



Enterprise Architecture Segment Report

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Version 1.0

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1 Introduction

The purpose of the Enterprise Architecture Segment Report (EASR) is to provide a structured format for agencies to report standardized information regarding the performance and development of their segment architectures to the Office of Management and Budget (OMB). Agencies will submit completed segment reports as part of the OMB Enterprise Architecture (EA) Assessment process and will provide quarterly updates to demonstrate the development and progress of each of their defined segments. OMB's EASR assessment process has four main goals including:

- Ensuring agencies are developing segment architectures and generating results;
- Identifying opportunities for re-use and cross-agency collaboration based on agency segment architecture information;
- Providing a platform for agency chief architects to engage with business owners; and
- Capturing updated segment information as part of the OMB EA Assessment process.

The EA Segment Report consists of five sections: Identification, Mappings, Performance, Transition Planning, and Collaboration and Reuse. Table 1 summarizes the focus of each reporting section. Additional detail on the reporting requirements can be found in the subsequent chapters.

Table 1: Segment Architecture Reporting Sections

Segment Architecture Reporting Sections		
Section	Description	Information Requested
Identification	Provides descriptive information about the segment and its current state.	<ul style="list-style-type: none"> • Segment Name • Segment Description • Agency • OMB Segment Code • Segment Type • Segment Phase • Segment Priority
Mappings	Contains mappings of the segment to the FEA and to investments, programs, and cross-agency initiatives.	<ul style="list-style-type: none"> • Investments (Exhibit 53/ITBRS) • Programs (PART program inventory) • Cross-Agency Initiatives (E-Gov/FTF) • FEA <ul style="list-style-type: none"> ○ BRM ○ SRM ○ TRM
Performance	Creates a comprehensive line of sight for segment performance as well as financial and non-financial success stories attributed in whole, or in part, to the segment architecture.	<ul style="list-style-type: none"> • Strategic Performance • Segment Performance • Program Performance • Business Performance
Transition Planning	Provides segment progress milestones to track the development of a segment within an agency. These milestones are different from those found in the Exhibit 300s.	<ul style="list-style-type: none"> • Segment Progress Milestones

Segment Architecture Reporting Sections		
Section	Description	Information Requested
Collaboration & Reuse	Provides information on business, data, and information system/service reuse by the segment and partners or other stakeholders related to the segment.	<ul style="list-style-type: none"> • Collaboration/Partners • Business Reuse • Data Reuse • Info System/Service Reuse

A segment architecture provides a detailed results-oriented architecture and a transition plan for a portion (or segment) of the agency/enterprise. Segments are individual building blocks in the Enterprise Transition Plan describing core mission areas, and common or shared business services and application services. A segment architecture comprises a series of work products describing the baseline architecture, the target architecture and a transition plan. Typical segment architecture products capture 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.

The Federal Segment Architecture Methodology (FSAM) was developed to provide guidance on using best practices to develop Segment Architectures resulting in information included in the EASR. Additionally, the FEA Practice Guidance contains information regarding the development of segment architecture and is available at: www.egov.gov.

2 Segment Performance and Investment Reporting

2.1 SEGMENT REPORTING TO OMB

The EASR is integral to the OMB EA Assessment process. Agencies will submit a segment report for each of the segments registered with OMB, even if the segments are identified as “notional”. These segment reports are required to be updated on a quarterly basis, as the segment develops and matures. Completeness of the report will depend on the maturity of the segment. Completed segments will have more thoroughly populated EASR, while notional segments will only contain descriptive information.

With the implementation of OMB’s EASR v1.0 and the EA Assessment Framework (EAAF) v3.0, agencies will submit an EA segment report for all of their segments by the end of February 2009. At a minimum, each segment report must complete the *Identification and Mappings* sections. Based on the segment maturity (i.e., notional, planned, in-progress or complete), agencies should provide the appropriate level of information. Going forward, agencies will update their segment reports on a quarterly basis to ensure the most accurate information is available as the segment matures.

- **February 2009 Submission** – *For the initial February 2009 EASR submission, agencies must provide EA segment reports for all segments. These reports must include complete data for the first two sections (Identification and Mappings) of the EASR*
- **Completion Submission** – Agencies must submit EA segment reports for all segments - each segment’s state of maturity will dictate the specific sections and associated attributes to be reported.
- **Use Submission** – Agencies will provide updates to the segment reports based on Exhibit 53/300 submissions.
- **Results Submission** - Agencies will provide updates to the segment reports based on end-of-the-year performance results and updates based on the Exhibit 53/300 pass back.
- **Future Quarterly Submissions** – Agencies will provide updated segment reports on a quarterly basis to OMB. These updates will reflect the additional information available as segment maturity progresses (e.g., from Planned to In-Progress). The EASR should include any new transition milestones demonstrating progress in segment maturity along with any new information (such as performance metrics).

The EAAF v3.0 includes a new reporting timeline aligning EA reporting with Agency CPIC processes. The reporting requirements for both the EAAF v3.0 EA submissions and the EASR v1.0 are identified in Table 2, shown below.

Table 2: Consolidated EA Assessment and Segment Reporting Schedule

	Q2			Q3			Q4			Q1		
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
EA Segment Reporting		✓			✓			✓			✓	
Agency EA Self Assessment and EA Submission				Completion				Use		Results		
OMB Review and Assessment of Agency EA						✓			✓			✓
OMB Feedback to Agency on EA Assessment	✓						✓			✓		

The information contained in the segment report may be aggregated from information agencies already collect and report as part of their Capital Planning Investment Control (CPIC) processes. In particular, the Exhibit 53, Exhibit 300, and the Enterprise Transition Plans contain essential information necessary to complete the EASR. The EASR gathers this information in a single form allowing OMB to review and analyze segments across the United States Government. Where applicable, OMB will gather segment report information directly from existing reporting processes in order to reduce the errors and burden of duplicate reporting.

Agencies should align their EA information gathering efforts with their CPIC processes to streamline the EASR reporting requirements. Agencies must ensure the integrity of the data they are submitting to OMB and make certain each segment report is consistent with data reported via other forms or sources.

2.2 SEGMENT REPORTING BASED ON MATURITY

The EASR provides a template for reporting on several aspects of a segment's maturity. Agencies are required to complete only certain portions of the EASR based on a segment's maturity. OMB has defined four segment maturity levels:

- **Notional** – Notional segments are the lowest level of maturity, denoting a conceptual view and require only limited information.
- **Planned** – Planned segments have additional information on the segment mappings, but may not include extensive performance milestones, or reusable objects.
- **In-Progress** – In-Progress segments are in the process of being architected and should complete a majority of the segment report, but may not have information on Collaboration and Reuse within the segment.
- **Complete** – Completed segments are approved by the mission or business owner and agencies are required to complete all worksheets and associated attributes of the segment report, in addition to a signature page. Additionally, agencies should post their

completed segment documents on the OMB MAX site for sharing and collaboration with other agencies (<https://max.omb.gov/>) to promote transparency and reuse.

Table 3 identifies the specific reporting requirements for each of the four segment maturity levels.

Table 3: Report Requirements by Segment Maturity

Section	Segment Maturity			
	Notional	Planned	In-Progress	Complete
Identification	<ul style="list-style-type: none"> Segment Name Segment Description Agency OMB Segment Code Segment Type Segment Phase Segment Priority 	<ul style="list-style-type: none"> Segment Name Segment Description Agency OMB Segment Code Segment Type Segment Phase Segment Priority 	<ul style="list-style-type: none"> Segment Name Segment Description Agency OMB Segment Code Segment Type Segment Phase Segment Priority 	<ul style="list-style-type: none"> Segment Name Segment Description Agency OMB Segment Code Segment Type Segment Phase Segment Priority
Mappings	<ul style="list-style-type: none"> Investments (Exhibit 53/ITBRS) Programs (PART program inventory) Cross-Agency Initiatives (E-Gov/FTF) 	<ul style="list-style-type: none"> Investments (Exhibit 53/ITBRS) Programs (PART program inventory) Cross-Agency Initiatives (E-Gov/FTF) 	<ul style="list-style-type: none"> Investments (Exhibit 53/ITBRS) Programs (PART program inventory) Cross-Agency Initiatives (E-Gov/FTF) FEA <ul style="list-style-type: none"> BRM SRM TRM 	<ul style="list-style-type: none"> Investments (Exhibit 53/ITBRS) Programs (PART program inventory) Cross-Agency Initiatives (E-Gov/FTF) FEA <ul style="list-style-type: none"> BRM SRM TRM
Performance		<ul style="list-style-type: none"> Business Performance 	<ul style="list-style-type: none"> Strategic Performance (PAR) Program Performance (PART) Business Performance 	<ul style="list-style-type: none"> Strategic Performance (PAR) Segment Performance Program Performance (PART) Business Performance
Transition Planning			<ul style="list-style-type: none"> Segment Progress Milestones 	<ul style="list-style-type: none"> Segment Progress Milestones
Collaboration and Reuse				<ul style="list-style-type: none"> Collaboration / Partners Business Reuse Data Reuse Info System / Service Reuse

FSAM provides specific guidance to agencies on how to develop segment architectures. This guidance was created through the joint effort of many agencies and provides a step-by-step process for developing a segment architecture. OMB is not requiring agencies to specifically follow this methodology, nor do previously completed segments have to be revised to adhere to

the FSAM. However, agencies should leverage the FSAM when developing new segments as it will assist them in providing consistent information for both reporting to OMB (via the EASR) as well as sharing information across agencies for reuse. The FSAM provides a crosswalk between the elements in the EASR and FSAM artifacts in Appendix I: FSAM Logical Data Model Supporting EA Reporting Requirements available via the CIO Council website (www.cio.gov).

2.3 SEGMENT REPORTING BASED ON SEGMENT TYPE

The OMB FEA Practice Guidance classifies segments into three types: Core Mission Area, Business Services, and Enterprise Service segments. Each of these segment types will have a fundamentally different view of the agency's EA and will focus on different aspects. Agencies should complete the segment report to reflect the focus of each type of segment.

A **Core Mission Area** segment represents a unique service area defining the mission or purpose of the agency. Core mission areas are defined by the agency business model (e.g., tactical defense, air transportation, energy supply, pollution prevention and control, and emergency response).

- ***These segments should have sufficient information available to complete all areas of the EA Segment Report.***

A **Business Service** segment includes common or shared business services supporting the core mission areas. Business services are defined by the agency business model and include the foundational mechanisms and back office services used to achieve the purpose of the agency (e.g., inspections and auditing, program monitoring, human resource management, and financial management).

- ***These segments may focus more heavily on Collaboration and Reuse within the EA Segment Report as they provide support to multiple core mission areas.***

An **Enterprise Service** segment includes common or shared IT services supporting core mission areas and business services. Enterprise services are defined by the agency service model and include the applications and service components used to achieve the purpose of the agency (e.g., knowledge management, records management, mapping/GIS, business intelligence, and reporting).

- ***These segments may only have a few enterprise-wide investments mapped to them since they focus mainly on providing collaboration and reuse throughout an agency. Enterprise Service segments may have limited information in the Performance and Transition Planning section, as their focus will be on reusing investments primarily mapped to another segment and provide services used by multiple segments.***

2.3.1 Primary and Secondary IT Investment Mapping

While IT Investments may support more than one segment, agencies are required to align their IT Investments in the Exhibit 53 to one, and only one, segment. Alignment within the Exhibit 53 is considered the primary alignment for an IT Investment and should be recorded in the Mappings section of the segment report. Agencies may provide secondary alignment for their IT

investments by listing the IT investment within the EASR *Collaboration and Reuse* section of the additional segments. This allows an agency to show where an IT Investment primarily supports a Core Mission Area segment, but may be an integral part of an Enterprise Service segment (such as Information Sharing).

2.3.2 Non-Applicable Fields

Agencies may not be able to populate every field of the EASR because the field is not relevant or applicable for the segment being reported. Two examples of this are (1) if the agency is unable to provide a mapping to a program with a Program Assessment Rating Tool (PART) evaluation or (2) if there are no primary IT Investments mapped to the segment (such as an Enterprise Service segment). In both of these cases, it is acceptable for the agency to enter “not applicable” into the specific field; however, agencies should only use this designator if all alternatives and options have been researched.

3 Segment Identification

The first section in the EASR Submission Template identifies and describes the segment, including its maturity, type and priority. The *Identification* section is based on the template agencies used to initially define and register their segments to OMB.

Note: There are many factors agencies must consider when determining if a specific segment architecture is identified as a priority. Some of the criteria to consider may include; statutory requirements, agency strategic planning, future investments, major investments within the planning stage, performance gaps, and resources available to actually develop the priority Segment Architecture. The priority segments must be consistent with the agency's Segment Prioritization Document and/or EA Segment Portfolio (Segment Metamodel) approved by the Chief Information Officer.

In general, this section will focus on the following data objects:

Table 4: Object Definitions for Segment Identification

	<u>Object</u>	<u>Description</u>
Identification	Segment Code	Segment architecture code as submitted to OMB
	Name	Name of the segment
	Description	Brief description of the segment
	Organizational Owner	Agency name
	Agency Code	Agency code as defined in the OMB A-11 Appendix C
	Segment Type	Core Mission, Business Services, or Enterprise Service segment
	Segment Maturity	Completed, In-Progress, Planned, Notional
	Priority Segment	Has this segment been identified as a priority within the Agency Segment Prioritization Process? Yes/No

4 Segment Mappings

The *Mappings* section is designed to show the relationship between the segment and the investments, programs, and initiatives it contains. This section also includes FEA Reference Model mappings, usage of FTF initiatives, and alignment between investments and PARTed programs within the segment. It is intended to provide a general overview of the business processes, IT initiatives, and mappings defining the segment. Agencies are required to report mapping information in other reports to OMB, such as the Exhibit 53, and should ensure all information is consistent. The following objects comprise this section:

Table 5: Object Definitions for Segment Mappings

	Object	Description
Mappings	IT Investment Name	Investment Name
	IT Investment UPI	Related IT Investment UPI from the Exhibit 53 if applicable
	IT Investment Description	Investment Description
	Program	PARTed Program Name
	FTF Initiative	FTF Initiative supported or used by this segment
	E-Gov	E-Gov Initiative supported or used by this segment
	BRM Business Area	FEA BRM Business Area
	BRM Line of Business	FEA BRM Line of Business
	BRM Sub-Function	FEA BRM Sub-Function
	SRM Service Domain	FEA SRM Service Domain
	SRM Service Type	FEA SRM Service Type
	SRM Component	FEA SRM Component
	TRM Service Area	FEA TRM Service Area
	TRM Service Category	FEA TRM Service Category
	TRM Service Standard	FEA TRM Service Standard
	Current/ Target	Is the FEA Mapping part of the Current State, Target State, or both States for the Segment Architecture?

4.1 FTF AND E-GOV ALIGNMENT

Agencies are required to demonstrate comprehensive use of the full set of FTF and E-Gov initiatives to increase their scope of completion. Specifically, agencies should indicate all instances an initiative supports or is used within the segment. For initiatives not used within the segment, agencies should provide actionable feedback on why the initiative was not implemented. Agencies should specify the usage status for all FTF and E-Gov initiatives in this section.

4.2 MAJOR IT INVESTMENT ALIGNMENT

A major IT investment is a system or acquisition requiring special management attention as a result of its importance to the mission or function of the agency, a component of the agency or another organization. In addition, IT investment is for financial management and obligates more than \$500,000 annually, has significant program or policy implications, has high executive visibility, has high development, operating, or maintenance costs, is funded through other than

direct appropriations, or is defined as major by the agency's capital planning and investment control process. Since OMB will work with the agency to declare other investments as major investments, agencies should consult with their OMB representative or agency budget officers about what investments to consider as "major." Note: Systems not considered "major" are "non-major."

Table 6: Segment Mapping Section

SEGMENT MAPPINGS SECTION			
Identification	Segment Code		
	Name		
	Description		
	Organizational Owner		
	Agency Code		
	Segment Type		
	Segment Maturity		
	Priority Segment		
IT Investment Mapping			
IT Investment Name	IT Investment UPI		Description
PARTed Program Mapping			
PARTed Program Name	PARTed Program ID	Associated IT Investment	IT Investment UPI
FTF Initiative Use			
FTF Initiative Name	FTF supported or used by segment? (Y/N)		Explanation for NOT using the FTF initiative (if applicable)
Recreation One-Stop	Yes		-----
GovBenefits.gov	No		<i>Not Applicable</i>
E-Loans	No		<i>Applicable, but it is not being used because.....</i>
USA Services			
IRS Free File			
Disaster Assistance Improvement Plan			
E-Rulemaking			
Expanding Electronic Tax Products for Businesses			
Federal Asset Sales			
International Trade Process Streamlining			
Business Gateway			
Case Management LoB			
Consolidated Health Informatics/ Federal Health Architecture			
Geospatial One-Stop			
Disaster Management			
SAFECOM			
E-Vital			
Grants.Gov			
Grants Management LoB			
Geospatial LoB			
E-Training			
Recruitment One-Stop			
Enterprise HR Integration			

FTF Initiative Use			
FTF Initiative Name	FTF supported or used by segment? (Y/N)	Explanation for NOT using the FTF initiative (if applicable)	
E-Clearance			
E-Payroll			
E-Travel			
Integrated Acquisition Environment			
E-Records Management			
Financial Management LoB			
Human Resources LoB			
Budget Formulation/Execution LoB			
IT Infrastructure LoB			
Information Systems Security LoB			
E-Authentication			
SmartBUY			
ITDS			
IPv6			
HSPD-12			
Information Sharing Environment			
National Information Exchange Model (NIEM)			
Next Generation Air Transportation System (NGATS)			
Federal Funding Accountability and Transparency Act (FFATA)			
FEA BRM Mapping			
BRM Business Area	BRM Line of Business	BRM Sub-Function	Current/Target
			<i>Current, Target or Both</i>
FEA SRM Mapping			
SRM Service Domain	SRM Service Type	SRM Component	Current/Target
			<i>Current, Target or Both</i>
FEA TRM Mapping			
TRM Service Area	TRM Service Category	TRM Service Standard	Current/Target
			<i>Current, Target or Both</i>

5 Segment Performance

Agencies and OMB will measure how well the activities and investments within a segment are performing according to the reported performance metrics. Performance metrics may cover a wide range of systems, technologies, processes, activities and outcomes within a segment. A successful segment should be able to demonstrate a line of sight from IT investment performance up to strategic success. A line of sight for the segment is developed by gathering metrics from many layers that are aligned to a common purpose.

In order to compare performance metrics across the government it is important to leverage common and accepted processes for collecting performance metrics. There are many ways to measure performance for investments, systems, and segments across the government. The results of these performance metrics vary depending on the focus of the agency. The *Performance* section focuses on providing a complete picture of segment performance from the highest level of Strategic Performance down to Business and Investment Performance.

5.1 REPORTING PERFORMANCE

There are four main layers in this section including; Strategic Performance, Segment Performance, Program Performance, and Business Performance. It is suggested agencies leverage current ongoing performance gathering activities to complete these layers, such as the Performance Accountability Report (PAR), IT Infrastructure Line of Business (ITI LOB) performance metrics, the Performance Section of the OMB Exhibit 300, and the Program Assessment Rating Tool (PART). The relationship between the performance layers and the metrics feeding them are shown in Figure 1 below.

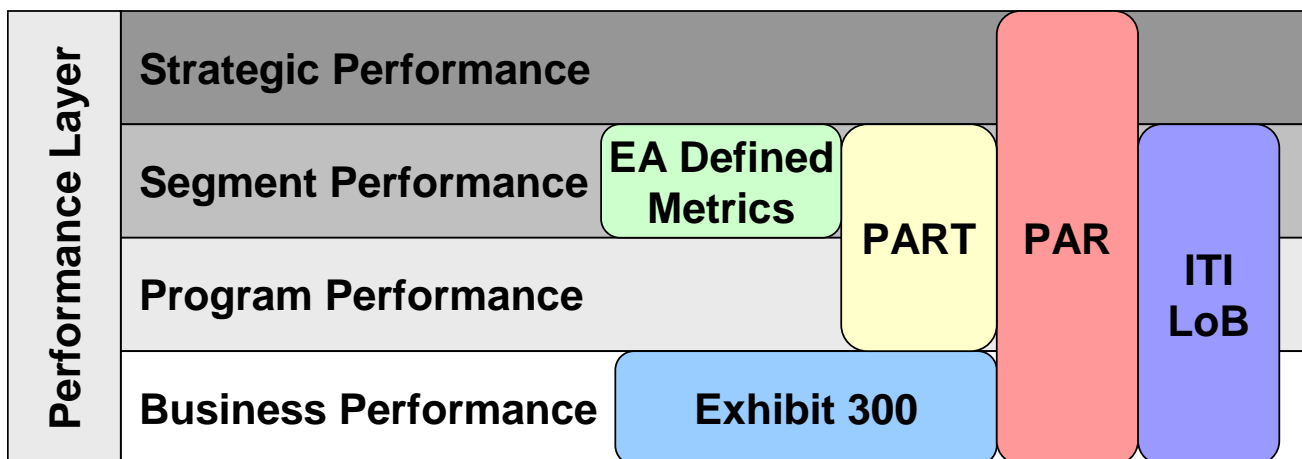


Figure 1: Performance Gathering Activities to Layer

Strategic Performance Layer

- Strategic Performance section measures how a segment supports the strategic goals of the agency. The primary metrics for this layer are taken from the PAR.
- The PAR provides financial and performance information, enabling the President, Congress, and the American public to assess the annual performance of the Federal agencies. As part of this process multiple performance metrics are gathered and tracked on an annual basis. These metrics are tied directly to the strategic goals of each agency.

Based on these metrics, key indicators are reported in the annual PAR document to track the performance of long-term goals.

Segment Performance Layer

- Segment Performance layer measures the success the implementation of EA and the segment has had on the enterprise. These metrics need to be developed for each individual segment and may be taken in part from the PART and PAR. One example of segment performance metrics are the consolidation, standardization and optimization metrics that are derived from the IT Infrastructure Line of Business.
- The Performance layer includes an area for agencies to report cost savings/avoidance and mission performance associated with a segment. This layer will allow agencies to show how the development, implementation, and/or use of its enterprise architecture within a segment led to financial or non-financial savings or strategic successes. The section allows agencies to show at a high level any cost savings or avoidance. Detailed cost savings information should be reported in accordance with OMB memorandum M-06-22. While agencies should strive to develop cost savings/avoidance for each segment, not all segments may be able to report this.

Program Performance Layer

- Program Performance layer focuses on the success of the investments aligned to the segment as based on their PART score. Agencies may report on program performance outside of the PART scores under the Investment Performance area.
- A program is an activity or set of activities intended to help achieve a particular outcome for the public. A program may be recognized by the executive branch and the Congress when making budget or other decisions. The nature of programs varies dramatically, therefore OMB and federal agencies have a great deal of flexibility in defining a program.
- The PART was developed to assess and improve program performance so the Federal government can achieve better results. A PART review helps identify a program's strengths and weaknesses to inform funding and management decisions aimed at making the program more effective. The latest results from PARTed programs aligned to the segment will be captured in this layer.

Business Performance Layer

- Business Performance layer exhibits how the performance of technology and processes affect the business outcomes of the segment. This section is intended to show the relationship between the performance of individual investments to processes, programs, activities, ultimately leading to outcome metrics. As such, the business and customer results are dependent on the processes and technologies which support them.
- Performance measured at this layer should focus on investments, systems, projects, process/activities, initiatives and programs. Agencies are NOT required to address each of these areas; instead this is intended to provide a space for reporting metrics from a number of different sources.
 - **Investments** are considered line items within an Agency's Exhibit 53

- A **System** is a discrete set of information resources organized for the collection, processing, maintenance, transmission, and dissemination of information. An interconnected set of information resources under the same direct management control, which shares common functionality. A system normally includes hardware, software, information, data, applications, communications, and people. A system refers to a set of information resources under the same management control, sharing common functionality, and requiring the same level of security controls. There is no clear and accepted definition of a system across the government. Accordingly, agencies are free to decide on what constitutes a system versus an application.
 - **Projects** are discrete, planned efforts to achieve a specific goal or result within a specific timeframe.
 - **Processes and Activities** reference the agency's business operations/ architecture and allow agencies to report on the performance of their activities.
 - **Initiatives and Programs** may be more activity based than IT based and allow agencies to report on the successful actions of their divisions, components, departments, etc.
- The business performance layer leverages both the FEA Performance Reference Model (PRM) and the FEA BRM. The PRM defines a Line of Sight (LoS) to show how input metrics (such as Technology) support output metrics (through Processes and Activities), which in turn, impact outcomes (such as, Mission, Business and Customer Results).
 - This layer relates performance to business by allowing agencies to include BRM mappings for each metric. Agencies should provide performance metrics for each of the BRM mappings they listed in the *Mappings* section of the report. The BRM mappings help to group IT investment and process/activity performance metrics in a business context. This will help in showing how the success and performance of individual IT Investment/System may support the business performance and outcomes of the segment.

Agencies should leverage the performance metrics they collect as part of the OMB Exhibit 300s and PAR process when completing the Business Performance layer. Exhibit 300s provides input metrics on specific IT investments. While the PAR mainly focuses on higher level Strategic Metrics, some process and outcome oriented metrics may be also be collected that would be applicable to the Business Performance Section.

FEA BRM Sub-functions are used to report multiple lines of sight within the segment. If applicable, agencies may group/report performance metrics by SRM mappings as to be consistent with the Exhibit 53 requirements. The following diagram illustrates the connection between the metric types in the LoS and the recommended sources for these metrics.

- **Input Metrics (Technology)** – Key input sources measured against the value they provide to end users through process
- **Output Metrics (Process and Activities)**– Process is measured against efficiency and effectiveness aligned to deliver desired outcomes
- **Outcome Metrics (Business and Customer Results)**– These metrics show how the agency is able to achieve mission and business results

As mentioned above, there are three types of metrics that compose the LoS. The importance of each of these types of metrics in representing segment performance depends upon the segment type. Some segments do not rely heavily on technology and are more focused on processes and activities, while other segments are solely focused on technology performance. Viewing the LoS as a whole provides a sense of the segment's overall performance. The Business Performance framework has been built to provide flexibility in the types of metrics captured in a segment. Figure 2 below illustrates the LoS, the types of metrics being measured within it and a suggested source for these metrics.

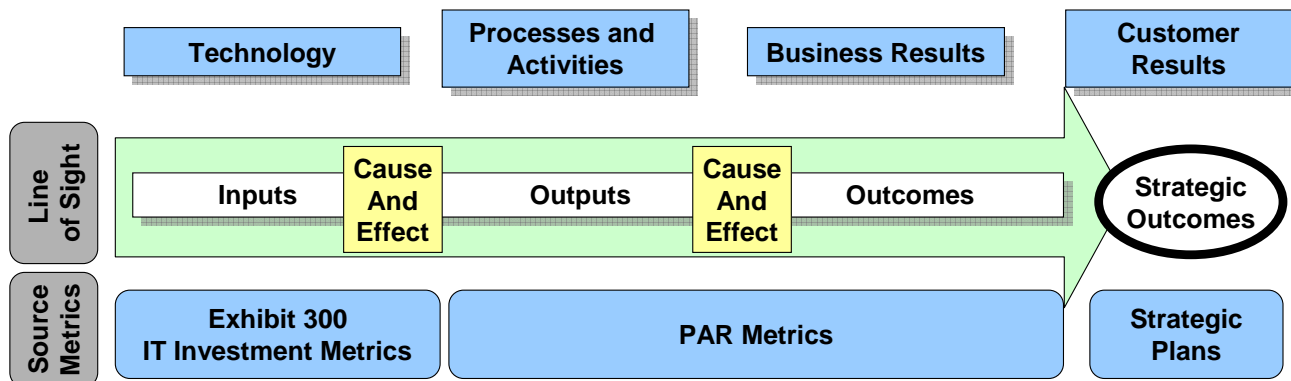


Figure 2: Performance Line of Sight

Once all metrics have been captured, careful analysis may illustrate the effectiveness of the segment and help to identify gaps and areas of improvement. It may be difficult to directly relate technology performance to processes and outcomes within a segment. Analysis may focus on individual portions of the LoS to show cause and effect between the metrics.

5.2 PERFORMANCE OBJECTS

The following objects from the segment meta-model will be used within the report to measure segment performance. Agencies are required to collect and report strategic metrics in their annual Performance Accountability Report (PAR). The highest level of the performance architecture will reflect these performance metrics and tie them to the strategic goals that they support. Agencies are required to provide actual for performance metrics in the previous year (PY) and target metrics for the current year (CY) as well as upcoming BY, upcoming BY+1, and upcoming BY+2 (only applies to multi-year investments).

Table 7: Object Definitions for Strategic Performance

	<u>Object</u>	<u>Description</u>
Strategic Performance	Fiscal Year	Fiscal Year of the Performance Metric
	PAR Metric	PAR Performance Measurement
	Agency, Component, Bureau, Operating Division, etc	Owning Organization
	Agency Code	Agency and Bureau Code as defined in the OMB A-11 Appendix C. If this is a department only reporting or an agency-wide activity, use 00 as your bureau code.
	Strategic Goal	Agency Strategic Goal supported by the performance metric
	Target	Target Metric
	Actual	Actual Metric
	Achieved?	Was the Target Metric Achieved?

Table 8: Object Definitions for Segment Performance

	<u>Object</u>	<u>Description</u>
Segment Performance	Fiscal Year	Fiscal Year that the metric is captured
	Metric	Performance Metric Description
	Target	Target Metric
	Actual	Actual Metric
	Comments	Comments on the Performance Metric, such as referencing the M-06-22 completed if this metric describes Cost Savings/Avoidance

Table 9: Object Definitions for Program Performance

	<u>Object</u>	<u>Description</u>
Program Performance	Program	PARTed Program Name
	Agency, Component, Bureau, Operating Division, etc	Owning Organization
	Agency Code	Agency and Bureau Code as defined in the OMB A-11 Appendix C. If this is a department only reporting or an agency-wide activity, use 00 as your bureau code.
	Year Assessed	The last year the program was assessed
	Final Rating	Final PART rating

Table 10: Object Definitions for Business Performance

	<u>Object</u>	<u>Description</u>
Business Performance	Metric ID	Agency defined ID for the performance metric
	Fiscal Year	Fiscal Year that the metric is captured
	Metric Type	Type of Metric (Input, Output, Outcome)
	Measurement Indicator	Performance Metric Description
	IT Investment Name	Investment Name
	System/ App/ Program	Applicable System, Application, or Program name related to this performance metric
	Strategic Goal	Agency Strategic Goal supported by this metric
	Line of Business or Service Type	FEA BRM Line of Business or SRM Service Type
	Sub-Function or Service Component	FEA BRM Sub-Function or SRM Service Component
	Agency Business Process	Agency Defined Business Process
	Target	Target Metric
	Actual	Actual Metric

5.3 PERFORMANCE SECTIONS

The *Performance* section measures performance in several areas of the segment in order to gain a comprehensive view of segment outputs and outcomes. The following reporting sub-sections have been developed to capture the layers previously mentioned.

- Strategic Performance reports on the PAR Key Indicators aligned to the segment. These high-level strategic metrics are reported on an annual basis and are reflected in the following table.
- Segment Performance allows agencies to report unique segment metrics demonstrating how the implementation of the segment is creating a positive outcome. These metrics may be as simple as cost savings/avoidance or they may be unique metrics developed by the agency EA office.
- Program Performance reports on the PART assessments for the programs aligned to the segment.
- Business Performance creates multiple lines of sight based on the BRM sub-functions and SRM mappings. Agencies may also use their own EA defined Business Architecture to group metrics in this section. These sub-functions may be replaced with higher level business activities based on the Segment Business Architecture.
- Systems listed in this table may be taken from those listed in the Exhibit 300 Security Table (Part I, Section E Security and Privacy). Systems in the Business Performance Section must be included on your agency FISMA system inventory and should be easily referenced in the inventory.
- Agencies should try to report at least one of each type of metric (Input, Output, and Outcome) for each BRM/SRM mapping listed in the *Mappings* section. This is not a requirement, but it will allow for a more complete picture of business performance within the segment.
- Agencies are required to provide actual results for performance metrics in the PY and target metrics for the CY as well as BY, BY+1, and BY+2 (only applies to multi-year investments).

Table 11: Segment Performance Section

SEGMENT PERFORMANCE SECTION											
Identification	Segment Code										
	Name										
	Description										
	Organizational Owner										
	Agency Code										
	Segment Type										
	Segment Maturity										
	Priority Segment										
Strategic Performance											
Fiscal Year	PAR Metric	Component, Bureau, Operating Division, etc	Agency Code	Strategic Goal	Target	Actual	Achieved?				
Segment Performance											
Fiscal Year	Metric	Target	Actual	Comments							
Program Performance											
Program	Component, Bureau, Operating Division, etc	Agency Code	Year Assessed	Final Rating							
Business Performance											
Fiscal Year	Metric ID	Metric Type	Measurement Indicator	IT Investment Name	System/App/Program	Strategic Goal	Line of Business or Service Type	Sub-Function or Service Component	Agency Business Process	Target	Actual
		<i>Input Metric</i>									
		<i>Output Metric</i>									
		<i>Outcome Metric</i>									

6 Segment Transition Planning

Segment Transition Planning is intended to capture the development milestones occurring as a segment matures. This is a critical component of an effective EA practice as it shows agencies have a plan and a set of milestones to move a segment from Notional through to Completion. It should describe the overall plan for an organization to achieve its target EA within a specified timeframe. The segment transition plan provides an agency-wide view of all modernization activities maturing the segment towards Completion.

The Transition Plan is not intended to repeat the investment milestones as identified within the Exhibit 300s, and should instead focus on the development activities occurring within a segment. Agencies may include some major investment milestones, such as the retirement of a legacy system or the implementation of a new investment as they mark the transition towards the Target Architecture. Agencies should focus on reporting actions to mature the segment, such as BPR project, completion of the Segment Architecture Documentation (including the Target Architecture), sign-off by business owners on the segment, etc...

There is an important relationship between performance and the successful implementation of the transition plan for a segment. For example, if a timetable for transition is intended to provide a certain benefit to an organization or a business process and the transition is delayed, then the value proposition for the effort, as well as the ROI and cost/benefit calculations will be affected. Thus, the temporal aspect of implementation has a real effect on the achievement of performance outcomes at all levels of the performance hierarchy or architecture.

Table 12: Object Definitions for Segment Transition Planning

	<u>Object</u>	<u>Description</u>
Transition Planning	Milestone ID	Agency defined ID for the milestone
	IT Investment/ System/ Program/ Activity/ etc...	IT Investment, Program, or Activity related to the milestone
	Transition/Performance Milestone	Milestone
	Target Completion Date	Target Completion Date
	Actual Completion Date	Actual Completion Date
	Dependant on Milestone X	Milestone ID that this milestone's completion is dependant upon
	Dependencies/ Constraints	Dependencies or constraints related to this milestone

The following section has been designed to capture the transition information as required by the Enterprise Transition Plan. Each milestone in the Transition Plan should be numbered by the agency to assist in relating dependencies between milestones. There is no set guidance on milestone ID numbering, so agencies may develop their own numbering convention.

Table 13: Segment Transition Planning Section

SEGMENT TRANSITION PLANNING SECTION						
Identification	Segment Code					
	Name					
	Description					
	Organizational Owner					
	Agency Code					
	Segment Type					
	Segment Maturity					
	Priority Segment					
Segment Transition Planning						
Milestone ID	IT Investment/ System/ Program/ etc...	Transition/ Performance Milestone	Target Completion Date	Actual Completion Date	Dependant on Milestone X	Dependencies/ Constraints

7 Segment Collaboration and Reuse

Segment Collaboration and Reuse focuses on the business, data, and information systems/services able to be leveraged and reused from a segment. This section focuses on three types of reuse within a segment: Business, Data, and Information System/Service Reuse.

Business Collaboration and Reuse

- **Segment Collaboration and Reuse** –OMB classifies segments as Core Mission, Business Service, or Enterprise Service as mentioned in Section 2.3. Segment reuse could occur by segments in any of these classifications. Typically, a Mission Segment would reuse the capabilities provided by an Enterprise Segment (e.g. Information Sharing).
- **Stakeholders** – While a segment may belong to a single owner within an agency, it may have multiple stakeholders that benefit from it. These stakeholders may be internal groups or external agencies, state, or local organizations. It is important to show the breadth of use that a segment may have across the government.
- **Business Capabilities** – Successful business capabilities may be replicated to other organizations – at the Federal level, this is likely represented by a BRM sub-function, at the agency level this may be seen at a business process level.

Data Collaboration and Reuse

- **Data Exchange Packages** – Data exchange packages represent information sharing among segments (sharing does not require an information system intermediary)
- **Data Entities** – In the meta-model (as based on the FEA DRM), a data exchange package is composed of one or more data entities. Examples of entities include: Person, Facility, Claim, etc. The entity may be common across many agencies whether it is ever exchanged or not. If data exchange packages are reused, then the constituent data entities should be listed.
- **Data Assets** – A data asset is a managed repository for data (i.e. a relational database; Web site, a document repository, directory or data service, etc.)

Information System/Service Collaboration and Reuse

- **Information System** – An information system may be reused by another segment. The most common occurrences are where a Mission Segment uses the information systems services of an Enterprise Service
- **System Services** - System services reuse occurs when a segment creates a service usable by a wide variety of outside segments. Analogous terms that may be used in other agency architectures include Information System Modules, Application Capabilities, Service Components, etc.

The definition of segment reuse can be difficult to understand. The traditional definition of segment reuse is:

Segment Reuse Business Rule – When any object, used by a segment, is owned by a different organization, segment reuse has occurred.

At some level, this may be an acceptable definition, and is indeed supported by the current meta-model. However, when segments are large grained objects, this definition may prove to be inadequate.

For the Enterprise or Solution Architect, the previous rule is “interesting” but not particularly useful. The most critical aspect in identifying reuse is the individual objects being shared across segments. These objects must be managed carefully due to their interaction within multiple segments. In this context, the reuse instance is more relevant. This does not change the above rule, but requires a different level of evidence to support the reuse.

Additional complications arise when we realize segment reuse can occur in many contexts. Reuse can occur within a single agency operational unit, at an agency level, or across agencies.

7.1 REUSE AND REPORTING

Currently each agency maintains Enterprise Architecture models. Identifying and reporting reuse at the operational unit or agency level is not without challenges. Many agencies do not have rigorous controls over the granularity of segments, the naming of information systems, data exchange objects, entities, data exchange objects, entities, business processes, etc. Collisions may occur and have to be managed.

Moving to the Federal level amplifies things even more. To be able to report meaningfully to the OMB, each unique object (Segment, DRM Exchange Package, Organization, Business Process, DRM Entity or System Service) will require a unique ID (UID). In general, the UID is not an intelligent key with semantic significance. Agencies should develop a numbering convention to create each UID and include the unique identifier for the agency within this convention.

Typically, agencies do not share EA repositories. Therefore, sharing segment objects will require some form of cooperation/collaboration between agencies. Agencies that provide reusable objects to other agencies will need to provide information on these objects to the agencies using these resources. This allows the agency consumers of these objects to report reuse within their segment report.

7.2 COLLABORATION AND REUSE OBJECTS

For purposes of this report, only the attributes necessary to detect and report reuse are considered. There may be additional attributes required to provide sufficient context for reporting reuse.

To avoid confusion about reusable objects; it is likely in the future some form of unique identifier (UID) for each object will be assigned or required. However, for simplification purposes the UID's have been factored out of the following models. From the class diagram, we find the following reusable objects (also contained in the submission template):

Table 14: Object Definitions for Segment Collaboration and Reuse

	<u>Object</u>	<u>Description</u>
Segment Collaboration and Reuse	Segment Name	Name of the segment being reused
	Segment Code	This is the segment architecture code as submitted to OMB
	Segment Reuse Explanation	Explanation of how the segment is being reused

Table 15: Object Definitions for Segment Stakeholders

	<u>Object</u>	<u>Description</u>
Stakeholders	Stakeholder	Name of the stakeholder group affected by this segment
	Agency Code	Agency code of the stakeholder if applicable.

Table 16: Object Definitions for Information System Reuse

	<u>Object</u>	<u>Description</u>
Information System	System Name	Name of the system being reused in this segment. This represents secondary mappings for IT Investments.
	System Description	System Description
	System Owner	System Owner Name
	Agency Code	Agency Code of the system

Table 17: Object Definitions for Data Exchange Package

	<u>Object</u>	<u>Description</u>
Data Exchange Packages	Data Exchange Package Name	Name of the Data Exchange Package
	Data Exchange Description	Description of the information being exchanged in the package and the systems which are exchanging the data
	Organizational Owner	Organizational Owner
	Data Steward	Person/ Group/ Division/ Etc responsible for maintaining the data standard for the information contained within the Data Exchange listed
	Agency Code	Agency Code of the owner of the data exchange
	Owning Information System	Name of the system which owns the information being used in the data exchange
	Using Information System	Name of the system which receives the information being used in the data exchange

Table 18: Object Definitions for Data Entity

	<u>Object</u>	<u>Description</u>
Data Entity	Data Package Name	Name of the data package which the Data Entity is found
	Data Entity Name	Name of the Data Entity that is part of the Data Exchange Package being reused
	Description	Description of the Data Entity
	Data Steward (Organization)	Organization/ Person/ Group/ Division/ Etc responsible for maintaining the data standard for the information contained within the Data Exchange listed
	Agency Code	Agency Code for the Data Steward

Table 19: Object Definitions for Business Collaboration and Reuse

	<u>Object</u>	<u>Description</u>
Business	BRM Business Area	BRM Business Area

Collaboration and Reuse	BRM Line of Business	BRM Line of Business
	BRM Sub function	BRM Sub function
	Providing Organization	Name of the Organization that may provide the reusable business activity
	Agency Code	Agency Code of the providing Organization

Table 20: Object Definitions for System Service Reuse

	Object	Description
System Service	System Service Name	Name of the Service being reused
	System Service Description	Description of the Service being reused
	System Name	Name of the System providing the service
	System Owner	System Owner Name
	Agency Code	Agency code of the System Owner

7.3 POTENTIAL REUSE REPORTING SECTIONS

As noted above, collaboration and reuse can be detected and reported at several levels. Note: Reuse does not necessarily require an information systems context, data exchange packages may, for example, represent standard sections; business processes may indeed be manual processes, etc. The following section has been created to capture the potential reuse within a segment.

Table 21: Segment Collaboration and Reuse Section

SEGMENT COLLABORATION AND REUSE SECTION						
Identification	Segment Code					
	Name					
	Description					
	Organizational Owner					
	Agency Code					
	Segment Type					
	Segment Maturity					
	Priority Segment					
Segment Collaboration and Reuse						
Segment Name	Segment Code	Segment Reuse Explanation				
Stakeholders						
Stakeholder	Agency Code					
Information System						
System Name	System Description	System Owner	Agency Code			
Data Exchange Package						
Data Exchange Package Name	Data Exchange Description	Organizational Owner	Data Steward	Agency Code	Owning Information System	Using Information System
Data Entity						
Data Package Name	Data Entity Name	Description	Data Steward (Org)	Agency Code		
Business Collaboration and Reuse						
BRM Business Area	BRM Line of Business	BRM Sub-function	Providing Organization	Agency Code		
System Service						
System Service Name	System Service Description	System Name	Provider Organization	Agency Code		