EnterpriseTransition Plan FY 2011

Department of Defense

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Chapter One – Introduction

The imperative to improve the Department's business operations has never been greater. Secretary of Defense Gates and Deputy Secretary Lynn have clearly articulated the pressing need for reform, driving action across all business areas such as acquisition and logistics, finance, real property and personnel. The people and processes that make up each of these business areas are supported by the Department's backbone of business Information Technology (IT). As current technology becomes obsolete, the Department must make targeted investments to modernize its existing business systems or develop and field new ones.
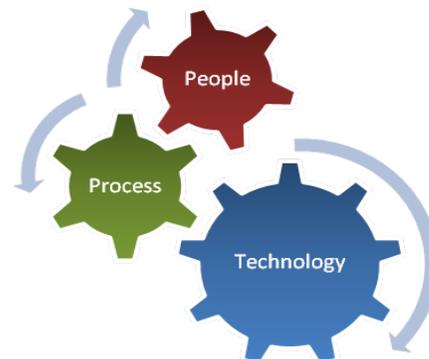
In FY11, the Department expects to spend nearly $7 billion on business systems. Approximately two-thirds of this amount is to sustain existing systems and one-third is for development or modernization efforts.

This Fiscal Year 2011 (FY11) Enterprise Transition Plan (ETP) focuses specifically on those business systems that are new or being modernized and provides the Department's roadmap accordingly. It identifies the governance and strategic framework DoD uses to manage its investments, describes how those investments are part of the Department's overarching management reform efforts, outlines key improvement initiatives for FY11 and provides specific information regarding each of its business system investments.

Statutory Requirements

This plan was developed pursuant to the FY05 National Defense Authorization Act (NDAA)[1], which established many of the foundational elements of today's business systems investment management framework. Specifically, it required that the ETP include:

- The acquisition strategy for new systems that make up the target enterprise architecture, including time-phased milestones, performance measures and a statement of the financial and non-financial resource requirements
- A listing of defense business legacy systems not expected to be part of the target environment (as of 2002)[2]
- A list of the defense business legacy systems expected to be part of the target environment[3]

We believe this plan satisfies both the letter and the intent of the law. We also believe it addresses many of the critiques of the ETP by the Government Accountability Office (GAO).

Document Scope

The FY11 ETP is an on-line document that includes a core printable file supplemented with additional on-line content. The core document includes summary level information describing the Department's strategic

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[1] This provision is codified at § 2222 of Title 10, United States Code, as amended.
[2] Information is available in the Master List of Systems at: http://dcmo.defense.gov/etp/FY2011/index.html
[3] Information is available in the Master List of Systems at: http://dcmo.defense.gov/etp/FY2011/index.html

approach to business systems modernization and its plans to improve IT-enabled business outcomes in FY11. Other on-line content provides more detailed information at the functional and systems level for 220 defense business systems that are being modernized or expected to begin modernizing in FY11.[4] Dashboard views are provided for core and interim systems that include: planned milestones, measures (core systems only), legacy system retirement information and resource requirements among other information.

Summary

Transforming the Department's business processes and systems to make them more effective and efficient is an ongoing effort motivated by the need to make better use of our resources, improve our stewardship and provide the best support possible to our warfighters.

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[4] The FY10 ETP highlighted 119 systems. This increase is largely due to the addition of Military Health System investments, other DoD Agencies such as Defense Commissary Agency, Defense Contract Management Agency, Defense Human Resource Activity, Defense Information Systems Agency, Defense Security Service, and the Missile Defense Agency, which were not included in past years. Also, systems were added this year that did not modernize in FY10, but are *likely* to modernize in FY11 based on budget projections. They were added to ensure the Department has increased visibility of all new *and* prospective modernization investments.

Chapter Two – Managing Defense Business Systems Investments

Managing business system investments in an organization as large as DoD requires (1) a clear understanding of strategy and strategic alignment; (2) integrated governance structures comprised of leaders who have authority, responsibility and commitment to make decisions; and (3) a set of transformational tools, such as the ETP and Business Enterprise Architecture (BEA) that can help systematically guide and constrain the overall portfolio of investments.

Strategy and Strategic Alignment

In a time of increasing fiscal constraint, it is important that the Department's business system investments be aligned with its strategic priorities.

The National Security Strategy, National Defense Strategy, Quadrennial Defense Review (QDR) and Defense budget set priorities for the entire Defense Department. These priorities are reflected in a family of plans that guide our business operations (**Figure 1**). Due to its size and complexity, the Department utilizes this family of plans approach to cascade enterprise business priorities reflected in the Strategic Management Plan (SMP)
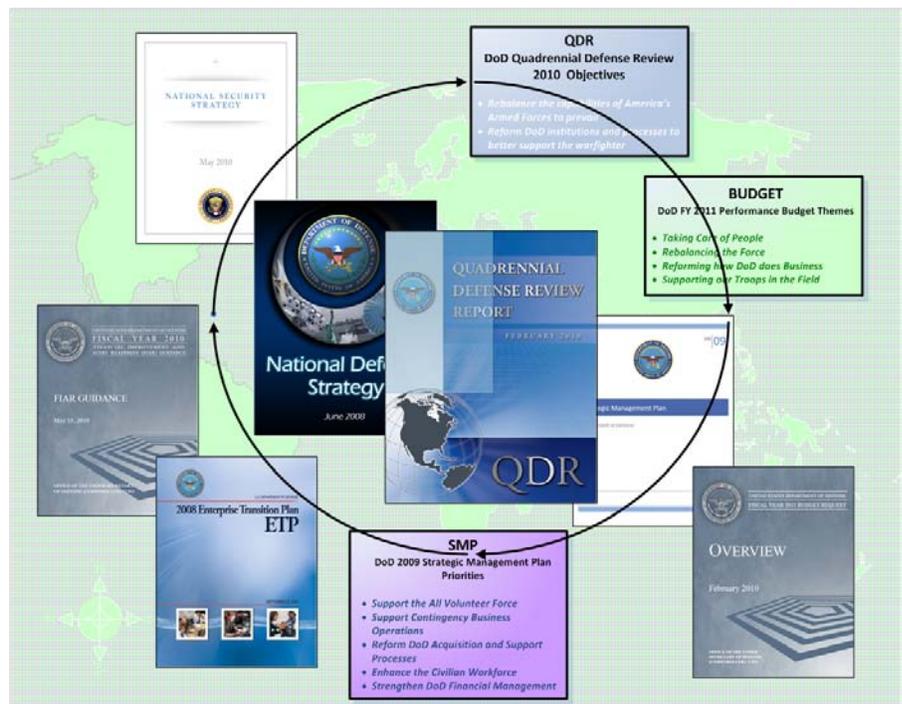
Figure 1. Family of Plans

(established by the FY08 NDAA) and Performance Budget, into functional and organizational plans such as the Financial Improvement and Audit Readiness (FIAR) Plan, DoD Logistics Strategic Plan, DoD Information Enterprise Strategic Plan, individual GAO High Risk Area Remediation Plans and Military Department (MilDep) Business Transformation and Transition Plans. This FY11 ETP is also a part of the Department's family of plans and reflects business system modernizations necessary to enable achievement of priorities included in the other plans.

Governance and Leadership Framework

In order to effectively manage business system investments, the Department utilizes a framework comprised of the Defense Business Systems Management Committee (DBSMC) and a series of supporting Investment Review Boards (IRBs) established by the FY05 NDAA. These governance bodies leverage newly established leadership positions, such as the Chief Management Officer (CMO), Deputy Chief Management Officer (DCMO) and MilDep CMOs established by the FY08 NDAA, in addition to the expertise and authority of long-established officials such as the Under Secretaries of Defense (USDs). While the DCMO and MilDep CMOs take an enterprise view, each USD remains responsible for setting policy and providing oversight for enterprise activities, processes and systems related to their functional areas of responsibility.

Within the Department, these functional areas of responsibility are also referred to as Core Business Missions (CBMs) and include Human Resources Management (HRM), Financial Management (FM), Weapons Systems Lifecycle Management (WSLM), Materiel Supply and Services Management (MSSM) and Real Property and Installations Lifecycle Management (RPILM). Each CBM is managed by a USD and has a corresponding IRB. The responsible USD designates a representative to chair the IRB aligned to the CBM. **Table 1** aligns CBMs to functional area managers. Additional information about CBMs can be found in Chapter Four.

Table 1. CBMs by Functional Area Managers

Defense Functional Area Manager	Core Business Mission
Under Secretary of Defense(Comptroller)/Chief Financial Officer (USD(C)/CFO)	Financial Management
Under Secretary of Defense for Personnel and Readiness (USD(P&R))	Human Resources Management
Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L))	Materiel Supply and Services Management
	Real Property and Installations Lifecycle Management
	Weapon System Lifecycle Management

The DBSMC, IRBs and mission areas are foundational elements of the Department's governance framework. The DBSMC, chaired by the Deputy Secretary of Defense, provides top-level direction for the Department's business efforts. Members of the DBSMC include the DCMO (Vice-Chair), USDs, MilDep CMOs, DoD Chief Information Officer (DoD CIO) and other officials designated by the Deputy Secretary of Defense.

The DBSMC's primary functions are to set strategic direction for the Department's business operations, track progress and oversee business systems investments. The DBSMC is statutorily responsible for approving business systems IT modernizations over $1 million and ensuring they are compliant with the BEA and certified by the IRBs before funds are obligated. Additionally, the DBSMC ensures Business Process Reengineering (BPR) activities are completed, approves updates to the BEA and ETP, manages cross-domain integration and coordinates business system modernization initiatives to maximize benefits and minimize costs.

Figure 2 illustrates how the Department's organizational structure integrates official line responsibilities with matrixed business transformation oversight. While functional roles of the Under Secretaries of Defense are clearly defined, cross-functional governance represented by the DBSMC is essential to ensure optimization of the enterprise.

¹ On August 9, 2010, the Secretary of Defense announced his plan to implement "Track Four" initiatives to create efficiencies, which included disestablishment of several activities, including ASD(NII).

Note: Acronyms are provided in the acronym list.

Figure 2. DoD Business Transformation Leadership and Governance Structure

Transformational Tools

Business leaders and governance boards rely heavily on transformation tools to assist them in managing their portfolios.

Business Enterprise Architecture

The BEA, guided by SMP priorities, is an integrated information architecture that provides a blueprint for business system modernization investments. It defines the Department's future business environment. The Department's business leaders rely on the BEA to help guide and constrain investments within their portfolios. The BEA includes laws, regulations, data standards, business rules and other requirements to which new systems and those being modernized are spending more than $1 million must comply.

Our business architecture is a living set of substantive Department-wide standards and business rules. Our federated architecture approach led the corporate enterprise to establish only those standards that must be common across the entire Department, while allowing MilDeps, DoD agencies, and other DoD organizations to develop their own architectures that capture elements unique to each organization. Based on GAO's Enterprise Architecture Maturity Model, we remain in the early stages of architecture development within the MilDeps, but progress is being made, and lessons learned continue to be shared across the Department. BEA 7.0 was released in March 2010. Important developments included incorporation of Wounded Warrior Processes, improved visualizations, linkage to the DoD SMP and content enhancements within each business area. The Department is currently in the process of developing BEA 8.0, which will be released in March 2011. Additional information about key focus areas for BEA 8.0 can be found in Chapter Three.

Enterprise Transition Plan

The ETP provides the roadmap that implements the BEA. It defines specific implementation goals, milestones and measures for each FY to reach the "to be" envisioned state. As information technology is a key enabler of all of the Department's business operations, it is important for the Department to have a cohesive plan for implementing and modernizing business systems within and across each of its functional areas.

Congressional Report on Defense Business Operations

The annual Congressional Report on Defense Business Operations informs Congress, the public, auditors and others of the Department's progress in achieving specific goals, milestones and measures in the prior year's ETP.

Summary

The Department utilizes a framework to execute business transformation. This framework is composed of an overarching strategy (SMP) to guide it, governance bodies (IRB/DBSMC) to manage it, an architecture (BEA) to set requirements, a plan (ETP) to implement it and a Congressional Report to document progress.

Chapter Three – FY11 Improvement Focus Areas

For FY11, the Department will focus its efforts to improve overall management of its business system investments in four areas.

- **Improved interoperability through End-to-End (E2E) processes**
- **Streamlined acquisition processes**
- **Reengineered processes**
- **More cost effective infrastructures**

First, the Department is focusing on further refining the concept of E2E process flows and improving data standards and interoperability within the BEA. Developing these E2E processes will enable the Department to better develop its target system environment and rationalize its portfolio of business systems. Second, the Department is focused on developing and implementing an alternative approach for acquisition of business IT capabilities more quickly and cost effectively. Third, the Department is institutionalizing tenets of BPR into the fabric of the Department's investment management processes, thus ensuring we are not spending money to automate inefficient processes. Fourth, the Department will seek efficiencies and cost savings in the way we manage our server infrastructure.

FY11 Business Enterprise Architecture Development

End-to-End Processes

BEA 7.0, released in March 2010, introduced the concept of E2E flows to serve as the foundation for a shared understanding of the target architecture, which represents the combination of systems, standards, business rules and measures needed to deliver E2E capability in the most efficient manner. This means fewer system hand-offs, little to no system redundancy and minimal functionality gaps between business systems. In BEA 7.0, 15 E2E processes were defined at a high level, with the expectation that processes would be further refined in the future. These E2E flows are:

- Acquire-to-Retire (A2R)
- Budget-to-Report (B2R)
- Concept-to-Product (C2P)
- Cost Management (CM)
- Deployment-to-Redeployment/ Retrograde (D2RR)
- Environmental Liabilities (EL)
- Hire-to-Retire (H2R)

- Market-to-Prospect (M2P)
- Order-to-Cash (O2C)
- Plan-to-Stock – Inventory Management (P2S)
- Procure-to-Pay (P2P)
- Proposal-to-Reward (P2R)
- Prospect-to-Order (P2O)
- Service Request-to-Resolution (SR2R)
- Service-to-Satisfaction (S2S)

In FY11, BEA 8.0 will further refine two of these flows—P2P and H2R. **Figures 3 and 4** show the first level of the P2P and H2R business flows, respectively.

By further breaking out or decomposing lower levels of E2E sub-processes in the BEA, the Department, as a whole, will be able to determine the most efficient way of executing its business. Individual Program Managers will be in the position to better align their processes with the Department's desired end state.

PROCURE-to-PAY (P2P)

Business Flow

Execute Requisition → Source Goods and Services → Manage Contract → Execute Purchase → Perform Receipt, Acceptance and Return → Process Invoice and Match → Execute Disbursement
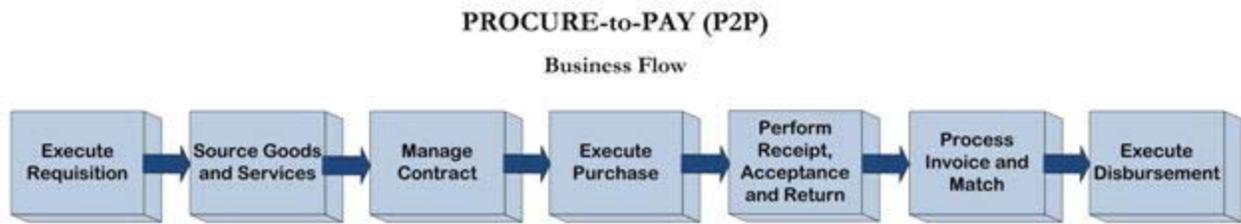
Figure 3. P2P Business Flow

HIRE-to-RETIRE (H2R)

Business Flow

Manage Organization → Acquire Human Resources → Develop Human Resources → Assign Human Resources → Maintain Human Resources → Separate or Retire Human Resources

Figure 4. H2R Business Flow

The E2E flow construct will also help IRBs make more informed investment decisions, prioritize future improvements to the BEA and rationalize business systems into a coherent target system environment. This target system environment is comprised of a right-sized combination of enterprise services, master data services, data warehouses, enterprise analytics, technology enablers (such as data translators) and Enterprise Resource Planning (ERP) systems or other core transactional systems.

Finally, the E2E process construct will help Program Managers and Functional Sponsors understand where their solutions fit into the overall enterprise and provide them with necessary data standards and business rules to efficiently integrate their solution into the target environment – both within and across E2E flows.

Consider the P2P process as an example. The current P2P process is executed by many mandated systems, core systems (some of which are ERPs) and other systems with specialized functionality that do not interoperate well, or at all, with other systems. As a result, there are many systems, interfaces and apparent redundancies.

Figure 5 represents a simplified depiction of the current P2P systems environment.

Figure 6 represents a possible notional final target system architecture. While this depiction may be overly simplistic, and it is not certain the Department could actually achieve this particular vision of the future, it represents a rationalized system portfolio that utilizes capability inherent in many of our current investments and greatly reduces the number of interfaces that have to be built and maintained. Considering our portfolio of business systems in this way is critical to making progress in simplifying the portfolio. It also reduces the number of data standards necessary to ensure interoperability. However, whatever is determined to be the final target architecture, achieving it will require clear interim steps.

Figure 7 presents an example of one possible notional interim step that assumes Component ERPs will assume full capability for core financial accounting and be supplemented by mandatory enterprise systems. Some of the functionality performed by previously mandatory enterprise systems (e.g., Standard Procurement System (SPS)) would be enabled in ERPs and redundant capability in non-ERP Component systems would be eliminated. Specialized functionality necessary to meet DoD needs or statutory requirements would continue to be performed by DoD enterprise systems.
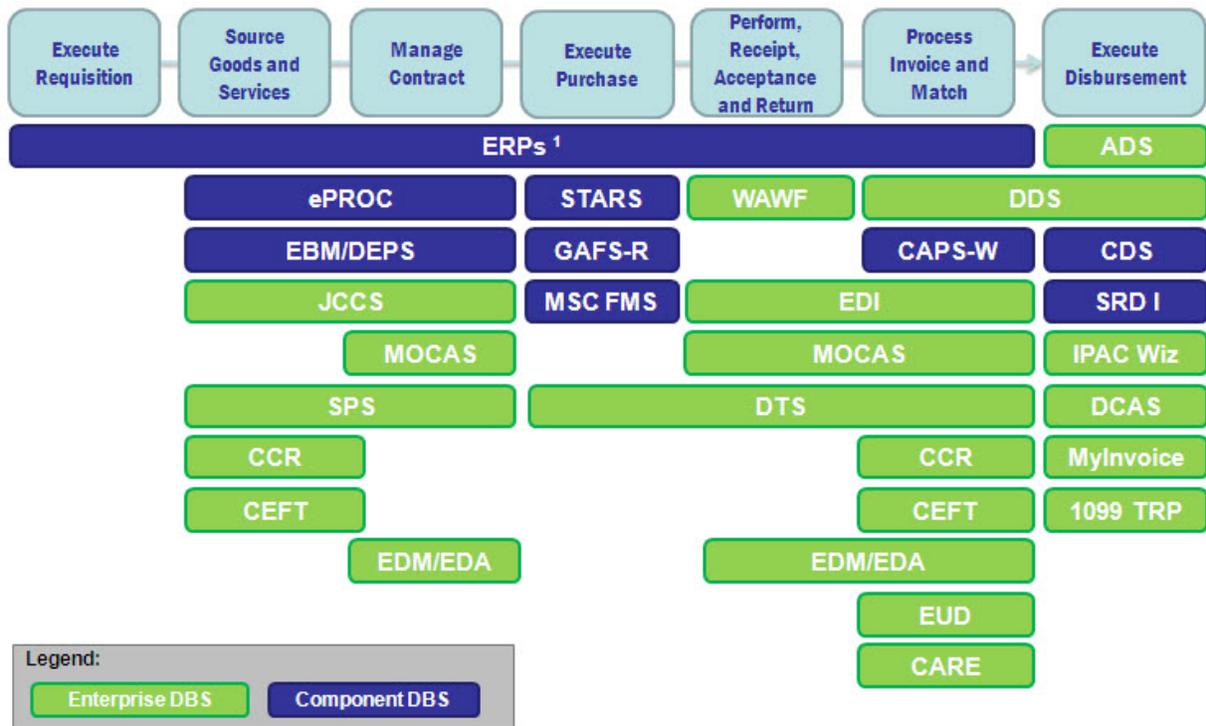
Figure 5. Current P2P Systems Environment
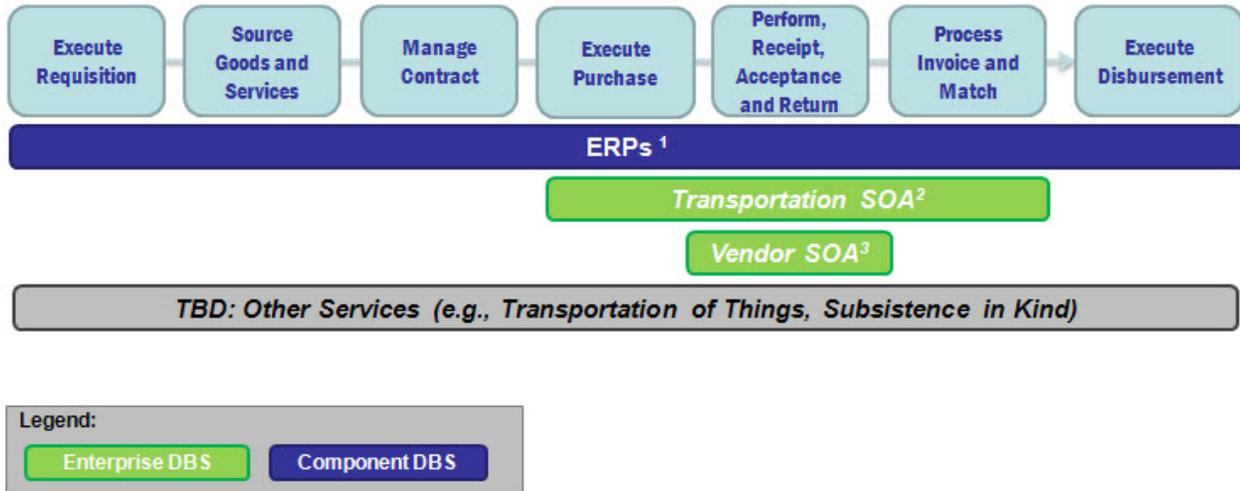
Figure 6. A Notional Optimal P2P Systems Environment
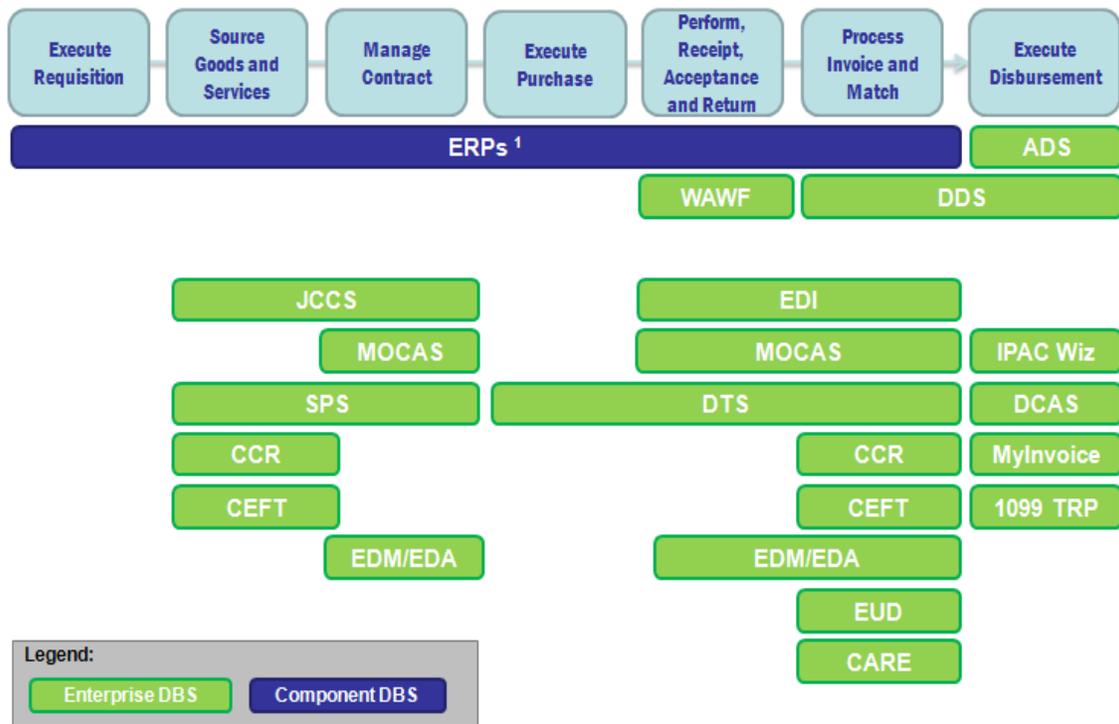
Figure 7. A Notional Improved P2P Systems Environment

Data Interoperability

The Office of the DCMO (ODCMO) continues to pursue making data understandable and interoperable across the Department by establishing a data environment based on a common business vocabulary. The Department is utilizing a variety of semantic Web technologies and standards to build and deploy this state-of-the-art data environment. The BEA is the foundation for establishing common vocabulary (CV) capabilities across the Department's business operations. Coupled with this CV effort, the Department is reevaluating its process for defining BEA data standards to ensure data standard requirements are sufficiently mature and ready for implementation. Along with Service-Oriented Architecture (SOA), these semantic technologies are key to achieving a Web-enabled environment.

The CV initiative uses common data concepts and names to reduce ambiguity and need for complex interface transformations between systems. To further check misunderstanding, semantic Web technologies allow creation of computer-processable definitions for the common vocabulary terms, allowing software systems to look these terms up, much as we would look up words in a dictionary, thereby making intelligent decisions based on what is researched.

As a key part of the process in realizing this vision, ODCMO established the Enterprise Information Web (EIW)[5] project to demonstrate the use and effectiveness of semantic technologies in making shared information understandable in a Web-enabled environment. The EIW effort is divided into roughly 90-day segments, each of which demonstrates capabilities provided by semantic technologies. CV is also used in architecture

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[5] EIW was previously Enterprise Information Warehouse.

descriptions to define information required to be captured and exchanged. It will become a part of architecture specifications, notably the BEA, beginning with BEA 8.0, to form a reference standard for IT design, development and deployment.

Historically, data standardization efforts were conducted "bottom up" within single business capabilities owned by each business area. Associated data requirements were incorporated into the BEA often without consideration of interoperability requirements across all operations within and between E2E business processes. This resulted in enterprise data standards that were redundant, contradictory or incomplete.

> **The inability to effectively acquire information technology systems is critical to national security.**
>
> *Defense Science Board Task Force Report on the DoD's Policies and Procedures for the Acquisition of IT, March 2009*

In FY10, the Department began efforts to improve alignment between objectives in the DoD SMP and BEA content using E2E business flows. This shifted the BEA content approval process from a functional bottom-up process, to a cross-functional top-down process. To be effective, the Department needed to understand impacts of proposed data standard changes to the BEA and the value each brought to the enterprise. It was agreed that development of a repeatable and objective assessment methodology was needed to support leadership decisions.

An initial prototype "heat map" view of existing and proposed data standards was created to provide a quick understanding of whether new standards being proposed were mature enough to be incorporated in the BEA. Standards were expected to be based on existing policy, laws or regulations, and to the extent feasible, be consistent with existing DoD ERP investments. Standards were also expected to include measures of effectiveness. During FY11, this approach will be improved and expanded upon to give leadership better information about data maturity and help establish BEA development priorities in order to close gaps in E2E business processes.

In addition to foundational vocabulary work and an improved approach to data standards, the Department is also extending work begun with SOA initiatives designed to achieve interoperability and efficiency in solution implementations. The combination of SOA and semantic technologies is particularly effective in Business Intelligence solutions, as is currently being demonstrated with the iterative development of the Human Resources (HR) EIW, where semantic technologies are driving querying, and HR information is displayed from multiple DoD HR systems within a "cloud" environment. As the Business Mission Areas' (BMA) first Semantic Web Technology project (Web 3.0), EIW is paving the way for an entirely new approach to delivering business capabilities in timeframes as short as 90 days. Because this technology is based on standards from the World Wide Web Consortium, all investments are interchangeable and immediately available for reuse. In this way, interoperability and net-centric benefits are realized in shorter time frames.

Alternative Business Information Technology Acquisition Approach

One of the Deputy Secretary's highest management priorities is to improve acquisition, development and fielding of IT capabilities. The 2009 Defense Science Board (DSB) Task Force report, *DoD's Policies and Procedures: The Acquisition of Information Technology* concluded the Department's current approach to implementing IT systems takes too long, costs too much and often fails to deliver performance improvements being sought. Given the rapid pace of IT development, this means DoD is in effect, delivering obsolete systems. The DSB

Task Force recommended the Department develop a unique acquisition system for IT modeled on commercial practices that are more agile and geared toward delivering meaningful increments of capability in approximately 18 months or less—increments prioritized on need and technical readiness.[6]

Building on these conclusions, Section 804 of the FY10 NDAA, tasked the Department to develop and implement a new process for acquiring IT systems and submit a report to Congress within 270 days. The Secretary of Defense is responding to this requirement in a report entitled, *"A New Approach for Delivering Information Capabilities in the DoD."* This report provides an update on the Department's progress toward developing a new IT acquisition process, discusses the timeframe for full implementation and submits that changes to legislation may be required to fully implement this new acquisition process.

The Deputy Secretary established an IT Acquisition Reform Task Force to ensure a senior leadership perspective of this overarching, cross-organizational effort. In FY11, the Department will work to outline a series of IT acquisition paths that apply high levels of institutional due diligence where needed, stripping away excess oversight requirements where not needed in accelerating business capability delivery. The Task Force is taking a phased approach and is guided by four key principles—speed, incremental development, governance and adaptability. The initial phase of the Department's IT Acquisition Reform effort will focus on DoD business systems. Future phases will focus on the remaining types of IT systems, incorporating lessons learned from the initial phase.

In the initial phase, the Department will improve acquisition of its defense business systems in two ways. First, the Department will implement a Business Capability Lifecycle (BCL), an alternate acquisition approach focused on the complete lifecycle of an acquisition and adhering to the key tenets of reform. BCL was signed by USD(AT&L) on November 15, 2010, and includes important changes in the areas of process, governance and decision support.

For example, BCL will be used instead of the Joint Capability Integration Development System (JCIDS) process, and requirements will be incorporated into a single business case document, thus reducing documentation requirements.[7] Second, the Department is altering its oversight of business Major Automated Information Systems (MAIS) through use of the Combined IRB for Acquisition (CIRB-A). The CIRB-A will serve as the Overarching Integrated Product Team for these investments and will serve as the primary advisory body to the Milestone Decision Authority—the DCMO or USD(AT&L) depending on the program. The CIRB-A will conduct regular reviews of all aspects of these programs as they approach acquisition milestone decisions or need IRB certification of funding.

Business Process Reengineering

Section 1072 of the FY10 NDAA introduced new requirements into the investment review process, stipulating that business systems may not be certified by the IRBs, or approved by the DBSMC, unless appropriate BPR efforts had been undertaken.

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[6] DSB Task Force Report titled, *Department of Defense's Policies and Procedures: The Acquisition of Information Technology* was published in March 2009. The DSB is a federal advisory committee established to provide independent advice to the Secretary of Defense. Statements, opinions, conclusions and recommendations in this report do not necessarily represent the official position of DoD.

[7] Chairman of the Joint Chiefs of Staff Instruction 3170.01G, "Joint Capabilities Integration and Development System," dated March 1, 2009, states "The JROC recognizes that the same level of oversight is not required for all information systems. Information systems that are defense business systems, regardless of cost, will comply with the process defined by the Defense Business Systems Management Committee. These systems will employ a business case document using the Business Capability Lifecycle process in lieu of an ICD/CDD to justify the need for a solution. In those cases where the JCIDS Gatekeeper, on the advice of the Lead FCB, determines that joint oversight of the business system is required, the business case document will be reviewed and validated in lieu of the appropriate JCIDS documents."

To evaluate a program's BPR efforts, the Department issued guidance and defined a number of key tenets that are integral parts of proper BPR. Key tenets include:

- Outlining a clear and reasonable problem statement;
- Demonstrating alignment between the investment and broader Departmental, Component and/or Service goals;
- Completing analysis of the "as-is" environment in sufficient detail to illuminate the problem statement and justify the need for a particular materiel investment;
- Considering and implementing changes across the full spectrum of operations or Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel and Facilities, in addition to developing a materiel solution;
- Completing analysis of the "to-be" environment in sufficient detail to be translated into clear requirements linked to the selected materiel solution's capabilities. This analysis must illustrate that the investment's underlying business processes are as streamlined and efficient as possible and unique requirements and unique interfaces have been minimized to the greatest extent possible;
- Identifying appropriate outcome-based business performance measures consistent and linked to the intended benefits of investment;
- Designing a reasonable implementation/change management approach; and
- Detailing actual results.

The BPR assessment process utilizes both a specific questionnaire (i.e., the BPR Assessment Form) and the provision of objective evidence to assess a program's BPR against criteria outlined above. Programs in different stages of their development/modernization lifecycle may have completed different amounts of BPR. However, it is important these programs begin BPR early and upfront in their lifecycle, and continue to conduct appropriate BPR throughout that lifecycle.

Conducting appropriate BPR early and upfront throughout a defense business system's acquisition or modernization lifecycle and identifying a consistent set of business performance measures, including system performance measures included in the ETP, is critical to improving our IT acquisition and modernization efforts. Specifically, it helps enable successful and timely system implementation through development of better requirements, incorporation or reuse of Commercial-Off-The-Shelf (COTS)/Government-Off-The-Shelf (GOTS) solutions, better and faster implementation with less customization of COTS/GOTS product(s) and implementation of proper standards, controls, training and change management strategies. Conducting appropriate BPR will also help the Department rationalize its defense business system portfolio, improve its use of performance management, control scope changes and reduce the cost of fielding business capability.

The Department successfully launched this new requirement and is currently conducting BPR reviews for each system that comes through the IRBs for a certification decision. During FY11, the Department will continue to reinforce BPR in its business system investments and the underlying processes they support. BPR efforts are not new to DoD, and leverage DoD Instruction 5000.02 and Clinger Cohen Act requirements to document Measures of Effectiveness for outcome-based business performance.

Rationalizing Infrastructure

During FY11, the Department will seek to reduce IT infrastructure costs by implementing a commercial technology known as Server Virtualization. This effort is consistent with the Office of Management and Budget (OMB) Federal Data Center Consolidation initiative. Server Virtualization is software that creates an emulation of a hardware platform on which a copy of an operating system can be run for other software. An application

installed alone on a virtual server, believes it is running alone on a physical machine dedicated to it, while in fact, several such emulations can run on a single physical server, allowing much higher utilization of physical resources than is usual when they are run traditionally. Hundreds of virtual servers may run on only dozens of machines. This technology will be used to consolidate computer servers supporting DoD Business Operations. Server Virtualization could achieve these results:

- Data Center server consolidation ratio of 16:1, which is a reduction of approximately 5,300 servers to 332;
- Improved annual IT productivity equivalent to approximately 186 full-time employees;
- Data Center space savings of over 711 square meters; and
- Reduced annual energy consumption of over 4,000 kilowatt equating to over 21,700 tons of carbon emissions.

Summary

In FY11, the Department is shifting its focus from functional activities to business outcomes by taking an E2E view of its processes and the data that goes through them. The Department recognizes the urgent need to develop special acquisition processes to more rapidly acquire and deploy IT in order to keep pace with technology evolution. This requires new methodologies to help investment managers (IRBs and DBSMC) make better decisions about IT investments and architecture development. At the operational level, business systems will use process improvement methodologies to ensure they are implementing efficient solutions that execute processes seamlessly. At all levels, the Department is establishing performance measures and tracking performance to verify whether planned outcomes are actually realized.

Chapter Four – Core Business Mission Initiatives, Plans and Measures

The SMP sets priorities and provides strategic direction for Departmental business operations. It identifies desired business outcomes and designates accountable organizations to implement them. As previously mentioned, the Under Secretaries of Defense represent various functional core business missions of the Department, and are leading business initiatives, many of which are enabled by IT. Effective collaboration is key to implementing optimal solutions and achieving the Department's business objectives.

The following sections provide an overview of each CBM's key initiatives and supporting business systems, alignment to the BEA and measures established for FY11.

Human Resources Management

HRM encompasses all activities supporting DoD personnel and family members throughout their careers and beyond. The Under Secretary of Defense for Personnel and Readiness (USD(P&R)) is responsible for leading and managing HRM activities to ensure the right people are recruited, trained, capable, motivated and ready to respond to the broad continuum of emergent threats both now and in the future. Within the Office of the USD(P&R), the Personnel and Readiness Information Management Directorate is responsible for planning, establishing policy and implementing HRM's transformational strategies and systems that provide and care for the Department's most important resource—its people.

Key Initiatives

The HRM CBM has many initiatives and BEA development efforts underway, including refinement of the Hire-to-Retire E2E process flow that will enable SMP priority "support the all-volunteer force." These initiatives include:

Human Resources Enterprise Information Web (HR EIW) reaches into MilDep systems to satisfy enterprise HR information needs. It accomplishes three objectives: reports near real-time, authoritative HR information on-demand; supports HR enterprise information standards; and supports IT flexibility. This capability provides important personnel visibility data to decision makers as they enact policies to recruit, train and maintain military forces. In FY11, HR EIW will deliver capability quarterly to demonstrate the technical approach's efficacy and test available commercial platform offerings for optimum performance. By the end of FY11, the ability to federate disparate MilDep Authoritative Data Systems by exposing live data via semantic queries, is planned to demonstrate a viable solution to enterprise personnel visibility in the Department.

Virtual Interactive Processing System (VIPS) will significantly modernize and automate the current labor-intensive recruitment induction process to ensure a continuous supply of qualified recruits to serve in the Armed Forces. VIPS will expand options for applicant interaction within the qualification process, positively verify an applicant's identity throughout the entrance/accession process, capture and verify biometric signatures, electronically validate applicant's self-disclosed information, support global accession processing and enhance data accessibility. It will also enable capabilities such as electronic screening of an applicant's background to pre-determine eligibility for enlistment, automatically generate the initial electronic medical healthcare record and virtually enlist personnel.

Virtual Lifetime Electronic Record (VLER) enables sharing of administrative and medical information for Service Members, Veterans and their dependents and beneficiaries with approved personnel providing health care or benefits using the National Health Information Network (NHIN) framework. VLER implementation will focus on sharing medical information for health care services. It will ensure health information is shared with the strictest and most rigorous standards of privacy and security under the Health Insurance Portability and Accountability Act and the Privacy Act. In FY11, three pilots in different locations in the U.S. will be deployed – each adding an increasing number of data elements. Over the next five years, VLER will expand to additional locations and increase data available for exchange for each Service Member, Veteran and dependant.

BEA Alignment and Compliance Goals

Human Resource Management Enterprise Standards (HRM ES) contains personnel information that will be refined and standardized and, as the project progresses, the BEA will be modified to include Common Human Resource Information Standards (CHRIS), which are elements of the HRM ES. Currently, there are 368 CHRIS in BEA 7.0; that number is expected to expand beyond 500 by the BEA 8.0 release.

VIPS was designated within the BEA 7.0 as an Enterprise System Initiative and integrated into appropriate architecture models. BEA related changes will be made as needed.

VLER functionality will be identified and implemented. Related data standards will enable exchange of administrative data in addition to military health information between DoD, the Department of Veterans' Affairs and private partners.

Weapon Systems Lifecycle Management

Acquisition Visibility (AV) is defined as achieving timely access to accurate, authoritative and reliable information supporting acquisition oversight, accountability and decision-making throughout the Department for effective and efficient delivery of warfighter capabilities. It brings transparency to critical information supporting full lifecycle management of the Department's processes that deliver weapon systems and automated information systems. Effective management and oversight of the vast portfolio of Major Defense Acquisition Programs (MDAPs) and Major Automated Information Systems depend on timely access to authoritative decision-making information.

Key Initiatives

Procurement Data Standard (PDS) is a system-agnostic data standard created to drive standardization of contract output to help enforce Federal Acquisition Regulation-based contracting laws and regulations and to support interoperability among different procurement, logistics and financial systems. It defines minimum requirements for procurement system output regardless of the systems or tools leveraged by the contracting community. Complete implementation of PDS will enable unparalleled levels of enterprise visibility into contract content and increase transparency in the government acquisition process.

Earned Value Data Enhancements improve access, accuracy and timeliness of Earned Value Management (EVM) System data. The EVM Central Repository pilot program provides an automated central repository for key acquisition data and provides a test framework to evaluate and improve contracting approaches for EVM and Cost and Software Data Reporting.

Resource Management Decision 700/Selected Acquisition Report (SAR), President's Budget and Future Year Defense Program (FYDP) Transparency. USD(AT&L) established, in coordination with USD(C)/CFO and the Director of Cost Assessment and Program Evaluation, a process for ensuring current

financial information is reported in the SARs, including, but not limited to, lifecycle cost estimate, annual funding by appropriation, planned annual procurement quantities, Program Acquisition Unit Cost and Average Procurement Unit Cost, and actual realized funding and procurement. Information reported in this process is consistent with cost estimate, funding and procurement quantity information provided for preparation of the President's Budget and the FYDP. A conceptual framework for demonstrating the new process and data reporting procedures was implemented in May 2010, employing new processes and procedures for submission of the FY12-16 Program Objective Memorandum. These new processes and data procedures will be used to create financial information in the December 2010 SARs for all MDAPs.

Pre-Milestone B Information Management establishes enterprise structure, data and information requirements for pre-Milestone B acquisition efforts to meet the 2009 Weapon Systems Acquisition Reform Act direction and Department efforts to improve acquisition performance.

BEA Alignment and Compliance Goals

WSLM AV Content Refinement will add new data elements and refine existing data elements, along with accompanying definitions and business rules, to provide governance and accountability for acquisition decision-making data along with a framework for accessing this information as an enterprise service.

P2P will derive, update and normalize required minimum data elements, data structures and business rules to execute the P2P E2E process, providing implementation guidance within the BEA that will be adopted by DoD systems, including ERP systems. This standardization will ensure compliance to Laws, Regulations and Policies and promote enterprise-wide interoperability between DoD systems.

Synchronized Pre-deployment Operational Tracker (SPOT) will be added to the BEA. SPOT enables full accountability and visibility of contractors supporting contingency operations.

Materiel Supply and Services Management

The Office of the Assistant Secretary of Defense for Logistics and Materiel Readiness within the Office of the USD(AT&L), in partnership with U.S. Transportation Command as the Distribution Process Owner, has management oversight responsibility for integrating all elements that comprise the Department's supply chain. The MSSM CBM includes logistics-related activities associated with: planning, requisitioning materiel, sourcing, making/manufacturing/repairing, performing logistic operations and field services, sustainment, delivery of property and forces, receipt, retail sales and return or retrograde of all classes of supply (materiel). The overarching goal of the MSSM CBM is to ensure enterprise business capabilities meet readiness requirements for the warfighter and support DoD forces at sustained levels of performance to meet or exceed Combatant Command requirements.

Key Initiatives

Automating Material Visibility
DoD has made implementing and integrating Automated Identification Technology (AIT) and systems that enhance asset visibility and maximize deployment and distribution operational efficiencies a priority. Radio Frequency Identification (RFID) and Item Unique Identification (IUID), the Department's unique asset identification system, are key enablers of this effort. Related FY11 activities include:

- Updating policies and regulations, as required, regarding use of primary AIT in the receipt and in-check process, to include: Defense Transportation Regulation 4500.9R; DoD 4140.1-R DoD Supply Chain Materiel Management Regulation; Department of Defense Instruction (DoDI) 4151.19 Serialized Item Management for Maintenance Management; DoDI 8320.04 IUID Standards for Tangible Personal Property; and applicable DoD Federal Acquisition Regulation Supplement (DFARS) clauses.
- Completing modifications to automated systems to report RFID visibility data to the enterprise system by September 2011.
- Evaluating (1) operational measures to determine progress made; and (2) results of using AIT-enabled processes at retail and maintenance locations identified in the implementation plan for operational efficiencies, return on investment and compliance with DoD policy, by December 2010.
- Completing active RFID systems updates to migrate from use of American National Standards Institute standards to open International Standards Organization standards by September 2011.
- Publishing revised passive RFID DFARS contract clause to expand tagging requirements to pharmaceutical shipments and additional sites to which contractors will be required to send tagged shipments by December 2010.
- Determining AIT infrastructure requirements necessary to integrate IUID with other baseline AIT to manage and track IUID eligible items in accordance with Joint Logistics Board-approved requirements by December 2010.

BEA Alignment and Compliance Goals

Order-to-Cash (O2C) Minimum Data Standards. O2C encompasses all business functions necessary to accept and process customer orders for services and/or inventory held for sale. The intent is to derive, update and normalize required minimum data elements, data structures and business rules to execute the O2C E2E process for DoD systems, including ERP systems, and incorporate them into BEA 8.0 to promote enterprise-wide interoperability between DoD systems across the entire O2C E2E process.

Real Property and Installations Lifecycle Management

America's military installations must sustain our home and forward deployed military, civilian and contractor personnel, as well as provide support for training and deployment needs during periods of peace, crisis, contingency and combat. MilDeps manage the Department's installations, with oversight by the Deputy Under Secretary of Defense for Installations and Environment, who is responsible for modernizing RPILM business systems and development of common data standards. MilDeps and Defense Agencies collaborated on these BPR efforts to increase efficiency and to ensure interoperability across the Department.

Key Initiatives

Real Property Inventory Requirements (RPIR) provide the foundation for achieving real property accountability by standardizing data, systems and processes. During the next four years, the CBM will migrate enterprise systems that support RPIR to a single, BEA-compliant, net-centric, service-oriented platform that will enable broader access to authoritative real property data and reporting, geospatial and analytical tools. This merger is expected to significantly drive down contracting, licensing and hosting costs, although cloud computing costs based on usage may offset some of that reduction. This merger is also expected to decrease data redundancy, increase data currency and increase accuracy of enterprise data by enforcing corrections at the source prior to its movement to the enterprise. By delivering this capability using a SOA approach, resources

required to interface with the new platform should also be significantly lower. Functionality is anticipated to be implemented incrementally, with an initial operational capability in place as early as January 2013, with full deployment prior to the end of FY14.

Real Property Acceptance Requirements and Real Property Construction in Progress Requirements establish accounting and financial standards for bringing new assets into DoD real property inventories. Implementing these requirements will provide real-time accountability for the Department's investments in construction projects, enabling accurate and consistent reporting to Congress, project and financial managers, and help to achieve clean audits.

Chemical Management Enterprise Information Integration improves accuracy and availability of authoritative data required for management of chemicals and materials and will ultimately reduce chemical-related risks throughout the DoD supply chain.

Defense Installation Spatial Data Infrastructure (DISDI) leverages spatial information and capabilities to better manage global installations and bases by using the Global Information Grid (GIG). DISDI develops standards and policy to reduce redundant acquisition and enable sharing and interoperability of high-quality geospatial data at all levels of installation management. By FY12, DoD Components will achieve full compliance with Version 3.0 of the Spatial Data Standards for Facilities, Installations and Environment. This will align geospatial data with RPIR, enabling SOA solutions that connect authoritative geospatial systems with real property management systems at all levels.

Enterprise Energy Management will provide real-time access to information on energy consumption and cost at various levels of aggregation to help DoD achieve its energy management goals. By FY12, the Department will have an implementation strategy and plan for enabling access to reliable and complete energy management information.

BEA Alignment and Compliance Goals

OmniClass Construction Classification System (OCCS) Support will further define the concept of Facility in the architecture by creating new entities and relationships depicting additional modules of which two of the three Facility sub-types, Building and Structure, may be comprised. This improvement will also introduce use of OCCS in support of standardized information exchanges, building information modeling, real property asset management and enterprise management of energy data.

Product Hazard Data (PHD) defines data standards for hazardous material information that are applicable across the Department. Implementing PHD business vocabulary and instituting a stewardship process will reduce redundant costs for data subscriptions and data maintenance as well as ensure a centralized, authoritative, interoperable source for PHD, facilitating better management of hazardous materials.

Real Property Data and Information Refinement will address gaps in consistent understanding and use of DoD real property inventory information to include refining relationships for property actions and refining functional use of asset review and inspection information.

Financial Management

USD(C)/CFO sets Departmental financial management policy, oversees associated financial activities and is committed to: proper and timely payments to the Department's military, civilian and retiree populations; accurate and timely payment of supplier and contractor invoices; accurate and reliable financial information to decision makers; and reliable warfighter support through effective and efficient financial operations and

activities. FM activities include planning, programming, budgeting, execution accounting, cost information and financial reporting.

Key Initiatives

USD(C)/CFO established DoD-wide priorities to focus improvement efforts on processes, controls and systems that produce and report information most often used to manage the Department. To achieve this objective, USD(C)/CFO designated two improvement priorities: (1) budgetary information and (2) mission critical asset information. Mission critical assets include the Department's military and general equipment, real property, inventory and operating materiel and supplies. DoD-wide initiatives are well underway to achieve these improvement priorities, and progress is already being made.

In support of USD(C)/CFO priorities, FM CBM leadership is promoting efficient and effective policies, business practices, systems and workforce initiatives that link resource allocation to planned and actual business outcomes supporting the Department's strategic goals and objectives; implement standards such as Standard Financial Information Structure (SFIS) and IUID that help produce comparable financial information across organizations; produce and interpret relevant, accurate and timely financial information readily available for analyses and decision-making; and achieve audit readiness and prepare auditable financial statements.

The path to achieving these goals, objectives and priorities is contained in the DoD FIAR Plan and Components Financial Improvement Plans (FIPs). Component FIPs conform to a standard FIAR strategy and methodology resulting in a phased approach to achieve USD(C)/CFO priorities while also achieving auditable annual financial statements. Both the DoD FIAR Plan and Component FIPs are integrated with the ETP.

Key to achieving USD(C)/CFO priorities, auditable annual financial statements and sustaining auditability is modernization of the Department's business and financial systems. The Department is in the process of replacing most of its legacy business and financial systems that do not effectively capture financial transactions in a manner compliant with modern integrated ERPs. These ERPs are the core of the audit-ready target systems environment. However, since full deployment will take many years, interim systems are being implemented to provide needed near-term capability. For example, the Business Enterprise Information Services (BEIS) family of systems supports translation of non-standard financial data for reporting purposes and integrates financial and non-financial data. This capability was recently used to support reporting requirements under the American Recovery and Reinvestment Act of 2009. Another system, Wide Area Work Flow (WAWF) captures both receipts and invoices electronically, and supports more efficient bill payment, while also ensuring business events are captured for purposes of accrual accounting and improved financial reporting.

BEA Alignment and Compliance Goals

Process updates. BEA processes will be updated to address: new Laws, Regulations and Policies (LRPs) impacting business processes; SFIS Governance Board changes; United States Standard General Ledger Transaction Library updates; and detailed requirements for Federal Financial Management Improvement Act readiness based upon Federal and DoD source documentation. BEA LRPs include constraints mandated by Federal, the Office of the Secretary of Defense and Congressional policies, regulations or statute (e.g., DoDIs or Directives, other DoD policies, Department of Treasury Financial Manuals and Public Law).

BEA changes to address material weaknesses. Processes will be identified to determine whether they include internal controls necessary to achieve a clean audit. This effort will provide visualization of how material weaknesses are addressed and aligned to business processes within the BEA, and how related performance measures track elimination or reduction of material weaknesses. This will help Program Managers identify areas

requiring BPR and help identify enterprise solutions for the future. For BEA version 8.0, this will focus on accounts receivable and fund balance with Treasury, two asset accounts. This effort is aligned to the SMP goal of good stewardship of public funds.

BEA compliance validation. Currently, system owners self assert compliance with enterprise standards such as the BEA, SFIS and BPR. Beginning in FY11, the FM IRB will pilot a more rigorous compliance regime in which validation by an outside party will be required.

Integrated ERPs with stronger controls, training and change management. ERPs are being acquired and implemented by each of the MilDeps and several Defense Agencies to improve financial compliance. Navy ERP implementation is well underway. Army has two of its financial systems of record—Logistics Modernization Program and General Fund Enterprise Business System—within a few years of reaching Full Operational Capability. Air Force's planned ERP for financial management – Defense Enterprise Accounting and Management System – recently completed a second technology demonstration in May 2010 that was deployed to over 1,100 users at Scott Air Force Base and DFAS Limestone, Maine. It will be integrated with the Air Force supply chain solution – Expeditionary Combat Support System – which recently implemented a small technology demonstration pilot at Hanscom Air Force Base in August 2010. The Defense Agencies Initiative is operating at its second agency while supporting limited functional requirements at other organizations. Effective ERP implementations will improve the business environment and provide improved financial controls to ensure business events are captured and recorded properly as well as support auditability of DoD financial statements.

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Chapter Five – Improving Contingency Business Operations

Deployed warfighters operate at a high operational tempo in uncertain expeditionary environments that rapidly and continuously evolve. They depend on business processes, systems and support to deliver business capabilities seamlessly and under austere conditions.

March 16, 2009
(photo by Pfc. Bethany L. Little)

Today's expeditionary BMA is supported by Service-specific systems that often do not function well in low-bandwidth or off-network expeditionary environments. In addition to network issues, the joint nature of expeditionary warfare often requires personnel from one Service to use another Service's system, necessitating on-the-job training in an already demanding environment. There is a critical need to reduce expeditionary systems' complexity, provide a logical means for system identification and rollout planning and provide a reach-back capability to resolve developing business issues.

The Department is taking proactive steps to bridge the gap between DoD business modernization initiatives and warfighter business needs. In the near-term, it has identified business needs and critical gaps, and is working with key stakeholders to bring resources (people and funding) to the fight. In the long-term, it recognizes the warfighter's perspective must be brought into current design efforts, so the future business environment adequately supports contingency operations.

U.S. Army Central and the former Joint Contracting Command - Iraq/Afghanistan – now U.S. Central Command - Joint Theater Support Contracting Command (C-JTSCC) – reached out in 2009 for enterprise support in streamlining contracting and financial business systems and processes. Lack of automated P2P processes and business systems capable of effectively and efficiently operating in a low-bandwidth environment were root causes of issues in-theater. As a result, vendors were encountering multiple pay problems. Without clear standards, incorrect contract information was being entered into systems of record and represented differently in each system. Over time, this resulted in degraded reporting and poor accountability of contracts. Weakened controls increased potential for fraud, waste and abuse – vendors were getting duplicate payments, incorrect payments or not being paid at all. The lack of automated capabilities resulted in manual, labor-intensive processes and an influx of cash on the battlefield. Based on these findings, several critical areas were identified as immediately requiring improvement: contract visibility, data quality and automated data exchange.

Improve Visibility of Contracts Awarded In-Theater

Since making data visibility in-theater a top priority, C-JTSCC has seen an increase in contracting sites reporting to the Electronic Document Access (EDA) system – from 51 percent to 92 percent in just three months. The increase in reporting resulted in a reduction in Electronic Funds Transfer (EFT) cycle time on contract payments. Reducing EFT cycle time enables local vendors to make the shift from cash-based to EFT-based transactions, an important step to removing cash from the battlefield.

Currently, three percent of new contracts and contract modifications issued from SPS, the automated contract writing system used in-theater, are not reported to EDA, the Continental United States (CONUS)-based system of record for documenting contracts. The warfighter is getting help. System administrators are being deployed to contracting sites to identify site-specific roadblocks and develop/implement site-specific solutions to obtain reporting from all contracting locations by the end of the FY. With continued support and coordination, contracting actions in-theater will greatly improve.

> **GOAL:** Maintain 100 percent visibility on contracting actions in-theater and reduce average EFT cycle time by 15 days for retrograded contract payments. This effort is critical for accountability purposes and reducing EFT cycle time creates a more attractive alternative to cash payments, further reducing cash on the battlefield.

Improve Contracting Data Quality

Currently, a significant number of contracts issued in-theater have invalid data in one or more of the following fields: Ship to Department of Defense Activity Address Code (DoDAAC), Pay Office DoDAAC and vendor Commercial and Government Entity (CAGE) code. WAWF is DoD's automated system for vendor invoicing and recording of government receipt and acceptance. Valid data entry is significant to successful WAWF implementation. Subject matter experts have been deployed to regional contracting centers in Iraq to liaise with logistics and vendor communities in identifying and/or establishing appropriate DoDAAC and/or CAGE codes for input to, and use by, existing automated contract writing systems. Over this year and the next, this effort will be extended into the Afghanistan Area of Responsibility (AOR) to improve contracting data quality and increase use of WAWF. The ten largest vendors in the Afghanistan AOR account for more than 50 percent of materiel and services delivered in-theater – enrolling these vendors into WAWF will provide a substantial improvement in accountability and real-time visibility on funding execution.

> **GOAL:** Process at least $200 million in additional payments via WAWF and enroll the 20 largest vendors in the Afghanistan AOR. This effort improves visibility into the payment process and will reduce cash on the battlefield.

Improve Automated Data Exchange between Theater-based Contracting Systems and CONUS-based Entitlement Systems

Currently, there is no interface between the automated contract writing systems in-theater, SPS and the Global Exchange System, which feeds CONUS-based entitlement systems at Defense Finance and Accounting Service (DFAS). Thus, a manual entry of contract details by DFAS accounting technicians from Portable Document Format documents uploaded to the EDA system into the entitling systems of record is required. As a result, manual data-entry errors are common, as are delays due to data fields improperly entered into the contract writing system at the time of award.

> **GOAL:** Complete interface with 95 percent of contracts automatically communicated from theater-based contracting systems to CONUS-based entitlement systems by the end of FY11. This effort will reduce man-hour requirements in-theater and allow personnel to focus on managing the contracting process rather than on duplicating manual data entry.

Summary

The Department established measureable goals in order to bridge the gap between long-term DoD business modernization initiatives and the warfighter's business needs. Solutions are being implemented that provide immediate support to deployed warfighters by strengthening contracting controls, streamlining business processes and reducing the amount of cash on the battlefield to mitigate risks of fraud, waste and abuse.

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Chapter Six – Enterprise Transition Plan Systems

The FY11 ETP includes business systems currently being modernized, or planning to modernize, in FY11 and have, or will, spend more than $1 million in development and modernization funds. It also includes programs that completed their modernization efforts last year (FY10). On-line content for this plan includes planned cost, milestone and performance measure objectives. The March 2012 Congressional Report to Congress will include actual results achieved. **Tables 2** and **3** provide a summary of system status (**core, interim or legacy)** broken out by CBM/IRB and Component for this ETP.

Table 2. ETP Systems Summarized by CBM and Status

Core Business Missions	Core	Interim	Legacy	Grand Total
Human Resources Management	76	8	8	92
Weapon System Lifecycle Management	17	8	1	26
Materiel Supply and Services Management	47	15	9	71
Real Property and Installations Lifecycle Management	5	0	1	6
Financial Management	12	11[1]	2	25
Total	157	42	21	220

[1] Includes Army P2P Initiative.

Table 3. ETP Systems by DoD Component

Component	Core	Interim	Legacy	Grand Total
Department of the Army	25	6[1]	1	32
Department of the Navy[2]	31	6	1	38
Department of the Air Force	23	8	11	42
USD(AT&L)	4	1	0	5
USD(P&R)	2	0	0	2
United States Special Operations Command	1	0	0	1
United States Transportation Command	11	0	0	11
Defense Information Systems Agency	0	2	0	2
Defense Logistics Agency	12	6	1	19
Defense Security Service	1	0	2	3
Missile Defense Agency	1	0	0	1
Defense Commissary Agency	2	1	0	3
Defense Finance and Accounting Service	1	7	3	11
Defense Contract Management Agency	1	0	0	1
Business Transformation Agency	11	1	0	12
TRICARE Management Activity	28	4	2	34
Defense Human Resource Activity	3	0	0	3
Total	157	42	21	220

[1] Includes Army P2P Initiative.
[2] Includes United States Marine Corps Systems.

Many FY11 ETP systems are **core systems,** those expected to become the Department's solution for a given capability or capabilities. However, this plan also includes **interim** and **legacy** systems being modernized to provide a bridge to the "to be" target system environment. **Interim systems** are existing systems being modernized to support the Department for a given capability during a limited period of time. **Legacy systems** are systems expected to be retired.

More detailed information, including milestones and measures for these modernizing systems, as well as a master list of all business systems, their FY11 planned resource requirements and legacy system retirement information is available via the ODCMO Web site (http://dcmo.defense.gov/etp/FY2011/index.html).

Performance Measures and Milestones

Ongoing acquisitions and modernizing business systems addressed in the ETP are tracked using the following types of traditional measures and milestones:

- **Cost** – whether the program is within planned cost, as well as cost savings or cost avoidance
- **Schedule** – whether the program is within planned schedule (or meets milestones)
- **Performance** – whether the investment is providing expected business benefits/value and is performing efficiently, effectively and maximizing return on investment to the enterprise

Measures and milestones will be tracked and reported throughout a program's lifecycle. During development and prior to actual delivery of capability, cost and schedule measures are primary considerations. Once a program starts to deliver capability, performance measures become extremely important. Cost information in the ETP includes planned costs (budgeted) broken down as current services and development/modernization. To ensure consistency, measures developed for this ETP may be used to support BPR assessments and vice-versa (measures developed to support BPR may be incorporated into future ETPs).

However, this ETP is providing increased focus in identifying outcome measures that will help determine whether the system delivers business benefits that it set out to achieve. Having an outcome focus requires a clear understanding of what results are expected and the means to assess whether they are actually delivered. For business system modernizations, business and mission needs and expected benefits should be fully justified in a comprehensive business case that includes performance measures before investments are made.

The ETP and the Business Operations Congressional Report are statutorily required to include time-phased milestones and performance measures.[8] Performance measures are required by a variety of statutes, OMB guidance and DoD issuances as a means to quantify results across most major processes (e.g., acquisition, performance budget, BPR).[9] The ETP includes planned measures to define expected performance; and actual performance against measures is reported in the Business Operations Congressional Report.

Beginning in FY11, the Department is requiring systems or Program Managers to develop performance measures based on the Federal Enterprise Architecture's Performance Reference Model (PRM), and the PRM Framework. This Framework is consistent with the Department's performance management framework. It helps IT Project Managers, Program Managers and key decision-makers understand how, and to what extent,

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[8] Since metrics are a subset of measures, the term "measures" is being used in the ETP.
[9] E.g., Clinger Cohen Act, Government Performance and Results Act, OMB Circulars A-11 and A-130, DoD Financial Management Regulation, DoD information technology portfolio management issuances.

key inputs (technology, people and other fixed assets) are enabling progress toward desired and intended outcomes and outputs.

The performance model identifies three levels of measures based on outcomes, outputs and inputs. **Outcome** measures focus on mission critical results from a business or program and customer perspective. **Output** measures assess direct effects of day-to-day activities and broader processes as driven by desired business and customer results. **Input** measures assess how resources (people, technology and other fixed assets) contribute to processes and activities.

While measuring outcomes is preferred, it is often easier to measure outputs and inputs. Output and input measures are acceptable when there is a reasonable and logical connection between the output/input being measured and the desired/expected outcome. **Figure 8** depicts these relationships and identifies various results that can be expected at each level.
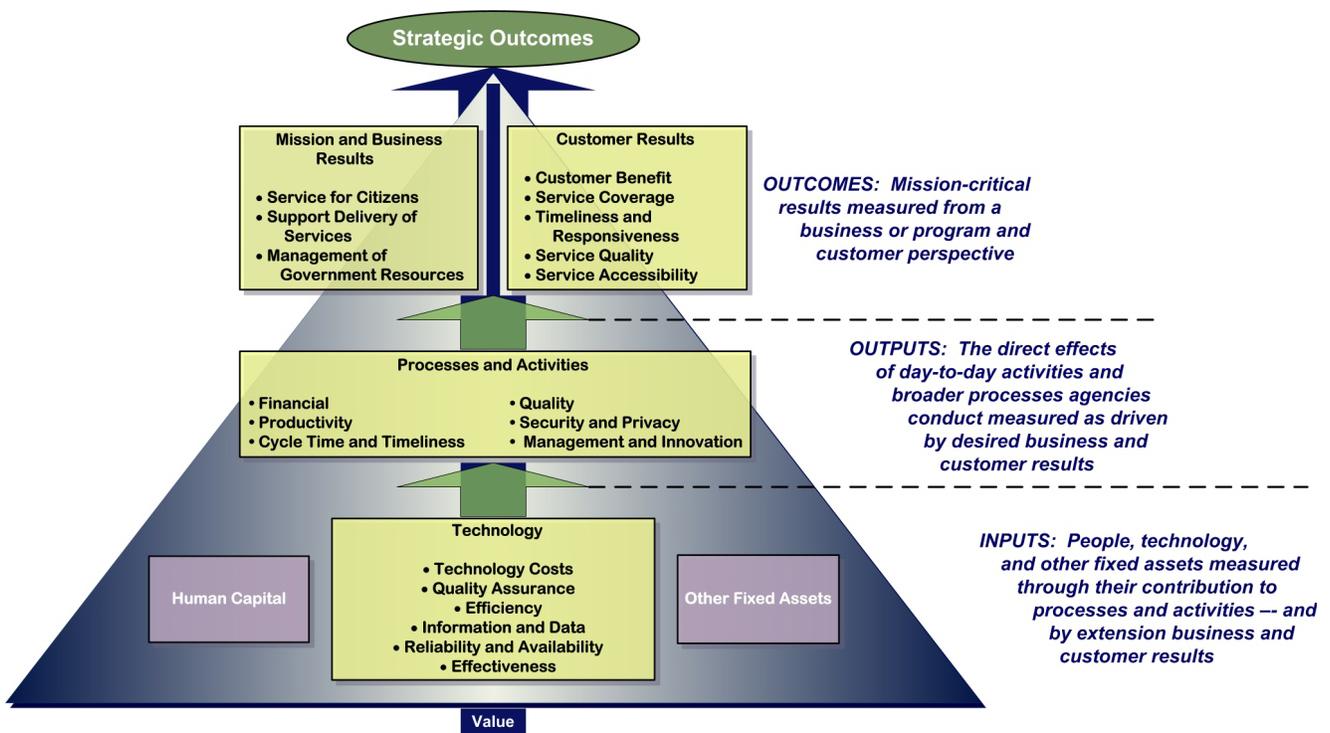
Figure 8. Input, Output and Performance Measure Benefits

The FY11 ETP includes expected benefits and performance measures for core business systems modernization. This information is included in program dashboards, which are available on-line via the DCMO Web site (http://dcmo.defense.gov/etp/FY2011/index.html). Actual results of these measures will be included in the March 2012 Defense Business Operations Congressional Report for those core systems delivering capability. Other measures against cost and schedule are also included for core systems at all lifecycle phases.

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Appendix: Acronyms

Acronym	Definition
1099 TRP	1099 Tax Reporting Program
A2R	Acquire-to-Retire
ADS	Authoritative Data Systems
AIT	Automated Identification Technology
AOR	Area of Responsibility
ASD(NII)/DoD CIO	Assistant Secretary of Defense for Networks and Information Integration/ Department of Defense Chief Information Officer
AV	Acquisition Visibility
B2R	Budget-to-Report
BCL	Business Capability Lifecycle
BEA	Business Enterprise Architecture
BEIS	Business Enterprise Information Services
BMA	Business Mission Area
BPR	Business Process Re-engineering
CAGE	Commercial and Government Global Entity
CAPS-W	Computerized Accounts Payable System-Windows
CBM	Core Business Mission
CCR	Central Contractor Registry
CEFT	Corporate Electronic Funds Transfer
CHRIS	Common Human Resource Information Standards
CIRB-A	Combined Investment Review Board for Acquisition
C-JTSCC	Joint Theater Support Contracting Command
CMO	Chief Management Officer
CONUS	Continental United States
COTS	Commercial-Off-The-Shelf
CV	Common Vocabulary
DBS	Defense Business System
DBSMC	Defense Business Systems Management Committee
D, CAPE	Director of Cost Assessment & Program Evaluation
DCAS	Defense Cash Accountability System

Acronym	Definition
DCMO	Deputy Chief Management Officer
DDS	Deployable Disbursing System
DFARS	Department of Defense Federal Acquisition Regulation Supplement
DFAS	Defense Finance and Accounting Service
DISDI	Defense Installation Spatial Data Infrastructure
DoD	Department of Defense
DoDAAC	Department of Defense Activity Address Code
DoDI	Department of Defense Instruction
DSB	Defense Science Board
DSD	Deputy Secretary of Defense
DTS	Defense Travel System
E2E	End-to-End
EBM/DEPS	Enterprise Business Modernization/DISA Enterprise Procurement System
EDA	Electronic Document Access
EDI	Electronic Commerce/Electronic Data Interchange
EDM/EDA	Electronic Document Management/Electronic Document Access
EFT	Electronic Funds Transfer
EIW	Enterprise Information Web
ePROC	eProcurement
ERP	Enterprise Resource Planning
ETP	Enterprise Transition Plan
EUD	Elimination of Unmatched Disbursements (APVM/PPVM)
EVM	Earned Value Management
FIAR	Financial Improvement and Audit Readiness
FIPS	Financial Improvement Plans
FM	Financial Management
FY	Fiscal Year
FYDP	Future Year Defense Program
GAFS-R	General Accounting and Finance - Reengineered
GAO	Government Accountability Office
GOTS	Government-Off-The-Shelf

Acronym	Definition
H2R	Hire-to-Retire
HR	Human Resources
HR EIW	Human Resources Enterprise Information Web
HRM	Human Resources Management
HRM ES	Human Resource Management Enterprise Standards
IPAC Wiz	Intra-Governmental Payment and Collection System Wizard
IRB	Investment Review Board
IT	Information Technology
IUID	Item Unique Identification
JCCS	Joint Contingency Contracting System
JCS	Joint Chiefs of Staff
LRP	Laws, Regulations and Policies
M2P	Market-to-Prospect
MAIS	Major Automated Information System
MDAP	Major Defense Acquisition Program
MilDep	Military Department
MOCAS	Mechanization of Contract Administration Services
MSC FMS	Military Sealift Command Financial Management System
MSSM	Materiel Supply and Services Management
MyInvoice	My Invoice
NDAA	National Defense Authorization Act
NHIN	National Health Information Network
O2C	Order-to-Cash
OCCS	OmniClass Construction Classification System
ODCMO	Office of the Deputy Chief Management Officer
OMB	Office of Management and Budget
P2O	Prospect-to-Order
P2P	Procure-to-Pay
P2S	Plan-to-Stock
PDS	Procurement Data Standard
PHD	Product Hazard Data

Acronym	Definition
PRM	Performance Reference Model
PSA	Principal Staff Assistant
QDR	Quadrennial Defense Review
RFID	Radio Frequency Identification
RPILM	Real Property and Installations Lifecycle Management
RPIR	Real Property Inventory Requirements
SAR	Selected Acquisition Report
SFIS	Standard Financial Information Structure
SMP	Strategic Management Plan
SOA	Service-Oriented Architecture
SPOT	Synchronized Pre-deployment Operational Tracker
SPS	Standard Procurement System
SRD I	Standard Finance System Redesign I
STARS	Standard Accounting and Reporting System
USD	Under Secretary of Defense
USD(AT&L)	Under Secretary of Defense for Acquisition, Technology and Logistics
USD(C)/CFO	Under Secretary of Defense (Comptroller)/Chief Financial Officer
USD(P&R)	Under Secretary of Defense for Personnel and Readiness
VIPS	Virtual Interactive Processing System
VLER	Virtual Lifetime Electronic Record
WAWF	Wide Area Work Flow
WSLM	Weapon Systems Lifecycle Management