

**Department of Defense
Business Enterprise Architecture 9.0
Overview and Summary Information (AV-1)
Version 9.0, March 15, 2012**

The AV-1 is an executive-level summary of the purpose, use and content of the Business Mission Area's (BMA) Business Enterprise Architecture (BEA). Initially, the AV-1 is used to focus the BEA development effort and document its scope. The AV-1 also includes findings and recommendations identified as a result of the development effort.

Architecture Project Identification

Project	DoD Business Enterprise Architecture (BEA) 9.0
Project Type	Enterprise Architecture
Architect	DoD Office of the Deputy Chief Management Officer (ODCMO)
Developed By	Representatives from the DoD BMA Core Business Missions (CBMs), and ODCMO
Assumptions and Constraints	<p>The BEA 9.0:</p> <ul style="list-style-type: none"> • The Strategic Management Plan (SMP) is a driver of release content • The End-to-End Framework (focusing on Procure-to-Pay and Hire-to-Retire) is used in conjunction with the SMP as an additional driver of content • Comprises content as defined with the BEA 8.1 Informational Release • Continues to improve conformance to Version 2 of the DoD Architecture Framework (DoDAF 2.0) and BPMN 2.0 with Analytic Conformance Class (Primitives) • Continues with requirements definition being done by the representatives of the Core Business Missions
Approval Authority	The Deputy Secretary of Defense, acting through the Defense Business Systems Management Committee (DBSMC).
Date Completed	Architecture content freeze date, February 10, 2012 and final release date March 15, 2012.
LOE and Development Costs	Level of effort and projected and actual costs to develop the CBM Models may be requested from the Office of the Deputy Chief Management Officer (ODCMO).
Scope: Architecture View and Models Identification	
Products Developed	BEA 9.0 comprises the following set of integrated architecture products -- AV-1, AV-2, CV-2, CV-6, DIV-1, DIV-2, DIV-3, OV-2, OV-3, OV-5a, OV-5b, OV-6a, OV-6c, SvcV-1, SvcV-5a, SV-1, SV-5a, SV-6, StdV-1, LRP and other Visualizations and Presentations.

Scope	The scope of the BEA is any function, process, data, rules and LRP that describe enterprise requirements within the Financial Management (FM), Human Resources Management (HRM), Real Property & Installations Lifecycle Management (RPILM), Materiel Supply & Service Management (MSSM) and Weapon Systems Lifecycle Management (WSLM) Core Business Missions. The scope of new content for BEA 9.0 focused on refinement of enterprise requirements within the Hire-to-Retire and Procure-to-Pay E2Es. Further modifications were made to conform to BMPN 2.0 and to improve interoperability. Additionally, there were refinements made to the following standards: Procurement Data Standard (PDS) and Purchase Request Data Standard (PRDS).
Time Frames Addressed	The BEA is the “To Be” business architecture for transformation efforts at the DoD. The current BEA “To Be” state has intermediate time frames for implementation that are addressed in the Enterprise Transition Plan (ETP). The aforementioned “new content” accounts for enterprise requirements defined since the BEA 8.0 release published on March 11, 2011.
Organizations Involved	Development of BEA 9.0 was facilitated by the ODCMO and involved representatives of the DoD BMA CBMs led by the Principal Staff Assistants (PSAs). The PSAs are Comptroller, Personnel & Readiness, and Acquisition Technology & Logistics. BEA development was further supported by the Investment Review Board (IRB), chaired by the ODCMO as the architecture lead within the IRB sessions.
Purpose and Viewpoint	
Purpose (Problems, Needs, Gaps)	The purpose of the BEA is to serve as a blueprint for DoD business transformation that helps to ensure that the right capabilities, resources and materiel are rapidly delivered to our warfighters: What they need, where they need it, when they need it, anywhere in the world. The BEA guides and constrains implementation of interoperable defense business system solutions as required by the National Defense Authorization Act (NDAA) and guides information technology (IT) investments to align with strategic Business Capabilities as required by NDAA, Clinger-Cohen and supporting Office of Management and Budget (OMB) and Government Accountability Office (GAO) policy. It is also used to support Portfolio Management by being implemented within the BMA investment review process. Each release of the BEA addresses BMA enterprise gaps or material weaknesses by having them refined as requirements that are reflected as BEA content against which investments must assert compliance.
Questions to be Answered	<ul style="list-style-type: none"> • How are we investing our funds to best enable the warfighting mission? • How are we investing our funds to best address the Business Mission Area strategic priorities? • Who are our people, what are their skills, where are they located? • Who are our industry partners, and what is the state of our relationship with them? • What assets are we providing to support the warfighter, and where are these assets deployed?
Architecture Viewpoint	BEA 9.0 was developed from an enterprise level using the viewpoint of the Principal Staff Assistants (PSAs). As mentioned in the <i>Organizations Involved</i> section of this AV-1, the PSAs are represented by personnel, aligned to the CBMs, responsible for interpreting PSA requirements and have them reflected as enterprise requirements within the BEA. The CBM representatives are guided by the SMP and the E2E framework. The BEA 9.0 and subsequent releases continue to enable the Department to manage its business from an E2E process perspective.

Context	
Mission	To be the BEA that “shall be sufficiently defined to effectively guide, constrain and permit implementation of interoperable defense business system solutions” (Title 10,SubtitleA,Part IV, Chapter 131,Section 2222)
Vision	To serve as the enterprise blueprint for defining the Department’s business environment. The BEA will continue to be driven by the Department’s Strategic Management Plan (SMP) and capture required enterprise capabilities, metrics aligned to the SMP, and data standards and rules to permit system and web service interoperability. To be used as a tool for guiding, constraining and certifying business system investments. To also be used as a tool for driving Portfolio Management and business process reengineering via the Department’s E2E Framework.
Rules, Conventions, and Criteria	<p>Rules:</p> <ul style="list-style-type: none"> • BEA content is traceable to SMP priorities and goals. • BEA process models are constrained by the Business Process Modeling Notation (BPMN) 2.0 Analytic Conformance Class (Primitives). • The BEA metamodel must conform to DM2. <p>Conventions: The conventions and methodology (e.g., IDEF0, IDEF 1X, BPMN) to be followed are documented in the BEA Development Methodology and the Architecture Product Guide (APG).</p> <p>Criteria:</p> <ul style="list-style-type: none"> • BEA content is traceable to the SMP priorities and goals. • BEA content is guided by the SMP and the E2E Framework. • Enterprise requirements reflected in the BEA are approved by the PSAs by way of the CBM representatives.
BEA Tasking / Linkages to Other Architectures	<p>Tasking -- The 2005 National Defense Authorization Act (NDAA) requires that the DoD build an “an enterprise architecture...which shall be sufficiently defined to effectively guide, constrain and permit implementation of interoperable defense business system solutions”</p> <p>Linkages to Other Architectures – Federal Enterprise Architecture (FEA) Business Reference Model through the DoD EA Reference Models; The DoD Joint Capability Areas (JCAs).</p>
Tools and File Formats to be Used	
IBM Rational System Architect v 11.4, Oracle, MS SQL Server, Enterprise Elements, Army Knowledge Online/Defense Knowledge Online	

Business Enterprise Architecture 9.0 -- Findings and Recommendations

Findings		Recommendations
1	<p>Authoritative data standards, based on common vocabularies, are a key driver for transformation efforts across the DoD BMA. Development efforts in BEA 9.0 are focused on data standardization in order to implement approved BMA Business Capabilities through development of integrated DoD business systems. Integration of the data standards continues to be a challenge.</p> <p>There also continue to be unresolved issues with multiple instances of the same terms and descriptions used generically across the different functional communities. The evolving central information repositories for decision makers are highly dependent on consistent and universal concepts and related definitions. Issues arising from conflicting terminology continue to impact the movement toward ontology federation and building a common business vocabulary.</p> <p>However, the revised focus of the BECCM to resolve issues prior to BEA integration meetings should improve BEA integration and federation efforts.</p>	<p>Continue to incorporate authoritative data standards into the BEA as a development priority. Develop a common vocabulary lexicon, based on DoDAF 2.0 metadata and BPMN /Primitives concepts to establish authoritative and de-conflicted common terms and usage. Use the BECCM to build the foundation for evolving Ontology work and standardized interfaces between DoD systems.</p>
2	<p>Current BEA structure and content does not fully support the BEA’s statutory use of permitting implementation of interoperable business system solutions. It also needs to be improved from methodology, tool and content perspectives to better support federation.</p>	<p>Adopt and implement a methodology to capture and make available BEA content that enables solution developers to “build federation into their solutions” through use of semantic ontologies and open source technologies.</p>
3	<p>BEA staff recommends a review of the use of Capabilities in an End to End Framework and identifying how to establish and manage an enterprise set of DoD Capabilities.</p>	<p>Further coordination with the DCMO and Joint Staff is required to determine the purpose and use of Capabilities within the E2E Framework. Also efforts need to be identified to incorporate the BEA Business Capabilities into the Joint Capability Areas (JCAs) enabling the creation of a set of Enterprise Capabilities across the DoD.</p>

Findings		Recommendations
4	<p>The methodology and roadmap for incorporating and depicting the E2Es within the BEA needs to be further developed and finalized by all involved stakeholders, including the E2E Governance Board, PSAs and the ODCMO.</p> <p>Issues to address include reuse of Level 1 Process Steps and Level 2 Process Models, how to visualize the interconnection of E2Es. As the BEA transitions to a “Semantic BEA” this methodology will be essential to maintain and develop an integrated architecture.</p> <p>The 4 APR 2011 “Use of E2E Business Models and Ontology in DoD Business Architecture” outlines that the “ADCMO will issue additional guidance to ensure these approaches are clearly applied to these management efforts.” This memo outlines that “Additional Guidance will identify future time boxed BEA development activities in consultation with the E2E Governance Council.” These actions need to be addressed as a priority to ensure the E2E Value Chain is adopted in the BEA products.</p>	<p>Establish a working group and continue to evolve the BEA Development Methodology (BDM), Architecture Product Guide (APG) and the BEA development environment to conform to DoDAF 2.0 and represent evolving End-to-End (E2E) Business Model and Semantic Ontology concepts. Also incorporate the proposed working group analysis into the Semantic BEA Vision, the Technical Transition Plan, the E2E Reference Model and any other executable guidance that is published by the ODCMO.</p> <p>Recommend that these findings be addressed for a future BEA release to ensure the E2E Value Chain is adopted in the BEA products.</p>
5	<p>BEA does not include processes, activities, or data objects related to the commercial sales process.</p>	<p>A joint Financial Management/Acquisition Technology and Logistics (AT&L) business process reengineering effort of the sales process should be scheduled for a future BEA release.</p>
6	<p>Operational Activities associated with contingency operations sometimes require exception handling of standard procedures and business rules. Further effort needs to be performed to capture this exception handling.</p>	<p>Recommend development in future releases of the BEA to satisfy SMP goal #7: “Create agile business operations that support contingency missions”. Analyze the impact of exceptions associated with contingency operations and incorporate these exceptions as appropriate.</p>