Allen Hamilton)
 - Functional SMEs (CCT, EM&I, Kearney Group)
 - Architecture (Unisys)
- **COTS: Oracle; Systems Integrator: Accenture**



8



The technical SMEs represented should include but are not limited to information security, information system engineering, financial management and contracting. Also, non-contract personnel may have other duties outside the IPT and may be a member of more than one IPT within or outside the FMO. Initially, representatives from the following organizations are suggested to be the primaries on the DEAMS evaluation IPT (Figure 4 identifies each organizations relative position as it relates to the functional and acquisition chain-of-command):

Program Management Office – 554 ELSG/FN: Electronic Systems Group, Financial Systems Division

A designated office that exercises centralized authority and responsibility for planning, organizing, staffing, controlling, and leading the combined efforts of assigned civilian and military personnel in a specific defense acquisition program (throughout its life cycle).³⁵

³⁵ DAU Glossary of Defense Acquisition Acronyms and Terms, 12th edition (plus updates since publication)

Functional Management Office – USTRANSCOM/TCJ8: United States Transportation Command, Directorate of Program Analysis and Financial Management

A designated office that exercises authority and responsibility for planning, organizing, staffing, controlling, and leading the functional related efforts of assigned civilian and military personnel in a specific defense acquisition program (throughout its life cycle).³⁶

USTRANSCOM/ TCJ6: United States Transportation Command, Directorate of Command, Control, Communications and Computer Systems

The Directorate responsible for long-range planning, policy, technical integration and interoperability, life-cycle support, and program management for major DoD transportation command, control, communications, and computer (C4) systems.³⁷

SAF/AQCP: Air Force Office of Contracting, Implementation and Policy Division

The directorate that plans, develops, and implements Air Force-wide contracting policies and procedures.³⁸

SAF/FMPT: Air Force Office of Financial Management and Comptroller, Information Systems and Technology Division

The Air Force level directorate charged with delivering integrated financial management capabilities to the warfighter, including modern applications, best business processes, and a data-centric strategy.³⁹

SAF/ XCXP: Air Force Office of Warfighting Integration and Chief Information Officer

The Air Force level directorate that serves as the focal point for Clinger-Cohen certification and Information Support Plan policy and governance, primary interface for

³⁶ DAU Glossary of Defense Acquisition Acronyms and Terms, 12th edition (plus updates since publication)

³⁷ All American Patriots website, “USTRANSCOM” Accessed Dec 2006 from <http://www.allamericanpatriots.com/>

³⁸ Air Force Portal website, “SAF/AQC” Accessed Dec 2006 from <https://www.my.af.mil/>

³⁹ Air Force Portal website, “SAF/FMPT,” Accessed Dec 2006 from <https://www.my.af.mil/>

joint, OSD and Federal actions requiring a response and serves as the Air Force Chief Information Officer's focal point for legislative interaction.⁴⁰

DFAS: Defense Finance and Accounting Service

The DoD organization responsible for providing accounting and finance services for the military departments and defense agencies.⁴¹

DISA: Defense Information Systems Agency

The DoD support agency responsible for planning, engineering, acquiring, fielding, and supporting global net-centric solutions.⁴²

System User: Air Force and USTRANCOM System Operators/Administrators

Support/Sustainment Plan Contractor: Consulting service that establishes a documented baseline for support/sustainment plans or modifies existing plans and provides a detailed report of life-cycle management activities detailing strengths, weaknesses and improvement⁴³ (i.e. Software Technology Support Center (STSC), Consulting Services).

⁴⁰ Air Force Portal website, "SAF/XCXP," Accessed Dec 2006 from <https://www.my.af.mil/>

⁴¹ DFAS website, "About DFAS: Mission," Accessed Dec 2006 from <http://www.dod.mil/dfas/about/mission.html>

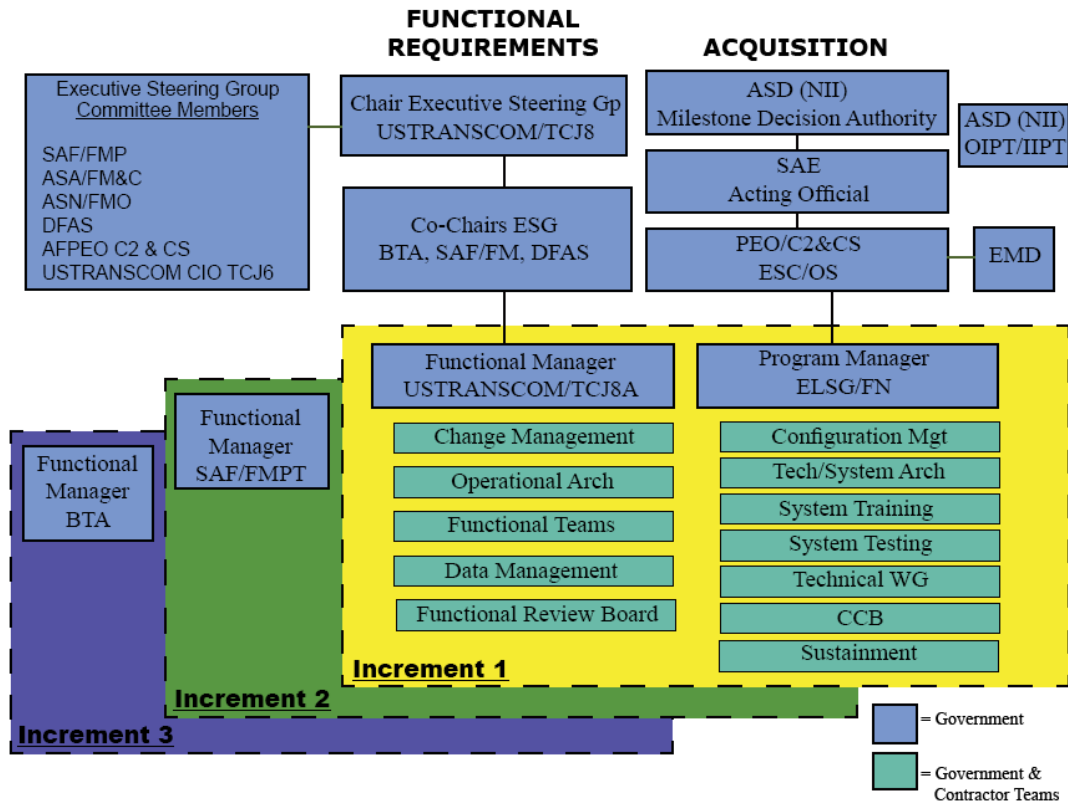
⁴² DISA website, "Mission, Vision and Values," Accessed Dec 2006 from <http://www.disa.mil/main/about/missman.html>

⁴³ STSC consulting Center website "Computer Resource Life Cycle Management Assistance," Accessed Nov 200 from http://stsc.hill.af.mil/consulting/sw_acquisition/acquisition/life_cycle.html

Figure 4. PMO and FMO Make-Up and Chain of Command

Governance

The DEAMS Executive Steering Group (ESG) includes representation from the Air Force, Army, Navy, OSD, and DFAS, making it a truly “purple” organization. The ESG provides stakeholder oversight to the program by making recommendations to improve management processes/practices, setting program strategy, and establishing critical success factors.



b. Roles/Responsibility

This section establishes the roles and responsibilities of the IPT. In addition to conducting the evaluation process of essential factors, requirements, MOEs and their associated metrics, the IPT should follow the direction of the suggested platform and add, modify and/or delete where appropriate. If the existing support plan platform is deemed insufficient, the evaluation IPT should establish a subsequent internal management process that provides a strategy and a plan for identifying, tracking and possibly resolving sustainment resource issues associated with future developments, modifications, upgrades and re-procurements of DEAMS. In any event, changes in the support/sustainment plan should be documented and accepted by the PM. As the platform is documented to date, at a minimum the evaluation process should:

- Assess where DEAMS is situated in the Defense Acquisition Life Cycle.
- Review the support/sustainment plan for completeness, practicality and usefulness for its stage in the Defense Acquisition Life Cycle.
- As required, modify, delete and/or add to the platform of the support/sustainment plan.
- Identify essential factors and their associated requirements that are critical to future DEAMS' developments, modifications, upgrades and re-procurements that have significant impact on people, systems and services.
- Communicate the status of unresolved issues.
- Identify, report and when possible, coordinate and resolve conflicting DoD personnel, service and system issues.
- Provide a single central repository that manages the history of all past and present essential factors, their requirements and methodology of measurement and the theory behind introducing new factors.
- Ensure copies of the support/sustainment plan are submitted to interested stakeholders.
- Ensure an updated plan is posted to the designated DISA website.
- If different from the stated plan, provide reports in synch with management requirements.
- Comply with the Clinger-Cohen Act and related laws

In conjunction with the stated roles and responsibilities, DoD guidance: Rules of the Road, A Guide for leading successful Integrated Product Teams suggest that the evaluation IPT should operate under the following broad principles:

1. Open discussions with no secrets
2. Qualified, empowered team members
3. Consistent, success-oriented, proactive participation
4. Continuous “up and down the line” communications

5. Reasoned disagreement
6. Issues raised and resolved early

This allows the IPT the greatest chance for success.

c. Timing

Once established, the evaluation IPT should meet upon entering a new milestone or phase. However, if events warrant, provisions to convene for a particular purpose and time should be made. All IPT members or representatives should be present during the evaluation process. Since the support/sustainment plan contractors' sole job is to support the sustainment strategy, they must be committed solely to the IPT and the support plan. They must be present at all times for all meetings. Advance notice of meetings should be provided and published as soon as the date is known.

G. RESOURCE REQUIREMENTS

1. Description

This chapter identifies anticipated resources not currently available that are needed to ensure DEAMS has and continues to have an up to date support/sustainment plan. Examples include personnel, funding and facilities.

2. Needs

It has not been determined by the PMO that the Information Support Plan (ISP), once created will be the sole support/sustainment plan or if the suggested platform will be adopted. Therefore, it is difficult to identify all anticipated resources. However, the following are general resources that are critical to any support plan.⁴⁴

- Stakeholder and PMO buy-in
- PMO and FMO personnel (contractor or government employee)
- Technical and functional subject matter experts (SME) from the Air Force, DFAS, DISA and USTRANSCOM
- Funding

⁴⁴ DEAMS FMO Interview, June 2006

In conjunction with the above resources, the following is needed to support the suggested sustainment plan platform.

- Support/Sustainment plan contractor funding
- DoD personnel funding
- Work-space: DoD facility, contractor facility or contracted facility

Initially the needs of the support plans are expected to be very dynamic. If adopted, one of the first functions by the PMO should be to review, modify, delete or add to the strategy needs and document the changes in the Support Strategy Gap section.

3. Format

Description

Provide a title and date. The title should start with the support plan identifier and should describe the major changes or events that drove the changes.

Example:

DEAMS support/sustainment plan original: Initial submission of sustainment plan platform – 30 Nov 2006

Support Strategy Gaps

Describe the anticipated resources needed to ensure DEAMS has and continues to have an up to date support/sustainment plan.

Example:

1. PMO and FMO personnel (contractor or government employees)
2. Identified technical and functional subject matter experts (SME) from the Air Force, DFAS, DISA and USTRANSCOM
3. Support/Sustainment plan contractor funding
4. DoD personnel funding
5. Work-space: DoD facility, contractor facility or contracted facility

4. Future Resource Investment Decisions

Describe the decisions made to mitigate the impact of the identified strategic gaps. Along with the responsible party, provide implementation and get well dates when applicable. Until the IPT is formed, it is suggested that representatives from the FMO and PMO make future resource investment decisions.

Example:

5. PMO and FMO personnel (contractor or government employees)

Decision: Draft Statement of Work for support/sustainment plan contractor

POC: Contracting section of PMO with support from IPT

Time Frame: Complete by 28 Feb 2007

V. GAP ANALYSIS BETWEEN EXISTING PLAN AND SUGGESTED SUPPORT/SUSTAINMENT PLAN PLATFORM

A. OVERVIEW

A gap analysis is an evaluation of similarities and differences between related current items and desired future items. It is a business assessment tool that enables the Department of Defense (DoD) to compare its actual performance with its potential performance:⁴⁵ For this project, the “actual performance” is the existing Defense Accounting Management System (DEAMS) support plan and the “potential performance” is the suggested support/sustainment plan platform.

Currently, a viable support/sustainment plan has not been developed for DEAMS. However, in accordance with the Defense Acquisition Guidebook, Chapter 7.3.6 all acquisition programs, regardless of acquisition category level are required to submit an Information Support Plan (ISP) at milestones B. As stated in previous chapters, DEAMS is yet to reach milestone B, therefore, an ISP has not been created. For comparison purposes, a generic ISP and the suggested support/sustainment plan platform will be used to perform the gap analysis.

DoD Instruction 4630.8 explains the ISP as having seven areas of interest: (1) Re-issuance and Purpose, (2) Applicability and Scope, (3) Definitions, (4) Policy, (5) Responsibility, (6) Procedures and (7) References.⁴⁶ The following sections: ISP format, ISP architecture guidance and ISP process flow represent a consolidated version of the seven areas of interest and will be the evaluation focus for the gap analysis.

B. EXISTING PLAN: GENERIC ISP

1. ISP Format

ISPs shall contain an (1) introduction consisting of an overview and program data, (2) an analysis chapter that consists of an incremental analysis process that shall be appropriately tailored to each program and an (3) issues chapter that details the

⁴⁵ Wikipedia, The Free Encyclopedia. Accessed Oct 2006 from http://en.wikipedia.org/wiki/Gap_analysis

⁴⁶ DoD Instruction 4630.8, Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS). 30 Jun 2004

information, interoperability and synchronization issues identified in the analysis section and the strategy to address or mitigate these issues. ISPs shall also include the following mandatory appendices: References, Systems Data Exchange Matrix (SV-6), Interface Control Agreements, and Acronym List. Other Appendices may be included, as necessary. The format within each chapter may be tailored to include only those elements that apply to the subject program.

(All ISP Format data is retrieved from the DoD Instruction 4630.8, "Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," Enclosure 4 attachment 1, 30 June, 2004)

Chapter 1 – Introduction: The introductory chapter shall be organized into two sections, overview and program data.

Overview: Provides a brief introduction describing the scope of the program, the program's relationship to other programs, and the program's relationships to relevant JOC(s) and/or JFC(s), Joint Capabilities Integration Development System (JCIDS) documents, and associated integrated architectures impacting the program. Do not duplicate JCIDS documentation content, but reference it as appropriate.

Program Data: Provides background information to the ISP reviewer so that the reviewer can understand the context of the ISP. It also documents the status of the acquisition at the point in time that the ISP was developed.

Chapter 2 – Analysis: Supporting integrated architecture products shall be used in the ISP analysis (see ISP Architecture Guidance). Analysis of the sufficiency of IT and NSS information support needs shall be accomplished in terms of the operational and functional capabilities that are being supported. This analysis requires an understanding of the operational and functional capabilities, and associated metrics to assess and evaluate: organizations; organizational relationships; operational activities; node connectivity and system data exchanges required to achieve a given capability.

Chapter 3 – Issues: Issues shall be presented in a table or an outline. The following is the minimum to be addressed: Issue Number; Supporting System; Issue, Issue Description; Issue Impact; and Mitigation Strategy or Resolution Path. Number each issue as "C-#" for critical shortfalls and "S-#" for substantive issue. Issues shall include resolution paths with projected dates to be corrected. If resolution details are not known, a discussion on the approach, including anticipated responsible parties shall be provided.

Appendix A. – References: Identify all related documents used to prepare the ISP.

Appendix B. - Systems Data Exchange Matrix (SV-6): Appendix B shall consist of a detailed SV-6 matrix derived from the associated integrated architectures, with narrative discussion as necessary. Provide additional systems data exchange information and supporting discussion, identified during the ISP analysis, for each system interface, if not already incorporated in JCIDS documentation. These shall be discussed in the main body of the ISP in the Analysis Section.

Appendix C. - Interface Control Agreements: Identify documentation that indicates agreements made and required between the subject ISP program and those programs necessary for information support.

Appendix D. - Acronym List: Provide an integrated dictionary.

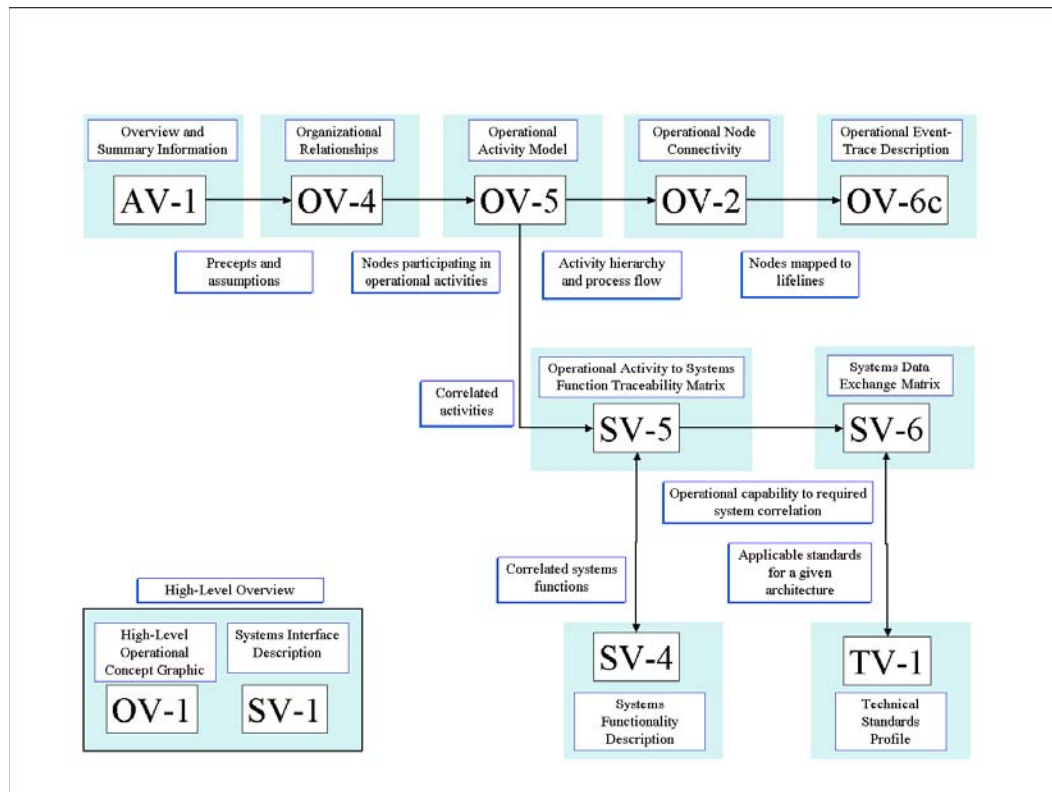
Other Appendices: Provide supporting information, as required, not included in the body of the ISP or relevant JCIDS documents. Additional or more detailed information, used to satisfy DoD Component-specific requirements, shall be included as an appendix, and not incorporated in the body of the subject ISP. Additional architecture products used in the ISP analysis will be provided in a separate appendix and referenced in the main body of the ISP.

2. ISP Architecture Guidance

Architecture view provides a summary of the integrated architecture products, and corresponding relationships, from the DoD Architecture Framework, needed to complete the ISP. These supporting integrated architecture products provide the basis for assessing information needs, information timeliness, information assurance, and net-ready attributes of information exchange and use. Analysis shall include the degree to which

requirements of the NR-KPP have been satisfied. Additional integrated architecture products shall be developed as necessary for refining detail in this assessment. Additional integrated architecture products, developed for the ISP analysis, shall be included as an appendix in the ISP.

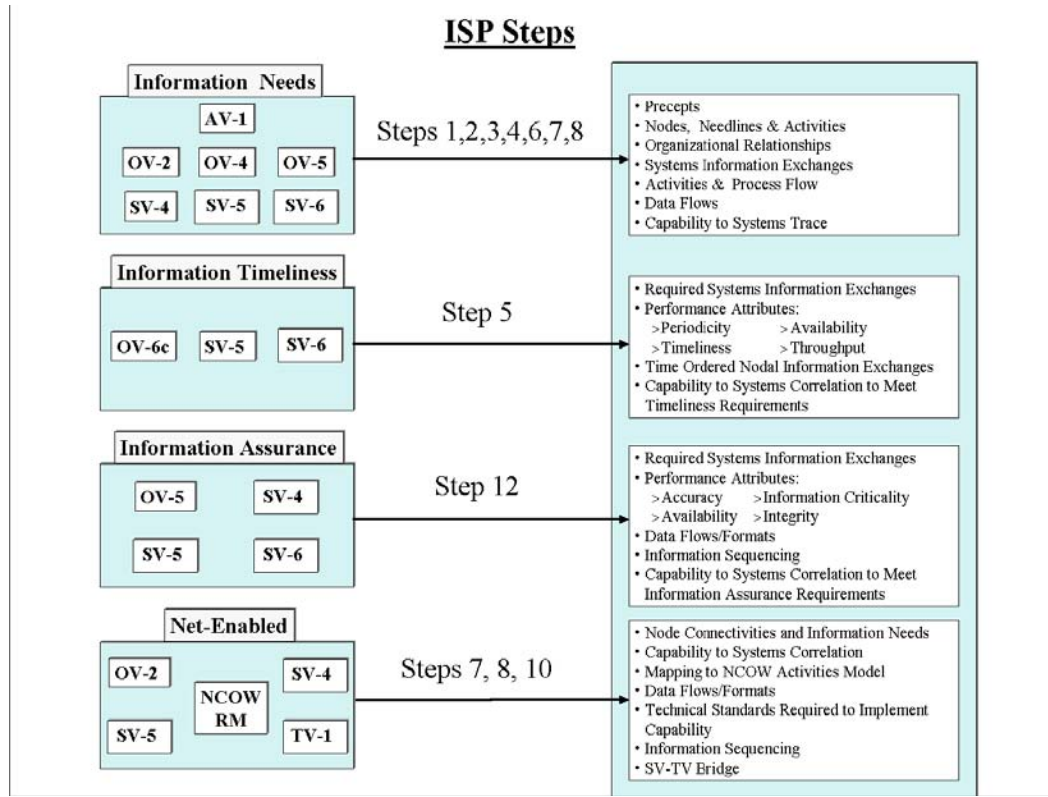
Figure 5. Architecture View Summary



(Department of Defense Instruction 4630.8, "Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," Enclosure 4, 30 June, 2004)

The ISP steps provide a summary of supporting integrated architecture products with corresponding steps of the ISP process required to assess information needs, information timeliness, information assurance, and net-ready attributes for information exchange and use.

Figure 6. Architecture Views for Net-Ready KPP Areas of Analysis



(DoD Instruction 4630.8, "Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," Enclosure 4, 30 June, 2004)

Step 1: Identify the warfighting missions (or functions within the enterprise business domains).

Step 2: Identify information needed to support operational/functional capabilities for each warfighting mission identified in step 1.

Step 3: Determine the operational users and notional suppliers of the information needed.

Step 4: Establish the quality of the data needed to support the functions identified in the programs integrated architecture.

Step 5: Determine if timeliness criteria exist for the information.

Step 6: Determine/Estimate the quantity of information of each type that is needed.

Step 7: Discuss how the information will be accessed or discovered.

Step 8: Assess the ability of supporting systems to supply the necessary information.

Step 9: Discuss RF Spectrum needs.

Step 10: Perform a Net-Centric Assessment.

Step11: Discuss the program's inconsistencies with the GIG Integrated Architecture and its strategy for getting into alignment.

Step 12: Discuss the program's Information Assurance strategy and reference the Program Protection Plan.

Step 13: Identify information support needs to support development, testing and training.

(DoD Instruction 4630.8, "Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," Enclosure 4, 30 June, 2004)

The Areas for Analysis graph suggests appropriate integrated architecture products required to evaluate information needs/dependencies, quality, quantity, sources, and timeliness.

Figure 7. Architecture Views vs. Analysis Areas

Architectural View	Area For Analysis					
	Overview	Information Need/Dependency	Information Quality	Information Quantity	Information Sources	Information Timeliness
AV-1	●					
OV-1	●					
OV-2		●			●	
OV-4		●				
OV-5		●				●
OV-6c		●				●
SV-1	●	●			●	
SV-4	●	●				
SV-5		●	●	●	●	●
SV-6		●	●	●	●	●
TV-1		●	●			●

(All ISP architecture guidance is retrieved from the DoD Instruction 4630.8, "Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," Enclosure 4, 30 June, 2004)

3. ISP Process Flow

(All ISP Process Flow data is retrieved from the DoD Instruction 4630.8, "Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," Enclosure 4, 30 June, 2004)

Prepare the plan - The DoD Component prepares the plan using the JCIDS documentation, integrated architectures, and other sources.

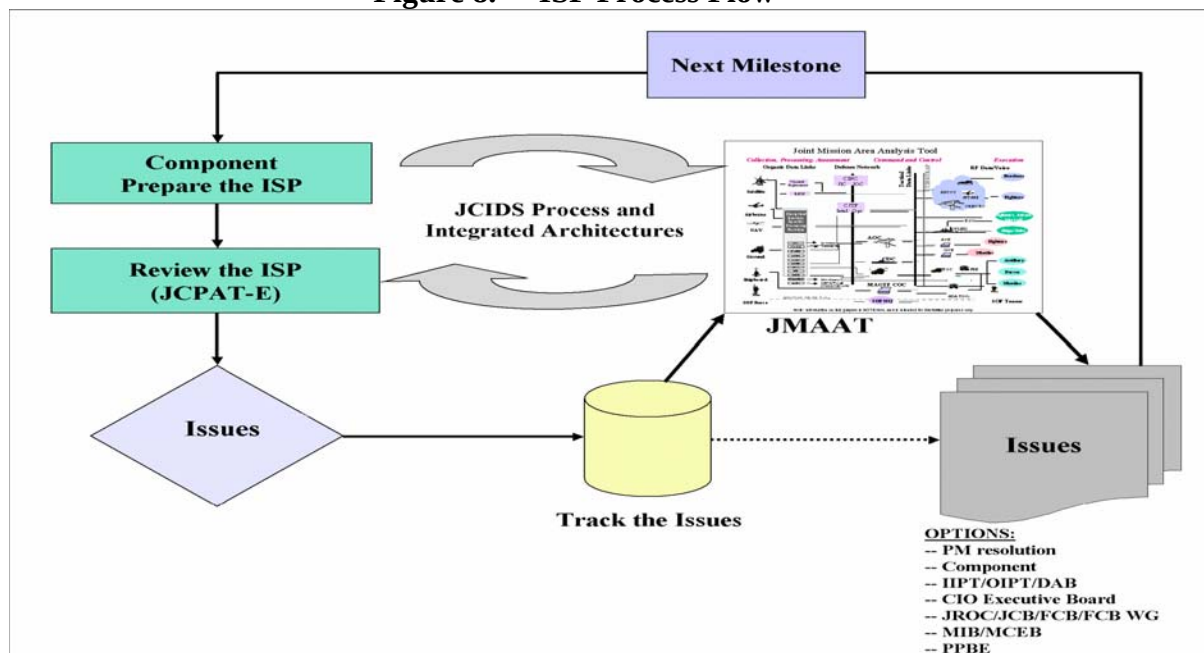
Review the plan - The plan is submitted for formal review coordinated by the Assistant Secretary of Defense for Networks and Information Integration/DoD Chief Information Officer (ASD(NII)/DoD CIO) using the Joint C4 Program Assessment Tool-Empowered (JCPAT-E)

Track the issues from the plan - Issues from the plan and from formal DoD-level reviews are posted in the ASD (NII)/DoD CIO issue database and the Joint Mission Area Analysis Tool (JMAAT).

Resolve the issues from the plan - Issues are disseminated to various forums for possible resolution.

Repeat the process - The final plan is placed in the JCPAT-E document repository and the process is repeated at each major milestone.

Figure 8. ISP Process Flow



C. SIMILARITIES

As part of the gap analysis the following similarities in format, architecture guidance and process flow were identified between the generic ISP and the suggested support/sustainment plan platform.

Format

- Both management tools have areas dedicated to addressing an overview of the system, system incremental analysis/evaluation process and system issues, to include suggestions to mitigate their impact.
- Both management tools provide guidance related to format, roles, responsibilities and timing.

Architecture Guidance

- Both management tools may become labor intensive.
- Both management tools performs an independent net-centric assessment: An assessment of the system framework for full human and technical connectivity that allows all DoD users and mission partners to share the information they need, when they need it, in a form they can understand and act on with confidence; and protects information from those who should not have it.⁴⁷
- Both management tools have the propensity to be expensive.
- Both management tools have the propensity to be contractor driven.⁴⁸

Process Flow

- Both management tools have a process to prepare and review the support plan, a process to identify issues and if possible, a process to resolve issues.

D. DIFFERENCES

As part of the gap analysis the following differences in format, architecture guidance and process flow were identified between the generic ISP and the suggested support/sustainment plan platform.

Format

⁴⁷ CJCS Net-Centric Operational Environment Joint Integrating Concept, Appendix B Glossary and Acronyms, 31 Oct 2005.

⁴⁸ DEAMS FMO Interview, Jun 2006

- The suggested support/sustainment plan platform provides the authority to tailor format to the needs of the PM and other stakeholders.
- The suggested support/sustainment plan platform identifies resource requirements needed to develop a sustainment strategy and to ensure its continuous evaluation.
- The support/sustainment plan platform provides practical examples.
- The ISP can be waived.
- The ISP creates separate documents to address system issues and resolutions.
- The ISP includes sections detailing document references, system data exchange matrices, interface control agreements or acronym listings.

Architecture Guidance

- The suggested support/sustainment plan platform is a simpler document. It takes a more practical approach to analyzing information needs, timeliness and assurance.
- The suggested support/sustainment plan platform's authority to modify is at a lower level (Evaluation IPT vs. Assistant Secretary of Defense for Networks and Information Integration/DoD Chief Information Officer)
- ISP is focused more on documenting system architecture.⁴⁹
- ISP performs a more thorough independent net-centric assessment.

Process Flow

- The suggested support/sustainment plan platform provides authorization to change the process flow to accommodate the needs of the PM and other stakeholders
- The ISP is coordinated electronically through the JCPAT and JMAAT.⁵⁰ Whereas the suggested support/sustainment plan platform is routed via email.
- The ISP has more layers and higher levels of approval coordination.

⁴⁹ DAU, Ask a Professor, "ISP," Accessed Oct 2006 from <http://akss.dau.mil/askaprof-aks>

⁵⁰ DOD Defense Acquisition Guide, Chapter 7.3 Interoperability and Supportability of Information Technology and National Security Systems, Section 7.3.6.4

E. SUMMARY

The generic ISP and the suggested support/sustainment plan are platforms for outlining, measuring and evaluating how total ownership cost and support/sustainment of a system is managed over its life cycle. The gap analysis showed that both management tools are similar in purpose and in format and show strong likeness in process flow, but differ immensely in their complexity. Where the ISP focuses more on real time interoperability and synchronization, the suggested plan is a platform for measuring basic sustainment. Despite using a generic ISP the gap analysis forced a harder look at the suggested plan and introduced some potential concerns. The following chapters will elaborate on those concerns and provide possible options to mitigate their impact.

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VI. SUGGESTED SUPPORT/SUSTAINMENT PLAN CONCERNS AND MITIGATING OPTIONS

A. OVERVIEW

As in the initiation and implementation of most new programs and strategies there are risk and issues that become barriers to their success. The suggested support/sustainment plan platform is no different. Upon review of the tool a number of external and internal issues that are potential barriers came to light. For this project external issues are those concerns that are present regardless of the sustainment plan: (1) leadership support, (2) coordination between impacted functions (3) labor intensity and (4) funding. Internal issues are those concerns that are specific to the suggested support/sustainment plan: (5) limited perspective (6) availability and commitment of influential technical and functional subject matter experts (SME), (7) flexibility and (8) lack of focus on integrated architecture. In an attempt to provide a starting point for any initial decisions regarding the plan, a number of options are provided for each identified concern. The following is a description of the issues, an explanation of the risk to successful implementation and the corresponding options to mitigate the risk.

B. EXTERNAL ISSUES

As stated, there are concerns with the suggested support /sustainment plan that are not unique to this specific management tool. These risks have been defined as external issues. The following is a description of each concern, an explanation of why it is a risk to the implementation and success of the strategy and an explanation of the corresponding options to mitigate the risk.

1. Leadership Support

Issue:

Having the necessary buy-in from key decision makers and stakeholders needed to commit sufficient resources in support of the proposed support/sustainment plan.

Explanation of Risk:

Program managers (PM) are likely to resist the imposition of another mandatory support plan, especially since the ISP is already “mandated.” It may be seen as one more

item in a long list of responsibilities already defined. Furthermore, stakeholders, to include PMs may continue with existing mindset that the plan is a condition or obstacle to proceed to the next phase or milestone⁵¹, rather than a management tool for determining and continuously assessing system support.

With that, PMs may politic and convince leadership to reject the implementation of the suggested plan until existing regulations, directives instructions and guidance are deleted or clarified, simplified and synchronized. For these reasons (lack of) leadership support is a risk to the management tool implementation.

Options:

- Educate DoD senior leadership on the benefits associated with achieving a practical support plan and integrating its funding in the requirements of the system
- Increase the PMO's emphasis on the sustainment strategy and its impact on achieving overall mission capability requirements⁵²
- Include identified sustainment related risk and risk mitigating planning in the system's marketing campaign to senior leadership⁵³

2. Coordination between impacted functions

Issue:

Ensuring coordination between information security, information system engineering, financial management and contracting disciplines at an Air Force level and USTRANSCOM level.

Explanation of Risk:

Priorities of the disciplines may not be in-line with the support needed to effectively manage a system sustainment strategy; moreover, the various disciplines might not have the resources to effectively manage a system sustainment strategy. How

⁵¹ DEAMS FMO interview, Jun 2006

⁵² DoD Designing and Assessing Supportability in DoD Weapon Systems: A guide to increased Reliability and reduced logistics footprint, Oct 24 2003

⁵³ DoD Designing and Assessing Supportability in DoD Weapon Systems: A guide to increased Reliability and reduced logistics footprint, Oct 24 2003

resources, time, and effort are devoted may be a major obstacle to the coordination needed for a collaborative effort of this magnitude. Even “if” the service and DoD mandates the functions to participate in an effort it doesn’t regulate the quality and effort of the participation, nor does it guarantee sufficient resources will be available to participate. For these reasons coordination between impacted functions is a risk to the management tool implementation.

Options:

- Educate DoD functional leadership on the necessity of supporting system program managers (PM) and benefits associated with achieving a practical support plan
- Develop a functional agreement at DoD level to have a strategic and integrated approach for information system’s support plan,⁵⁴ and clearly define roles, relationships and functions for the impacted disciplines
- Change guidance for integrated program teams (IPT) and mandate IPTs and functional participation on support plan development as a condition of the overall system acquisition
- Create a strategic human resource plan, implement a set of specific human resource transformation actions (aggressive recruiting, increased training, job rotations and cross-discipline training) and create an overall “learning culture”⁵⁵

3. Labor Intensive

Issue:

Having sufficient personnel to evaluate and coordinate on the information systems’ processes, requirements and issues throughout its lifetime.

Explanation of Risk:

Some believe to support the workforce needed to sustain the management tool the personnel must be majority contractor.⁵⁶ It is highly unlikely that DoD will have the

⁵⁴ U.S. General Accounting Office, *Major Management Challenges and Program Risks: Department of Defense*, [GAO-03-98](#) (Washington, D.C.: Jan. 2003).

⁵⁵ Gansler, Jacques. *A Vision of the Government as a World-Class Buyer: Major Procurement Issues for the Coming Decade*, Jan 2002

⁵⁶ DEAMS FMO Interview

personnel to provide organic resources to manage and field the evaluation IPT or any other entity designated to perform incremental analysis⁵⁷. For these reasons labor intensity is a risk to the management tool implementation.

Options:

- Optimize DoD personnel and manpower: Utilize Air Force Institute for Technology and Naval Postgraduate School students to booster PMO resources
- Create a strategic human resource plan, implement a set of specific human resource transformation actions (aggressive recruiting, increased training, job rotations and cross-discipline training) and create an overall “learning culture.”⁵⁸
- Re-assess personnel requirements and their constraints in quantity, skill levels and the use of contractor support.⁵⁹
- Develop a strategic, integrated, and enterprise wide approach for information system’s support plan contracts.⁶⁰

4. Funding

Issue:

Adequate and consistent funding is needed to provide sufficient resources in support of the proposed support/sustainment plan.

Explanation of Risk:

Funding is needed over the life-span of the system and the life-span of DoD information systems have no definite time periods. It is difficult to anticipate the needs and scope of support, let alone the priorities of stakeholders over an indefinite time span; as stockholder’s priorities go so goes the allocation of funds. Furthermore, this is an additional price tag to an increasing support tail budget. It is difficult to tell if the DoD

⁵⁷ Naval Postgraduate School Seminar, Major System Acquisitions, Sep 2006.

⁵⁸ Gansler, Jacques. A Vision of the Government as a World-Class Buyer: Major Procurement Issues for the Coming Decade, Jan 2002

⁵⁹ DoD Designing and Assessing Supportability in DoD Weapon Systems: A guide to increased Reliability and reduced logistics footprint, Oct 24 2003

⁶⁰ General Accounting Office, Major Management Challenges and Program Risks: Department of Defense, GAO-03-98

has fully embraced the Total Ownership Cost (TOC) concept and the importance of having a sustainment strategy. Per the Defense Life Cycle, we only begin to address system support (through the ISP) after development and design⁶¹ and as mentioned earlier, the ISP has a waiver process, so it is not truly “mandatory.” As a result, it is unlikely funds will be allocated for the suggested support plan until support strategies are a priority of stakeholders. For these reasons funding is a risk to the management tool implementation.

Options:

- Revise requirements guidance to include TOC goals for any major system as performance parameters equal to any others⁶²
- In the requirements process consider cost of sustainment as a major part of the requirement
- Provide a market analysis to determine the availability of support plan contractors and apply results to the TOC⁶³
- Support plan contractors and DoD conduct a core capability assessment and identify the actions and cost required to sustain those capabilities through out the “life-span” of the system*.

C. INTERNAL ISSUES

There are concerns with the suggested support/sustainment plan that are unique to this management tool. These risks have been defined as internal issues and the following is a description of each concern, an explanation of why it is a risk to the implementation and success of the strategy and an explanation of the corresponding options to mitigate the risk.

⁶¹ DoD Defense Acquisition Guidbook

⁶² General Accounting Office, Report to the Subcommittee on Readiness and Management Support, “Best Practices: Setting Requirements Differently Could Reduce Systems Total Ownership Cost,” GAO-03-57

⁶³Gansler, Jacques. A Vision of the Government as a World-Class Buyer:Major Procurement Issues for the Coming Decade, Jan 2002

5. Limited Perspective

Issue:

Expertise to thoroughly evaluate and understand the scope of required research and broad perspective needed to create a complete and usable sustainment strategy management tool

Explanation of Risk:

The suggested support/sustainment plan platform was created with a limited assessment of its environmental influences. Sufficient time was not spent on identifying the needs and wants of a wider range of stakeholders. For these reasons limited perspective is a risk to the success of the management tool.

Options:

- Incorporated feedback from potential users of the support plan.
- Debrief peers and incorporate their feedback.
- Prior to strategy development conduct an environmental analysis to include political trends, economic trends and technical trends of major acquisition information systems, Commercial of the Shelf (COTS) systems and modified COTS systems ⁶⁴
- Consider the performance histories of prior systems or systems of similar capability and review them as an IPT

6. Availability and commitment of influential technical and functional SMEs

Issue:

Having technical and functional SMEs that have visibility of impacted systems and the ability to provide input on the allocation of impacted system's resources.

Explanation of Risk:

The entire evaluation and review process is dependent on the availability and commitment of technical and functional SMEs that have visibility into the impacted systems and influence on their resource allocation. DoD may not have SMEs with the

⁶⁴ Roberts, Nancy, Presentation on Organizational System's Framework, Strategic Management, Feb 2004

level of influence available to be committed effectively to the evaluation IPT. Also, like with other issues, it may not be a priority to functional and technical leadership to commit their SMEs to long term support strategies. For these reasons availability and commitment of influential technical and functional SMEs is a risk to the success of the management tool.

Options:

- Identify and address military workforce requirements or gaps, especially for mission-critical skills and assess the feasibility, costs, and benefits of offering incentives as a way to increase retention of trained, experienced personnel.⁶⁵
- Emphasize and fund education and training.⁶⁶

7. Flexibility

Issue:

The suggested support plan can evolve to a more technical and robust plan that is no longer practical in nature.

Explanation of Risk:

Within the guidance of the suggested platform the evaluation IPT has the authority to add, modify and/or delete were appropriate. If the existing support plan platform is deemed insufficient, the evaluation IPT can establish a subsequent internal management process. This brings up concerns of standardization and measurability, especially if there are no controls other than what is deemed “appropriate.” The suggested support plan is so flexible it has the potential to evolve to a more technical and less practical platform. As SMEs and stakeholders become more involved and seek to influence the strategy it may become less of a management tool. For these reasons flexibility is a risk to the success of the management tool.

Options:

- In the language of the support plan guidance entrench a general philosophy of usability and simplicity.

⁶⁵ U.S. General Accounting Office, Major Management Challenges and Program Risks:Department of Defense, GAO-03-98

⁶⁶ Gansler, Jacques. A Vision of the Government as a World-Class Buyer:Major Procurement Issues for the Coming Decade, Jan 2002

- Despite complexities of supporting integrated information systems and the evolution of their support plans ensure stakeholder outputs (status reports, metrics, etc...) are practical in nature.

8. Lack of Focus on Integrated Architecture

Issue:

The suggested support plan does not address an integrated architecture or the evaluation coordination function.

Explanation of Risk:

The suggested support plan did not completely address its integrated architecture. The integrated architecture is an assessment of the system framework for full human and technical connectivity.⁶⁷ As with the limited perspective concerns, the suggested support plan did not spend sufficient time on a wider range of factors impacting the system organization framework. Of the five design factors of organization framework (people, organization's structure, "technology" of work, and organizational subsystems)⁶⁸, technology of work and process/subsystems received limited attention.

Options:

- As part of the support plan evaluation process create a realistic operational environment to help predict operational stresses⁶⁹
- Integrate test personnel and performance and acceptance criteria into the support plan evaluation process
- Include the impacts of a reduction in the logistics footprint into the support plan evaluation process
- Identify and incorporate operability requirements of a forward deployed location into the support plan evaluation.

⁶⁷ CJCS Net-Centric Operational Environment Joint Integrating Concept, Appendix B Glossary and Acronyms, 31 Oct 2005

⁶⁸ Roberts, Nancy, Note on Organizational System's Framework, Strategic Management, Fall 2003.

⁶⁹ DoD Designing and Assessing Supportability in DoD Weapon Systems: A guide to increased Reliability and reduced logistics footprint, Oct 24 2003

D. SUMMARY

The suggested management tool is not nearly as robust as other DoD strategies. The concerns listed above are a testament to that characteristic. It can, however, be modified into a more encompassing plan, such as the ISP. Unfortunately, in doing so the suggested tool might lose its simplicity and practicality and become more of a burden to PMs and other stakeholders and thus be a risk to its implementation. To reduce this risk and to have a starting point for the initial decisions regarding its strategic gaps, options for each identified concern were provided.

As the management project comes to a close the final chapter provides a conclusion and a recommendation intended to resolve the concerns and strategic gaps of the management tool. In conjunction, further direction for future research is identified to bolster the support plan platform. The ultimate goal is to ensure the simple and usable strategy is not reduced to an administrative and bureaucratic nuisance, and yet still addresses the complexities of the support plan undertaking.

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VII. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

A. MBA PROJECT SUMMARY

This MBA project's objective is to create the foundation for a formal support/sustainment plan that can be used to support the Defense Enterprise Accounting Management System (DEAMS) and other similar business enterprise initiatives. A review of DEAMS's current stage in the Defense Acquisition Life Cycle and a literature review of support plan regulatory guidance serve as a background to the suggested support plan platform (Chapter IV): A management tool that identifies measures and evaluates system resources critical to total ownership cost (TOC) and life cycle sustainment. In addition, upon review of the suggested plan, concerns and issues are addressed and options to mitigate the concerns and issues are identified. To conclude a recommendations and a direction for future research is provided.

B. CONCLUSIONS

Existing policies reveal the complexity and lack of practical application of current support plan guidance for commercial off the shelf (COTS) systems, modified COTS systems and major acquisition information systems (MAIS). The intent of the guidance is to provide a platform for outlining, measuring and evaluating how TOC, support and sustainment of a system are managed over its life cycle. Results from the literature review and insight provided from the functional management office (FMO) interviews suggest that the measuring and evaluating process of the existing support strategies are convoluted and complicated to the point that they lose their usefulness. The only sustainment strategy that is mandated by policy that is close to a "management tool" is the Information Support Plan (ISP) and due to its complexity it can be waived or avoided if the system is not introduced by the Joint Capability Integration and Development System (JCIDS) process.

The suggested support/sustainment plan platform is designed to provide a flexible, yet mandatory means of identifying measuring and evaluating critical TOC and life cycle sustainment resources. Before the management tool can be implemented and deemed "the system support plan" it must be scrutinized thoroughly, controls to make the

plan more standard must be developed and additional attention given to the system's framework as it relates to personnel interaction and internal process mapping (architect).

C. RECOMMENDATIONS

Despite its deficiencies, it is recommended that the DEAMS program management office (PMO) and FMO adopt the suggested management tool as a basis for its support plan platform. However, at a minimum the PMO and FMO should strive to incorporate the following actions as a consequence of its shortfalls.

Educate DoD senior leadership on the benefits associated with integrating or at least planning and programming funding as a requirement of the system. Introduce an aggressive marketing campaign that focuses on the savings linked to the usability aspect of a practical support plan. Identify related risk and offer risk mitigating suggestions. Provide historical data from the Defenses Travel System and the Standard Procurement System that emphasizes the impact that a thorough or incomplete planned, programmed and executed support plan has on the overall mission capability and cost avoidance of an acquired information system.

Develop a functional agreement at DoD level to have a strategic and integrated approach for information system's support plans and clearly define roles, relationships and functions for the impacted disciplines. Change regulatory guidance that mandates integrated program teams (IPT) as a function of the support plan development and incremental analysis. In conjunction, functional and technical subject matter experts (SME) participation in the IPT must be a condition of the system acquisition

Provide a market analysis to determine the availability of support plan contractors.

Conduct a core capability assessment on existing support plan contractors and DoD personnel. Identify actions and cost required to sustain those capabilities throughout the "life-span" of the system

Re-assess support plan personnel requirements and their constraints in quantity, training and skill level. Judiciously use contractors as the personnel core for the evaluation IPT. Optimize DoD personnel and manpower by supplementing the initial

strategic review with Air Force Institute for Technology (AFIT) and Naval Postgraduate School (NPS) students. AFIT and NPS students could be identified and assigned to a PMO or FMO as a condition of their enrollment and could support the PMO or FMO through work on required research projects.

Solicit potential users and technical/functional peers for feedback. Incorporate their feedback.

Consider the support strategy for prior systems or systems of similar capability. Review their support plans for lessons learned and apply when appropriate.

Promote a culture of practicality. Despite complexities of supporting integrated information systems and the evolution of their support plans ensure stakeholder outputs (status reports, metrics, etc...) are practical in nature.

Create a realistic operational environment to help predict operational stresses. Integrate test personnel into the support plan evaluation process. Be sure to identify and incorporate operability requirements of a forward deployed location.

At the outset, the support plan will need significant attention. The PMO and FMO must keep in mind that the support plan is designed to be a management tool over the life span of the system and initially it may require more work than benefit received. But if adopted, the support/sustainment plan over the long haul will benefit stakeholders by providing a practical platform that can sustain business enterprise initiatives while allowing the DoD to utilize its resources more efficiently without sacrificing effectiveness.

D. DIRECTION FOR FUTURE RESEARCH

The sustainment of information systems, whether it's a COTS product, a modified COTS product or a MAIS is extremely dynamic and is an in depth undertaking. It impacts personnel, systems and services at various levels. As the DoD looks to replace legacy systems, support plans will demand more and more attention. And as a consequence, more and more research opportunities will present themselves. As a conclusion to the MBA Project, the following are possible topics that warrant future research

1. Military workforce requirements, especially for mission-critical skills that will serve as functional and technical SMEs and assess the feasibility, costs, and benefits of offering incentives as a way to increase retention of trained, experienced personnel.
2. Strategic human resource plan that implements a set of specific human resource transformation actions (aggressive recruiting, increased training, job rotations and cross-discipline training). Funding education and training is critical.⁷⁰
3. A strategic, integrated and DoD wide approach for information system's support plan contracts.⁷¹
4. Revise requirements guidance to include TOC goals for any major system as performance parameters equal to any others⁷²
5. An environmental analysis to include political trends, economic trends and technical trends of major acquisition information systems, Commercial of the Shelf (COTS) systems and modified COTS systems⁷³

⁷⁰ Gansler, Jacques. A Vision of the Government as a World-Class Buyer: Major Procurement Issues for the Coming Decade, Jan 2002

⁷¹ General Accounting Office, Major Management Challenges and Program Risks: Department of Defense, GAO-03-98

⁷² General Accounting Office, Report to the Subcommittee on Readiness and Management Support, "Best Practices: Setting Requirements Differently Could Reduce Systems Total Ownership Cost," GAO-03-57

⁷³ Roberts, Nancy. Presentation on Organizational System's Framework, Strategic Management, Feb 2004.

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