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**DEPARTMENT OF DEFENSE**

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Department of Defense  
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

**CHIEF INFORMATION OFFICER**

**MEMORANDUM FOR SENIOR PENTAGON LEADERSHIP  
COMMANDERS OF THE COMBATANT COMMANDS  
DEFENSE AGENCY AND DOD FIELD ACTIVITY DIRECTORS**

**SUBJECT: Federated DoD Business Enterprise Architecture (BEA) Framework –  
Modernization of the DoD BEA**

References: (a) Title 10 United States Code § 2222  
(b) GAO High Risk Report, GAO-23-106203, April 20, 2023

This memorandum issues the DoD Business Enterprise Architecture (BEA) Framework with seventeen End-to-End processes for distribution to all DoD Components as attached. The Defense Business Systems (DBS) Cross Functional Board (CFB) established under the Defense Business Council (DBC) will oversee the development and operationalization of the DoD BEA.

Reference (a) states, "The Secretary, working through the Chief Information Officer of the Department of Defense, shall develop and maintain a blueprint to guide the development of integrated business processes within the Department of Defense. Such blueprint shall be known as the "defense business enterprise architecture"." DoD BEA modernization has been addressed in Government Accountability Office (GAO) audits and remains on the high-risk list. Reference (b) outlines recommendations and asks DoD to "complete updates to its federated business enterprise architecture and the realignment of responsibilities previously assigned to the former Office of the Chief Management Officer" and "ensure that it exercises consistent leadership over the business enterprise architecture."

In February 2023, my office issued for SES/GO/FO coordination the draft DoD BEA framework outlining a federated approach. The final document is a result of collaborative refinement. The lead for this effort is Mr. Bill Dunlap, Principal Director for the DCIO(IE) and chair of the DBS CFB, [william.r.dunlap2.civ@mail.mil](mailto:william.r.dunlap2.civ@mail.mil).

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As stated

# **Federated DoD Business Enterprise Architecture (BEA) Framework - Modernization of the DoD BEA**



**January 2024**

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## Purpose

This paper describes the way forward and framework for the modernization of the Department of Defense (DoD) Business Enterprise Architecture (BEA). The framework outlines the need to federate the DoD BEA to establish a common taxonomy for describing DoD business (i.e., end-to-end processes) while empowering business function leaders to create the architectures necessary to manage their portfolios.

Modernizing the DoD BEA is pivotal to transforming Defense Business System (DBS) portfolio management efforts and is an essential component to managing DBS as a strategic asset per the National Defense Strategy and the DoD Strategic Management Plan.

## Background

The Clinger Cohen Act (CCA) of 1996 requires that the Chief Information Officer (CIO) of an executive agency be responsible for:

- (1) providing advice and other assistance to the head of the executive agency and other senior management personnel of the executive agency to ensure that information technology is acquired, and information resources are managed for the executive agency in a manner that implements the policies and procedures of this division, consistent with Title 44 United States Code (U.S.C.) Chapter 35, and the priorities established by the head of the executive agency;
- (2) developing, maintaining, and facilitating the implementation of a sound and integrated information technology architecture for the executive agency; and
- (3) promoting the effective and efficient design and operation of all major information resources management processes for the executive agency, including improvements to work processes of the executive agency.

The CCA encompassed the Information Technology Management Reform Act (ITMRA) (Division E) and the Federal Acquisition Reform Act (FARA) (Division D) which were signed into law as part of the National Defense Authorization Act (NDAA) for Fiscal Year 1996. The BEA, which guides implementation of interoperable DBS solutions per Title 10, U.S.C. § 2222, supports alignment to CCA requirements.

The DoD has created and maintained a BEA for over two decades. Different approaches have been used to create content and utilize the BEA. In some areas, the BEA has been a key driver in integrating business operations by driving standards (data and process) and in other areas the BEA has not been used for its intended purpose. This modernization strategy will employ an incremental approach and establish the foundation to meet the objectives and intentions of the CCA, NDAA and other applicable legislation, and long-standing Government Accountability Office (GAO) open recommendations.

The DoD is focused on rationalizing its DBS environment to divest itself of technical debt, reinvest in modern software and cloud technologies, reduce the number of systems, and effectively utilize more of its end-to-end business solutions. The DoD BEA must evolve to a federated and data-centric architecture that enables the identification of DoD-wide DBS optimization and rationalization opportunities.

### Modernization Vision

The vision is for a Federated DoD BEA that enables DBS rationalization, compliance, business process reengineering (BPR), and optimization of system design requirements. Seventeen End-to-End (E2E) processes (see Appendix A) that build on the previous fifteen from BEA 11.2 will serve as the foundation for the DoD BEA. Based on discussions with Army, Navy, Air Force, and the Defense Logistics Agency, the E2E was modified to reflect within the processes a new “Request to Delivery” E2E, replaced “Acquire to Retire” to have two E2E, one for “Equipment” and another for “Real Property” and removed “Prospect to Order” E2E. The E2E processes are derived mostly from industry standards and tailored to support DoD uniqueness. DoD CIO will maintain the DoD BEA and articulate the E2E processes at Level 0 (L0) and Level 1 (L1). Initially, until an assessment and determination of a proper BEA tool, DBS owners will indicate affiliation with one or more L1 E2E processes in the Defense Information Technology Portfolio Repository (DITPR) for each of their systems. With this information, DoD can begin to enhance the discussions and analysis for its ongoing system rationalization efforts. The DoD Components are expected to align their BEAs to the DoD BEA. Component level BPR or system architectures should also align to the DoD BEA. This federated approach empowers the Office of the Secretary of Defense (OSD) Principal Staff Assistants (PSA) functional leads to lead their respective functional areas, while giving DoD Components the latitude necessary to maintain ongoing portfolio management efforts that are best managed at their level. This can only be achieved through ongoing, collaborative efforts between DoD CIO, the OSD PSA functional leads, and DoD Components.

The Federated DoD BEA emphasizes the following principles:

- **Champion Questions Based Architecture Development:** The federated architecture shifts away from a ‘build it and they will come’ approach and moves to an agile, questions-based approach focused on defined requirements and specific data needs of BEA stakeholders. DoD CIO will establish governance and robust configuration management under the oversight of the Defense Business Council (DBC) to ensure the architecture remains aligned to the business and IT needs.
- **Use BEA 11.2 as Modernization Starting Point:** The modern BEA will not be created from scratch and will leverage the DoD BEA 11.2 that OSD PSA functional leads and DoD Components previously developed to reflect business functional areas as a baseline. DoD CIO will work with each OSD PSA functional lead and DoD Component to appropriately integrate the relevant DoD BEA 11.2 content into the modernization effort.
- **Prioritize Data-Driven Decision Making:** The DoD BEA must evolve beyond a diagram and flat file based architecture to one that is user friendly and data-centric to enable executive

decision making. A modern DoD BEA will enable stakeholders to visualize and assess DBS alignment to the DoD BEA to support the identification of rationalization opportunities, address assertion and compliance requirements, and highlight business process inefficiencies.

### Federation Approach

The plan for the DoD BEA is to use a Federated approach across the Department. “Under a Federated approach, the architecture consists of a family of coherent but distinct member architectures that conform to an overarching corporate or parent architecture. This approach recognizes that each federation member has unique goals and needs as well as common roles and responsibilities with the members above and below it. As such, segment architectures (e.g., component, subordinate, or subsidiary architectures) are substantially autonomous, but they also inherit certain rules, policies, procedures, and services from the parent architectures. A Federated architecture enables component organization autonomy while ensuring corporate or enterprise-wide linkages and alignment where appropriate” (GAO-10-846G Executive Guide).

The Federated DoD BEA will use common E2E processes at L0 and L1 as a foundation. The BEA will consist of segment architectures at and below Level 2 that are distinct, yet interoperable with each other, to establish an integrated view of the state of DBS. “Segments can be viewed as logical aspects, or “slivers,” of the enterprise that can be architected and pursued as separate initiatives under the overall corporate architecture. As such, the segments serve as a bridge between the corporate frame of reference captured in the EA and individual programs within portfolios of system investments.”<sup>1</sup> There will be three categories of segment architectures within the Federated DoD BEA: Enterprise Segment, Component Segment, and Initiative Segment, as shown in Figure 1 and described in Appendix B.

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<sup>1</sup> Government Accountability Office, “Organizational Transformation: A Framework for Assessing and Improving Enterprise Architecture Management” (Version 2.0), August 2010

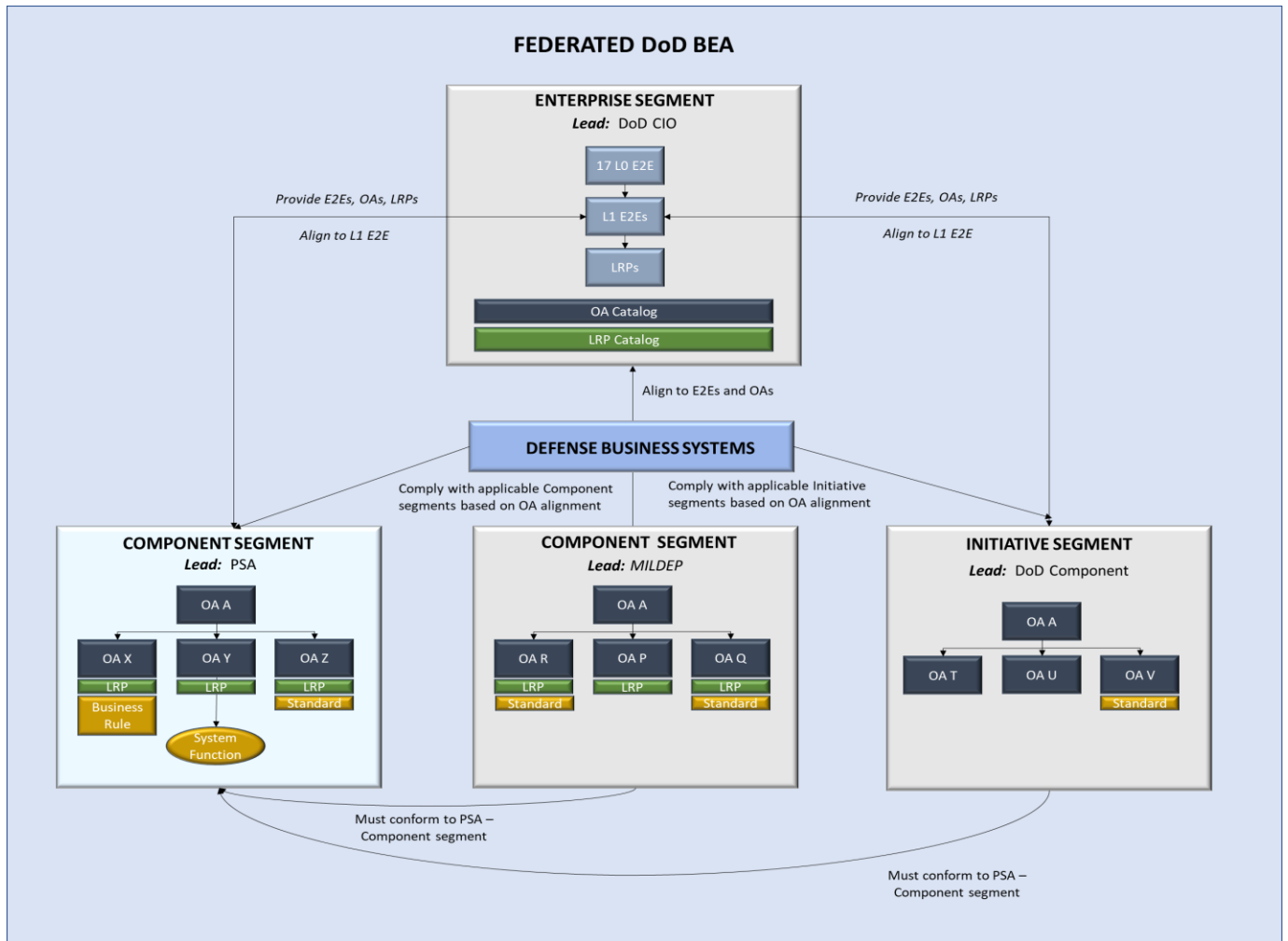


Figure 1: Foundational Federated Approach

### Operational Activities and Laws, Regulations and Policies

Operational activities (OA) are key components of an enterprise architecture as they describe the individual activities, tasks, and business functions performed within each E2E. They are key for the identification of DBS functions in support of portfolio management and maintaining mission alignment. The applicable Laws, Regulations and Policies (LRP) will be associated at L0/L1 and OA. The Federated DoD BEA L1 E2E and OA will enable architecture assessments and achievement of portfolio management objectives. DoD CIO, in coordination with the OSD PSA functional leads and DoD Components, will develop enterprise catalogs for OAs and LRPs. All OAs identified within the catalog will map to at least one L1 E2E. The enterprise catalog of LRPs will be used to constrain and guide DBS. The OSD PSA functional leads and DoD Components will use the enterprise catalogs when building out their respective segment architectures. DoD CIO will maintain the catalogs and establish strict configuration management governance and procedures to ensure any segment within the Federated DoD BEA uses approved OAs and LRPs so DBS activities are commonly understandable and comparable throughout the Department as shown in Figure 1.

## Enterprise Processes and Data Models

An aspect of the modernization approach is to identify those enterprise process and data, which are a defined set of operations or tasks, in use across the Department. This includes identification of standard data, captured in common data standards and common enterprise data entities. Data standards provide clear and consistent identification and organization of data components, metadata, and taxonomies enabling improved data quality across the enterprise, to support accurate business intelligence and data-driven decision making.

## System Alignment with the BEA

Regular architecture assessments will ensure an up to date understanding of the primary functions of each DBS in the portfolio and will enable effective DBS management, road-mapping, and rationalization. Architecture assessments will entail selection of the OAs that directly map to the L1 E2E, which will ensure the necessary system alignment to the BEA and specificity to identify duplication, but not overburden system owners with the assessment process itself.

## Uses of the BEA for Business Process Reengineering

The L0 and L1 BEA E2Es provide a high-level foundation for BPR efforts. BPR supports assessing process complexity, identifying gaps, implementing opportunities to streamline and improve the processes as the Department rationalizes its DBS portfolio, improve portfolio management, and with a goal to reduce the cost of fielding. BPR should be part of the DBS management process where opportunities exist to rationalize and/or consolidate DBS.

## Way Ahead

The Federated DoD BEA Framework depicts the approach to modernizing the DoD BEA and the key elements that must be in place to realize the benefits of the modernization effort. The framework is the starting point and is not the final BEA. DoD CIO, in close coordination with all DoD BEA stakeholders, will develop and operationalize the BEA and the OSD PSA functional leads will implement updated BEA segments. As such, the DoD CIO established an executive level DBS Cross Functional Board (CFB) under the oversight of the DBC to address rationalization and BEA requirements as well as other DBS management matters. DoD BEA success depends on strong partnership through the DBS CFB, resource advocacy support, and determining the proper BEA tools. The DBS CFB will oversee development of BEA guidance and implementation, create requirements, assess options for the collection and visualization of BEA data (e.g., tools), and serve as the DoD BEA Configuration Control Board. The DBC with input from the DBS CFB will ensure DBS portfolio management processes and capabilities appropriately use DoD BEA data to drive and inform DBS management and modernization decisions, including DBS rationalization initiatives.



## Appendix A – Enterprise End-to-End Processes

<b>BEA E2E Level 0</b>	<b>BEA E2E</b>
Acquire-to-Retire (A2R) – Equipment	<ul style="list-style-type: none"> <li>• Planning for Equipment</li> <li>• Bring into APSR</li> <li>• Manage Asset</li> <li>• Dispose of Asset</li> </ul>
Acquire-to-Retire (A2R) - Real Property	<ul style="list-style-type: none"> <li>• Conduct Master Planning</li> <li>• Acquire Asset</li> <li>• Placement into Service</li> <li>• Manage Asset</li> <li>• Dispose of Asset</li> </ul>
Budget-to-Report (B2R)	<ul style="list-style-type: none"> <li>• Perform Executive Level Planning</li> <li>• Perform Programming</li> <li>• Perform Budget Planning and Formulation</li> <li>• Distribute and Manage Budget</li> <li>• Manage Financial Assets and Liabilities</li> <li>• Perform Treasury Operations</li> <li>• Manage General Ledger Transactions</li> <li>• Perform Reporting</li> </ul>
Concept-to-Product (C2P)	<ul style="list-style-type: none"> <li>• Recognize Problem</li> <li>• Define Capability</li> <li>• Develop Product/Project Concept</li> <li>• Initiate Planning and Obtain Commitment</li> <li>• Initiate Development</li> <li>• Introduce Product</li> </ul>
Cost Management (CM)	<ul style="list-style-type: none"> <li>• Establish Cost Accounting Procedures</li> <li>• Develop Costing Methodology</li> <li>• Perform Cost Assignment</li> <li>• Perform Period End Close</li> <li>• Develop Cost Reports</li> </ul>
Deployment-to-Redeployment Retrograde (D2RR)	<ul style="list-style-type: none"> <li>• Perform Deployment Planning</li> <li>• Perform Pre-Deployment Build-Up</li> <li>• Execute Deployment</li> <li>• Perform In-Theater Sustainment</li> <li>• Execute Redeployment/Retrograde</li> </ul>
Environmental Liabilities (EL)	<ul style="list-style-type: none"> <li>• Identify Sites/Assets with Environmental Liabilities</li> <li>• Develop EL Cost Estimates</li> <li>• Perform Environmental Cleanup, Closure, or Disposal Action</li> <li>• Report Environmental Liabilities</li> </ul>

BEA E2E Level 0	BEA E2E
Excess-to-Disposal (E2D)	<ul style="list-style-type: none"> <li>• Transfer in, Accept and Warehouse Excess, Obsolete and Unserviceable Inventory</li> <li>• Manage EOU Inventory</li> <li>• Manage RTD Cycle</li> <li>• Conduct Public Sales</li> <li>• Perform Disposal Services</li> </ul>
Hire-to-Retire (H2R)	<ul style="list-style-type: none"> <li>• Manage Organization</li> <li>• Manage Recruiting and Accession</li> <li>• Manage Human Resources Information</li> <li>• Manage Identity Credential</li> <li>• Manage Benefit Programs</li> <li>• Manage Personnel Development</li> <li>• Manage Assignment and Transfer</li> <li>• Account for Personnel</li> <li>• Manage Performance</li> <li>• Manage Compensation and Reimbursements</li> <li>• Manage Personnel Retention</li> <li>• Administer Grievance Process</li> <li>• Manage Physical Evaluation Process</li> <li>• Manage Human Resources Interaction</li> <li>• Manage Adverse Actions</li> <li>• Manage Separation and Retirement</li> </ul>
Market-to-Prospect (M2P)	<ul style="list-style-type: none"> <li>• Establish Marketing Plan</li> <li>• Target Audiences</li> <li>• Plan and Define Engagement Campaigns</li> <li>• Execute Engagement Campaigns</li> <li>• Measure and Evaluate Campaign Performance</li> </ul>
Order-to-Cash (O2C)	<ul style="list-style-type: none"> <li>• Manage Customers</li> <li>• Accept Orders</li> <li>• Prioritize Orders</li> <li>• Fulfill Orders</li> <li>• Perform Distribution</li> <li>• Manage Receivables</li> <li>• Manage Cash Collection</li> </ul>
Plan-to-Stock (P2S)	<ul style="list-style-type: none"> <li>• Create Inventory Plan</li> <li>• Determine Source</li> <li>• Receive, Accept and Warehouse Inventory</li> <li>• Distribute and Pre-position Inventory</li> <li>• Perform Inventory Management</li> <li>• Dispose of Inventory</li> </ul>

BEA E2E Level 0	BEA E2E
Procure-to-Pay (P2P)	<ul style="list-style-type: none"> <li>• Create Purchase Requisition</li> <li>• Develop Procurement Strategy</li> <li>• Award Procurement Instrument</li> <li>• Administer Procurement Instrument</li> <li>• Perform Receipt, Acceptance, and Return</li> <li>• Manage Procurement Entitlement</li> <li>• Manage Disbursements</li> <li>• Perform Instrument Closeout</li> </ul>
Proposal-to-Reward (P2R)	<ul style="list-style-type: none"> <li>• Identify and Prioritize Needs</li> <li>• Execute and Review Grant Application</li> <li>• Review and Award Grant Application</li> <li>• Execute Grant</li> <li>• Perform Management &amp; Administration</li> </ul>
Request-to-Delivery (R2D)	<ul style="list-style-type: none"> <li>• Plan Transportation</li> <li>• Order Transportation Resources</li> <li>• Execute Material and Force Movement Execute Grant</li> <li>• Regulate Distribution</li> </ul>
Service Request-to-Resolution (SR2S)	<ul style="list-style-type: none"> <li>• Identify Repair Requirement</li> <li>• Fund Requirement</li> <li>• Source Service</li> <li>• Schedule Service</li> <li>• Diagnose Repair</li> <li>• Finalize Requirements</li> <li>• Perform Service</li> <li>• Close and Post Record</li> <li>• Create Bill</li> <li>• Return to Inventory or Use</li> </ul>
Service-to-Satisfaction (S2S)	<ul style="list-style-type: none"> <li>• Identify Service Requirements</li> <li>• Establish Service Capability</li> <li>• Provide Service</li> <li>• Measure Customer Service Satisfaction &amp; Improve</li> </ul>

## Appendix B – Segment Descriptions

**Enterprise Segment:** DoD CIO will establish and maintain the Enterprise segment of the Federated DoD BEA. The Enterprise segment will consist of E2E processes, articulated at L0 and L1, to serve as the foundation and high-level organizing construct for the DoD BEA. DBC will appoint OSD PSA functional leads as “Process Champions” for each E2E. The process champion will serve as the subject matter expert and primary authority for all matters related to the E2E.

**Component Segment:** Component segments describe a functional area (e.g., Financial Management, Human Resources) within the Federated DoD BEA. OSD PSA functional leads and DoD Components may create Component segments to describe and manage their area of responsibility, with each segment aligning to a L1 E2E within the Enterprise segment. Segments developed by DoD Components must align to the Enterprise segment and map to the segment developed by the OSD PSA functional lead that defines the functional area for which they are responsible. For example, the Office of the Undersecretary of Defense for Personnel and Readiness (USD(P&R)) and the United States Air Force (USAF) can both create a segment to define Human Resources. Both segments must align to the L1 E2E, but the USAF segment must also map to the OUSD(P&R) segment, as OUSD(P&R) is the Department-wide lead for Human Resources. Component segment owners may include any architecture product, at the level of detail required, to define and manage their functional area if the segment aligns to the L1 E2E and utilizes the catalog of OAs and LRPs. For example, the Office of the Undersecretary of Defense for Acquisition and Sustainment (OUSD(A&S)) can build a segment to define the Acquisition functional area. The segment can align LRPs to any OA level, associate data standards to OAs, and include system function views to support Acquisition portfolio management activities. DBS that align to the impacted E2Es and OAs within this segment, will be required to comply with any requirements associated with the OAs, as shown in Figure 1.

**Initiative Segment:** OSD PSA functional leads and DoD Components develop Initiative Segments in response to need. For example, an initiative to develop Real Property Inventory Requirements can be performed by the OUSD(A&S) in collaboration with other DoD Components to implement business process transformation across DoD's diverse real property environment. Initiative Segments can include any BEA object necessary to define the Initiative Segment. All Initiative Segments must align to the Enterprise segment at the L1 E2E level, as well as to the OSD PSA functional lead defined segment, to establish a holistic and interoperable view of the DoD business enterprise.