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# Federal Enterprise Architecture Program EA Assessment Framework 2.2

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# 1 Introduction

Version 2.2 of the Office of Management and Budget (OMB) Enterprise Architecture Assessment Framework is designed to advance the use of enterprise architecture (EA) across the Federal government. This document serves as the basis for enterprise architecture maturity assessments of Federal agencies performed by OMB. This document is a successor to version 2.1 of the OMB EA Assessment Framework.

The OMB Enterprise Architecture Assessment Framework (hereafter called the Framework) helps OMB and the agencies assess the capability of EA programs to guide and inform strategic IT investments. It also helps to better understand the current state of an agency's EA, and assists agencies in integrating their EA into their decision-making processes. By applying the assessment themselves, agencies are able to identify strengths and weaknesses within their EA programs and adjust them accordingly. As a result, the agency's enterprise architecture will help improve the performance of Information Resource Management (IRM) and Information Technology (IT) investment decision-making.

## 2 Changes in the 2.2 Framework

This version (2.2) of the EA Assessment Framework is largely an incremental revision of the previous version (2.1). This is by design and reflects the evolving maturity of both the OMB Federal Enterprise Architecture program and individual agency EA initiatives.

Many elements of the Framework remain the same, including the organization of assessment criteria into three Capability Areas: Completion, Use and Results, and the use of a maturity scoring scale for each assessment criterion. The timing of the assessment process remains the same, and the assessment criteria in the previous Framework still remain in the current version. The Framework continues to reflect agreed upon "Architecture Principles for the US Government" located at [www.egov.gov](http://www.egov.gov), and provides support for OMB's focus on cost-effective agency mission performance.

The changes incorporated into the current version of the Framework streamline the assessment process and continue the focus on development of agency EAs to meet the needs of their agency's business communities.

Major changes included in the current Framework can be summarized as follows:

- A new criterion has been added to the Results capability area to measure EA program value; this reflects recent updates to the FEA Practice Guidance, which is available for download at [http://www.whitehouse.gov/omb/egov/documents/FEA\\_Practice\\_Guidance.pdf](http://www.whitehouse.gov/omb/egov/documents/FEA_Practice_Guidance.pdf)<sup>1</sup>
- The set of suggested artifacts serving as evidence of EA maturity has been streamlined to simplify agency preparations for their annual EA assessments,

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<sup>1</sup> As of October 2007, the EA Program Value section of the FEA Practice Guidance has not yet been released in final format. A draft of the section was sent to agencies for review and feedback in June 2007. Once it is released in final, the updated Practice Guidance will be sent to agency Chief Architects and posted on the E-Gov website (URL listed above).

and to reflect the importance of the EA Transition Strategy as a primary document of an EA program.

- More detailed information about requirements for incorporating Federal Transition Framework (FTF) products into agency architectures is provided, consistent with updates to the FEA Practice Guidance and FTF Usage Guide available at: [www.egov.gov](http://www.egov.gov)
- The IPv6 Assessment Criteria has been updated to reflect current compliance requirements described in OMB Memorandum 05-22, available at <http://www.whitehouse.gov/omb/memoranda/fy2005/m05-22.pdf>.
- The assessment scoring algorithm is updated. To achieve a Green (Acceptable) rating, agencies to score at least a 4 average in all three capability areas: Completion, Use and Results. Please refer to Section 4.
- The process of submitting evidence of maturity has been simplified. Agencies need only submit artifacts demonstrating the level of maturity they have achieved for a given criteria. If these artifacts do not sufficiently demonstrate maturity, OMB may request submission of artifacts from lower levels of maturity for a given criteria.

### 3 Framework Structure

The Framework uses fourteen assessment criteria to evaluate the maturity and effectiveness of agency enterprise architecture programs. Each criterion consists of five maturity levels, scored from 1-5. Related assessment criteria are grouped into three capability areas: Completion, Use and Results.

Below is a brief outline of each of the three capability areas.

#### **Completion** measures:

- Incorporation of relevant architectural content from the cross-agency initiatives in the Federal Transition Framework;
- Development of segment architectures;
- Linkage of horizontal layers of an agency's EA (e.g. performance, business, data, services, and technology), through a line of sight from program performance to IT investments;
- Transition strategy from the baseline to the target architecture; and
- Alignment to the FEA reference models.

#### **Use** measures:

- Policies and procedures necessary for an agency to develop, maintain, and oversee its EA; and
- Integration of EA with agency's IRM programs and IT management processes including strategic and capital planning, and program/project management.

#### **Results** measures:

- Agency cost savings, cost avoidance, and mission performance improvements attributable to the EA program;

- Agency internal EA value measurement programs; and
- IPv6 implementation performance.

Examples of representative artifacts are included to assist agencies in demonstrating their maturity for each assessment criterion. It is important to note, the description of the artifacts is not intended to be exhaustive or prescriptive. OMB is interested in the content of the artifacts and does not prescribe the format, so long as the artifact can be reviewed by OMB without requiring the use of proprietary software products such as EA modeling tools. Moreover, agencies may decide to develop additional artifacts or elaborate upon them further than described here. Appendix A of this document provides a description of the artifacts in more detail.

Additionally, for each assessment criterion both a rationale and a mandate are provided. The rationale explains why OMB considers it important to collect information about each criterion, while the mandate links the assessment criterion to law and/or policy where appropriate. All documents listed as mandates are available for download from OMB E-Government website on the following pages:

- Legislation: <http://www.whitehouse.gov/omb/egov/e-1-legislation.html>
- OMB Memoranda: <http://www.whitehouse.gov/omb/egov/e-3-memoranda.html>
- Federal Enterprise Architecture: <http://www.whitehouse.gov/omb/egov/a-1-fea.html>
- Federal Transition Framework: <http://www.whitehouse.gov/omb/egov/a-2-EAFTF.html>

## 4 Agency EA Assessment Scoring Process

The assessment process for this version of the Framework is consistent with the prior version of the Framework. OMB will conduct an annual, comprehensive assessment of an agency's enterprise architecture. In addition, OMB will expect agencies to submit quarterly progress reports on their success in achieving the milestones set forth in their EA Program Plan.

Both the annual and quarterly reviews are discussed below. The list of agencies to be assessed using this Framework is included in Appendix C.

### 4.1 ANNUAL ASSESSMENT PROCESS

The annual assessment process is intended to be a comprehensive review of the state of an agency's enterprise architecture program. Agencies are expected to use the framework to perform a self-assessment and submit their architectures for evaluation in February of each year. OMB will assess the agencies' architectures in March and provide a final assessment rating and feedback on each criterion. Detailed instructions are provided in advance of the annual assessment process.

For each criterion, agencies are expected to submit the artifacts required *for only the level of maturity they are claiming*. *This is an important change from the 2.1*

*Framework, where agencies were required to submit artifacts for all levels. For example, if an agency assesses itself at Level 4 for the Business Architecture criteria, it should submit only the Transition Strategy as evidence of Level 4 maturity, not the Baseline and Target Business Architecture artifacts. OMB may elect to request these additional artifacts from the agency during the assessment process if there is a question regarding maturity levels, but the materials would not be expected as part of the initial submission package from the agency. This is intended to minimize the effort required by the agency to prepare materials for assessment.*

The assessment focuses on three capability areas of EA:

- Completion of an enterprise architecture;
- Use of EA to drive improved decision-making; and
- Results achieved to improve the agency's program effectiveness.

Agencies will receive an average assessment score for each of the three capability areas. The average is calculated by summing the score for all criteria within the capability area and then dividing by the number of criteria. Scores will be rounded to the nearest tenth.

The results of the annual EA assessment are reflected in the Status score for the e-Government section within the President's Management Agenda. The scoring algorithm is published within the *PMA Scorecard Standards for Success*, available online at <http://www.whitehouse.gov/results/agenda/standardsforsuccess08-2007.pdf>.

The following table describes how Green, Yellow and Red ratings will be determined:

<b>Green</b>	<ul style="list-style-type: none"> <li>• Score equal to or greater than 4 in the "Completion", "Use", AND "Results" capability areas</li> </ul>
<b>Yellow</b>	<ul style="list-style-type: none"> <li>• Score equal to or greater than 4 in the "Completion" capability area, AND;</li> <li>• A score equal to or greater than 4 in <u>either</u> the "Use" <u>or</u> "Results" capability areas</li> </ul>
<b>Red</b>	<ul style="list-style-type: none"> <li>• All other scores</li> </ul>

## 4.2 QUARTERLY EA PERFORMANCE REVIEW

The quarterly reporting process is designed to be an adjunct to the annual OMB EA assessment process. OMB will use the quarterly EA reporting process to work collaboratively with agencies to identify concrete milestones each agency can achieve in order to improve the effectiveness of its EA programs. Quarterly milestones should focus the agency on improving its EA program in areas identified for improvement

during the previous annual assessment. As a result, the quarterly milestones should advance the maturity of the EA program so the agency can achieve business performance improvements that will be assessed during the next annual EA assessment cycle.

The results of the quarterly EA reporting process are reflected in the Progress score for the e-Government section within the President's Management Agenda.

Detailed guidance regarding the quarterly EA performance review is available online at: [http://www.whitehouse.gov/omb/egov/documents/FEA\\_EA\\_Quarterly\\_Reporting\\_Guidance\\_FINAL.pdf](http://www.whitehouse.gov/omb/egov/documents/FEA_EA_Quarterly_Reporting_Guidance_FINAL.pdf)

## 5 Assessment Framework 2.2 Criteria

### 5.1 COMPLETION CAPABILITY AREA

- *Description:* This category measures the completion maturity of an agency's EA artifacts in terms of performance, business, data, services, and technology. The agency's baseline and target architectures are well-defined, showing traceability through all architectural layers. Using its transition strategy and sequencing plan, the agency is able to achieve its desired target state.
- *Outcomes:*
  - Identifies specific outputs (artifacts for each architectural layer) the agency needs to maintain and monitor its EA.
  - Describes the future capabilities (via sequencing plan and target architecture) to enable the agency to achieve its performance goals.
  - Identifies the magnitude of the gap between the baseline and target architectures and possible improvement strategies to realize its target state.
  - Integrates relevant cross-agency initiatives into the agency's target architecture and transition strategy.
  - Produces segment architectures describing agency lines of business to be used to assist agency managers in decision-making tasks.
  - Identifies unnecessary duplication and opportunities for consolidation and reuse of information and technology within and across agencies.
  - Provides a framework and a functional view of an agency's lines of business (LoBs), including its internal operations/processes.
- *General description of Completion Maturity Levels:*

Level	Name	Description
1	Initial	Informal and ad-hoc EA processes. Some inventories of information for a given architecture layer may exist, but it is not linked to other layers of the architecture and is incomplete.
2	Baseline	The agency has developed a baseline architecture. The architecture has an enterprise-wide scope and communicates a clear line of sight between EA layers.
3	Target	The agency has developed target architecture. Architecture elements are aligned to agency programs and lines of business. The target architecture addresses priorities and performance objectives identified in the agency's strategic plan. Architecture has an enterprise-wide scope and communicates a clear line of sight between EA layers.
4	Integrated	The agency has developed at least one segment



Level	Name	Description
		architecture for a core mission line of business, business service or enterprise service, as defined in Appendix B. The relevant business owner has approved the segment architecture in writing. The agency's transition strategy shows migration to the target architecture. Relevant cross-agency initiatives from the Federal Transition Framework and other official sources have been incorporated into the agency's target architecture.
5	Optimized	The agency has developed multiple segment architectures to support core mission lines of business, business services or enterprise services, as defined in Appendix B. The segment architectures are incorporated into the overall agency EA. The relevant business owners have approved segment architectures in writing.

- *Notes:*
  - The Completion capability area assesses agency maturity in developing baseline and target architectures: Performance, Business, Data, Service Component, and Technology. However, this should not be construed as a requirement for agencies to restructure their EA frameworks into five corresponding layers or views. OMB does not require agencies to adopt one specific EA framework. Agencies are simply required to demonstrate in their submissions to OMB the content described in each assessment criterion is available within their EA.

### 5.1.1 Performance Architecture

- *Description:* The EA contains performance measurement indicators, based on the FEA Performance Reference Model (PRM) linked to and reflecting the agency's strategic plan. The EA is used to help track improved agency performance.
- *Rationale:* The agency EA must clearly demonstrate how it furthers the agency's strategic objectives and aligns to well-defined performance goals. To achieve this, it is important to identify meaningful performance measurement indicators.
- *Mandate:* OMB A-11, s.300; GPRA; Clinger-Cohen Act, OMB Memorandum 05-23, A-130, PART

<b>Level 1 Practices (Initial)</b>	<p><i>Activities:</i> The agency has identified performance measurement areas and categories (based on the FEA PRM) for its baseline architecture.</p> <p><i>Artifact:</i> Baseline Performance Architecture</p>
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<b>Level 2 Practices (Baseline)</b>	<p><i>Activities:</i> The agency has identified performance measurement indicators (based on the FEA PRM) for its baseline architecture.</p> <p><i>Artifact:</i> Baseline Performance Architecture</p>
<b>Level 3 Practices (Target)</b>	<p><i>Activities:</i> The agency has identified performance measurement indicators (based on the FEA PRM) for its target architecture. Quantified target values are identified for each measurement indicator. The target performance architecture addresses priorities and performance objectives identified in the agency's strategic plan, and demonstrates line of sight between the other layers of the architecture.</p> <p><i>Artifact:</i> Target Performance Architecture</p>
<b>Level 4 Practices (Integrated)</b>	<p><i>Activities:</i> The agency has completed at least one segment architecture for an agency's core mission line of business, business service or enterprise service, as defined in Appendix B. The segment architecture includes baseline and target performance measures, and demonstrates line of sight between the other layers of the architecture. The relevant business owner has authorized the segment performance architecture in writing.</p> <p>The agency's Transition Strategy includes the achievement of performance targets as milestones within the transition sequencing plan. This includes the performance targets from relevant cross-agency initiatives in the Federal Transition Framework. The transition sequencing plan shows the level of performance improvement to be achieved at specific points in time.</p> <p><i>Artifacts:</i> Transition Strategy, Segment Architecture Authorization</p>

<p><b>Level 5 Practices (Optimized)</b></p>	<p><i>Activities:</i> The agency has developed segment architectures for multiple core mission lines of business, business services or enterprise services, as defined in Appendix B. The segment architectures include baseline and target performance measures for the segment, and demonstrate line of sight between the other layers of the architecture. The relevant business owner has authorized the segment performance architectures in writing.</p> <p>The agency's Transition Strategy includes the achievement of performance targets as milestones within the transition sequencing plan. This includes the performance targets from relevant cross-agency initiatives in the Federal Transition Framework. The transition sequencing plan shows the level of performance improvement to be achieved at specific points in time. Performance milestones in the Transition Strategy are complete and updated. Performance measurement indicators and processes are monitored, measured and updated on a regular basis.</p> <p><i>Artifacts:</i> Transition Strategy, Segment Architecture Authorization</p>
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### 5.1.2 Business Architecture

- *Description:* EA contains an inventory of agency business processes, aligned to the FEA Business Reference Model (BRM), linked to layers of the agency's EA and used to inform investment decision making. Segment architectures are developed for each agency line of business, including Services for Citizens, as well as Support Lines of Business.
- *Rationale:* An effective EA must be business-driven, requiring alignment between the IT architecture layers and business processes.
- *Mandate:* OMB A-11, s.300; GPRA; Clinger-Cohen Act

<p><b>Level 1 Practices (Initial)</b></p>	<p><i>Activities:</i> The agency has partially identified its current lines of business and sub-functions and has mapped these to the FEA Business Reference Model (BRM).</p> <p><i>Artifact:</i> Baseline Business Architecture</p>
<p><b>Level 2 Practices (Baseline)</b></p>	<p><i>Activities:</i> The agency has identified its current lines of business and sub-functions and has mapped these to the FEA Business Reference Model (BRM).</p> <p><i>Artifact:</i> Baseline Business Architecture</p>
<p><b>Level 3 Practices (Target)</b></p>	<p><i>Activities:</i> The agency has identified the target lines of business and sub-functions and has mapped these to the FEA Business Reference Model (BRM). There is line of sight between the</p>

	<p>business layer of the target architecture to other layers of the architecture.</p> <p><i>Artifact:</i> Target Business Architecture</p>
<b>Level 4 Practices (Integrated)</b>	<p><i>Activities:</i> The agency has completed at least one segment business architecture for an agency's core mission line of business, business service or enterprise service, as defined in Appendix B. The segment architecture includes complete target business processes, and demonstrates line of sight between the other layers of the architecture. The relevant business owner has authorized the segment business architecture in writing. The agency Transition Strategy includes initiatives with milestones to achieve the target business architecture and to implement business architecture elements (e.g. lines of business, sub-functions, common business processes) from relevant cross-agency initiatives in the Federal Transition Framework.</p> <p><i>Artifacts:</i> Transition Strategy, Segment Architecture Authorization</p>
<b>Level 5 Practices (Optimized)</b>	<p><i>Activities:</i> The agency has developed multiple segment architectures for core mission lines of business, business services or enterprise services, as defined in Appendix B. The segment architectures include complete target business processes and demonstrate line of sight between the other layers of the architecture. The relevant business owners have authorized segment business architectures in writing. The agency Transition Strategy includes initiatives with milestones to achieve the target business architecture and to implement business architecture elements (e.g. lines of business, sub-functions, common business processes) from relevant cross-agency initiatives in the Federal Transition Framework. Business architectures for each segment are integrated into the overall agency EA.</p> <p><i>Artifacts:</i> Transition Strategy, Segment Architecture Authorization</p>

### 5.1.3 Data Architecture (Information Management)

- *Description:* Enterprise data described at the level of business data entities, linked to the FEA Data Reference Model (DRM) and other layers of agency EA.
- *Rationale:* An enterprise data architecture is the key to identifying data sharing and exchange opportunities both within and across agencies.

- *Mandate:* OMB A-11, s.300; GPRA; Clinger-Cohen Act, Data Quality Act, E-Government Act of 2002, OMB M-05-04, OMB A-119, OMB Information Dissemination Memorandum 207(d)

<b>Level 1 Practices (Initial)</b>	<p><i>Activities:</i> The agency has partially documented the elements of its baseline data architecture, including data assets and data stewards as defined by the DRM.</p> <p><i>Artifact:</i> Baseline Data Architecture</p>
<b>Level 2 Practices (Baseline)</b>	<p><i>Activities:</i> The agency has documented its baseline data architecture as defined by the DRM. Agency data assets are managed as program resources.</p> <p><i>Artifact:</i> Baseline Data Architecture</p>
<b>Level 3 Practices (Target)</b>	<p><i>Activities:</i> The agency has documented its target data architecture as defined by the DRM. The target data architecture defines the agency's enterprise target data assets.</p> <p><i>Artifact:</i> Target Data Architecture</p>
<b>Level 4 Practices (Integrated)</b>	<p><i>Activities:</i> The agency has taken steps to implement its target data architecture in coordination with internal and external stakeholders. It has defined, in its Transition Strategy, a migration of agency data assets from those managed primarily as program resources to those managed primarily as enterprise resources. The agency's capital planning and procurement policies require new investments to implement published data standards.</p> <p>The agency has completed at least one segment architecture for an agency's core mission line of business, business service or enterprise service, as defined in Appendix B. The segment architecture includes a complete target data architecture and demonstrates line of sight between the other layers of the architecture. The relevant business owner has authorized the segment architecture in writing.</p> <p><i>Artifacts:</i> Transition Strategy, Segment Architecture Authorization</p>

<p><b>Level 5 Practices (Optimized)</b></p>	<p><i>Activities:</i> The agency is actively participating in cross-agency communities of interest and other initiatives. It has adopted and implemented data standards created by cross-agency Communities of Interest (COIs) and/or voluntary consensus standards bodies. The agency has defined, in its Transition Strategy, a migration of agency data assets from internal agency resources to shared, cross-agency, data assets where appropriate.</p> <p>The agency has completed multiple segment data architectures for the agency's core mission lines of business, business services or enterprise services, as defined in Appendix B, and these architectures implement appropriate cross-agency COI and/or voluntary consensus data standards. The segment architectures include a complete target data architecture and demonstrate line of sight between the other layers of the architectures. The relevant business owners have authorized segment architectures in writing.</p> <p><i>Artifacts:</i> Transition Strategy, Segment Architecture Authorization</p>
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#### 5.1.4 Service Component Architecture

- *Description:* This architecture describes agency services linked to the FEA Service Component Reference Model and other layers of the agency EA.
- *Rationale:* The service component architecture is the foundation for identifying opportunities for reuse both within and across agencies.
- *Mandate:* OMB A-11, s.300; GPRA; Clinger-Cohen Act, E-Government Act

<p><b>Level 1 Practices (Initial)</b></p>	<p><i>Activities:</i> The agency has partially identified the baseline systems/applications and service components, and has mapped these to the FEA Service Reference Model (SRM) as well as any other relevant agency-level SRM.</p> <p><i>Artifact:</i> Baseline Service Component Architecture</p>
<p><b>Level 2 Practices (Baseline)</b></p>	<p><i>Activities:</i> The agency has identified the baseline systems/applications and service components for the agency, and has mapped these to the FEA Service Reference Model (SRM) as well as any other relevant agency-level SRM.</p> <p><i>Artifact:</i> Baseline Service Component Architecture</p>
<p><b>Level 3 Practices (Target)</b></p>	<p><i>Activities:</i> The agency has identified the target systems/applications and service components for the agency, and has mapped these to the FEA Service Reference Model (SRM) as well as any other relevant agency-level SRM. The</p>

	<p>target architecture demonstrates line of sight between the other layers of the architectures.</p> <p><i>Artifact:</i> Target Service Component Architecture</p>
<b>Level 4 Practices (Integrated)</b>	<p><i>Activities:</i> The agency has developed at least one segment architecture for an agency's core mission line of business, business service or enterprise service, as defined in Appendix B. The segment architecture includes a complete target service component (or systems/application) architecture and demonstrates line of sight between the other layers of the architecture. The relevant business owner has authorized the segment architecture. The agency Transition Strategy includes initiatives and milestones to achieve the agency's target service component architecture and to implement service component architecture elements from relevant cross-agency initiatives in the Federal Transition Framework.</p> <p><i>Artifacts:</i> Transition Strategy, Segment Architecture Authorization</p>
<b>Level 5 Practices (Optimized)</b>	<p><i>Activities:</i> The agency has developed segment architectures for core mission lines of business, business services or enterprise services, as defined in Appendix B. The segment architectures include a complete service component architecture, and demonstrate line of sight between the other layers of the architectures. Service component architectures for each segment are integrated into the overall agency EA. The relevant business owners have authorized the segment architectures.</p> <p><i>Artifacts:</i> Transition Strategy, Segment Architecture Authorization</p>

### 5.1.5 Technology Architecture

- *Description:* The technology architecture contains an inventory of deployed and approved technologies linked to the FEA Technical Reference Model and other layers of the agency EA; providing a basis for standardization opportunities.
- *Rationale:* The technology architecture provides a basis to identify opportunities for technology standardization both within and across agencies.
- *Mandate:* OMB A-11, s.300; GPRA; Clinger-Cohen Act, E-Government Act, OMB Circular A-119.

<b>Level 1 Practices (Initial)</b>	<p><i>Activities:</i> The agency has partially identified the baseline technology products and standards and has mapped these to the FEA Technology Reference Model (TRM).</p> <p><i>Artifact:</i> Baseline Technology Architecture</p>
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<b>Level 2 Practices (Baseline)</b>	<p><i>Activities:</i> The agency has identified the baseline technology products and standards for the agency and has mapped these to the FEA Technology Reference Model (TRM).</p> <p><i>Artifact:</i> Baseline Technology Architecture</p>
<b>Level 3 Practices (Target)</b>	<p><i>Activities:</i> The agency has identified the target technology products and standards for the agency, and has mapped these to the FEA Technical Reference Model (TRM). The target architecture demonstrates line of sight between the other layers of the architecture.</p> <p><i>Artifact:</i> Target Technology Architecture</p>
<b>Level 4 Practices (Integrated)</b>	<p><i>Activities:</i> The agency has developed at least one segment architecture for an agency's core mission line of business, business service or enterprise service, as defined in Appendix B. The segment architecture includes a complete target technology architecture and demonstrates line of sight between the other layers of the architecture. The relevant business owner has authorized the segment technology architecture. The agency's Transition Strategy includes initiatives and milestones to achieve the agency's target technology architecture and to implement technology architecture elements from relevant cross-agency initiatives from the Federal Transition Framework.</p> <p><i>Artifacts:</i> Transition Strategy, Segment Architecture Authorization</p>
<b>Level 5 Practices (Optimized)</b>	<p><i>Activities:</i> The agency has developed segment architectures for core mission lines of business, business services or enterprise services, as defined in Appendix B. The segment architectures include a complete technology architecture and demonstrate line of sight between the other layers of the architecture. Technology architectures for each segment are integrated into the overall agency EA. The relevant business owners have authorized the segment architectures.</p> <p><i>Artifacts:</i> Transition Strategy, Segment Architecture Authorization</p>

### 5.1.6 Transition Strategy

- *Description:* A transition strategy describes the agency's plan for migrating from its baseline architecture to its target architecture.
- *Rationale:* The transition strategy defines projects, programs, and timelines/milestones and is the foundation for modernization and transformation activities from the baseline to target architecture.
- *Mandate:* OMB A-11, s.300; GPRA; Clinger-Cohen Act, E-Government Act



<b>Level 1 Practices (Initial)</b>	<p><i>Activities:</i> The agency has a repeatable approach/methodology for creating, maintaining, and managing the EA Transition Strategy, including processes for performing gap analysis, alternatives analysis, and the management of projects over time.</p> <p><i>Artifact:</i> Transition Strategy</p>
<b>Level 2 Practices (Baseline)</b>	<p><i>Activities:</i> The agency has performed a redundancy and gap analysis identifying opportunities for consolidation or reuse and gaps between the baseline and target architectures.</p> <p><i>Artifact:</i> Transition Strategy</p>
<b>Level 3 Practices (Target)</b>	<p><i>Activities:</i> The agency has defined programs and projects in support of its target architecture and has a documented sequencing plan integrating program and project dependencies, performance improvement, security planning activities, and enterprise transition states. The Transition Strategy addresses priorities and performance objectives identified in the agency's strategic plan.</p> <p><i>Artifact:</i> Transition Strategy</p>
<b>Level 4 Practices (Integrated)</b>	<p><i>Activities:</i> The agency Transition Strategy includes initiatives with milestones for at least one segment architecture. The agency demonstrates clear linkage between programs and projects in the Transition Strategy and initiatives in the agency investment portfolio. Relevant cross-agency initiatives from the Federal Transition Framework are incorporated into the Transition Strategy and consistent with the agency's E-Gov implementation plan and milestones.</p> <p>The agency CIO has approved the Transition Strategy in writing.</p> <p><i>Artifacts:</i> Transition Strategy, Transition Strategy Approval</p>
<b>Level 5 Practices (Optimized)</b>	<p><i>Activities:</i> The agency Transition Strategy includes initiatives with milestones for multiple segment architectures. The achievement of performance targets are included as milestones in the EA sequencing plan, and include quantified target values. The transition sequencing plan shows the level of performance improvement to be achieved at specific points in time.</p> <p>The Department head has approved the Transition Strategy in writing.</p> <p><i>Artifacts:</i> Transition Strategy, Annual Performance Plan, Transition Strategy Approval</p>

## 5.2 USE CAPABILITY AREA

- *Description:* The agency has established the necessary management practices, processes, and policies needed for developing, maintaining and overseeing EA, and demonstrating the importance of EA awareness and the value of employing EA practices within the agency. The agency uses its EA to inform strategic planning, information resources management, IT management, and capital planning and investment control processes.
- *Outcomes:*
  - Establishes strategic objectives and programs the agency needs to meet citizens' needs.
  - Demonstrates the relationship between EA, strategic planning, and capital planning processes.
  - Provides the ability to make better management decisions, and as necessary, the ability to assess and re-assess the path forward.
- *General description of Use Maturity Levels:*

Level	Name	Description
1	Developed	Enterprise architecture processes exist within the agency, but they may be incomplete and there is no evidence processes are rigorously adhered to within the organization.
2	Deployed	EA processes and products exist, and are used within the enterprise architecture program. Processes are documented but are not coordinated with other enterprise IT and program management processes.
3	Managed	EA processes and products exist and are used by the agency's CIO to manage information technology infrastructure.
4	Integrated	EA processes and products exist and are used by the agency's CIO and CFO to manage information technology investments.
5	Optimized	EA is used by the agency's program and business owners throughout the organization to make informed program decisions that comply with EA.

### 5.2.1 EA Governance and EA Program Management

- *Description:* The agency must govern and manage the implementation and use of EA policies and processes. This includes the appointment of a Chief Architect (CA), allocation of resources and the sponsorship of EA at the executive level. The agency's EA Program Management Office governs the development, implementation and maintenance of the EA.
- *Rationale:* Effective governance and program management assures agency compliance with EA processes and procedures and facilitates executive support.

- *Mandate:* OMB A-11, s.300, OMB Circular A-130

<b>Level 1 Practices (Developed)</b>	<p><i>Activities:</i> Agency has developed a vision and strategy for EA. The agency has begun to identify EA tasks, and resource requirements. Agency has appointed a Chief Architect, has senior-level sponsorship of its EA Program, and has funded an EA program.</p> <p><i>Artifact:</i> EA Program Plan</p>
<b>Level 2 Practices (Deployed)</b>	<p><i>Activities:</i> Agency has established an EA Governance Committee or other group for directing, overseeing, or approving EA activities. Internal and external stakeholders are identified based on their involvement in EA related activities and needed information. The agency has selected an EA Framework.</p> <p><i>Artifact:</i> EA Governance Committee Charter</p>
<b>Level 3 Practices (Managed)</b>	<p><i>Activities:</i> The EA Governance Committee or another group meets regularly and makes decisions related to directing, overseeing, and approving EA activities within the agency. The committee follows a formal process for holding, conducting and recording meetings.</p> <p><i>Artifacts:</i> EA Governance Plan, EA Governance Committee Meeting Minutes</p>
<b>Level 4 Practices (Integrated)</b>	<p><i>Activities:</i> The EA Governance Committee manages and monitors the agency's EA using the enterprise transition strategy and IT investment project plans. The EA Governance Committee identifies issues with achieving the target architecture and develops plans to address them. The agency's CIO has approved the EA Governance Plan in writing.</p> <p><i>Artifacts:</i> EA Governance Plan, EA Governance Committee Meeting Minutes, Governance Plan Approval</p>
<b>Level 5 Practices (Optimized)</b>	<p><i>Activities:</i> The EA Governance Committee ensures EA compliance throughout the agency. If non-compliance is identified, the Committee is responsible for developing a plan to resolve the issue. Alignment to the EA standards is a common practice throughout the agency. The compliance process is reviewed and updated when deficiencies or enhancements to the process are identified. The agency's head has approved the EA Governance Plan in writing.</p> <p><i>Artifacts:</i> EA Governance Plan, EA Governance Committee Meeting Minutes, Governance Plan Approval</p>

### 5.2.2 EA Change Management and EA Deployment

- *Description:* The agency should have the ability to effectively manage changes to EA artifacts, including documents and any EA repositories. The agency should have the ability to deploy EA content out to their user community, including deployment of a repository, communications and training.
- *Rationale:* Change and configuration management is essential to ensure EA work products and processes remain current since EA serves as a tool for strategic planning and IT investing. EA products and processes must be clearly understood by, and available to, business stakeholders and IT stakeholders.
- *Mandate:* OMB A-11, s.300, OMB Circular A-130

<b>Level 1 Practices (Developed)</b>	<p><i>Activities:</i> The agency has developed an EA policy to ensure agency-wide commitment to EA. Policy clearly assigns responsibility to develop, implement and maintain the EA.</p> <p><i>Artifact:</i> EA Policy</p>
<b>Level 2 Practices (Deployed)</b>	<p><i>Activities:</i> The agency has deployed an EA tool/repository to manage EA artifacts and models. The tool/repository supports the agency's EA framework. The tool/repository is readily accessible to the agency's EA user community.</p> <p><i>Artifact:</i> EA Change Management Plan</p>
<b>Level 3 Practices (Managed)</b>	<p><i>Activities:</i> The agency has established an EA baseline serving as the basis for further development. The EA baseline and other EA artifacts are updated, versioned and archived using change control procedures. The EA tool/repository and EA documents are accessible to the agency's CIO community and users are informed of changes, as necessary.</p> <p><i>Artifact:</i> EA Change Management Reports</p>
<b>Level 4 Practices (Integrated)</b>	<p><i>Activities:</i> The agency's architecture is communicated to users throughout the agency (outside of CIO/IT community). Training is available and provided throughout the agency to increase awareness and understanding of EA concepts and processes. The EA tool/repository, EA documents, and EA communications materials are accessible to users throughout the agency (including business users) and users are informed of changes, as necessary.</p> <p><i>Artifacts:</i> EA Communications Plan and Training Plan and Materials</p>
<b>Level 5 Practices (Optimized)</b>	<p><i>Activities:</i> The EA repository and its interfaces are used by participants or support staff for the CPIC, SDLC, and strategic planning processes. Current EA information is readily available to participants in these processes, as well as the broader agency</p>

	<p>user community. Users are informed of changes, as necessary.</p> <p><i>Artifacts:</i> EA Communications Plan and Training Plan and Materials</p>
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### 5.2.3 Collaboration and Reuse

- *Description:* Agencies should have the ability to effectively federate lower-level segment architectures (including content, structure and policies) with higher-level agency-wide EA initiatives. Effectively federated architectures should promote collaboration and reuse opportunities within the agency
- *Rationale:* An effective agency-wide EA must incorporate the content of all of the agency's constituent organizational units, such as bureaus and offices, or else EA becomes just another "stovepipe" within the enterprise.
- *Mandate:* OMB A-130
- *Note:* In the case of small agencies not containing subsidiary operating units, OMB may elect not to use this criterion for assessment, based on discussions with the agency.

<b>Level 1 Practices (Developed)</b>	<p><i>Activities:</i> Multiple bureau-level architectures exist within the agency. No policies or procedures exist to integrate bureau-level architectures into the agency-wide EA, or to address commonalities at the agency level. Agency policies and procedures do not promote or support reuse.</p> <p><i>Artifact:</i> Agency EA Policies</p>
<b>Level 2 Practices (Deployed)</b>	<p><i>Activities:</i> EA integration policies and processes provide a mechanism to link bureau-level EAs and segment architectures to the agency-level EA.</p> <p><i>Artifact:</i> Agency EA Policies, Transition Strategy</p>
<b>Level 3 Practices (Managed)</b>	<p><i>Activities:</i> Department/Agency and bureau-level EAs are using compatible EA framework(s) and modeling standards. The agency EA represents an aggregation of bureau, program, segment, and other sub-unit architectures. The agency has identified, though not yet integrated or consolidated, common processes, data, services, and supporting technology at the appropriate levels within the agency (i.e., services provided at the agency level are identified, while some services remain at the bureau/sub-unit level).</p> <p><i>Artifacts:</i> EA Framework Document, Transition Strategy</p>
<b>Level 4 Practices (Integrated)</b>	<p><i>Activities:</i> The agency has standardized applicable common processes, data, services, and supporting technology across bureaus for specific segment architectures (e.g. finance, human resources, IT). The agency has implemented processes to drive</p>

	<p>collaboration and reuse, such as a component registry and required steps in the SDLC process to check for reusable components.</p> <p><i>Artifact:</i> Transition Strategy</p>
<b>Level 5 Practices (Optimized)</b>	<p><i>Activities:</i> There are no redundant common processes, information, services and technology within the agency and among the bureaus. All commonalities that should be addressed at the enterprise or cross-bureau level have been identified and are being consolidated/integrated, including those provided by cross-agency initiatives in the FTF. As new business needs arise, the appropriate level of reuse is included in planning and investment decisions.</p> <p><i>Artifacts:</i> Transition Strategy, IT Investment Review Board Meeting Minutes</p>

#### 5.2.4 CPIC Integration

- *Description:* The agency EA should be integrated with the agency's CPIC processes, including agency ability to align proposed investments to the approved transition strategy.
- *Rationale:* Investment decisions should be made to achieve a more efficient and effective target state.
- *Mandate:* OMB A-11, Exhibit 53, and Exhibit 300

<b>Level 1 Practices (Developed)</b>	<p><i>Activities:</i> Projects and purchases are typically done in isolation at the bureau level, resulting in costly purchases and redundant development and training requirements. Scattered CPIC processes exist for selecting, controlling, and evaluating IT investments. EA data is not used to inform IT initiative/system funding decisions.</p> <p><i>Artifact:</i> Agency CPIC Guide</p>
<b>Level 2 Practices (Deployed)</b>	<p><i>Activities:</i> Agency has begun to integrate its CPIC process with its EA Framework and process. The agency's IT investment review process identifies the business needs for identified IT projects fitting within its architecture. CPIC integration with EA is primarily to ensure investment compliance to the architecture after the investment has already been proposed.</p> <p><i>Artifact:</i> Architecture Review Board Meeting Minutes</p>
<b>Level 3 Practices (Managed)</b>	<p><i>Activities:</i> The agency's EA and CPIC programs work together to determine the IT investment portfolio. The agency's policies and procedures specify the relationship of its architecture to its</p>

	<p>IT decision-making processes and criteria. IT investments are selected, prioritized, or re-prioritized using the agency's target architecture.</p> <p><i>Artifacts:</i> Architecture Review Board Meeting Minutes, Transition Strategy</p>
<p><b>Level 4 Practices (Integrated)</b></p>	<p><i>Activities:</i> The agency's EA is used to guide and inform the development and acquisition of investments/systems. The agency's target architecture and transition strategy are used to drive new investments and the IT portfolio. Costs and benefits, including benefits across agency boundaries, are considered in identifying projects. Milestones in the Transition Strategy (Sequencing Plan) are consistent with those identified in business cases and project plans for investments.</p> <p><i>Artifacts:</i> Transition Strategy, IT Investment Review Board Minutes</p>
<p><b>Level 5 Practices (Optimized)</b></p>	<p><i>Activities:</i> An "Architect, Invest, Implement" approach is used and embraced through the integration of EA and CPIC. EA is incorporated into the strategic planning and budgeting processes. EA is used to help identify new investments. The EA target architecture is proactively refined, based on internal and external strategic business drivers, and updates are incorporated into the IT portfolio.</p> <p><i>Artifacts:</i> Transition Strategy, Agency IT Strategic Plan, IT Investment Review Board Minutes</p>

## 5.3 RESULTS CAPABILITY AREA

- *Description:* The agency is measuring the effectiveness and value of its EA by assigning performance measurements to its EA and related processes, and using its analysis of the performance measurements to update its EA practice and guidance.
- *Outcomes:*
  - Demonstrates the relationship of IT investments to the agency's ability to achieve mission and program performance objectives;
  - Captures how well the agency or specific processes within an agency are serving citizens;
  - Identifies the relationships between agency inputs and outcomes; and
  - Demonstrates agency progress towards goals, closing performance gaps, and achieving critical results.
- *General description of Results Maturity Levels:*

Level	Name	Description
1	Defined	The agency has few processes in place to demonstrate measurable agency performance improvement.
2	Measured	The agency has established processes to measure results of the EA program but is not able to demonstrate improvements to agency performance.
3	Reported	The agency has established processes to measure results of the EA program and is able to demonstrate some improvements to agency performance.
4	Improved	The agency has established processes to measure results of the EA program and is able to demonstrate significant improvements to agency performance.
5	Sustained	The agency has established processes to measure results of the EA program and is able to demonstrate significant and sustained improvements to agency performance.

### 5.3.1 Cost Savings and Cost Avoidance

- *Description:* The agency enterprise architecture is achieving demonstrable benefits to the agency in cost savings and cost avoidance for IT investments. The agency should develop and submit an EA Program Results Analysis document clearly demonstrating the improvements to agency IT investment performance attributable to the EA program, and explain how the EA program activities resulted in cost savings, cost avoidance, and/or improved mission performance for the agency. The agency fulfills this requirement by demonstrating results in one of three ways: demonstrating the EA program has resulted in cost savings and/or cost avoidance; maintaining agency IT spending below a certain percentage of its overall discretionary budget authority; or achieving PART scores above a certain level. See criteria below for specific thresholds.



- *Rationale:* Effective enterprise architectures should identify opportunities for reuse, consolidation and standardization that result in improved financial performance for the agency. Higher levels of IT spending are justified when an agency is achieving superior levels of mission performance.
- *Mandate:* Clinger-Cohen Act, OMB Memorandum M-06-22, OMB Program Assessment Rating Tool (PART)
- *Note:* Agencies should submit evidence of maturity using the reporting format indicated in OMB Memorandum M-06-22

<b>Level 1 Practices (Defined)</b>	<p><i>Activities:</i> The agency is not able to demonstrate the EA program has resulted in cost savings or cost avoidance.</p> <p><i>Artifact:</i> EA Program Results Analysis</p>
<b>Level 2 Practices (Measured)</b>	<p><i>Activities:</i> The agency is not able to demonstrate the EA program has resulted in cost savings or cost avoidance, but can demonstrate the EA program has improved IT investment efficiency by producing a more effective IT portfolio without an increase to the agency's FY07 IT budget.</p> <p><i>Artifact:</i> EA Program Results Analysis</p>
<b>Level 3 Practices (Reported)</b>	<p><i>Activities:</i> The agency is able to demonstrate the EA program has resulted in cost savings and/or cost avoidance of at least 1% of the agency's FY07 IT budget; OR the agency's IT spending for FY07 is 7.5% of it's overall discretionary budget authority or less; OR the agency's average PART score for FY07 (released with the President's Budget in February 2008) is 70 or higher.</p> <p><i>Artifact:</i> EA Program Results Analysis</p>
<b>Level 4 Practices (Improved)</b>	<p><i>Activities:</i> The agency is able to demonstrate the EA program has resulted in cost savings and/or cost avoidance of at least 3% of the agency's FY07 IT budget; OR the agency's IT spending for FY07 is 5% of it's overall discretionary budget authority or less; OR the agency's average PART score for FY07 (released with the President's Budget in February 2008) is 85 or higher.</p> <p><i>Artifact:</i> EA Program Results Analysis</p>
<b>Level 5 Practices (Sustained)</b>	<p><i>Activities:</i> The agency is able to demonstrate the EA program has resulted in cost savings and/or cost avoidance of at least 5% of the agency's FY07 IT budget; OR the agency's IT spending for FY07 is 3.5% of it's overall discretionary budget authority or less; OR the agency's average PART score for FY07 (released with the President's Budget in February 2008) is 95 or higher.</p> <p><i>Artifact:</i> EA Program Results Analysis</p>

### 5.3.2 Performance Improvement

- *Description:* The agency transition strategy should include well-defined and objectively measurable performance milestones. These performance milestones must enable the agency to determine whether it is meeting its mission and performance objectives, defined by the business owners who have ultimate responsibility for agency performance. See section 5.1.6 of this assessment framework and the FEA Practice Guidance located at [www.egov.gov](http://www.egov.gov) for more information regarding transition strategy.
- *Rationale:* The transition strategy should include performance milestones indicating an agency's success in achieving performance targets. This ensures the agency's EA is actionable and will produce improvements to the agency's mission performance.
- *Mandate:* OMB A-130

<b>Level 1 Practices (Defined)</b>	<p><i>Activities:</i> The agency has included the achievement of performance targets (from target performance architecture) as milestones in the EA Transition Strategy.</p> <p><i>Artifact:</i> Agency Transition Strategy</p>
<b>Level 2 Practices (Measured)</b>	<p><i>Activities:</i> The agency has processes/tools in place to measure target performance.</p> <p><i>Artifact:</i> Agency Transition Strategy</p>
<b>Level 3 Practices (Reported)</b>	<p><i>Activities:</i> The agency is actively tracking and reporting target performance.</p> <p><i>Artifact:</i> Agency Transition Strategy</p>
<b>Level 4 Practices (Improved)</b>	<p><i>Activities:</i> Performance targets identified in the previous year's Transition Strategy have been achieved on schedule, but not to the level predicted in the target, OR the target performance improvement was achieved, but was completed late according to the schedule in the Transition Strategy.</p> <p><i>Artifact:</i> Agency Transition Strategy</p>
<b>Level 5 Practices (Sustained)</b>	<p><i>Activities:</i> Performance targets in the Transition Strategy have been fully achieved, on schedule.</p> <p><i>Artifact:</i> Agency Transition Strategy</p>

### 5.3.3 Measuring EA Program Value

- *Description:* EA value measurement is a continuous, customer-focused process integrated with each phase of the Performance Improvement Lifecycle. The principal goals of EA value measurement are to document EA value to agency decision-makers and to identify opportunities to improve EA products and services.

EA value measurement tracks architecture development and use, and monitors the impact of EA products and services on IT investment decisions, collaboration and reuse, standards compliance, stakeholder satisfaction, and other measurement areas and indicators. For detailed guidance concerning the establishment of an agency EA Program Value measurement initiative, please refer to Section 5 of the FEA Practice Guidance, which will be available online upon its release at [http://www.whitehouse.gov/omb/egov/documents/FEA\\_Practice\\_Guidance.pdf](http://www.whitehouse.gov/omb/egov/documents/FEA_Practice_Guidance.pdf).

- *Rationale:* Agency EA programs should deliver results-oriented products and services to inform business decisions and increase the efficiency and effectiveness of IT investments, program management and agency operations.
- *Mandate:* OMB A-130

<b>Level 1 Practices (Defined)</b>	<p><i>Activities:</i> The agency has identified stakeholders and goals for EA value measurement</p> <p><i>Artifact:</i> Agency EA Value Measurement Plan</p>
<b>Level 2 Practices (Measured)</b>	<p><i>Activities:</i> The agency has identified EA value indicators and data sources, and has created a survey/feedback form to be used for the value measurement initiative.</p> <p><i>Artifacts:</i> Agency EA Value Measurement Plan</p>
<b>Level 3 Practices (Reported)</b>	<p><i>Activities:</i> The agency has conducted an EA value measurement initiative.</p> <p><i>Artifacts:</i> Agency EA Value Measurement Plan</p>
<b>Level 4 Practices (Improved)</b>	<p><i>Activities:</i> The agency has conducted an EA value measurement initiative and has generated a report summarizing the findings of the initiative.</p> <p><i>Artifacts:</i> Agency EA Value Measurement Plan, Agency EA Value Measurement Summary Report</p>
<b>Level 5 Practices (Sustained)</b>	<p><i>Activities:</i> The agency is able to demonstrate it has updated the EA Program Plan based on feedback documented in the EA Value Measurement Summary Report.</p> <p><i>Artifacts:</i> Agency EA Value Measurement Plan, Agency EA Value Measurement Summary Report, EA Program Plan</p>

#### 5.3.4 Internet Protocol Version 6 (IPv6)

- *Description:* The agency's EA (including Transition Strategy) must incorporate Internet Protocol version 6 (IPv6) into the agency's target architecture
- *Rationale:* Federal agencies are required to implement IPv6 within their network backbone by June 2008.

- *Mandate:* OMB Memorandum M-05-22

<b>Level 1 Practices (Defined)</b>	<p><i>Activities:</i> The agency has assigned an official to lead and coordinate agency planning for the IPv6 transition.</p> <p><i>Artifact:</i> Memorandum, or other document, indicating appointment of agency IPv6 lead.</p>
<b>Level 2 Practices (Measured)</b>	<p><i>Activities:</i> The agency has completed an inventory of IP-aware hardware devices within their network backbone.</p> <p><i>Artifact:</i> IP device inventory using guidance in Attachment A of OMB M-05-22</p>
<b>Level 3 Practices (Reported)</b>	<p><i>Activities:</i> The agency has developed an IPv6 Transition Plan including a detailed implementation sequencing plan through June 30, 2008. At a minimum, the plan includes the agency's approach for governance, planning, acquisition, implementation (full lifecycle), training, and maintenance of security throughout and after transition. IPv6 Transition Plan has been integrated with the agency EA Transition Strategy.</p> <p><i>Artifacts:</i> IPv6 Transition Plan, EA Transition Strategy (with integrated IPv6 transition activities)</p>
<b>Level 4 Practices (Improved)</b>	<p><i>Activities:</i> The agency has performed a cost and risk impact analysis for migrating to IPv6. Agency has also completed a second inventory of IP-aware devices.</p> <p><i>Artifacts:</i> IPv6 impact analysis document using guidance in Attachment B of OMB M-05-22, second IP-aware device inventory (Attachment A)</p>
<b>Level 5 Practices (Sustained)</b>	<p><i>Activities:</i> The agency has met all of its IPv6 transition milestones, and is on schedule to complete transition by June 30, 2008.</p> <p><i>Artifacts:</i> IPv6 transition milestones (included in EA Transition Strategy) through completion date (i.e. June 30, 2008) showing projected and actual completion dates, evidence of milestone completion (agency should determine the artifact(s) constituting evidence of completion for each milestone), documentation of successful execution of deployment test criteria (once transition is complete).</p>

## Appendix A: Artifact Descriptions

The table below provides a brief description of the type of artifacts typically used to satisfy a specific maturity level for one of the assessment criteria described previously. The appropriate artifacts are to be submitted to OMB as part of the annual agency EA Assessment.

*Note: The description of the artifacts is not intended to be exhaustive or prescriptive. OMB is interested in the content of the artifacts and does not prescribe the format, as long as the artifact can be reviewed by OMB without requiring the use of proprietary software products (such as EA modeling tools). Moreover, agencies may well decide to develop additional artifacts or elaborate upon them further than described here.*

Artifact Name	Artifact Description
<b>Annual Performance Plan</b>	The agency annual performance plan as required by the Government Performance and Results Act (GPRA) (1993), section (4)(B).
<b>Architecture Review Board Meeting Minutes</b>	Minutes from the body responsible for reviewing IT investments as evidence to demonstrate the EA is ensuring conformance of proposed IT investments with agency EA standards and guidelines. <i>Note: the body does not have to be called the “Architecture Review Board”.</i>
<b>Business Architecture</b>	The Business Architecture is a functional perspective of the overall agency EA providing the information about the agency’s baseline and target architectures. Examples of elements include: <ul style="list-style-type: none"> <li>• Agency business processes, aligned to business sub-functions within the FEA BRM;</li> <li>• Internal and external participants (roles) within these business processes;</li> <li>• Linkage between agency business processes and agency-specific performance measurement indicators;</li> <li>• Linkage between business processes to agency service components;</li> <li>• Agency programs, linked to business processes; and</li> <li>• Offices and facilities.</li> </ul>
<b>Data Architecture</b>	The Data Architecture is a perspective of the overall agency EA providing the information about the agency’s baseline and target data architectures. Examples of elements include: <ul style="list-style-type: none"> <li>• Agency data model describing the key data elements of the agency’s business domain, and the relationships between them. The data model may include data dictionaries, thesauri, taxonomies, and topic maps;</li> <li>• An inventory of agency data stores, including the specific data elements it manages;</li> <li>• A description of any data and data exchange standards</li> </ul>

Artifact Name	Artifact Description
	<p>existing within the agency, including data exchange packages and messaging formats;</p> <ul style="list-style-type: none"> <li>• Linkage between the agency data model and the service components accessing the data elements;</li> <li>• Documented data management policies and procedures for data/information quality; and</li> <li>• OMB M-05-04 compliant agency websites and search engines; and/or metadata registries, repositories, and/or clearinghouse.</li> </ul>
<b>EA Change Management Plan</b>	<p>An EA Change Management Plan describes the process of how changes to the agency's EA artifacts and repository will be managed. An EA CM plan may include rules for how changes are to be approved, how artifacts are to be versioned, and any relevant technical standards for implementing change management.</p> <p><i>Note:</i> if the agency already possesses an overall CM plan the EA initiative conforms to, there is no need to create a specialized version for the EA initiative.</p>
<b>EA Change Management Reports</b>	<p>To demonstrate effective EA change management processes, agencies may submit one or more examples of EA change management reports from the agency. These might include change logs for EA artifacts, minutes from an agency committee responsible for overseeing EA change management, or reports from any change management tool used to manage changes to EA content.</p>
<b>EA Communications and Training Plans and Materials</b>	<p>To demonstrate effective EA communications and training processes, agencies may submit one or more examples of materials. Examples might include training plans, course books, presentations, newsletters, workshop materials or other training content.</p>
<b>EA Framework Document</b>	<p>An EA Framework Document (sometimes called a meta-model) fundamentally describes three aspects of an enterprise architecture:</p> <ul style="list-style-type: none"> <li>• The types (or classes) of information the EA will concern itself with;</li> <li>• The acceptable relationships between these types; and</li> <li>• Views of the architecture showing selected elements of the EA in a meaningful context</li> </ul> <p>Agencies may elect to wholly adopt an existing EA framework (such as Zachmann or DoDAF, for example), extend an existing framework, or create an entirely new framework as the needs of the agency dictate.</p>
<b>EA Governance Committee Meeting Minutes</b>	<p>To demonstrate effective EA governance processes, agencies may submit one or more examples of meeting minutes from the agency's EA governance body.</p>
<b>EA Governance</b>	<p>A document describing how the development and evolution of an</p>

Artifact Name	Artifact Description
<b>Plan</b>	agency's EA is to be governed. Typical elements may include: <ul style="list-style-type: none"> <li>• Description of EA governing bodies or individual roles within the agency;</li> <li>• Responsibilities for each governing body or individual role;</li> <li>• A description of the governance lifecycle, i.e. the process by which governance decisions are made; and</li> <li>• Relationship between the EA governance process and those for related IT governance bodies, e.g. Capital Planning, IT Strategy, or others.</li> </ul>
<b>EA Governance Plan Approval</b>	A document signed by the appropriate official (CIO or Department Head, depending on maturity level) indicating formal approval of the agency EA Governance Plan.
<b>EA Policy</b>	A document expressing agency commitment to develop and utilize an enterprise architecture and assigning responsibility for EA development and management to specific roles and groups within the agency.
<b>EA Program Plan</b>	A document describing the goals and objectives of the EA program and defining the scope of the initiative at least at a high level. It may identify key stakeholders of the EA program, the relationship of the EA to other agency initiatives and performance objectives for the EA. It is intended to be a non-technical document validated by the agency business managers, not just IT personnel.
<b>EA Program Results Analysis</b>	A document clearly demonstrating the improvements to agency IT investment performance attributable to the EA program. It explains how the EA program activities resulted in cost savings or cost avoidance for the agency. This artifact should be created in conformance to OMB Memorandum 06-22.
<b>EA Repository</b>	An EA Repository is a mechanism for storing all of the relevant content within the agency's EA in a readily retrievable form. The implementation of a repository may be as simple as a common shared directory with agency EA artifacts, or it may include databases, web portals or EA-specific modeling tools and repositories.
<b>EA Value Measurement Plan</b>	A step-by-step process to define EA value measurement areas, identify measurement sources, and monitor and track value measures during each phase of the Performance Improvement Lifecycle
<b>EA Value Measurement Summary Report</b>	A document showing the outcomes of an agency's EA Value Measurement process.
<b>IP Device Inventory</b>	A document listing and describing all of the IP-aware hardware and software in an agency's network core (aka "backbone"). Agencies were required to complete this inventory (and submit it to OMB) by November 15, 2005, per OMB Memorandum M-05-22. The Memorandum provides a template for documenting the

Artifact Name	Artifact Description
	inventory.
<b>IPv6 Impact Analysis</b>	<p>A document describing the cost and risk impact (on the agency) for the adoption of IPv6 into its network core. This impact analysis includes a list of all risks, with the following information for each identified risk:</p> <ul style="list-style-type: none"> <li>• Date identified</li> <li>• Area of Risk</li> <li>• Description</li> <li>• Probability of Occurrence</li> <li>• Strategy for Mitigation</li> <li>• Current Status</li> </ul> <p>Agencies were encouraged to use OMB Circular A-11, Exhibit 300 – Section I.F (Risk Inventory and Assessment) from 2005 as a guide for the completion of the risk analysis.</p> <p>Additionally, agencies were required to provide a cost estimate for the IPv6 implementation. Agencies were required to complete this cost and risk impact analysis (and submit it to OMB) by June 30, 2006, per OMB Memorandum M-05-22.</p>
<b>IPv6 Transition Milestones</b>	The specific activities (e.g. planning, acquisition, implementation, testing) involved with IPv6 implementation. Each milestone has a planned completion (target) date. These milestones are included in the agency IPv6 Transition Plan and the EA Transition Strategy.
<b>IPv6 Transition Plan</b>	A document describing an agency’s plan for the adoption of IPv6 into its network core. This plan includes, but is not limited to, a detailed project plan (with milestones and target dates) for the IPv6 effort. Agencies were required to complete a first version of this plan (and submit it to OMB) by February 28, 2006, per OMB Memorandum M-05-22.
<b>IT Investment Review Board Minutes</b>	<p>Minutes from the body responsible for selecting and prioritizing IT investments used as evidence to demonstrate a mature CPIC integration process with EA.</p> <p><i>Note:</i> the body does not have to be called the “IT Investment Review Board”.</p>
<b>IT Strategic Plan</b>	The agency Information Resource Management Strategic Plan, as required by 44 U.S.C 3506 (b) (2).
<b>Performance Architecture</b>	<p>The Performance Architecture is a perspective of the overall agency EA providing the information about the agency’s baseline and target architectures. Examples of elements include:</p> <ul style="list-style-type: none"> <li>• Agency strategic goals and objectives (as per the agency’s Strategic Plan and IRM Plan) and linkage between performance indicators and business processes;</li> <li>• Agency-specific performance measurement indicators, aligned to the generic measurement indicators described</li> </ul>



Artifact Name	Artifact Description
	<p>in the FEA PRM; and</p> <ul style="list-style-type: none"> <li>• Linkage between the agency's strategic goals and investments.</li> </ul>
<b>SDLC Guide</b>	<p>A System Development Life Cycle (SDLC) guide describes the agency's approved policies and methodology for software development projects. Subjects covered by an SDLC guide may include relevant industry or government standards, approved software development tools and languages, policies on reuse of existing components, and a methodology or framework for software development.</p>
<b>Segment Architecture</b>	<p>Segment architecture provides detailed results-oriented architecture and a transition plan for a portion or segment of the enterprise. Segments are individual building blocks in the EA Transition Strategy describing core mission areas, and common or shared business services and application services. Segment architecture comprises a series of work products describing baseline architecture, target architecture and a transition plan. Work products document segment-level change drivers, describe baseline and target performance, business, data, services and technology architecture, and provide a roadmap to enhance business operations and achieve measurable performance improvements. Types of segment architectures are defined in Appendix B of this document.</p> <p>The FEA Practice Guidance provides further information regarding the development of a segment architecture and is available at: <a href="http://www.egov.gov">www.egov.gov</a>.</p>
<b>Segment Architecture Authorization</b>	<p>A document signed by the relevant business owner indicating formal authorization and use of the segment architecture to drive the future direction of the business. This document should remain current and reviewed annually (signature by business owner should be within 3 months of EA submission).</p>
<b>Service Component Architecture</b>	<p>The Service Component Architecture is a perspective of the overall agency EA providing the information about the agency's baseline and target architectures. Examples of elements include:</p> <ul style="list-style-type: none"> <li>• Agency service components, aligned to the FEA SRM;</li> <li>• Component interfaces;</li> <li>• Linkage between service components and technology infrastructure, products and standards;</li> <li>• Linkage between applications and the agency business processes they automate;</li> <li>• Linkage between service components and the data objects accessed by these components; and</li> <li>• Linkage between service components and facilities where they are hosted</li> </ul>

Artifact Name	Artifact Description
<b>Technology Architecture</b>	<p>The Technology Architecture is a capabilities perspective of the overall agency EA providing the information about the agency's baseline and target architectures. Examples of elements include:</p> <ul style="list-style-type: none"> <li>• Agency technical reference model documenting technology products in use, aligned to the FEA TRM;</li> <li>• Agency standards profile documenting applicable agency technology standards, aligned to the FEA TRM; and</li> <li>• Linkage between technology products and standards to service components.</li> </ul>
<b>Transition Strategy</b>	<p>The Transition Strategy is a critical component of an effective EA practice. It describes the overall plan for an organization to achieve its target "to-be" EA within a specified timeframe. It clearly links proposed agency investments to the target architecture. Also, the Transition Strategy helps to define logical dependencies between transition activities (programs and projects) and helps to define the relative priority of these activities (for investment purposes).</p> <p>Section 4 of the FEA Practice Guidance (available at: <a href="http://www.egov.gov">www.egov.gov</a>) provides further guidance regarding the development and components of a transition strategy.</p>
<b>Transition Strategy Approval</b>	<p>A document signed by the appropriate official (CIO or Department Head, depending on maturity level) indicating formal approval of the agency Transition Strategy.</p>

## Appendix B: Segment Architecture Types

Segment Type	Description	Reference Model	Owner
<b>Core Mission Area</b>	Unique service areas defining the mission or purpose of the agency. Core mission areas are defined by the agency BM.	BRM: Service for Citizens	Business Area Official
<b>Business Service</b>	Common or shared business services supporting the core mission areas. Business services are defined by the agency Business Model (BM) and include the foundational mechanisms and back office services used to achieve the purpose of the agency.	BRM: Mode of Delivery, Delivery of Services, Management of Government Resources	OCIO or Program Management Office Official
<b>Enterprise Service</b>	Common or shared IT services supporting core mission areas and business services. Enterprise services are defined by the agency Service Component Model (SM) and include the applications and service components used to achieve the purpose of the agency.	SRM	OCIO or Program Management Office Official

## Appendix C: Agencies Included in the EA Assessment Process

All agencies evaluated as part of the PMA Scorecard process will be assessed, namely:

U.S. Army Corps of Engineers (USACE)
Department of Commerce (DOC)
Department of Defense (DoD)
Department of Education (ED)
Department of Energy (DOE)
Department of Health and Human Services (HHS)
Department of Homeland Security (DHS)
Department of Housing and Urban Development (HUD)
Department of Interior (DOI)
Department of Justice (DOJ)
Department of Labor (DOL)
Department of State (State) and US Agency for International Development (USAID) Joint Enterprise Architecture
Department of Transportation (DOT)
Department of Treasury (Treasury)
Department of Veterans Affairs (VA)
Environmental Protection Agency (EPA)
General Services Administration (GSA)
National Aeronautics and Space Administration (NASA)
National Science Foundation (NSF)
Office of Management and Budget (OMB)
Office of Personnel Management (OPM)
Social Security Administration (SSA)
Small Business Administration (SBA)
Smithsonian Institution (Smithsonian)
U.S. Department of Agriculture (USDA)