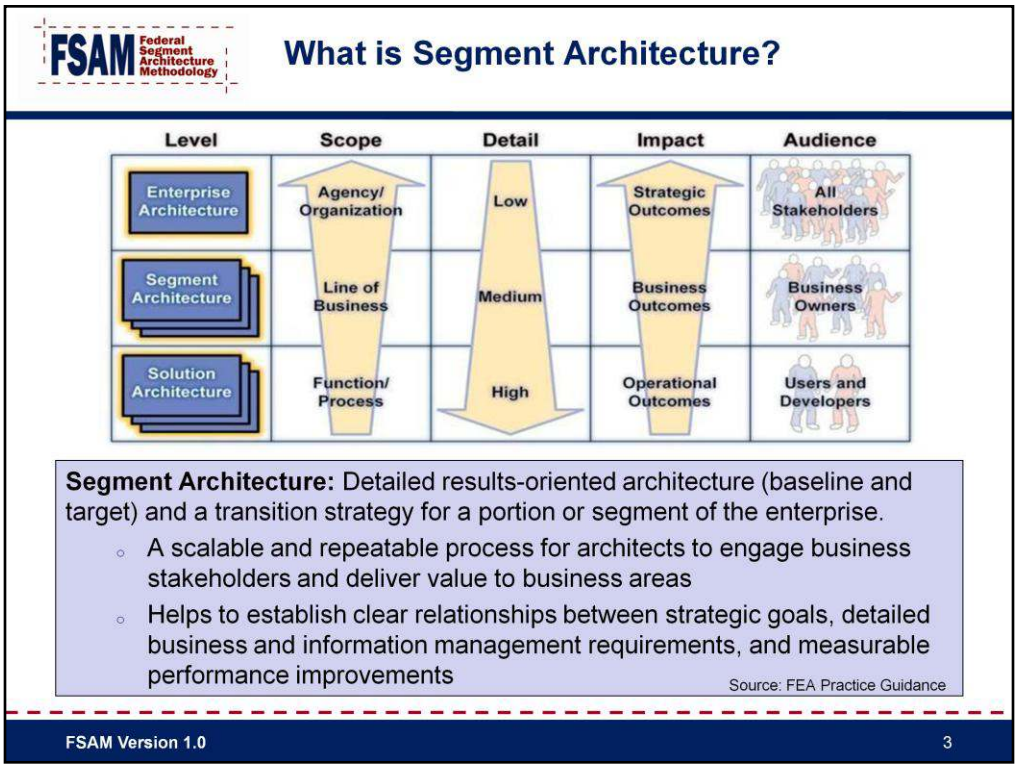
Welcome to the Federal Segment Architecture Methodology (FSAM) Practitioner's Training session!

In this session, you will learn about the FSAM, what it is and who created it, and then you'll walk through each step of the process. The training will also provide an overview of each of the FSAM outputs and associated suggested analytical techniques that can be used collectively to describe a segment architecture.

This section of the training will introduce the FSAM and how it came to be. At the end of this section, you should be able to:

- Describe the definition of a segment architecture
- Understand that FSAM is a repeatable step by step process for developing segment architectures
- Identify what best practices were considered in developing FSAM
- Identify the 5 top level steps of FSAM
- Describe how FSAM fits into the overall structure of the performance improvement lifecycle (Architect – Invest – Implement) defined in the Federal Enterprise Architecture (FEA) Practice Guidance
- Understand how FSAM supports other management processes (e.g., strategic planning, CPIC)



Enterprise, segment, and solution architectures provide different business perspectives by varying the level of detail and addressing related but distinct concerns. Just as enterprises are themselves hierarchically organized, so are the different views provided by each type of architecture.

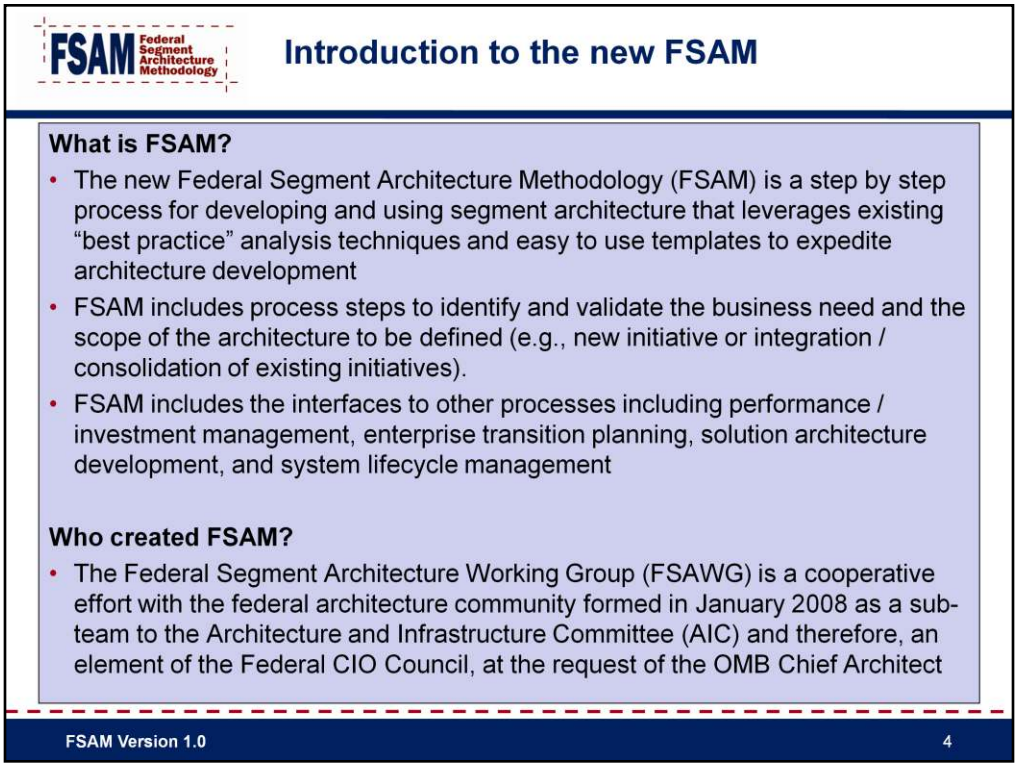
Segment architecture defines a simple roadmap for a core mission area, business service, or enterprise service. Segment architecture is driven by business management and delivers products that improve the delivery of services to citizens and agency staff. From an investment perspective, segment architecture drives decisions for a business case or group of business cases supporting a core mission area or common or shared service. The primary stakeholders for segment architecture are business owners and managers.

Segment architecture is related to enterprise architecture (EA) through three principles: structure, reuse, and alignment. Because it is related to EA, segment architecture:

•Inherits the framework used by the EA, although that framework may be extended and specialized to meet the specific needs of a core mission area or common or shared service;

•Reuses important assets defined at the enterprise level, including data, common business processes and investments, and applications and technologies; and

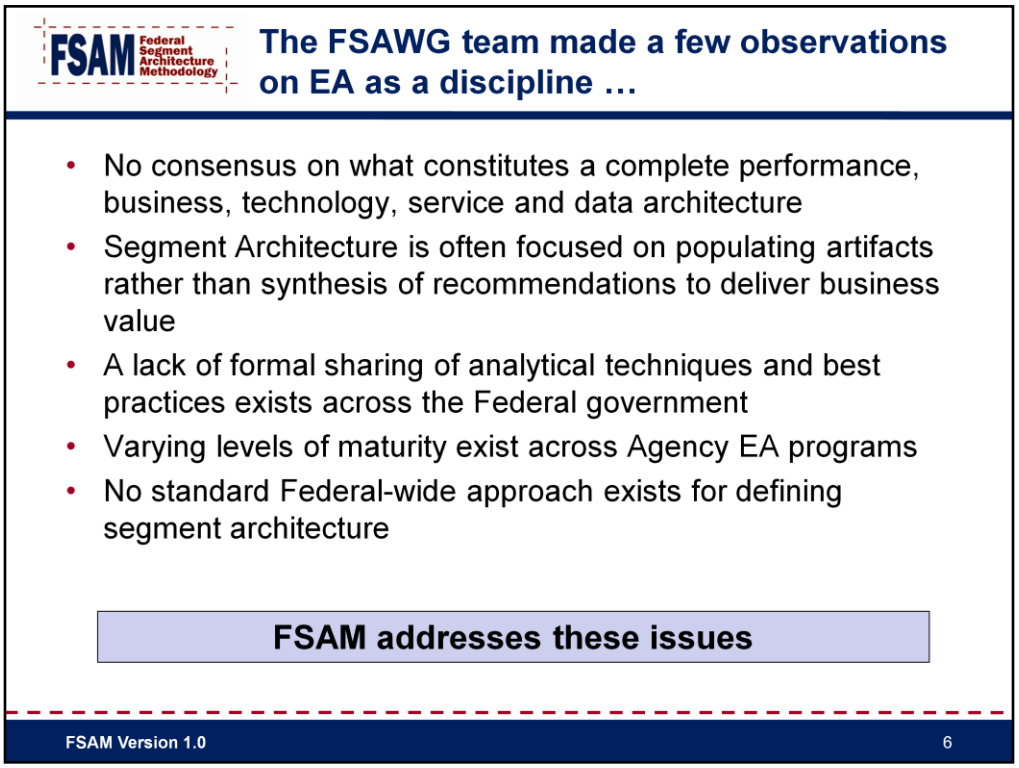
•Aligns with elements defined at the enterprise level, such as business strategies, mandates, standards, and performance measures.



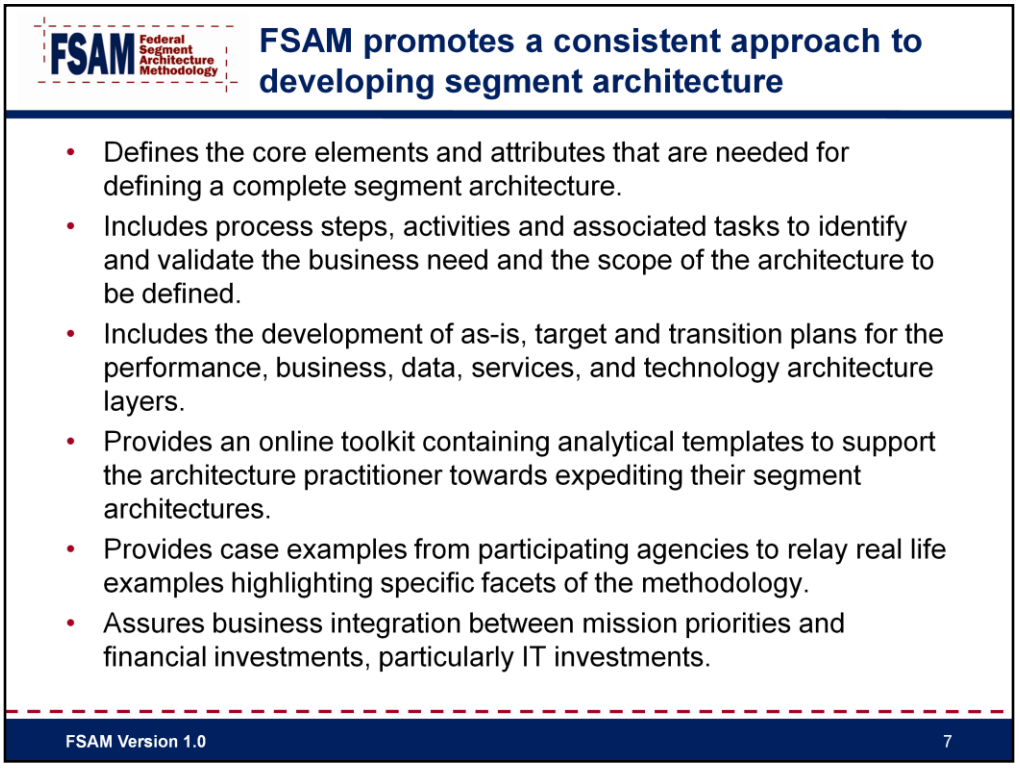
In January 2008, the Federal Segment Architecture Working Group (FSAWG) was formed as a sub-team of the Architecture and Infrastructure Committee (AIC) of the Federal CIO Council. The FSAWG consisted of federal agency chief architects tasked to leverage enterprise architecture (EA) best practices in order to publish a standard methodology for creating and using segment architectures.

The FSAWG developed the Federal Segment Architecture Methodology (FSAM), a step-by-step process for developing and using segment architecture that leverages existing "best practice" analysis techniques and easy-to-use templates to expedite architecture development. The FSAM includes guidance for development of segment architecture in the form of a repeatable "how-to" process for business-driven, results-oriented modernization planning.

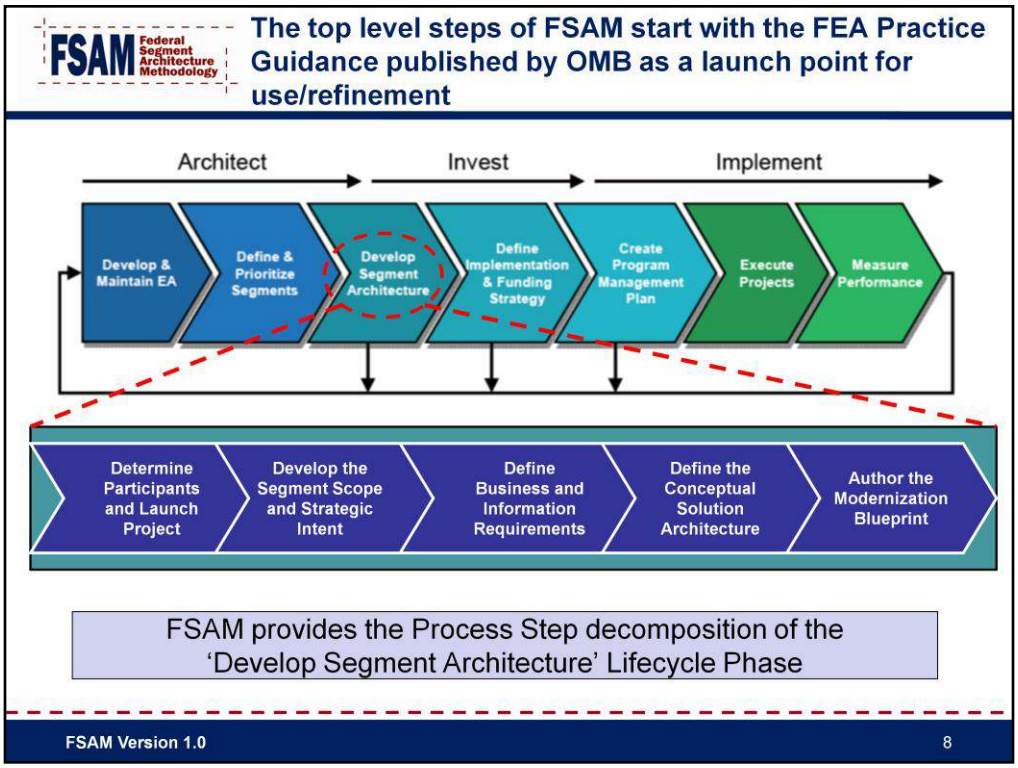
The purpose of the FSAWG is to identify and leverage segment architecture artifacts, documents and methodologies within the federal government that exemplify “best practices.” The FSAWG provides a collaborative work environment for federal agencies in which to develop segment architecture guidance and training materials and establishes a single, repeatable, best-of-breed approach to the development and use of segment architecture as an element of an integrated, results-oriented EA practice.



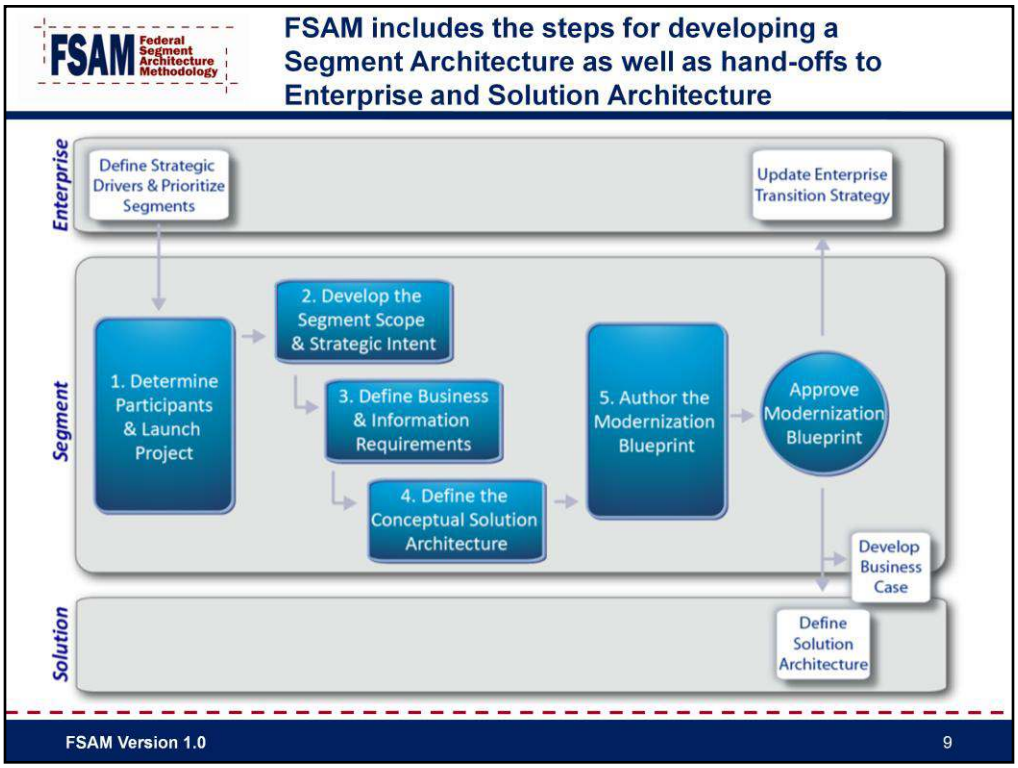
Through a collaborative approach and sharing of best practices and lessons learned, FSAWG was able to identify and address key themes related to the overall state of the practice of federal enterprise architecture. In addressing these concerns, FSAM was developed to instantiate a common, repeatable process by which agencies can architect their segments.



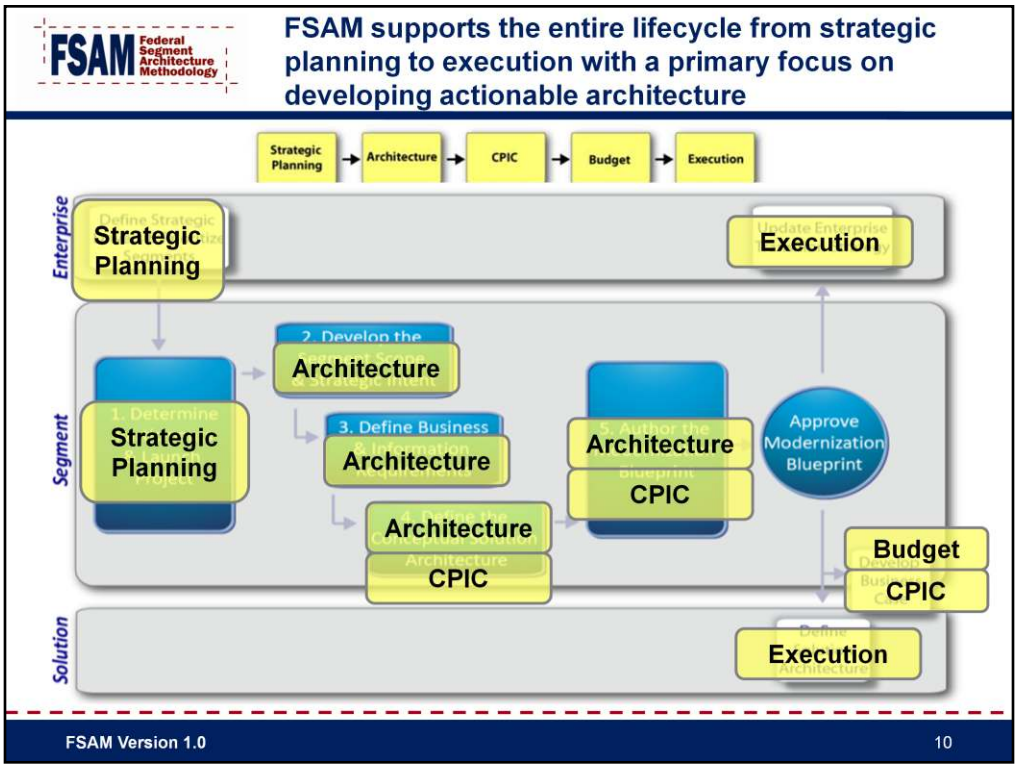
In addressing the identified concerns related to performing segment architecture, FSAM was designed to help architects develop the core elements and attributes that are needed for a complete segment architecture. FSAM incorporates best practices and provides a toolkit of proven analytical techniques. FSAM is also designed to provide information that supports EA and investment-reporting processes.



FSAM is consistent with the existing enterprise architecture performance improvement lifecycle and is designed to integrate with the existing Federal Enterprise Architecture Practice Guidance.



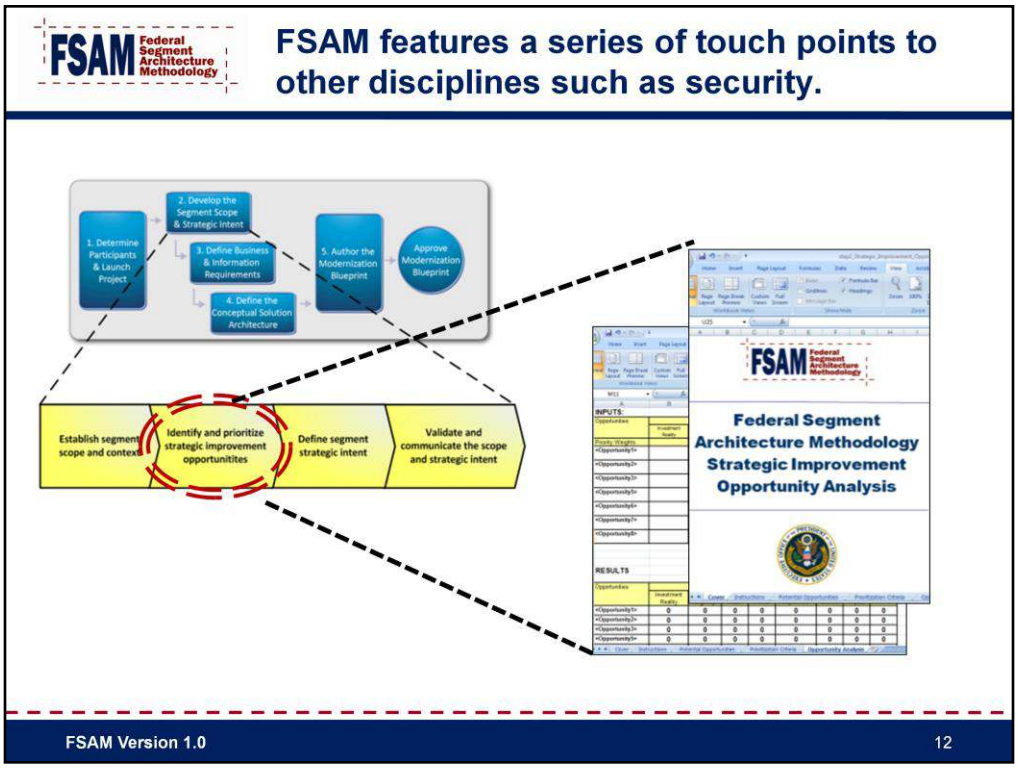
FSAM is designed to help architects develop the core elements and attributes that are needed for a complete segment architecture. The top level of the methodology consists of five key process steps that provide guidance on identifying and validating the business need and the scope of the architecture, defining the current (as-is) and target states for the segment, and developing transition plans for the performance, business, data, services, and technology architecture layers.



Execution of the FSAM process results in information that supports key management processes of strategic planning, segment architecture, capital planning and investment control, budget, and execution (i.e., solution architecture and enterprise transition execution milestones).

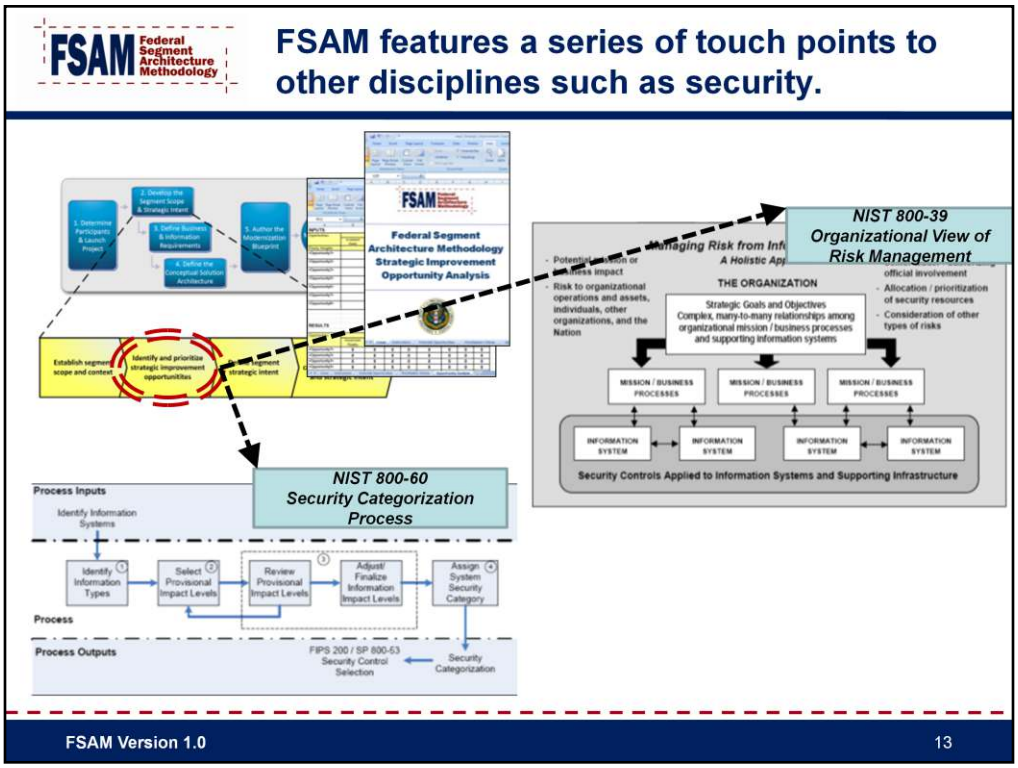
This section will provide an overview of FSAM and how it integrates with and supports other processes related to segment architecture. At the end of this section, you should be able to:

- Identify touch points in FSAM to the Practical Guide for Solution Oriented Architecture (PGFSOA), the National Institute of Standards and Technology (NIST) 800-39 Risk Management Framework, and the Federal Transition Framework (FTF)
- Recognize that FSAM provides information required to describe a complete segment using the enterprise architecture segment report (EASR) to be submitted to the Office of Management and Budget (OMB)
- Describe to overall hierarchical structure of FSAM documentation (i.e., steps, activities and tasks)
- Describe the difference between an FSAM "output" and "suggested analytical technique"
- Describe the difference between a core and non-core FSAM output.

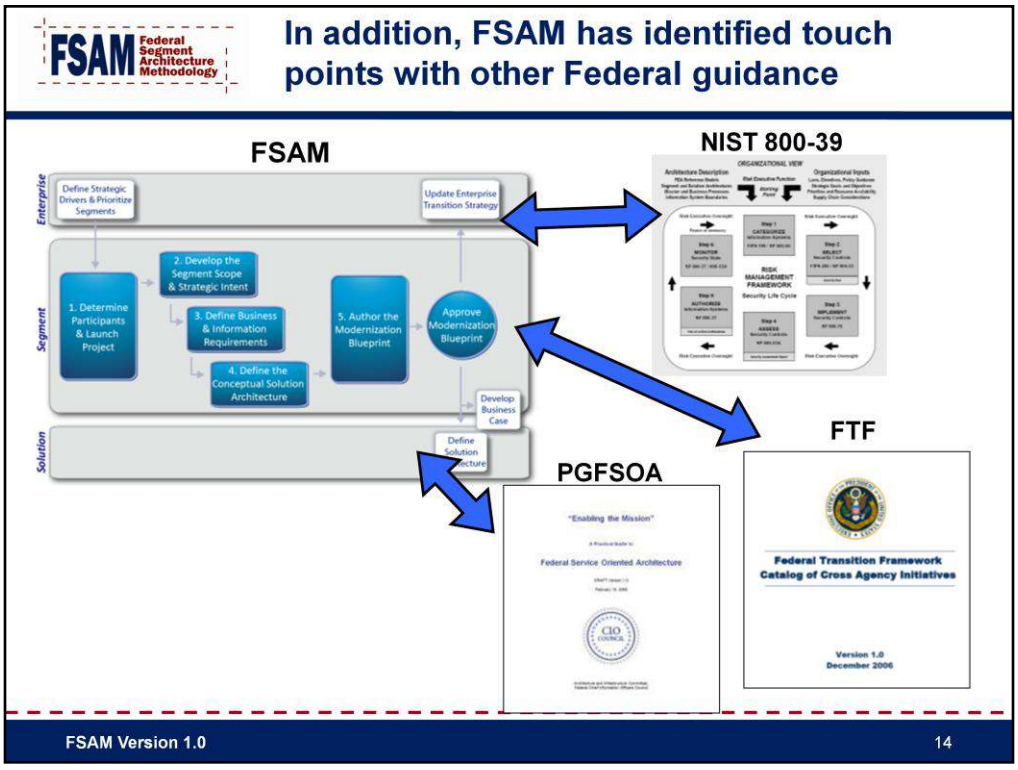


FSAM includes touch points and references to other key disciplines. It highlights key touch points with key documents, including NIST 800-39, the Federal Transition Framework (FTF), and PGFSOA, as well as any associated FEA Profiles. The at-a-glance table also has links to key considerations for enterprise and business service segments and an indication of the overall level of complexity of each activity.

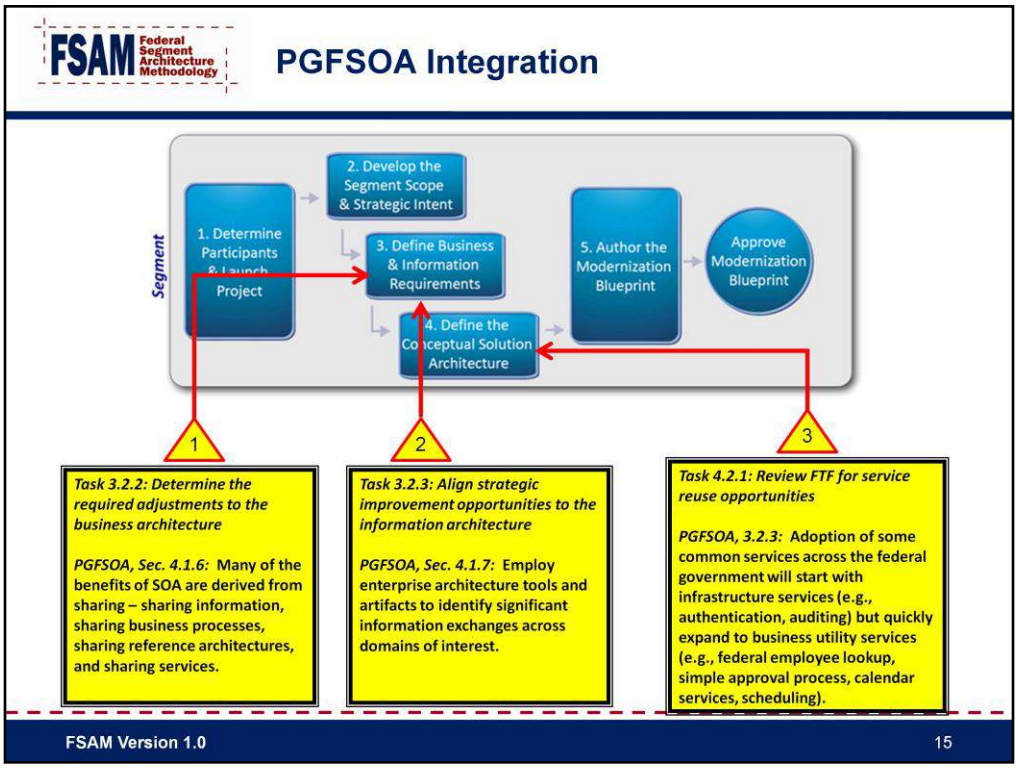
For example, in Activity 2.2, *Identify and prioritize strategic improvement opportunities*, potential high-level risks and impacts associated with the segment scope and context are considered. Security and privacy risks may be identified here that are not adequately addressed in the as-is environment.



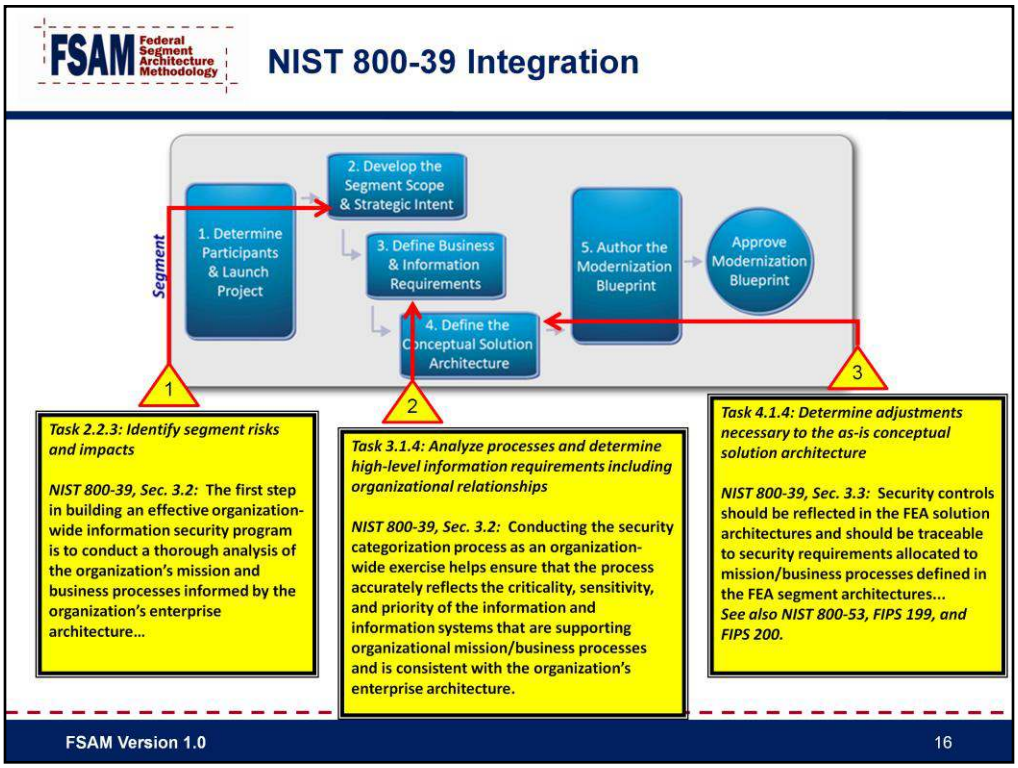
Segment architects can leverage the latest version of the Security and Privacy Profile and NIST 800-39, Managing Risk from Information Systems, to facilitate discussions to ensure adequate security controls are identified up front for addressing confidentiality, integrity and availability of key business functions. Architects can also leverage NIST 800-60 to help identify the security categorization associated with the information needs of the segment.



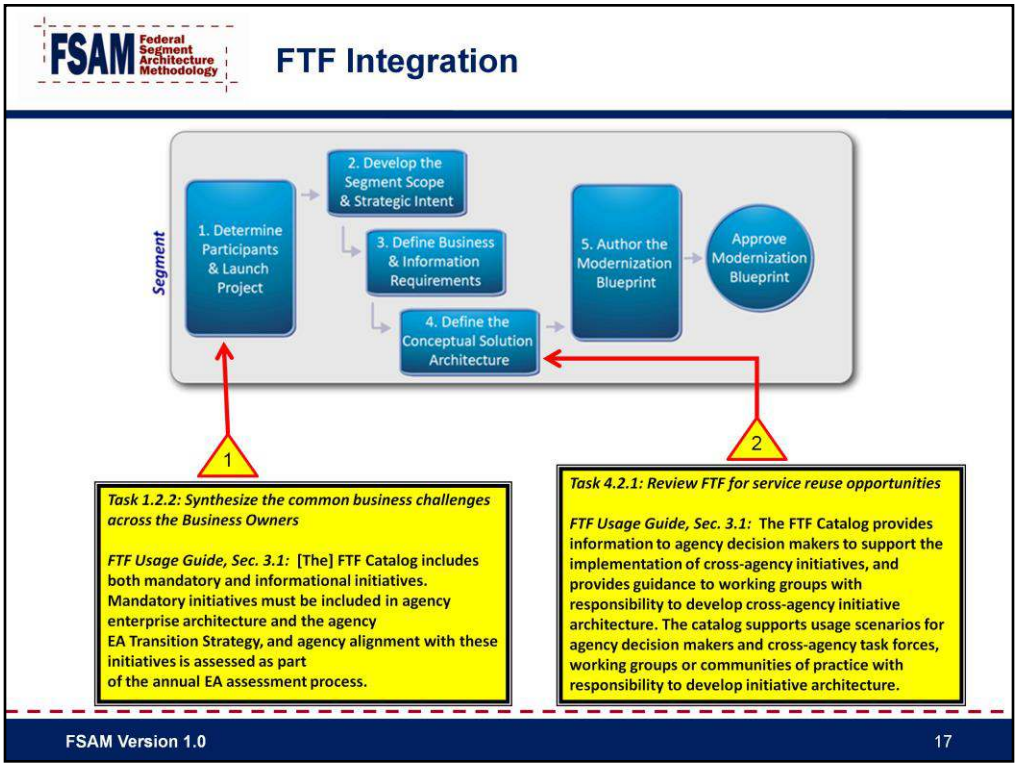
FSAM highlights key touch points with key documents, including NIST 800-39, the Federal Transition Framework (FTF), and PGFSOA, as well as any associated FEA Profiles. The at-a-glance table also has links to key considerations for enterprise and business service segments and an indication of the overall level of complexity of each activity.



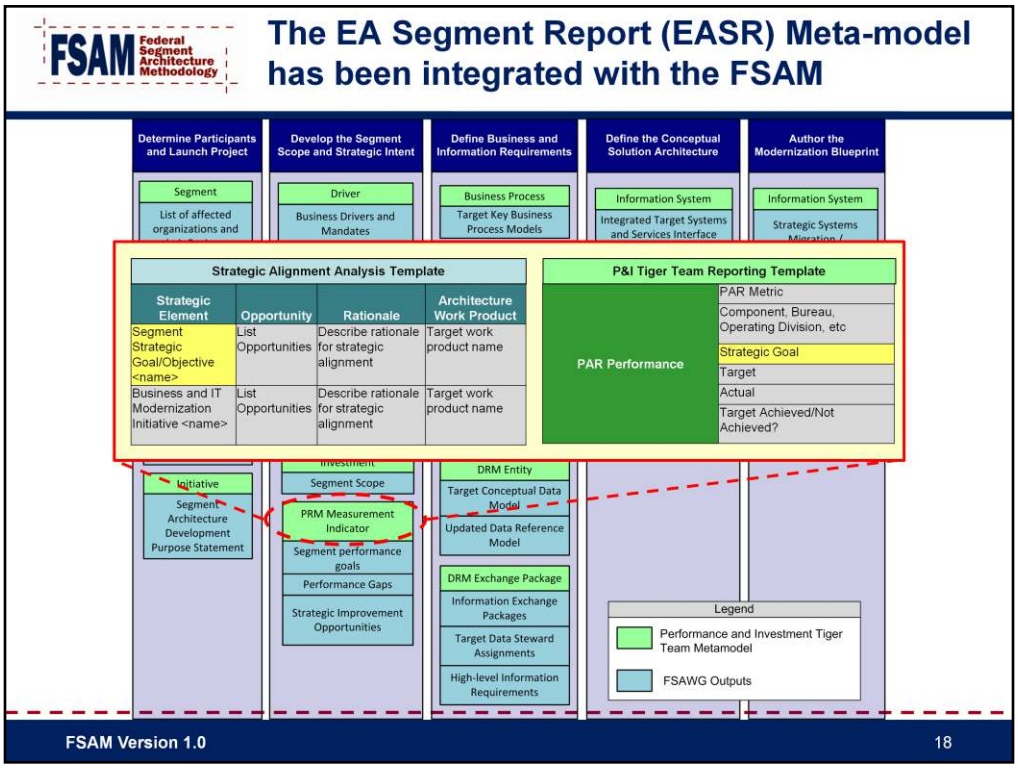
PGFSOA has touch points associated with determining the strategies for service delivery and automation of information exchanges in the target state. FSAM emphasizes the goal of adopting common services across the federal government.



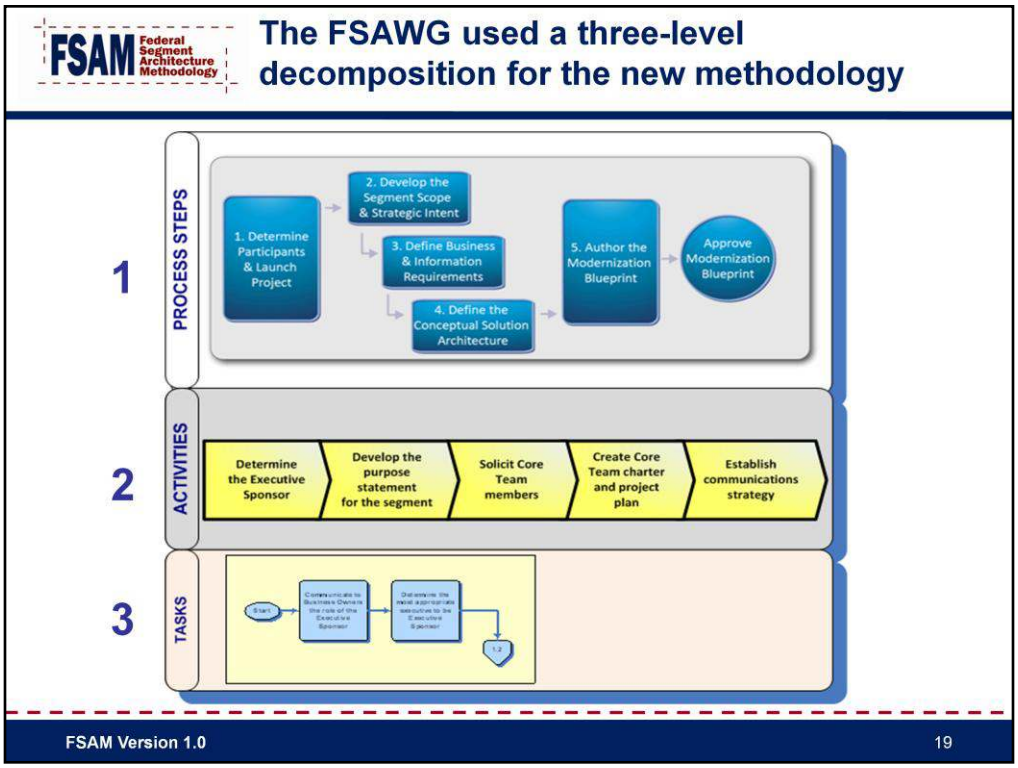
FSAM integrates with the Risk Management Framework of NIST 800-39 throughout Steps 2, 3, and 4. This begins with the identification of opportunities for reducing risk in Step 2, followed by the identification of security controls associated with business processes, information requirements, and organizational boundaries. Step 4 includes the development of specific recommendations associated with deploying appropriate security controls across the segment services and systems.



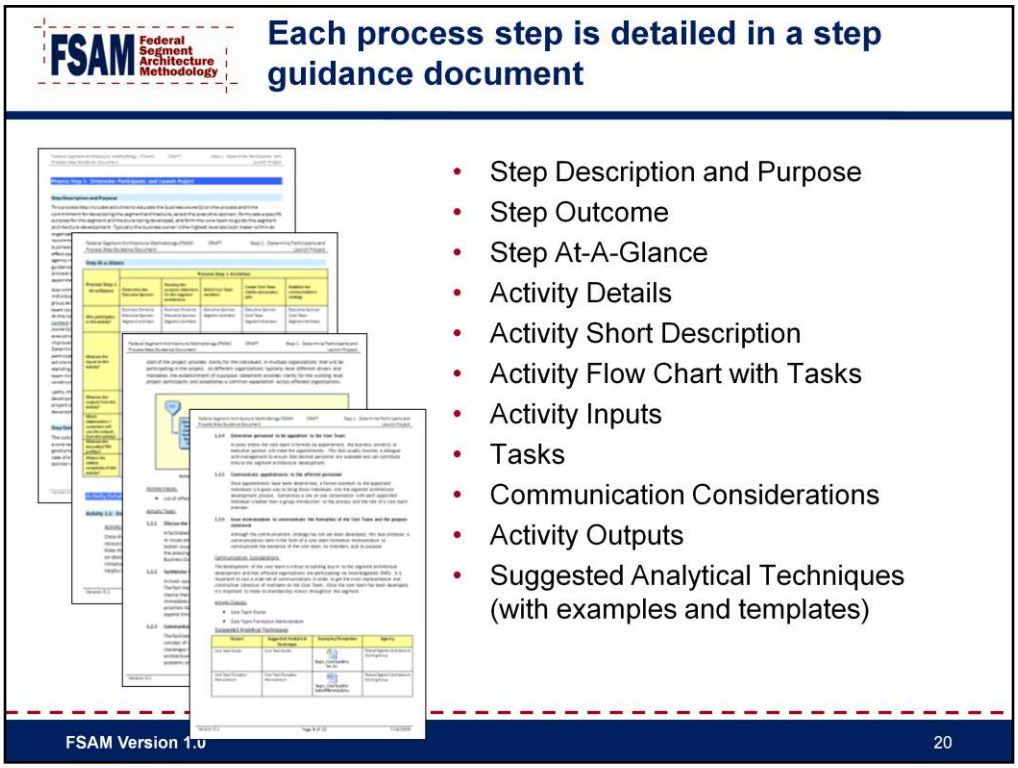
FSAM also integrates with FTF both in the identification of mandatory FTF solution requirements (e.g. HSPD-12) and the selection of service components and solutions as part of defining the conceptual solution architecture in Step 4.



In developing segment architectures using the FSAM process, agencies will have also produce all of the information as required in order to populate the enterprise architecture segment report (EASR) for a completed segment.



The FSAM is structured with three levels of decomposition that describe the process steps in terms of more detailed activities and tasks. The process steps, activities, and tasks are presented in an online toolkit containing guidance documents as well as analytical templates designed to expedite the development of segment architectures.



FSAM includes:

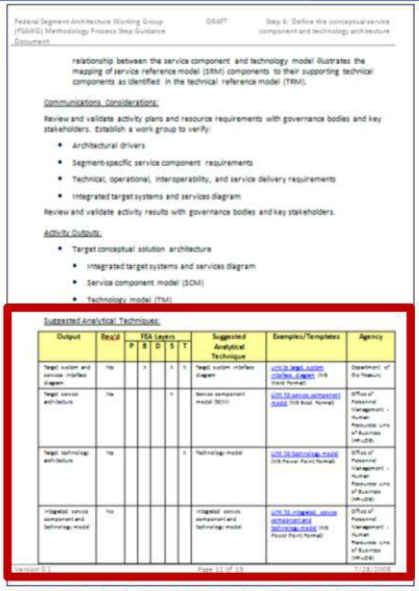
- 5 steps
- 21 activities
- 77 tasks
- 54 analytical techniques

FSAM analytical techniques include best practices from more than eight organizations are represented, including newly defined FSAWG templates

Analytical techniques have been included in the FSAM with templates from Agency best practices

Each suggested analytical technique table includes:

- Output name
- Core – (Y,N) Outputs that support population of Segment Architecture Template in EAAF Ver. 3.0.
- Associated FEA Layers
- Name of suggested analytical technique
- Link to the template/example
- Contributing Agency



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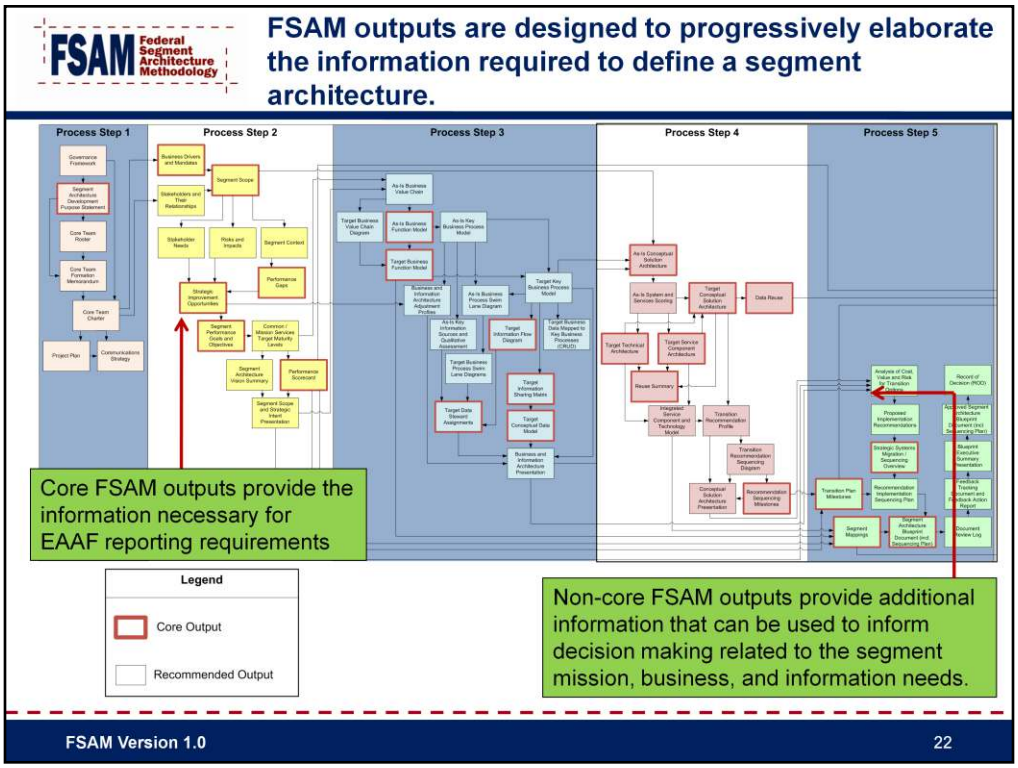
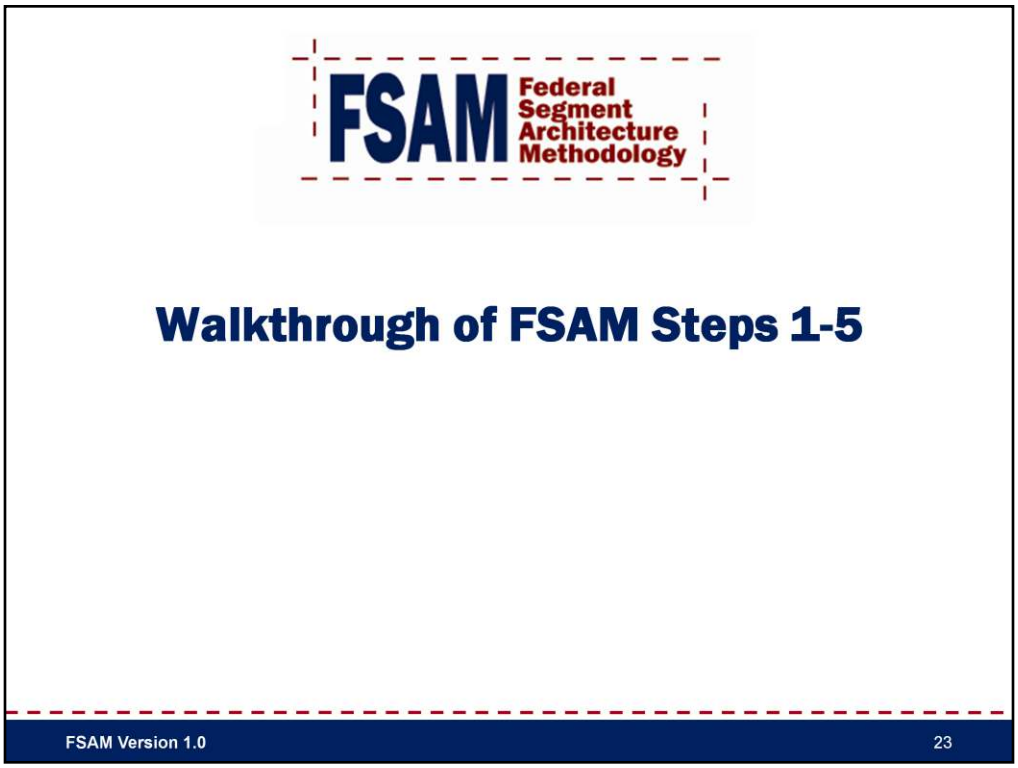
Suggested analytical techniques are provided corresponding to each activity in this process step. These techniques are included in a table describing the FSAM output(s) produced during each activity. Certain FSAM outputs are classified as 'core' to identify the architectural information necessary in order to specify a complete segment architecture.

For each FSAM output, the table also includes examples of analytical techniques associated with the output(s). These analytical techniques provide descriptive (not prescriptive) guidance on how to perform the analysis and capture the architectural information for each output. Agencies may employ other templates or artifacts that provide the equivalent level of information and analysis.

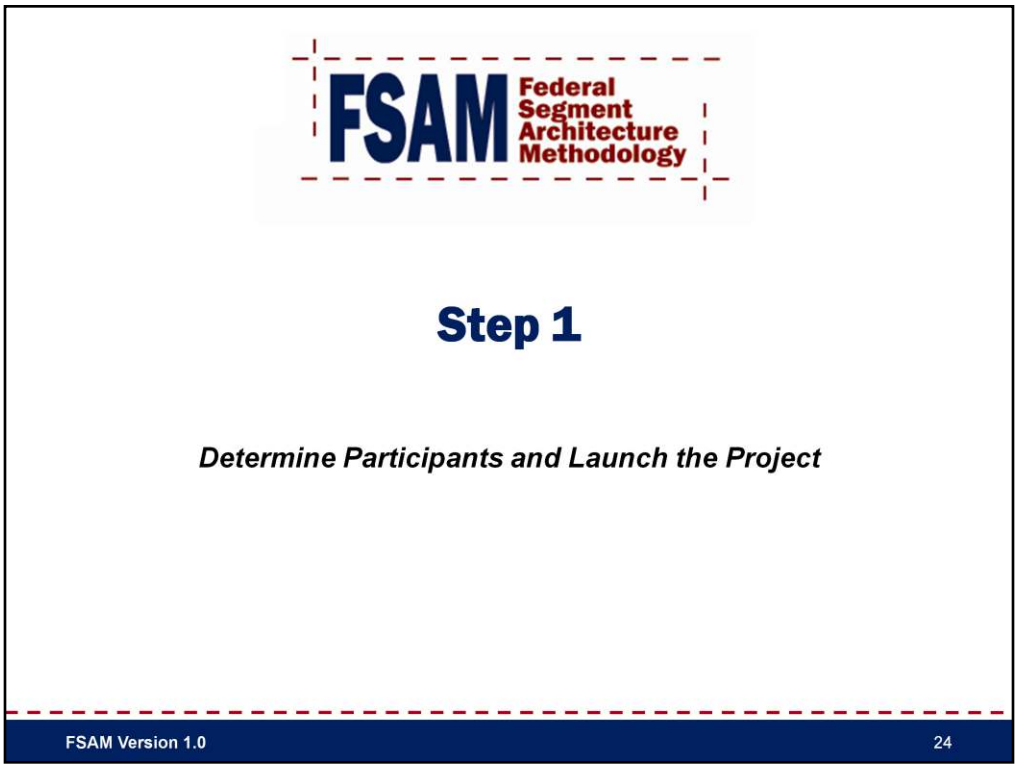


FSAM outputs are designed to progressively elaborate the information required to define a segment architecture. Core FSAM artifacts provide the information necessary for a complete segment architecture that will satisfy federal enterprise architecture assessment framework (EAAF) reporting requirements.

Non-core FSAM outputs are recommended in that they provide additional information that can be used to inform decision making related to the segment mission, business, and information needs.



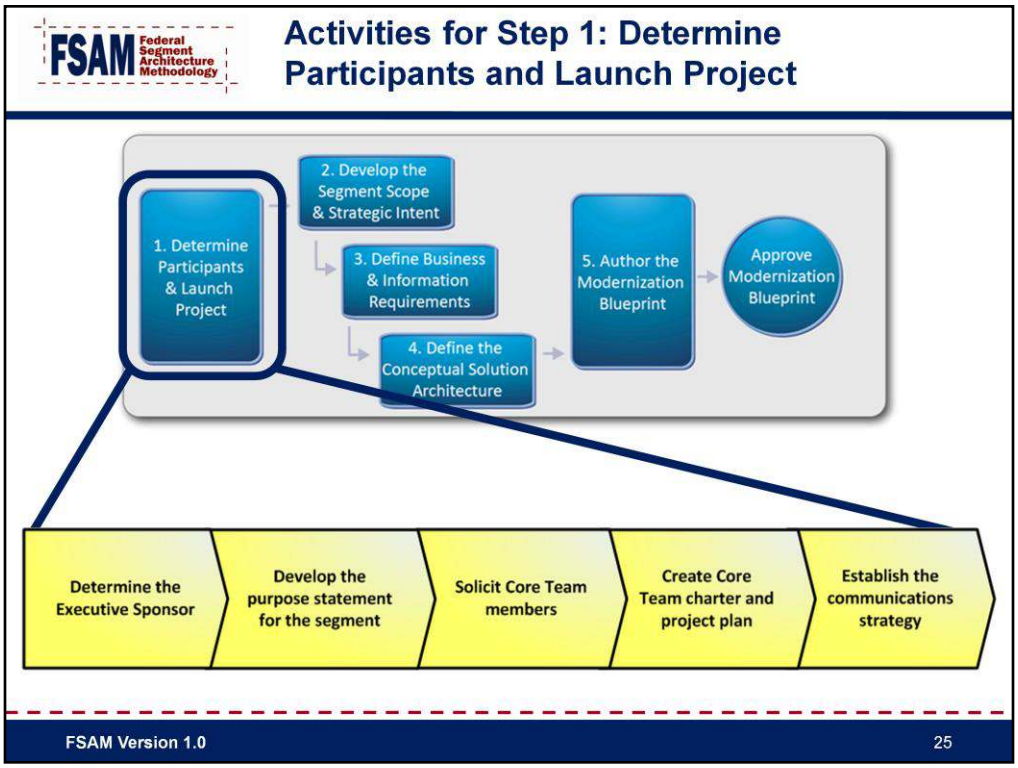
In the following sections you will be introduced to the five steps of FSAM, including the high-level step purpose and outcomes, the activities and tasks within each step, and the associated outputs and suggested analytical techniques.



The architect leverages the guidance in this process step to engage with key stakeholders to establish the segment governance framework, validate the business owner(s) for the segment, formally appoint an executive sponsor and a core team, and establish the purpose statement to guide the architecture development. This process step also includes guidance for introducing a solid project management foundation for the segment architecture development effort with the creation of a project plan and communications strategy.

At the end of this section, you should be able to:

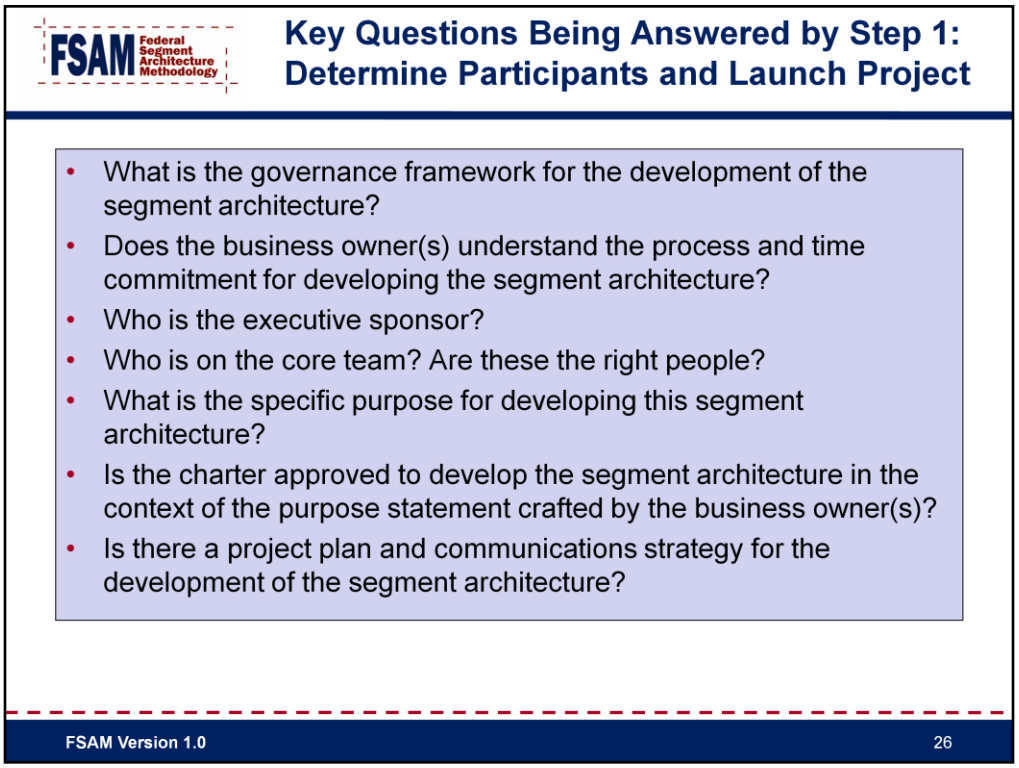
- Describe the outcome of this step.
- Identify the activities and tasks associated with this step.
- Identify the core outputs of this step along with the other recommended “non-core” outputs
- Describe the importance of establishing the governance framework that supports the development of the segment architecture.
- Describe the importance of the role of the business owner, executive sponsor, and core team.
- Identify the FSAM outputs that help define the overall purpose for developing this segment architecture.
- Identify the FSAM outputs that support overall project management associated with the development of the segment architecture.



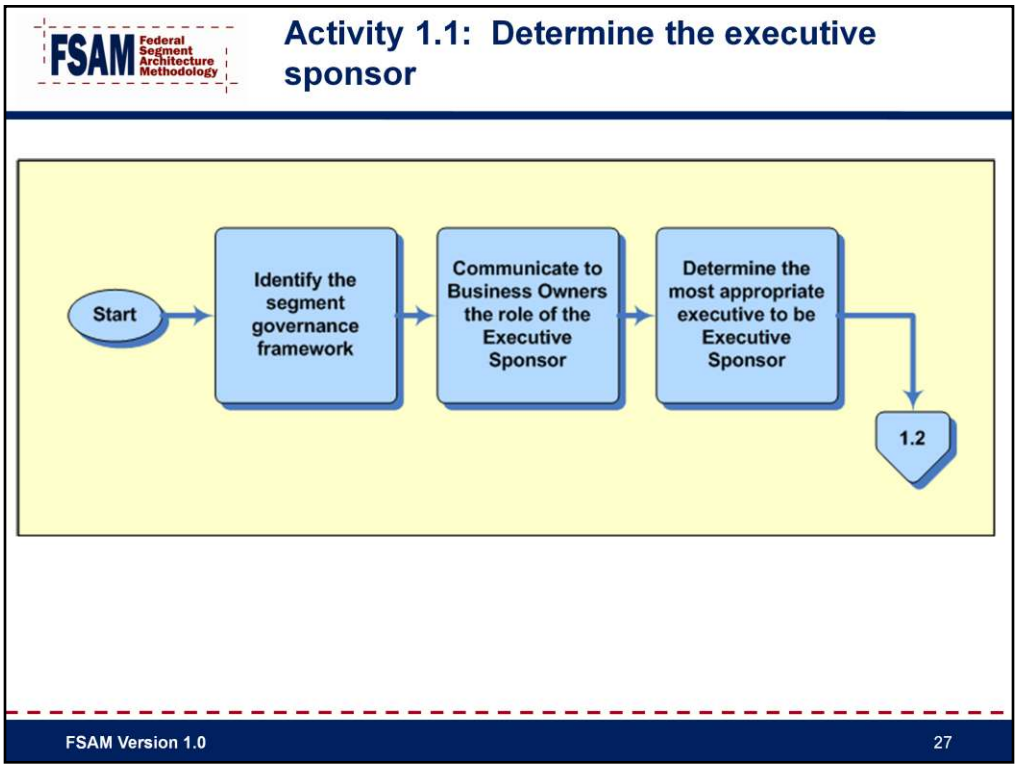
Step Purpose:
The overall purpose of this step is to establish the segment governance framework, validate the business owner(s), formally appoint an executive sponsor and a core team, establish the purpose statement to guide the architecture development, and to establish a good project management foundation.

Outcome

- An executive sponsor is selected to be just that – an executive who is willing to sponsor and champion the concept of transformation within the segment.
- A business owner is typically a senior agency official with executive decision making authority within the segment.
- Note: In the case of a mission-critical segment, that only affects one organization, the business owner and executive sponsor will likely be the same individual.
- The core team typically consists of program manager level personnel who are subject matter experts in the segment, and possibly key segment stakeholders.
- Along with the establishment of the core team charter and project plan, the communication strategy is developed to chart out the engagement of key stakeholders and governance bodies throughout the segment architecture development effort.



At the conclusion of Step 1, the core team should have answers to these questions as they relate to their segment.

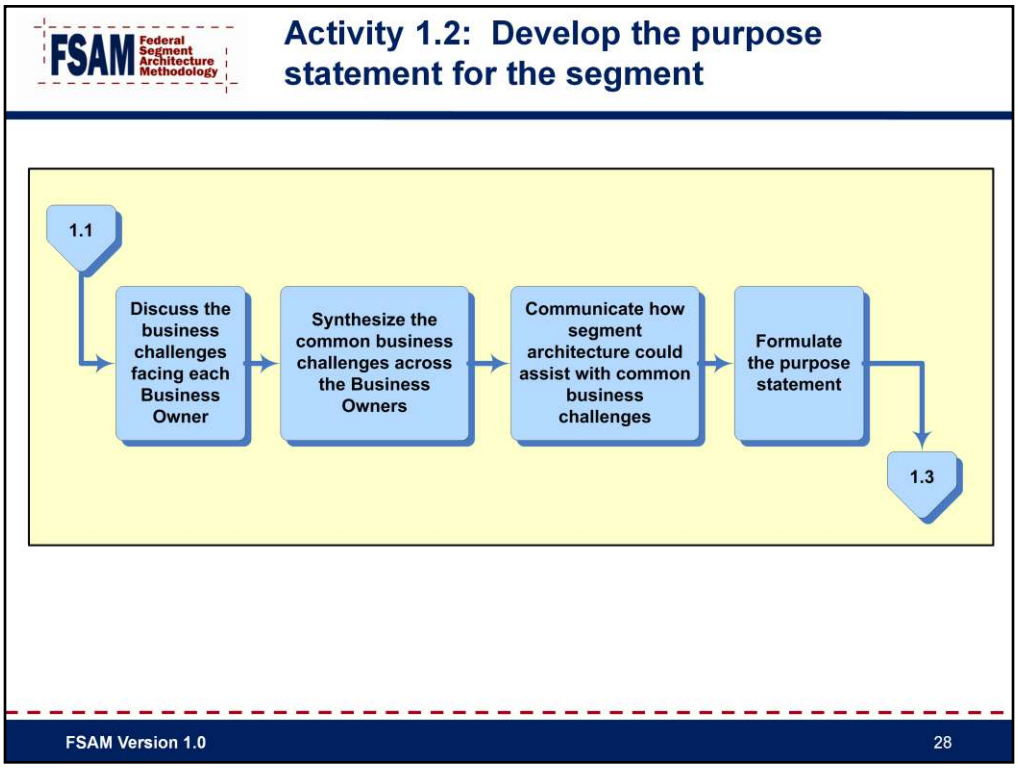


This activity begins with an overall definition of the segment governance structure. In particular, it is critical to identify up-front a comprehensive governance framework for creating and sustaining the segment architecture when developing segment architectures that span multiple agencies. This also leads to the definition of the business owner(s) for the segment who must understand the planning and resource commitments associated with developing the segment architecture. A business owner is typically a senior agency official with executive decision making authority within the segment.

Once the business owner(s) have a high level understanding of the planning concept and resource commitments, then they are ready to discuss the selection of an executive sponsor. Note that in many cases, the executive sponsor and business owner may be the same individual or an obvious choice rendering the tasks within this activity irrelevant. However, in cross-agency initiatives, there may be several business owners involved from several organizations and it is helpful to designate an executive sponsor.

An executive sponsor should be just that – an executive who is willing to sponsor and champion the concept of transformation within the segment. The executive sponsor will be a visionary leader for the core team and will play a key decision making role in determining the direction and scope of the segment architecture findings and recommendations. The executive sponsor is in a decision-making role and should therefore be a senior official with the authority to make decisions within the segment.

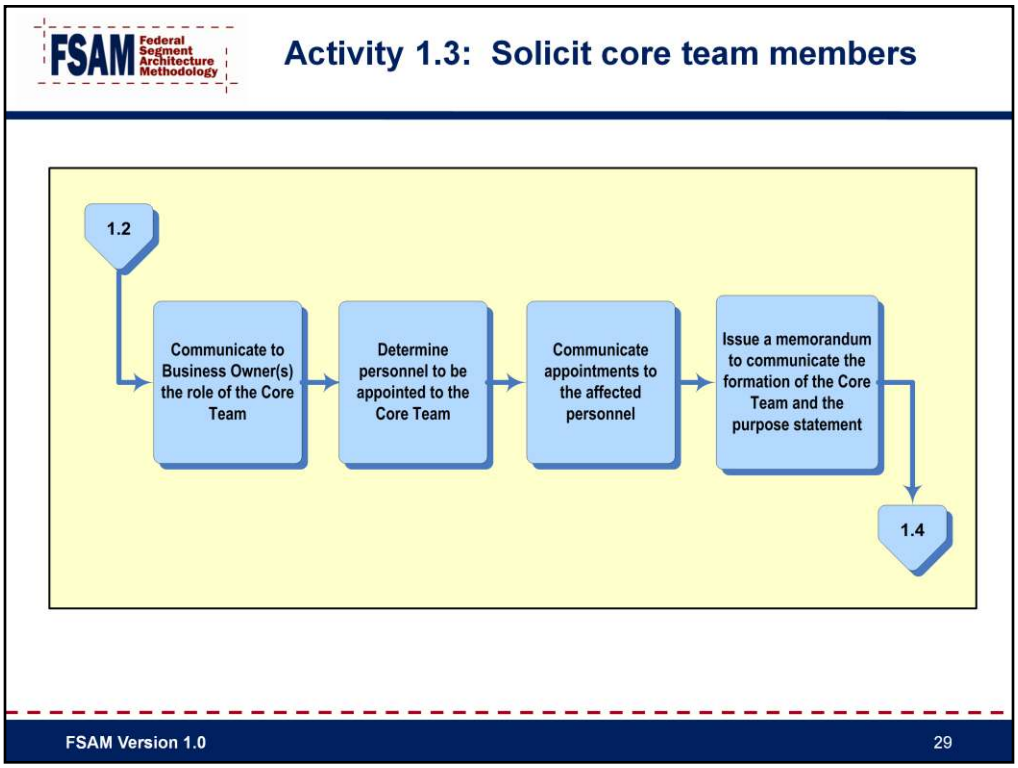
During this activity, the business owner(s) should also be educated on the segment architecture process. This education can include formally meeting with the business owner(s) of the segment to communicate how their resources will be used in developing the segment architecture. This education can be used to set expectations up front so that the appropriate executive sponsor and core team can be selected.



It is critical that the business owner(s) and the executive sponsor formulate their intent for the segment architecture development. This segment architecture intent, or purpose statement, serves to communicate to the core team the reason why the segment architecture is being created. For example, the purpose statement could be higher citizen satisfaction, lower costs, more efficient operations, addressing a GAO audit, and/or introducing a new service to citizens.

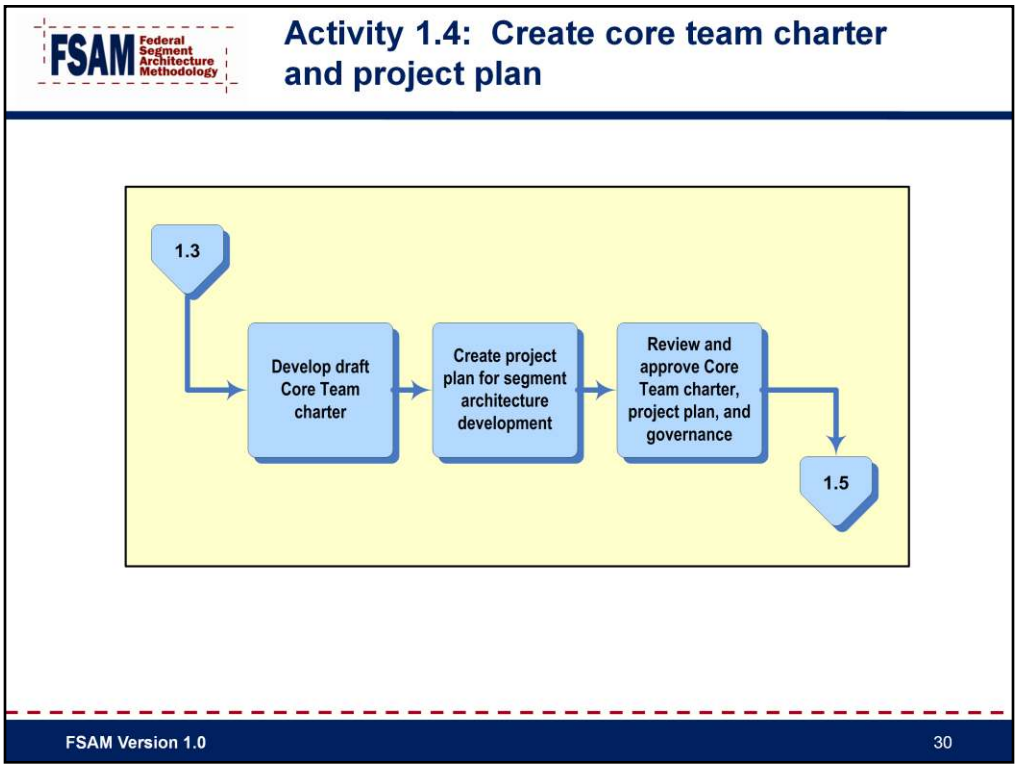
In some cases, the purpose statement can be a high-level statement of principles. In other cases, the purpose statement might be a more detailed listing of objectives and expected areas to consider. This is the opportunity to establish why this segment architecture is important and what its implementation should accomplish.

The purpose statement is particularly important for segments that span multiple organizations and have multiple business owner(s). In these instances, a purpose statement established at the start of the project provides clarity for the individuals in multiple organizations that will be participating in the project. As different organizations typically have different motivators and mandates, the establishment of a purpose statement provides clarity for the working-level project participants and establishes a common expectation across affected organizations.



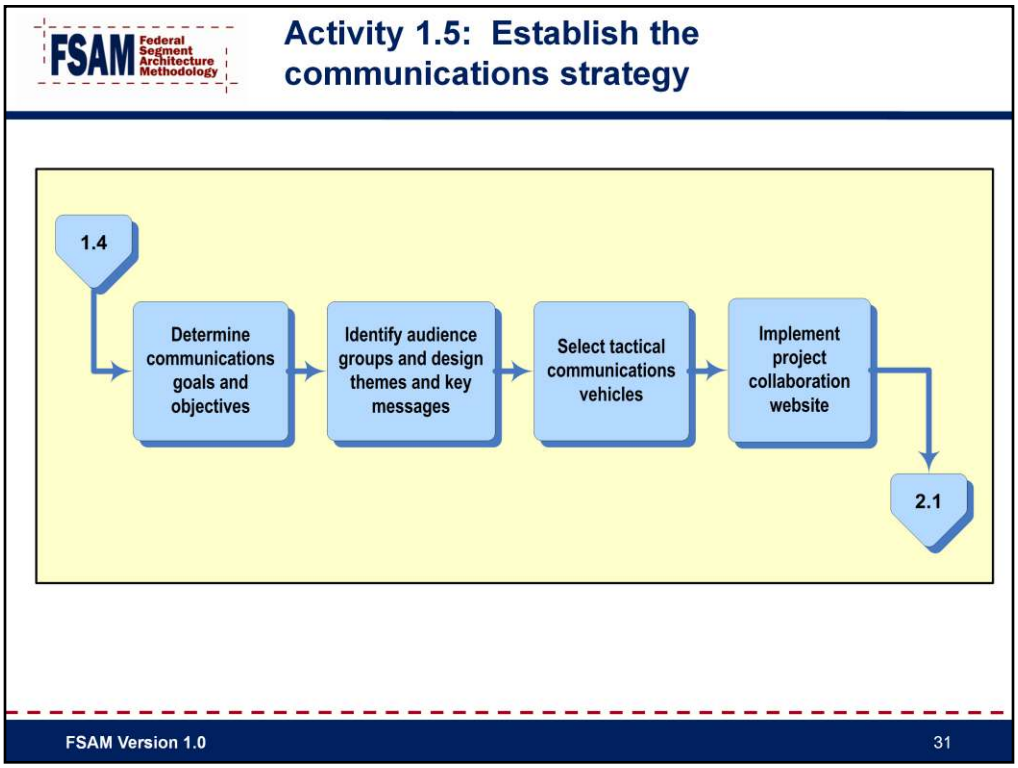
The core team is a critical entity throughout the segment architecture development process. Without a knowledgeable, enthusiastic and constructive core team, the segment architecture might not be valid, relevant or implementable. This activity involves the executive sponsor recruiting the best and brightest subject matter experts from the affected organizations. All affected organizations need a seat at the table and that seat needs to be filled by an individual who will embrace the purpose statement and respond positively to other core team members.

Note that the core team membership is critical to the success of the project. The core team typically consists of program manager level personnel who are subject matter experts in the segment, and possibly key segment stakeholders. Core team members should be constructive, able to think outside of a single organizational context, good communicators, visionary, and excited about change. It is important to note that the core team may decide to invite other subject matter experts for advice, as needed, to supplement their knowledgebase as they move through the segment architecture development process. The important element of the core team is that it is a highly functional team that has the knowledge and vision to develop an actionable segment architecture.



The segment architecture development should include the use of project management techniques just like any other project. The core team needs to establish a charter to support the development of the segment architecture. The core team charter establishes the legitimacy of the project, the role of its players, operational ground rules, decision-making structure, preliminary scope, and stated goals and objectives.

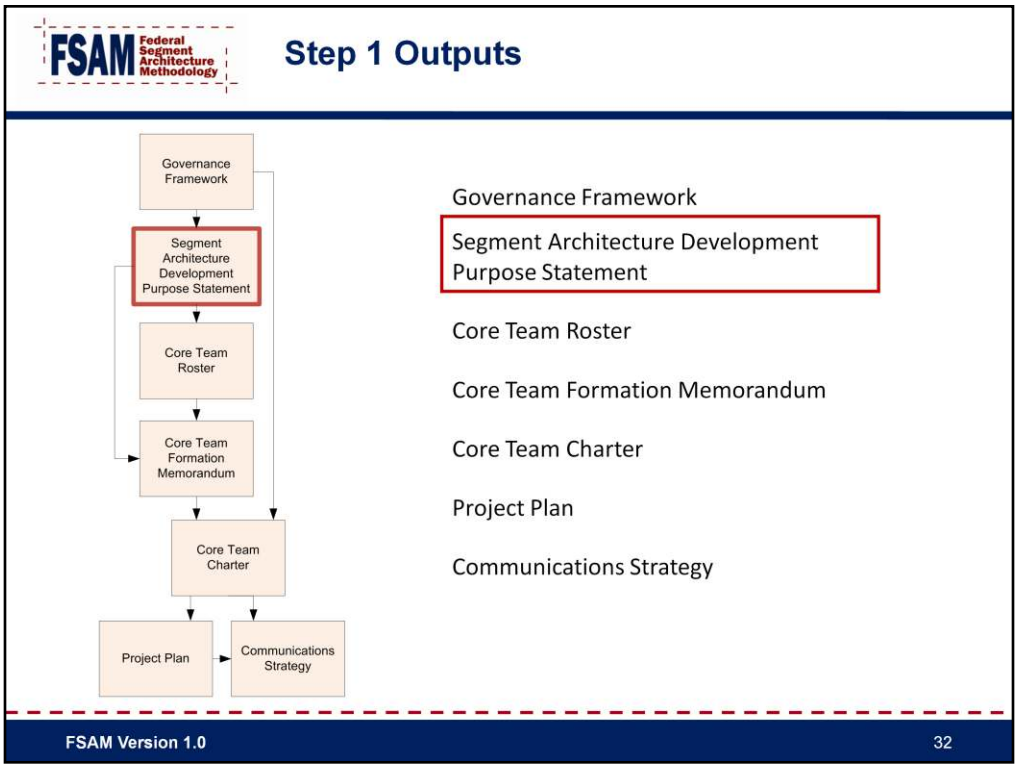
In addition to the charter, the segment architecture development should be guided by a project plan. The project plan will guide the process and ensure timely delivery of the segment architecture. The FSAM process steps, activities, tasks and outputs are major contributors to the structure and sequencing of the project plan.



Successful communication requires the development of a communication strategy. The communication strategy should identify relevant stakeholders in the context of the purpose statement and the core team's knowledge of the affected organizations. The communication strategy includes the necessary value-based messages for the respective types of stakeholders.

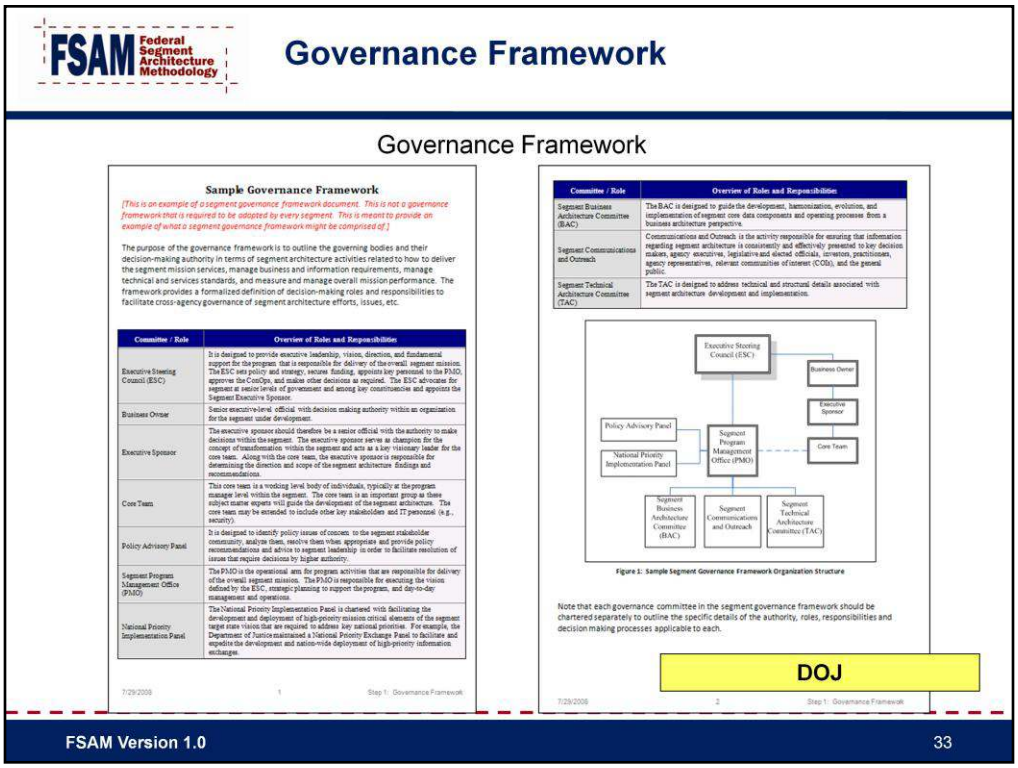
For effective communications and collaboration, the core team should establish a web site to facilitate barrier-free information dissemination. The communication strategy should address the necessary targeting (stakeholder, timing and delivery means) of the value messages that are important throughout the project. This targeting should be orchestrated with existing organizational and informational channels, behaviors, calendars and events to optimize reach and usefulness.

Examples of key organizational events would be workshops, collaborative forums, communities of practice or interest (COP, COI), and the annual budget and CPIC cycles. The communication plan should identify the optimal formats and delivery channels (email, brochure, presentations, and web) to sustain effective communications.



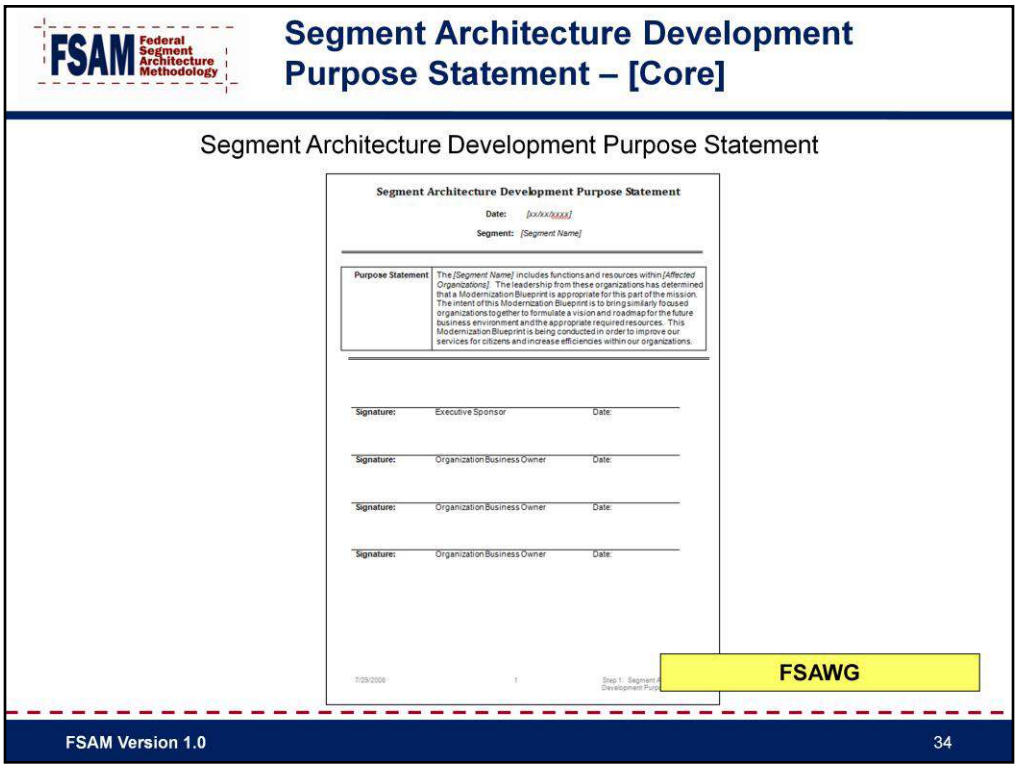
This graphic displays all of the outputs for Step 1. Each output is linked to a suggested analytical template. Outputs with red circles are "core" and the others are "recommended".

Suggested analytical techniques are included for activities within the methodology to better define what is core for a complete segment architecture in the form of descriptive (not prescriptive) guidance on how to accomplish the analysis. The suggested analytical techniques provide guidance as to what outputs are core to defining a complete segment architecture.



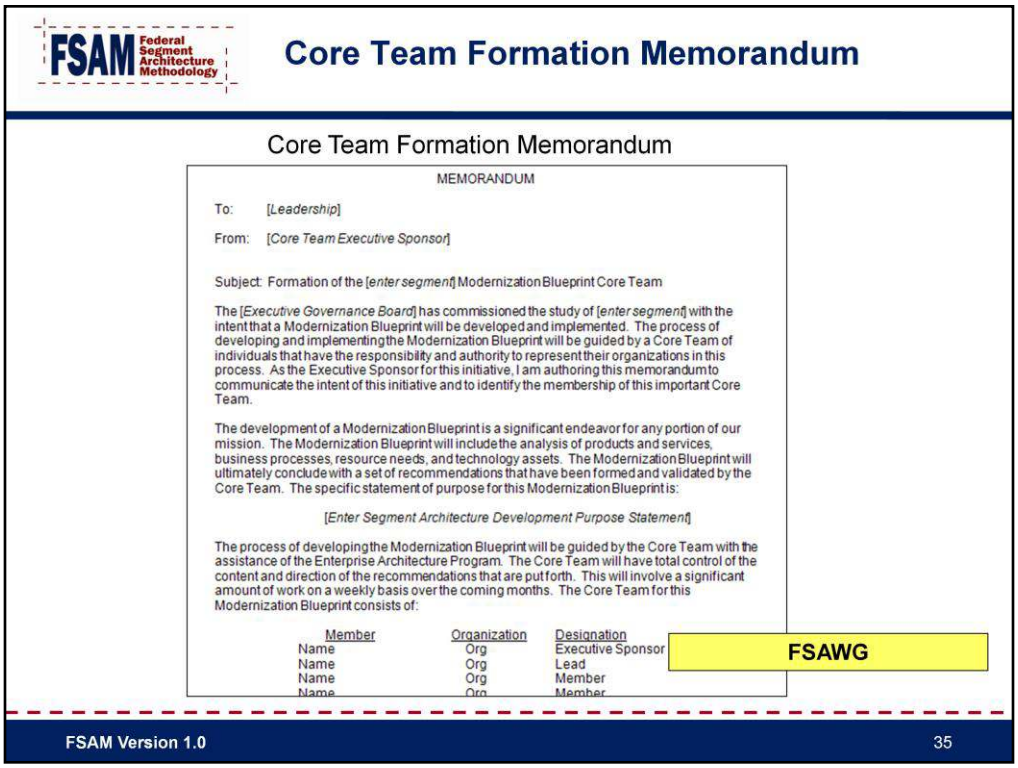
Governance Framework

- The purpose of the governance framework is to outline the governing bodies and their decision-making authority in terms of segment architecture activities related to how to deliver the segment mission services, manage business and information requirements, manage technical and services standards, and measure and manage overall mission performance.
- The framework provides a formalized definition of decision-making roles and responsibilities to facilitate cross-agency governance of segment architecture efforts, issues, etc.



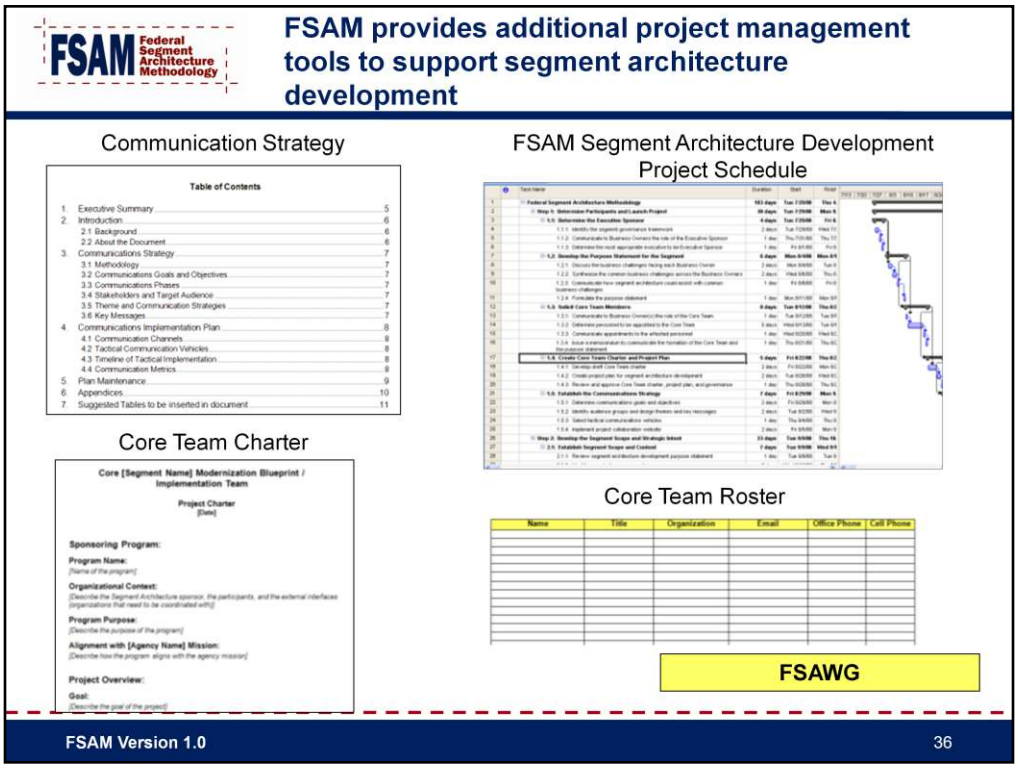
Segment Purpose Statement (Core)

- The purpose statement is used to formulate a reason for creating the segment architecture so that the core team and executive sponsor have a clear understanding of what is expected in terms of high-level performance improvements
- In some cases, the purpose statement can be a high-level statement of principles. In other cases, the purpose statement might be a more detailed listing of objectives and expected areas to consider.
- This is an opportunity to establish why this segment architecture is important and what its implementation should accomplish.



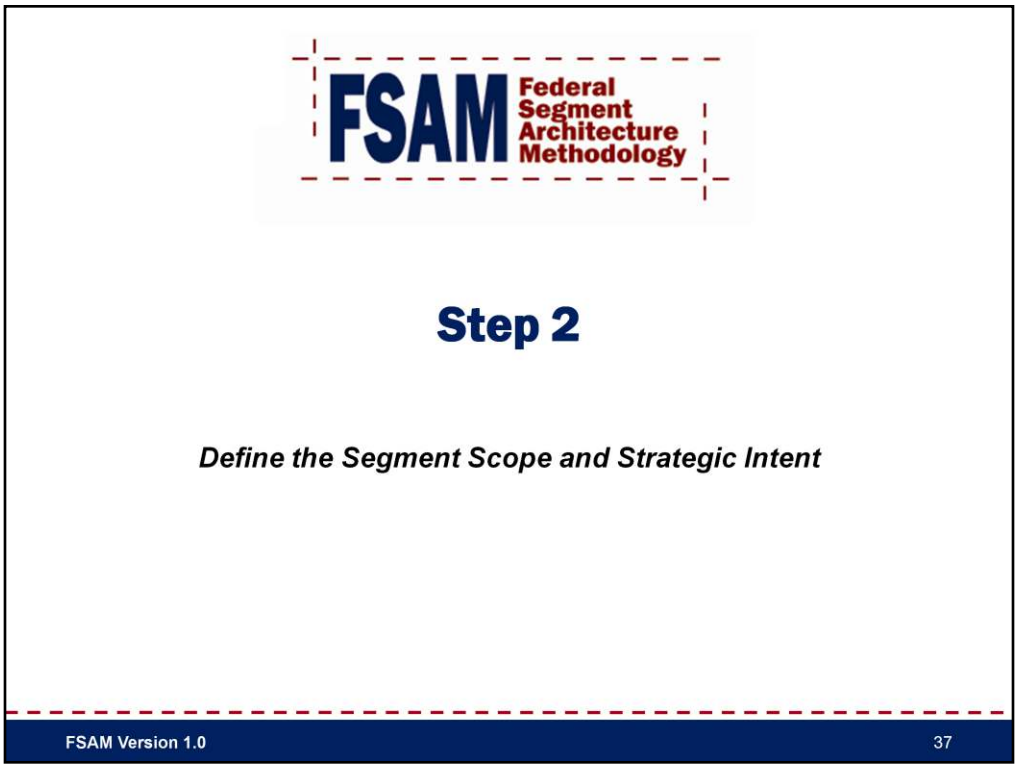
Core Team Formation Memorandum

The core team formation memorandum is used to communicate the existence of the core team, its members, and its purpose.



Project Plan (non core)

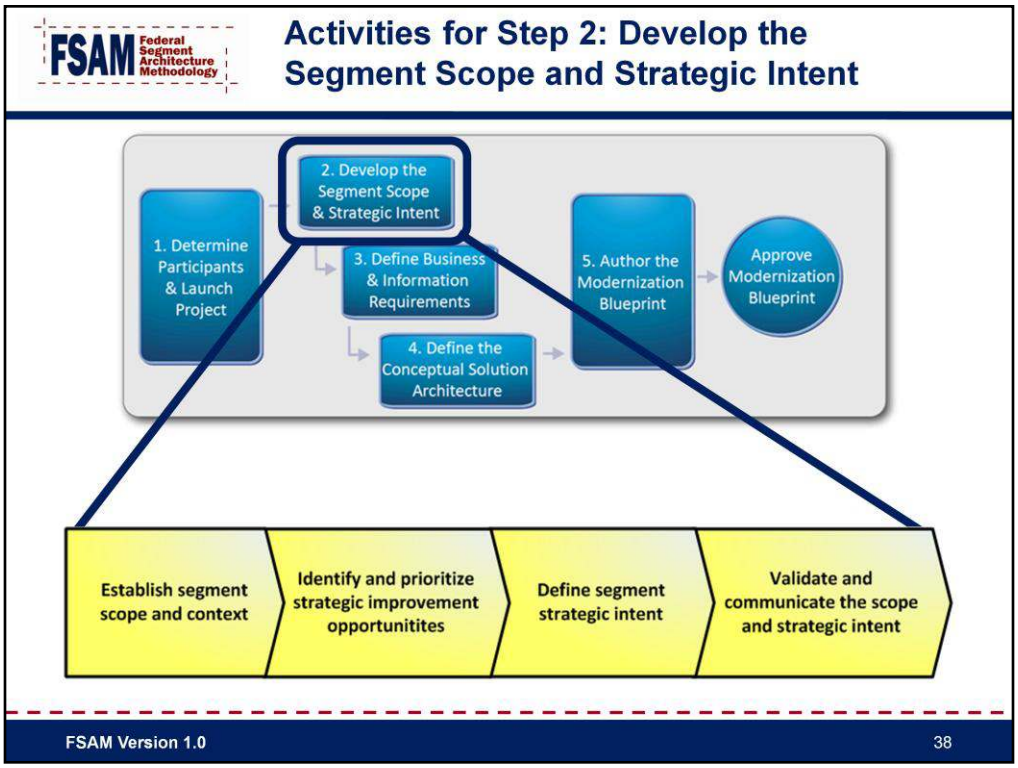
- The project plan will guide the process and ensure timely delivery of the segment architecture.
- The FSAM methodology provides a project plan template that is pre-populated with the steps, activities, and tasks within the methodology.
- This project plan should be tailored to the particular segment architecture effort and should be maintained throughout the development of the segment architecture.



The architect leverages the guidance in this process step to engage with key stakeholders to produce a segment scope and to define the strategic improvement opportunities for the segment. The architect then defines the segment *strategic intent* which consists of the target state vision, performance goals, and common / mission services and their target maturity levels. The subsequent FSAM process steps provide guidance for architects to align the architecture with the strategic intent to create a complete segment performance line-of-sight and to support achieving the target state vision.

At the end of this section, you should be able to:

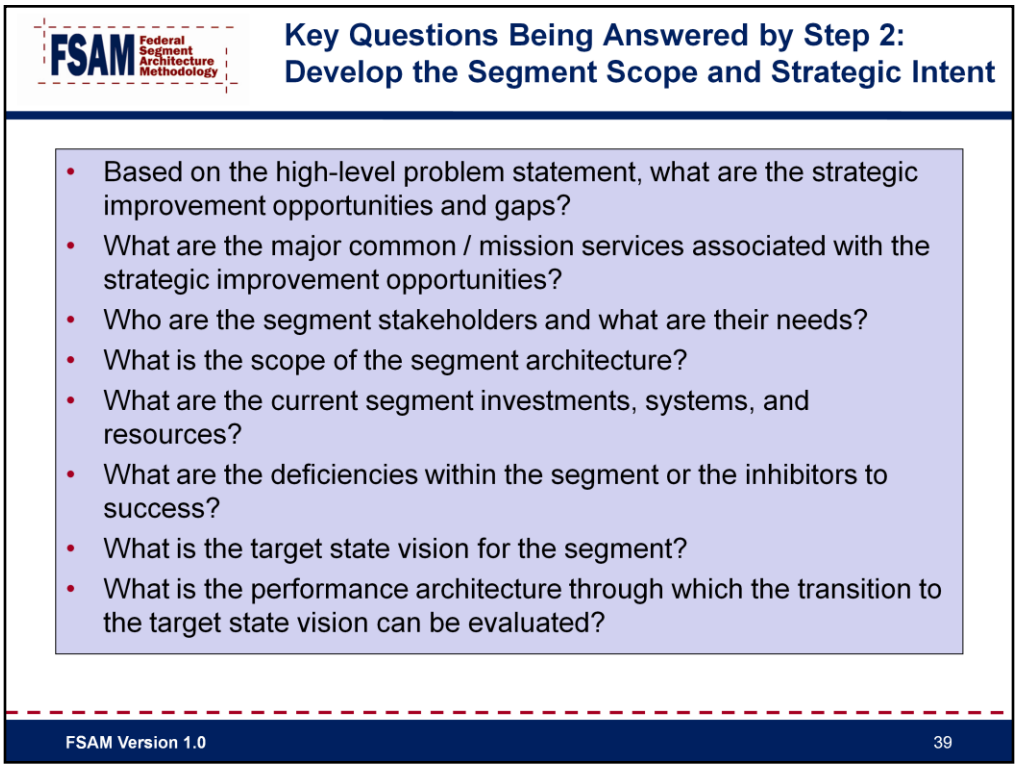
- Describe the outcome of this step.
- Identify the activities and tasks associated with this step.
- Identify the core outputs of this step along with the other recommended "non-core" outputs
- Describe what is meant by "strategic intent" of the segment
- Describe the importance of identifying segment stakeholders and their needs
- Describe an FSAM suggested analytical technique that helps elicit performance opportunities (e.g., SWOT)
- Describe the importance of defining the scope of the segment architecture
- Identify the FSAM outputs and associated analytical techniques that help develop the target state vision for the segment and the performance architecture for achieving the target state vision



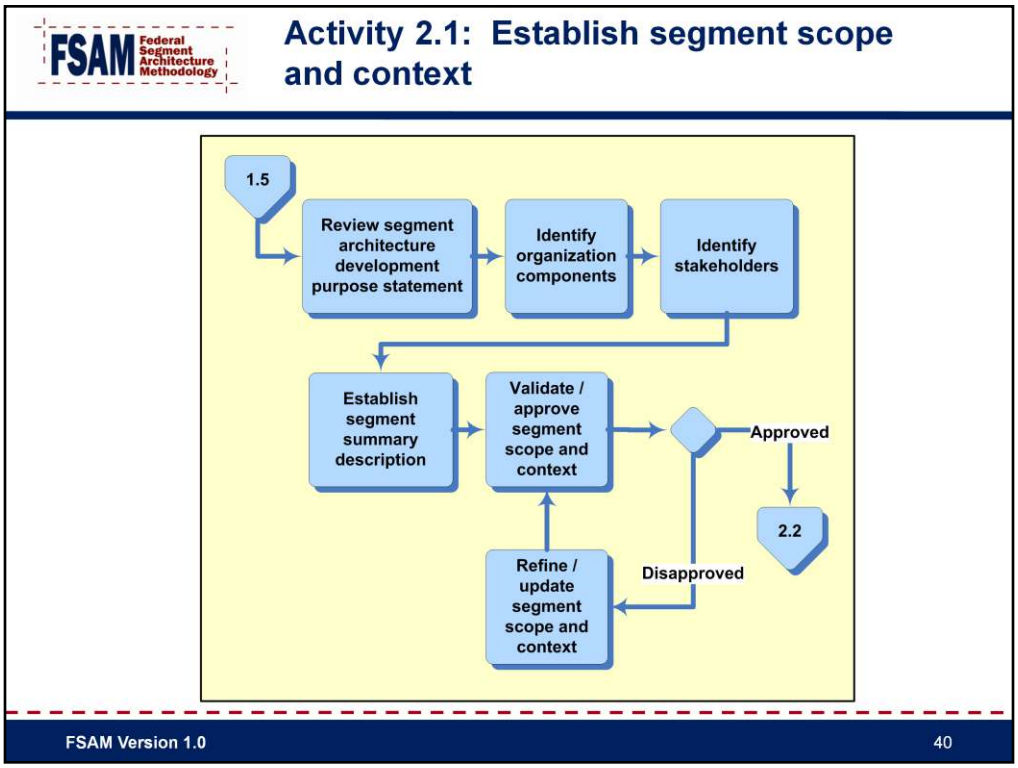
Step Purpose:
The overall purpose of this step is to define the segment scope and strategic intent, which includes the performance architecture through which achievement of strategic improvement opportunities will be measured.

Step Outcome:

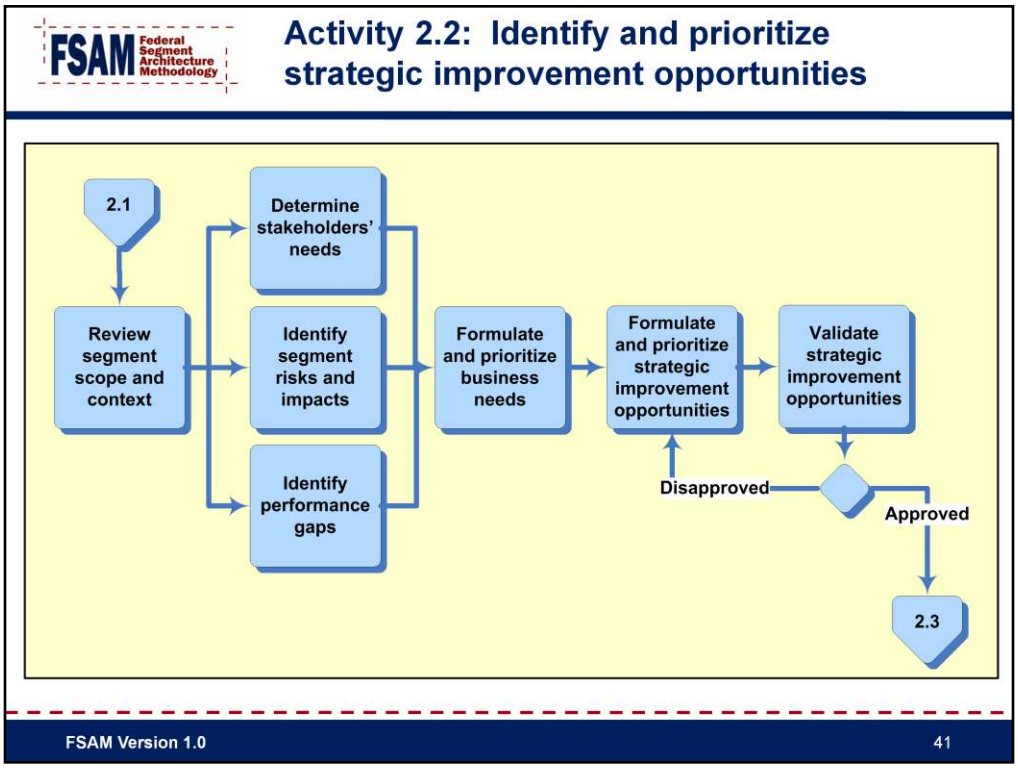
- This step will produce a segment scope and prioritized strategic improvement opportunities based upon the needs of the business.
- The strategic intent, which consists of the target state vision, performance goals, and common / mission services target maturity levels, is also established.
- The subsequent process steps in this methodology will ultimately align to provide a complete segment performance line-of-sight and support the achievement of the segment target state vision.



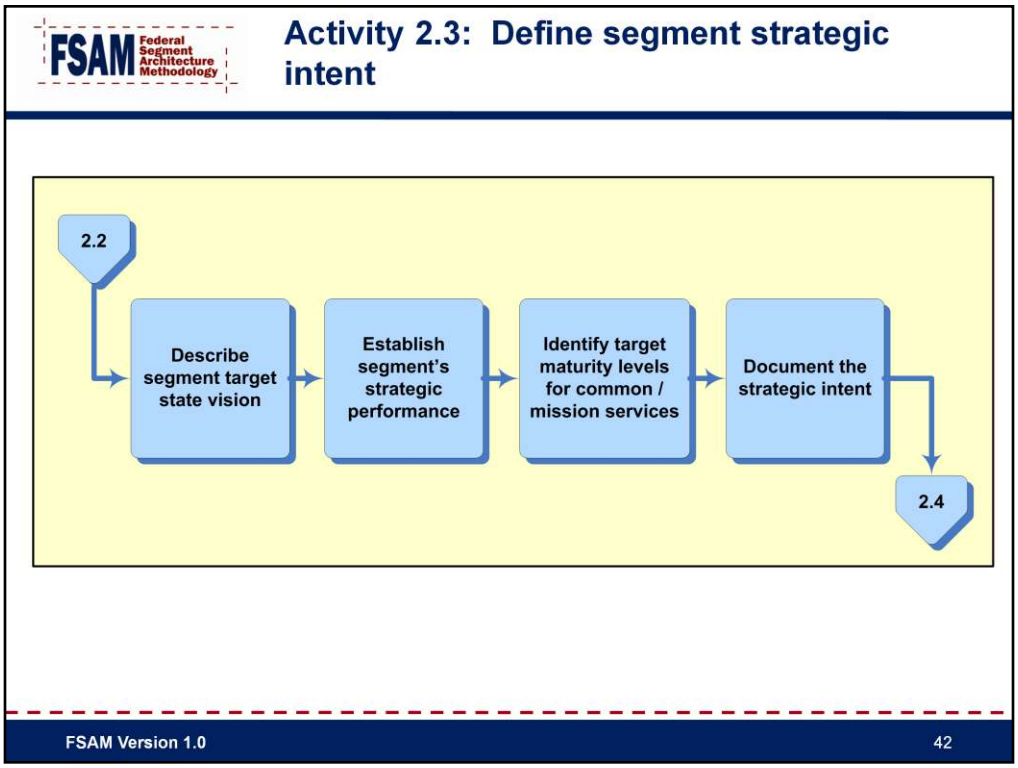
At the conclusion of Step 2, the core team should have answers to these questions as they relate to their segment.



This activity consists of identifying at a high-level the segment stakeholders, business domains, common / mission services, information exchanges, systems, security, and technical focus areas in the context of the "segment architecture development purpose statement" from process step 1. Some of these items may not be known at this point. However, the more information that is available to describe the proposed segment scope and formulate a clear understanding with the core team, the better.



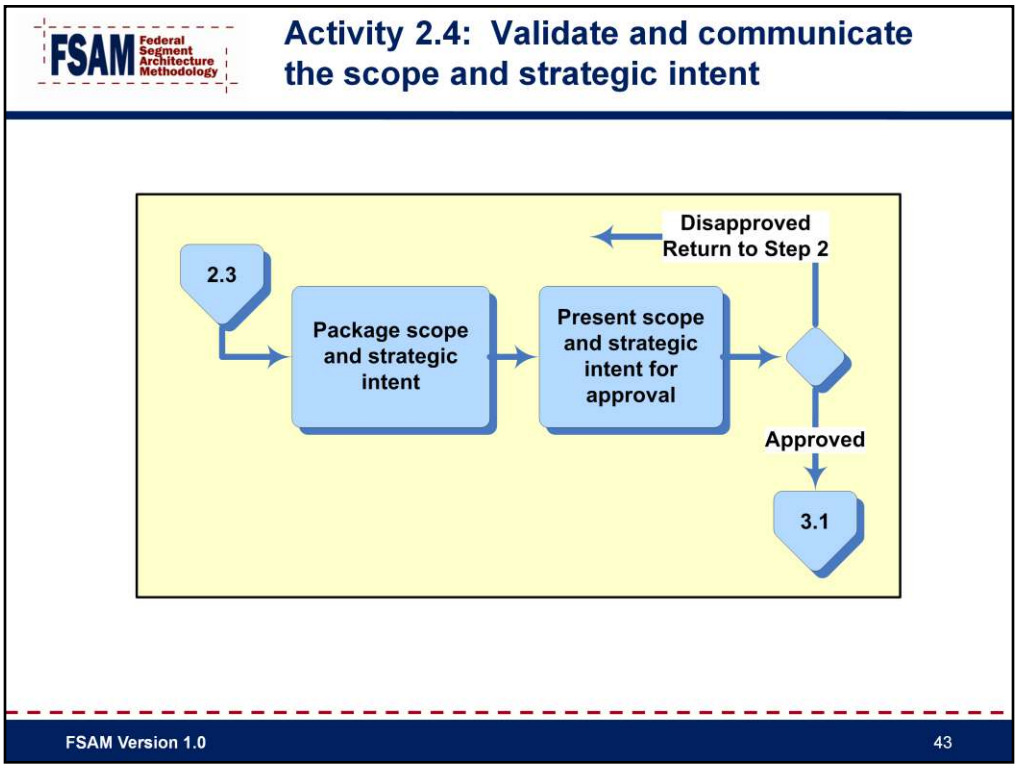
This activity consists of identifying the segment stakeholder needs, segment risks and impacts, and performance gaps. The core team uses this information to formulate the segment business needs and identify a set of high-level strategic improvement opportunities. The segment's strategic improvement opportunities are then prioritized and selected to form the foundation through which the segment strategic intent is developed.



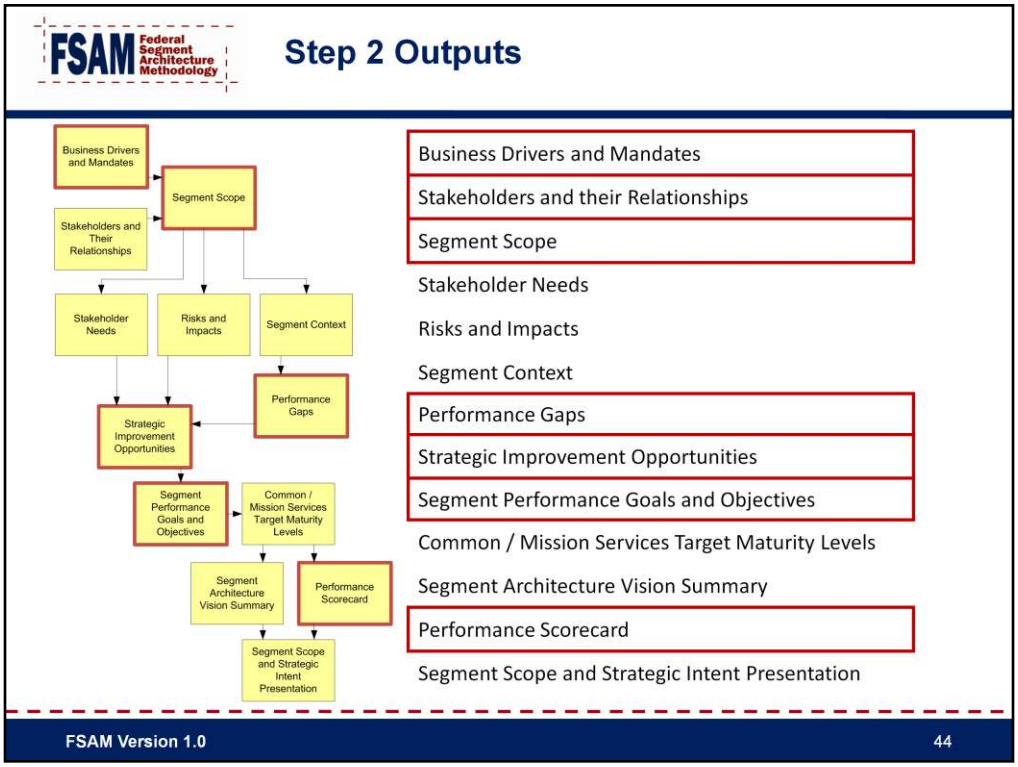
This activity, which results in the segment strategic intent, consists of reviewing the prioritized strategic improvement opportunities and developing the language to describe the target state vision, goals, outcomes, performance indicators, and the target product(s) and/or service(s) target maturity levels.

Note: If this is a common service segment, business scenarios may be defined at this point to describe the strategic improvement opportunities and clarify the vision of the segment.

In addition, the segment scope is collated with the outputs developed within this activity to produce a comprehensive document which summarizes the overall segment scope and strategic intent. This document is the final output of process step 2 and is validated and approved by the business owner(s) and/or the executive sponsor before proceeding to the next step.

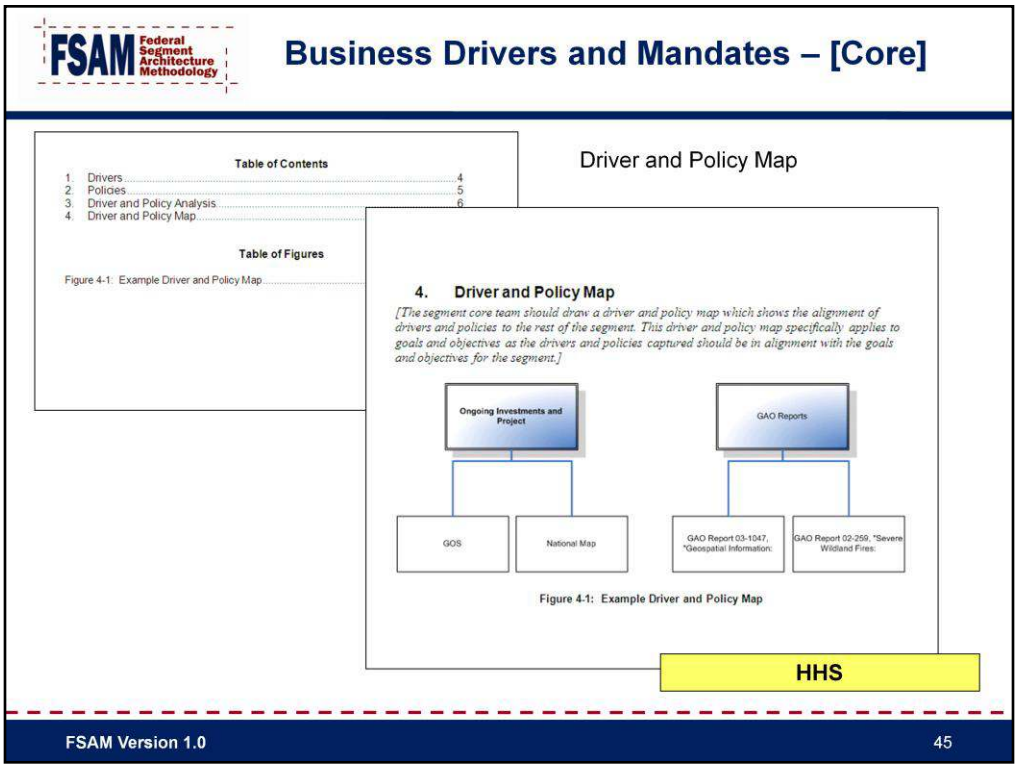


This activity includes packaging and gaining approval of the segment scope and strategic intent from the executive sponsor and business owner(s).



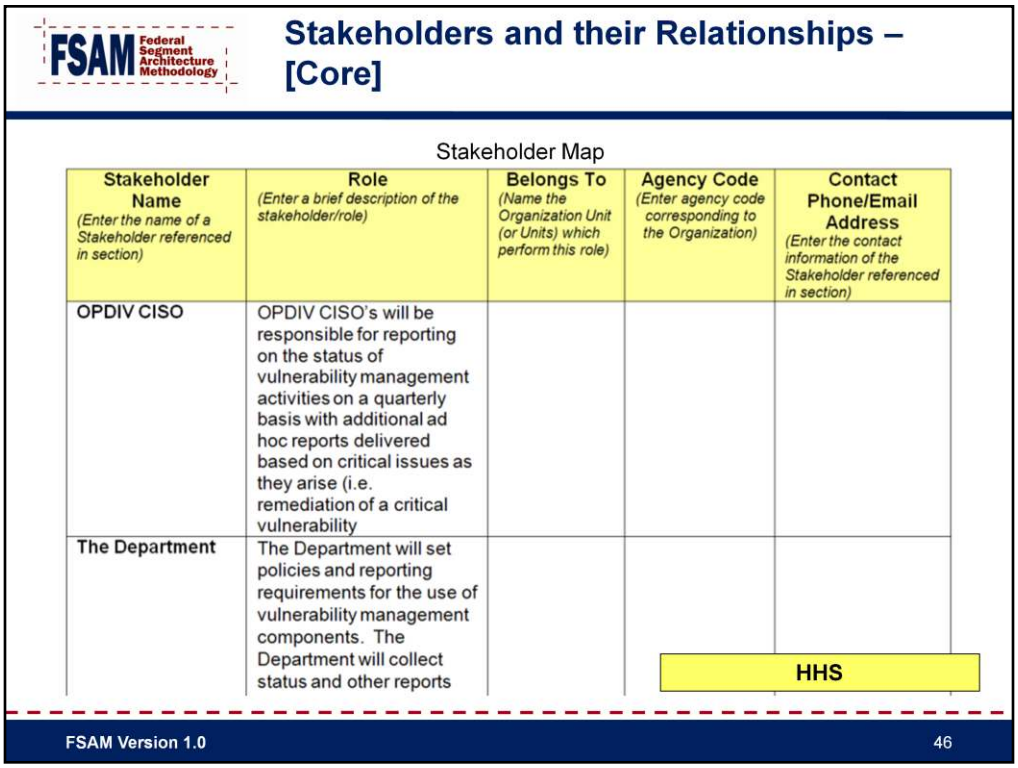
This graphic displays all of the outputs for Step 2. Each output is linked to a suggested analytical template. Outputs with red circles are "core" and the others are "recommended".

Note that suggested analytical techniques are included for activities within the methodology to better define what is core for a complete segment architecture in the form of descriptive (not prescriptive) guidance on how to accomplish the analysis. The suggested analytical techniques provide guidance as to what outputs are core for defining a complete segment architecture.



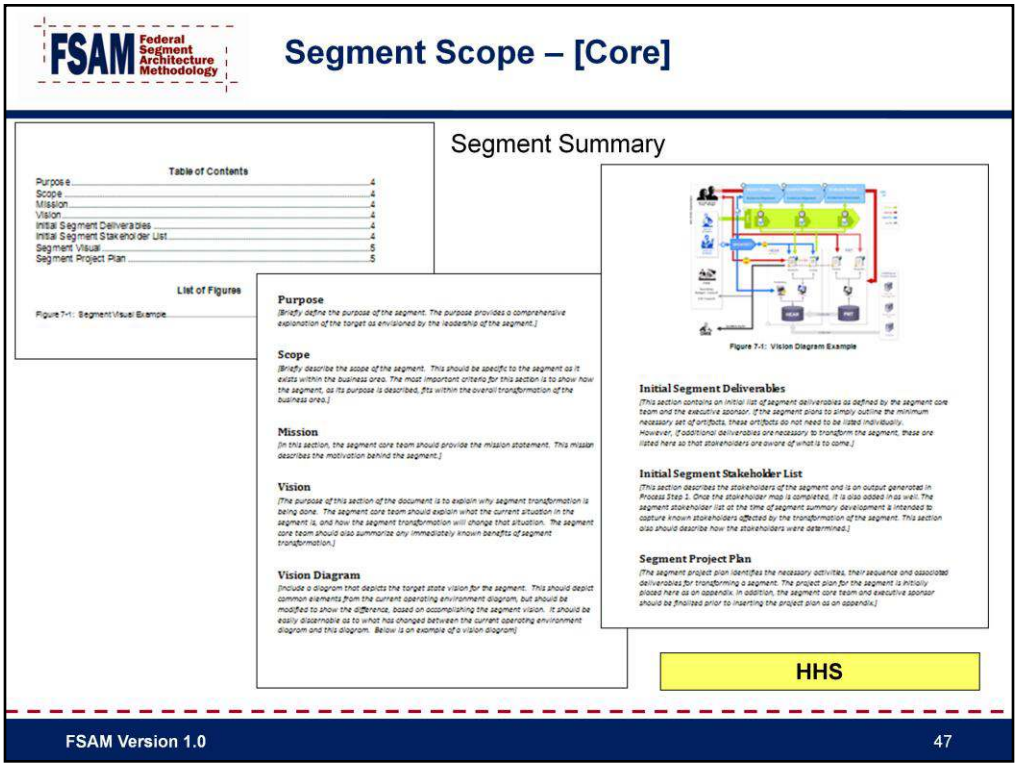
Driver and Policy Map

The driver and policy map analytical technique provides the foundation from which the segment's performance line-of-sight will be built, demonstrating the linkage to the strategic, business, and investment improvement opportunities identified in subsequent steps.



Stakeholder Map

The stakeholder mapping analytical technique can be used to identify the key stakeholders and their role with respect to the segment.

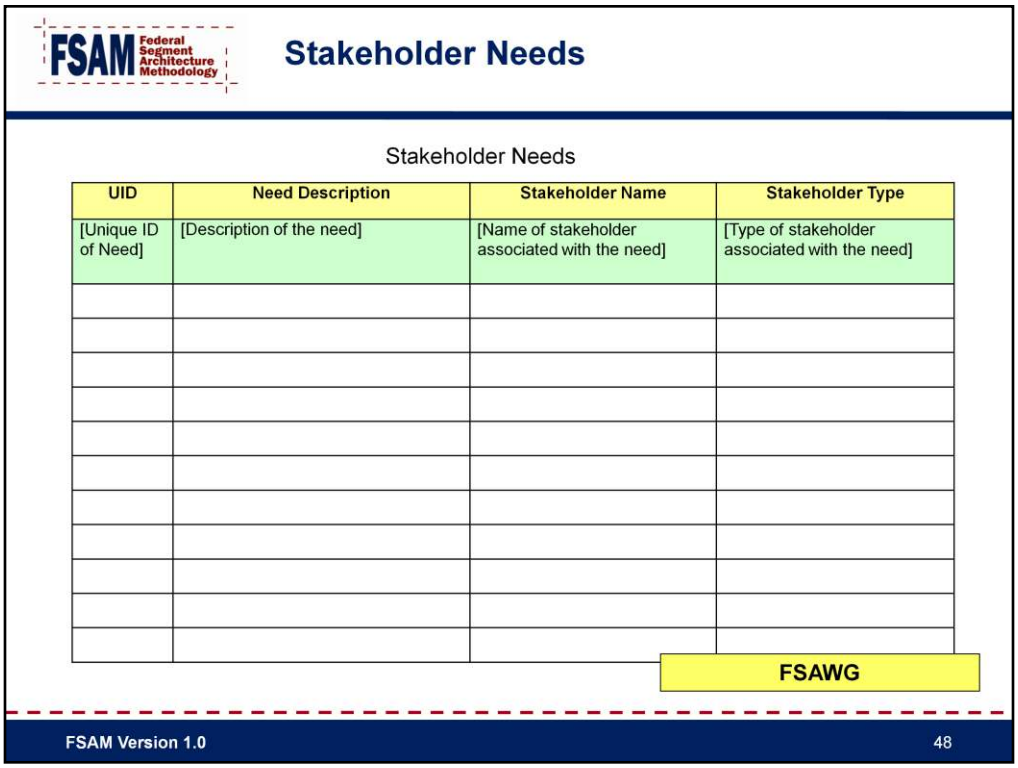


Segment Scope

With the segment scope, the segment summary analytical technique begins to take shape. This analytical technique is used to capture the segment scope and also requires additional information that will be completed later in the process. At this point in the process, the focus is on defining the scope to provide focus for subsequent analysis of the segment architecture upon the performance improvements to be achieved. Scoping the effort is the first step in avoiding downstream "analysis paralysis".

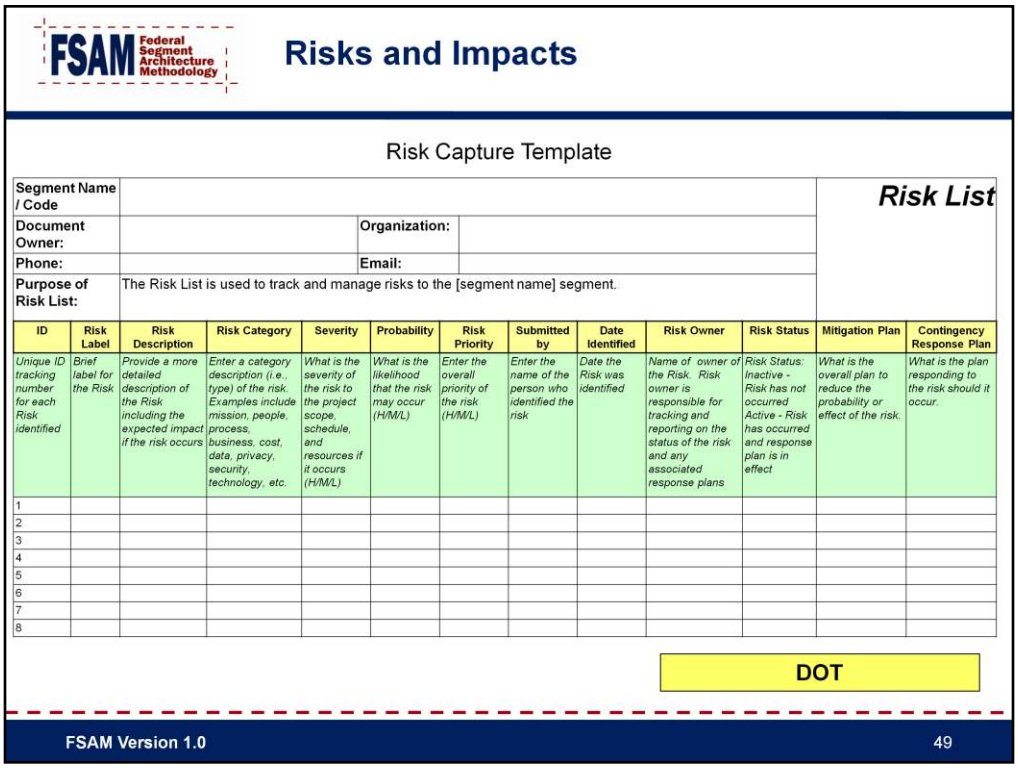
During the FSAM Activity 2.1, *Establish segment scope and context*, the segment purpose (from Step 1), segment scope, and mission sections of this analytical technique can be populated. The complete segment summary will be defined later in Step 2 to contain all the following information:

- Purpose
- Scope
- Mission
- Vision
- Vision Diagram
- Initial Segment Deliverables
- Initial Segment Stakeholder List
- Segment Project Plan



Stakeholder Needs

Stakeholder needs analysis technique provides a means to formulate the consolidated business needs of the segment. Stakeholder needs are foundational to establishing the segment scope. Stakeholder needs are useful in identify existing gaps and can be prioritized to help establish the performance improvement focus and define the overall scope for the segment architecture development effort.



FSAM Federal Segment Architecture Methodology

Risks and Impacts

Risk Capture Template

Segment Name / Code			***Risk List***
Document Owner:		**Organization:**	
Phone:		**Email:**	
Purpose of Risk List:	The Risk List is used to track and manage risks to the [segment name] segment.		

ID	Risk Label	Risk Description	Risk Category	Severity	Probability	Risk Priority	Submitted by	Date Identified	Risk Owner	Risk Status	Mitigation Plan	Contingency Response Plan
Unique ID tracking number for each Risk identified	*Brief label for the Risk*	*Provide a more detailed description of the Risk including the expected impact if the risk occurs*	*Enter a category description (i.e., type) of the risk. Examples include mission, people, process, business, cost, data, privacy, security, technology, etc.*	*What is the severity of the risk to the project scope, schedule, and resources if it occurs (H/M/L)*	*What is the likelihood that the risk may occur (H/M/L)*	*Enter the overall priority of the risk (H/M/L)*	*Enter the name of the person who identified the risk*	*Date the Risk was identified*	*Name of owner of the Risk. Risk owner is responsible for tracking and reporting on the status of the risk and any associated response plans*	*Risk Status: Inactive - Risk has not occurred Active - Risk has occurred and response plan is in effect*	*What is the overall plan to reduce the probability or effect of the risk.*	*What is the plan responding to the risk should it occur.*
1												
2												
3												
4												
5												
6												
7												
8												

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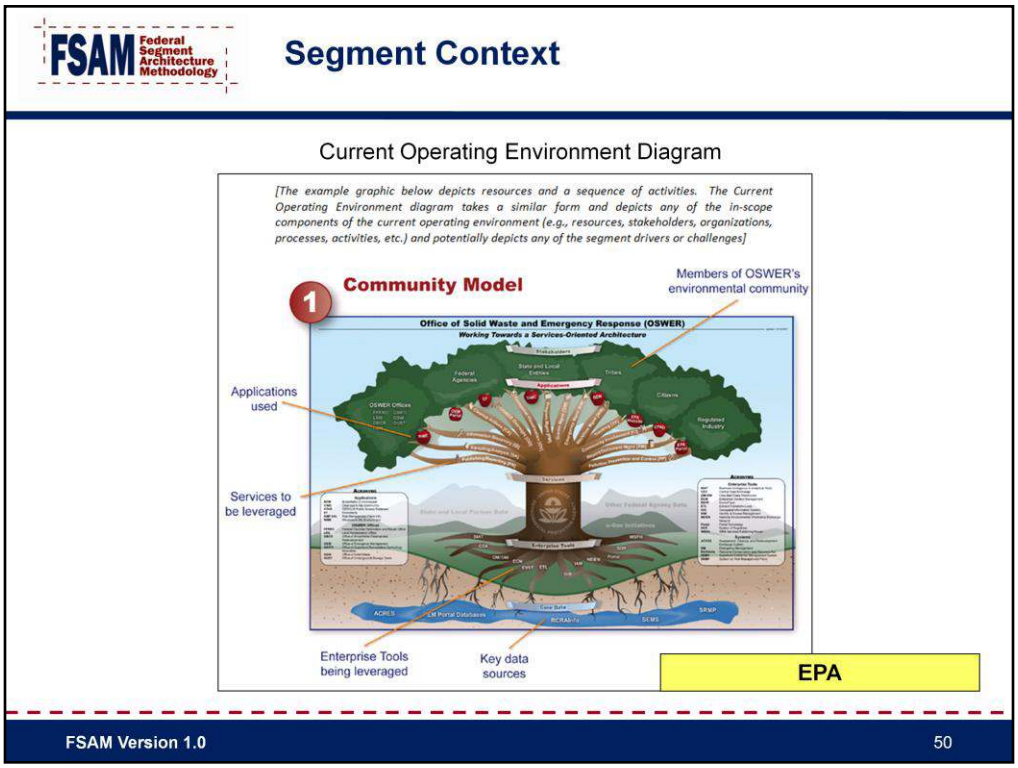
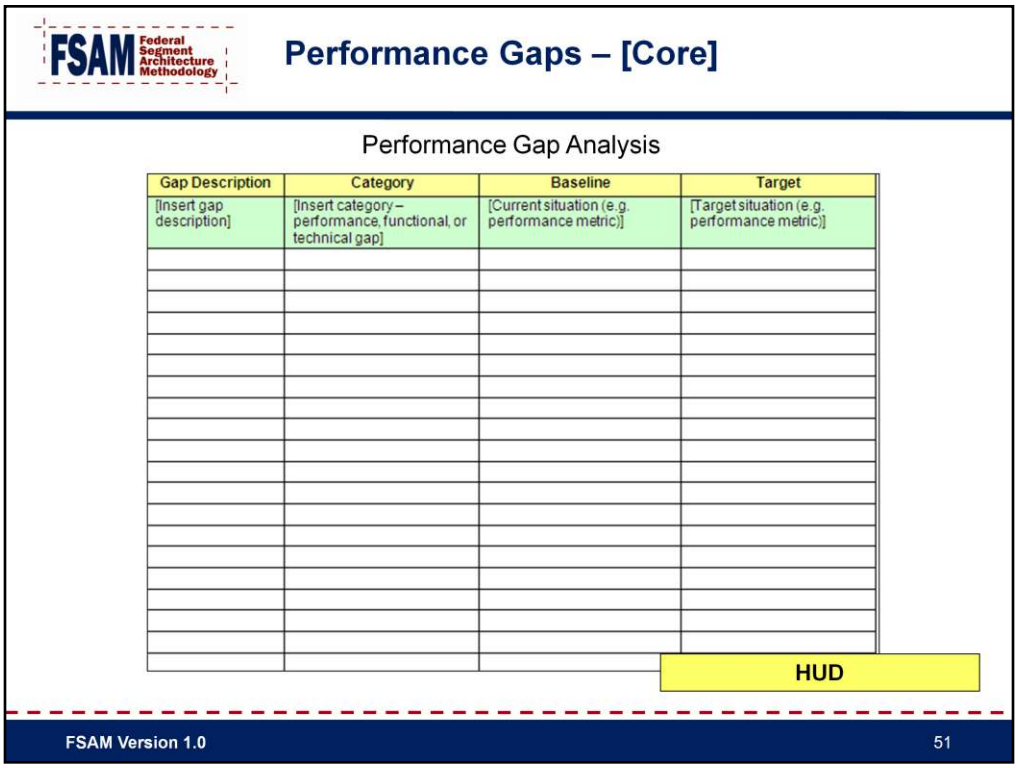
The risk capture template can be used to identify the high-level risks for the segment. This analytical technique is not intended to be used as a risk list for the project to develop the segment architecture, but rather as a comprehensive risk list associated with the operational concept of the segment. This list should include high-level risks associated with the segment mission, people, process, business, cost, data, privacy, security, technology, etc. The segment risk can be a key driver in determining the overall priorities for the segment architecture.



Current Operating Environment Diagram

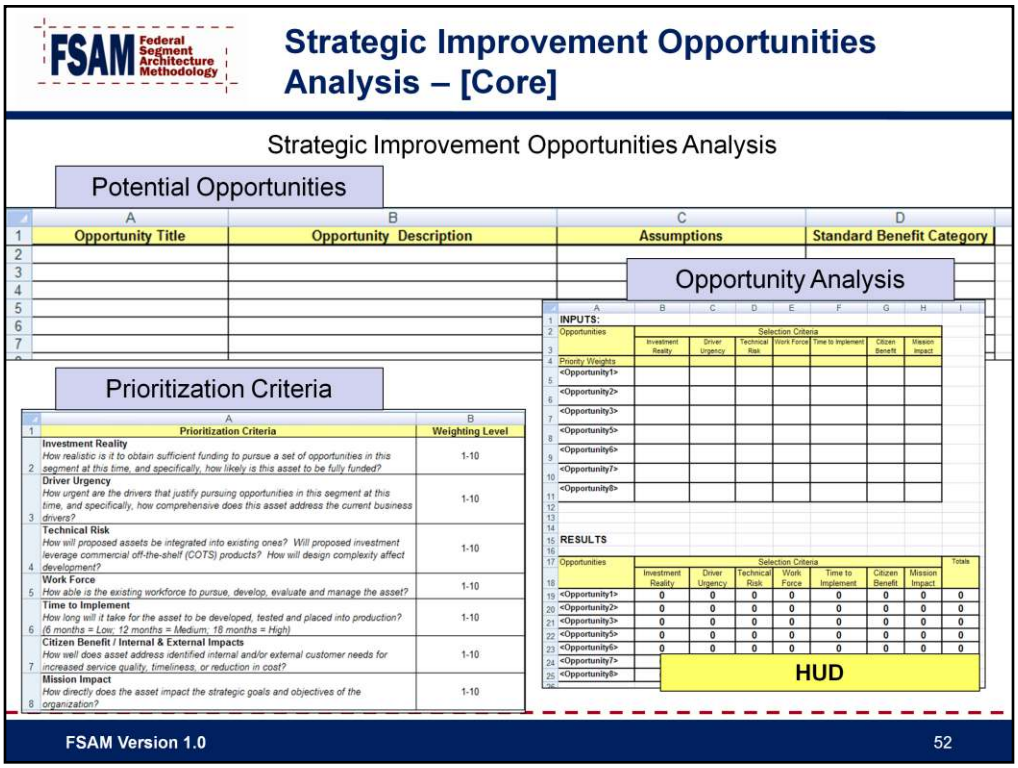
The Current Operating Environment Diagram from EPA is a suggested technique for the Segment Context output. The example graphic depicts resources and a sequence of activities.

The Current Operating Environment diagram takes a similar form and depicts any of the in-scope components of the current operating environment (e.g., resources, stakeholders, organizations, processes, activities, etc.) and potentially depicts any of the segment drivers or challenges.



Performance Gap Analysis

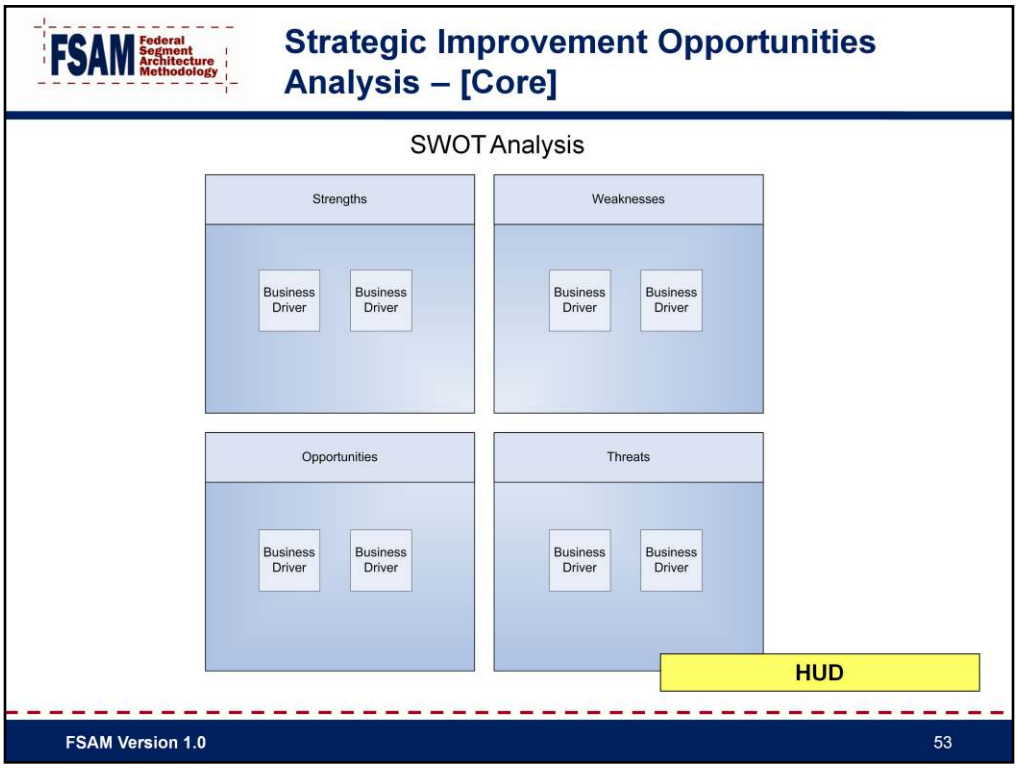
This performance gap analysis analytical tool is a spreadsheet that helps identify the As-Is state performance gaps in order to facilitate prioritization of performance improvement opportunities. The performance gap analysis documents any pre-existing performance architectures, OIG/GAO reports, customer surveys, or deficiencies in achieving PAR and PART metrics that are within the segment scope identified in Activity 2.1. Customer, business, process /activity, and technology performance information is collected for the "current state" in order to identify, quantify, and prioritize segment performance gaps between current and target performance metrics.



Strategic Improvement Opportunities Analysis

There are three worksheets (tabs) contained within this template: Potential Opportunities; Prioritization Criteria; and Opportunity Analysis.

- The Potential Opportunities Tab is leveraged to capture the potential opportunities to improve segment performance.
- The Prioritization Criteria Tab defines the criteria through which the opportunities will be prioritized.
- The Opportunity Analysis Tab takes the Potential Opportunities from the first tab and prioritizes them based on the criteria established in the second tab.



SWOT Analysis

SWOT Analysis is a strategic planning method used to evaluate the Strengths, Weaknesses, Opportunities, and Threats (SWOT). A SWOT Analysis is one analysis technique that could be leveraged to identify strategic improvement opportunities. The analysis technique involves identifying the internal and external factors that are favorable and unfavorable to achieving a goal or strategic objective.

Strengths and Weaknesses are internal value creating (or destroying) factors such as assets, skills or resources a company has at its disposal relatively to its competitors. They can be measured using internal assessments or external benchmarking.

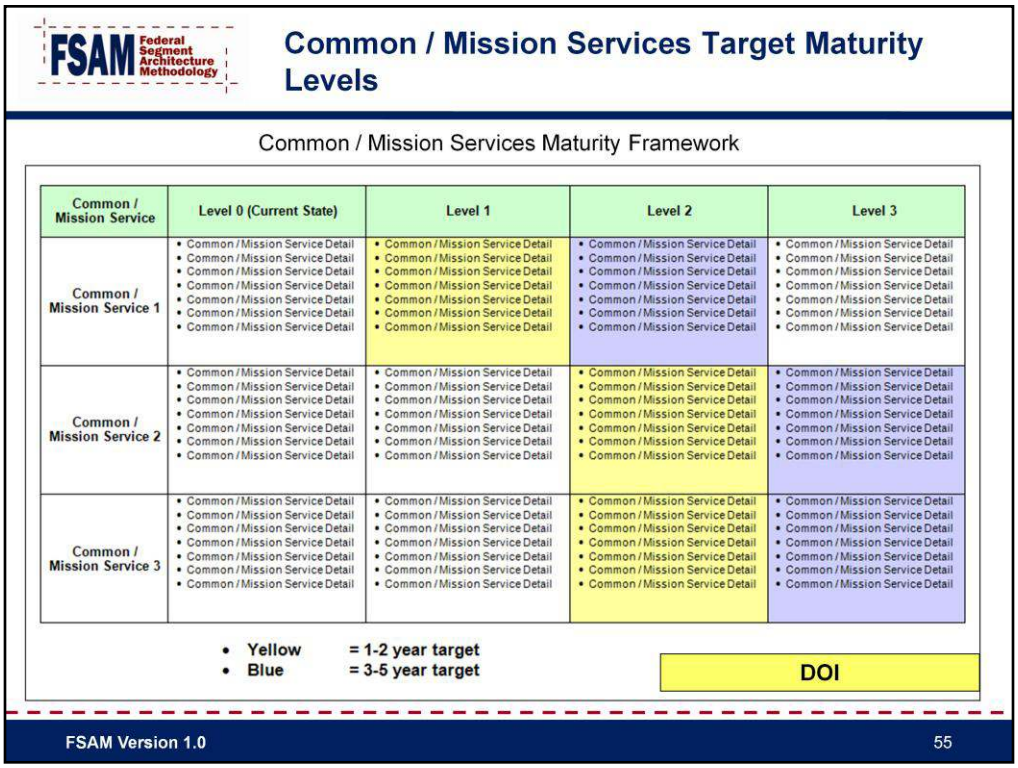
Opportunities and Threats are external value creating (or destroying) factors a company cannot control, but emerge from either the competitive dynamics of the industry/market or from demographic, economic, political, technical, social, legal or cultural factors.

For each SWOT factor identified, probabilities of occurrence should be established facilitating the development of fostering and/or mitigating activities. Strengths and Opportunities should be nurtured in order to ensure they are leveraged throughout the Segment life-cycle. Similarly, for Weaknesses and Threats, mitigation strategies should be developed in order to reduce the probability of occurrence and/or magnitude of impact.

	A	B	C	D
1	**Strategic Element**	**Opportunity**	**Rationale**	**Architecture Work Product**
2	Segment Strategic Goal/Objective <name>	List Opportunities	Describe rationale for strategic alignment	Target work product name
3	Business and IT Modernization Initiative <name>	List Opportunities	Describe rationale for strategic alignment	Target work product name
4	Business and IT Modernization Enterprise Services <name>	List Opportunities	Describe rationale for strategic alignment	Target Work Product Name
5	Cross-agency Initiative Name	List Opportunities	Describe rationale for strategic alignment	Target work product name
6				

Strategic Alignment of Opportunities

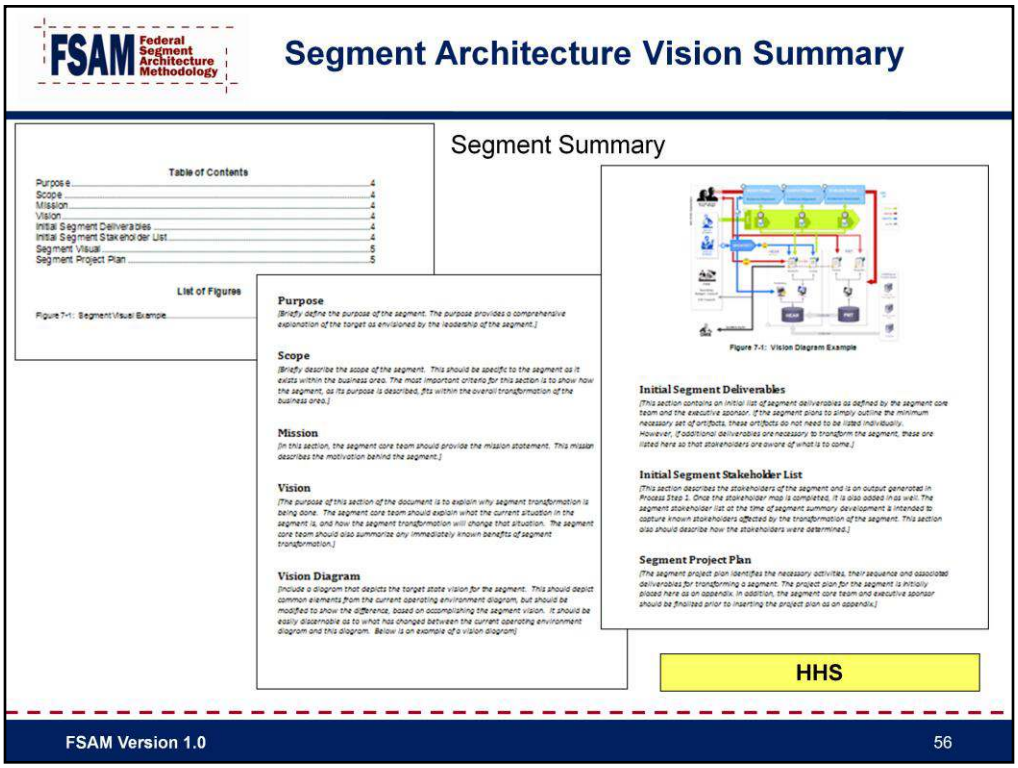
The strategic alignment of opportunities template provides an analytical technique that helps align the strategic goals and objectives with identified opportunities. This analysis includes providing an overall rationale and identifying any supporting segment architecture work product(s) that provides additional reference information supporting the alignment.



Common / Mission Services Target Maturity Framework

The template employed in this analysis technique is an example of a services maturity framework for an organization's common or mission services. Each row represents a common or mission service delivered by the organization towards which the Agency will devote resources in order to accomplish goals and objectives.

Different maturity levels could be targeted for each service of the organization and are described in the columns. These levels generally (but not always) provide for increases in sophistication, scale, and involvement going from left to right or from Level 1 to Level 3.

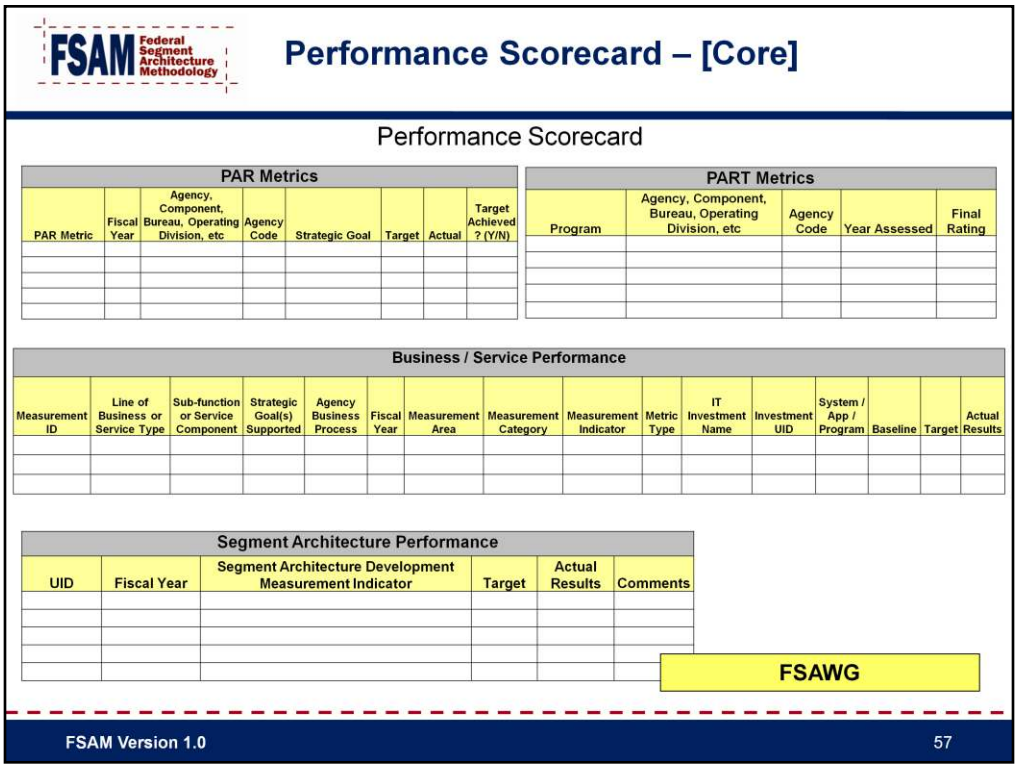


Segment Scope

In FSAM Activity 2.3, *Define segment strategic intent*, the segment summary that was initiated in Activity 2.1 is completed with additional information that outlines the segment vision and includes a stakeholder analysis. In addition, the segment scope outlines the deliverables and high-level project plan for completing the segment architecture. This information will be useful in scoping the breadth and depth of the subsequent architectural analysis to be performed in Steps 3 and 4.

When complete, the segment summary will contain all the following information:

- Purpose
- Scope
- Mission
- Vision
- Vision Diagram
- Initial Segment Deliverables
- Initial Segment Stakeholder List
- Segment Project Plan



Performance Scorecard

The performance scorecard consists of strategic, business, program and segment performance data. This analytical technique is designed to conforms to EAAF v3.0 reporting requirements. The purpose of the Segment Performance is to create a reporting framework to measure how well the activities and investments within a segment are performing.

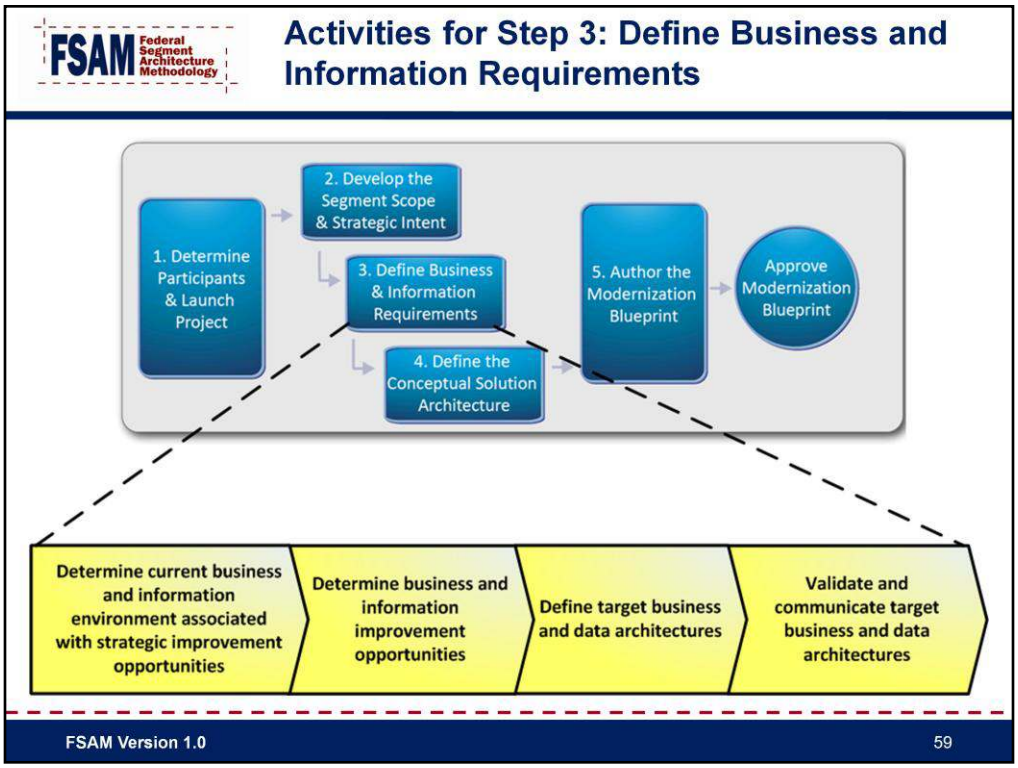
The performance scorecard developed by the FSAWG is an Excel spreadsheet with tabs for the following:

- Strategic Performance (PAR) -- reports on the PAR Key Indicators that are aligned to the Segment.
- Program Performance (PART) -- reports on the PART assessments for the programs aligned to the Segment.
- Business / Service Performance -- creates multiple lines of sight based on the BRM Sub-functions that the Segment performs. These sub-functions may be replaced with higher level business processes based on the Segment Business Architecture.
- Segment Performance -- captures the Segment Architecture Development metrics that measure the successes of the architecture effort.

The architect leverages the guidance in this process step to engage with key stakeholders to analyze the segment business and information environments and determine the business and information improvement opportunities that will achieve the target performance architecture. Within this step, the architect begins with by developing a broad, holistic view of the overall business and information requirements associated with the strategic improvement opportunities identified in the previous step. Information requirements include the information exchanges that relate to the critical business processes associated with the performance improvement opportunities. The business and data architectures are derived from these requirements. The business and data architectures developed at the end of this step may include the specification of business and information services respectively, and should be sufficiently complete and actionable to result in more efficient processes and allocation of resources.

At the end of this section, you should be able to:

- Describe the outcome of this step.
- Identify the activities and tasks associated with this step.
- Identify the core outputs of this step along with the other recommended “non-core” outputs
- Describe how FSAM helps define how well the current (as-is) business and information environment meets the needs of the segment stakeholders
- Describe how FSAM helps articulate the segment’s goals and performance objectives into target business and data architectures expressed within business functions, business processes, and information requirements
- Describe how FSAM provides guidance on determining the appropriate level of analysis of business and information requirements to form actionable recommendations
- Describe how a recommendation related to the current business and information environments that fulfills the target performance architecture can be effectively described using the FSAM adjustment profile analytical technique

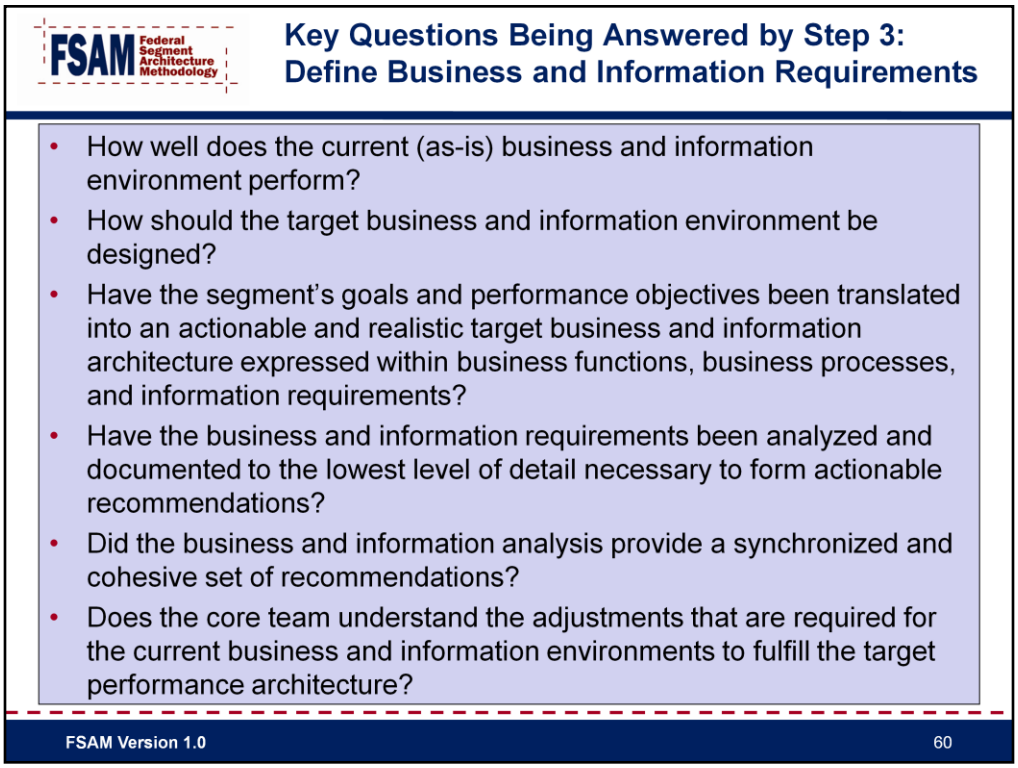


Step Purpose:

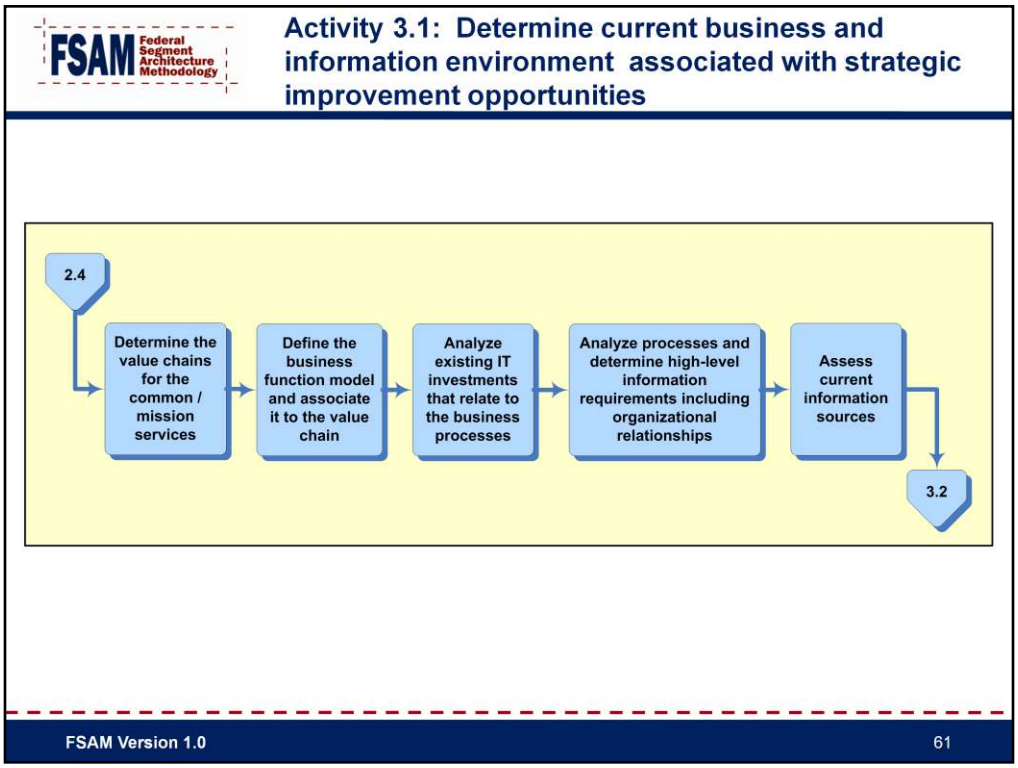
The overall purpose of this step is to define the adjustments that are required by the current business and information environments to achieve the target performance architecture, including delivery of common / mission services.

Step Outcome:

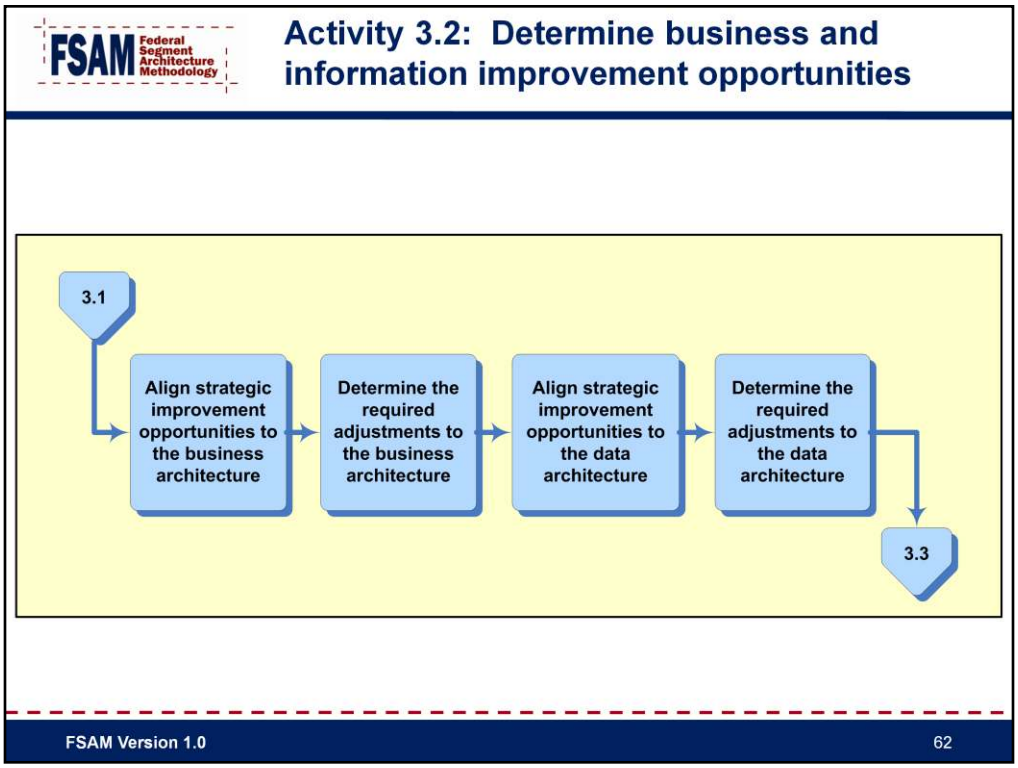
The outcome of this process step is an understanding of the adjustments that are required by the current business and information environments to achieve the target performance architecture, including delivery of common/mission services.



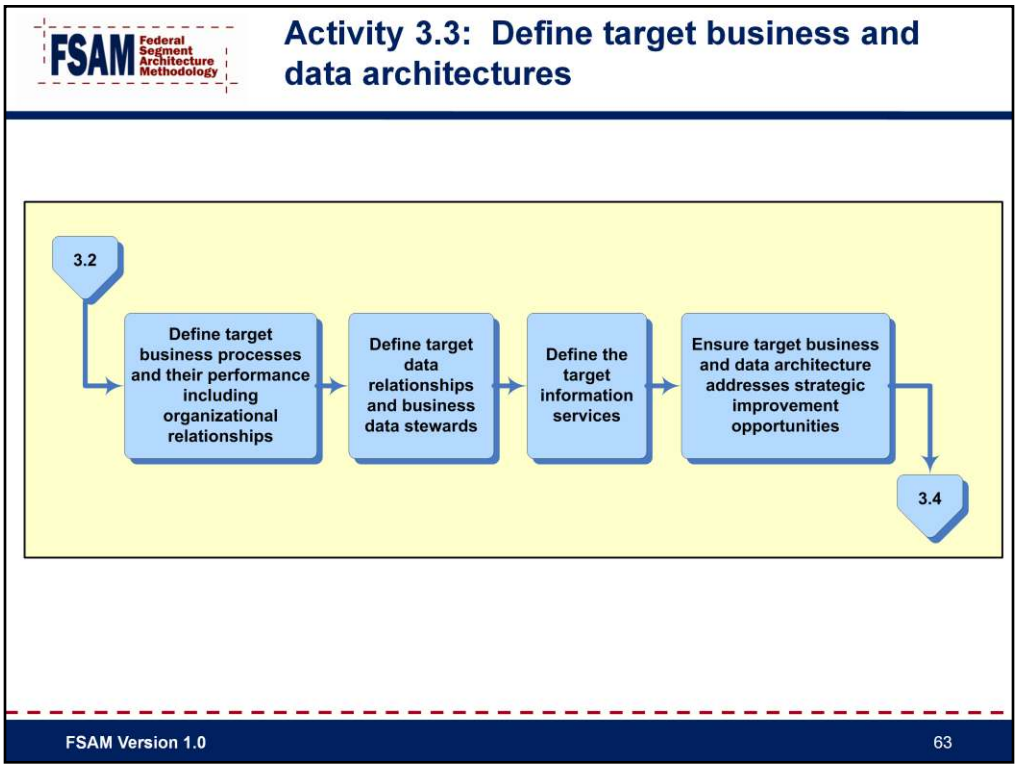
At the conclusion of Step 3, the core team should have answers to these questions as they relate to their segment.



This activity includes an analysis of the current business and information environment in the context of the strategic improvement opportunities identified in process step 2. Specifically, the architects need to define and analyze the portions of the current business and information requirements that are relevant to the strategic improvement opportunities and the common / mission services identified in process step 2. The intent is to analyze the current business and information environment so that in subsequent activities any adjustments to the current state can be determined and strategic improvement opportunities can be realized.



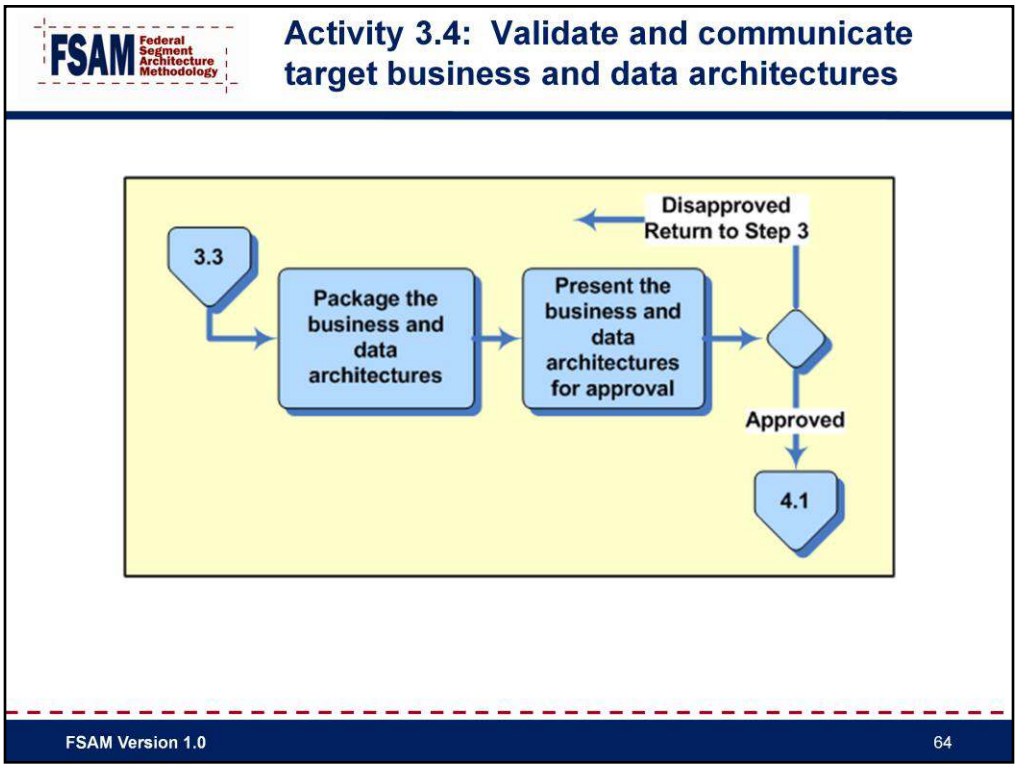
The segment architect should analyze the gap between the current and required business environment in the context of the strategic improvement opportunities identified in process step 2. This activity provides guidance for determining which elements within the current state business and information environment must change to meet the desired strategic improvement opportunities. The segment architect should describe the needed changes to the business and information environments and determine whether any of these changes are currently addressed with planned initiatives or investments. The result of this activity is an articulation of the changes that must be made within the target business and data architectures (to be defined in the next activity).



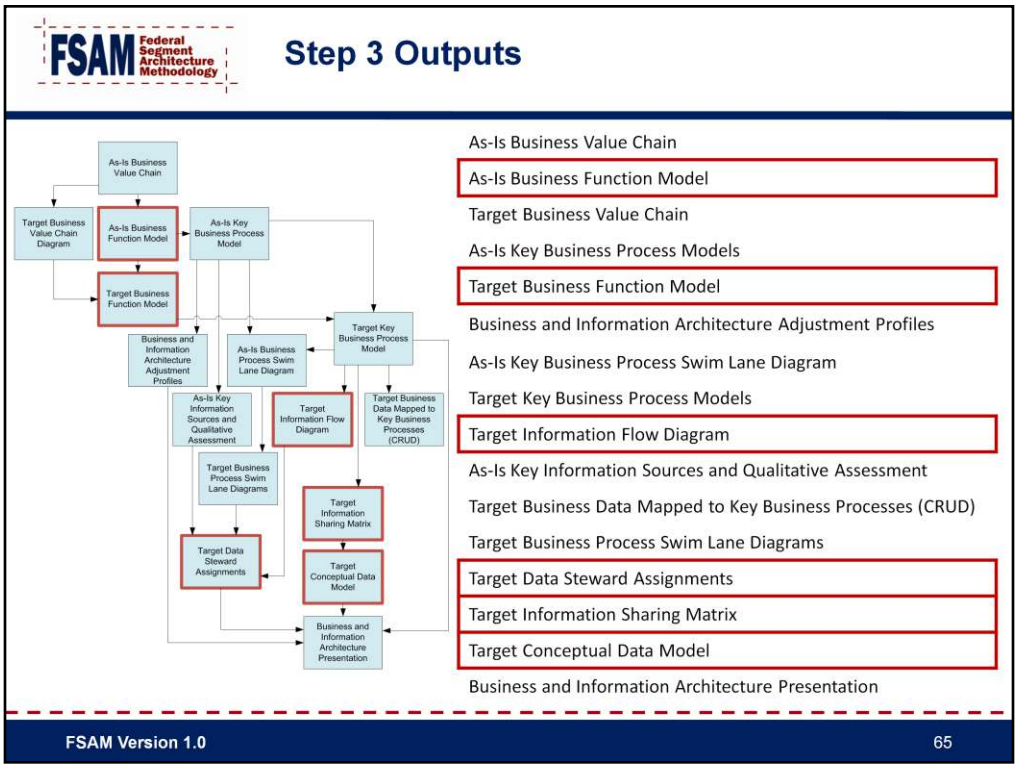
During this activity, the architect should define the optimal target business and data architecture to reflect each of the business and information improvement opportunities identified in the prior activities. During this activity, the architect will define the target business and information environments by developing target versions of the current state business and information artifacts previously developed. The scope of this analysis should focus only on critical business processes and information at an appropriate level of detail and granularity so as to:

- Identify the target state business processes and information
- Facilitate the derivation of the data architecture from the business architecture
- Maintain traceability between the business architecture and data architecture

In the end, the target business and data architectures will be recommended for implementation. The result will be to achieve the strategic improvement opportunities from process step 2, to operationalize the organization's data reference model (DRM), and to maintain compliance with information assurance and security mandates.



Gain approval from the core team in regards to the target business and data architecture.



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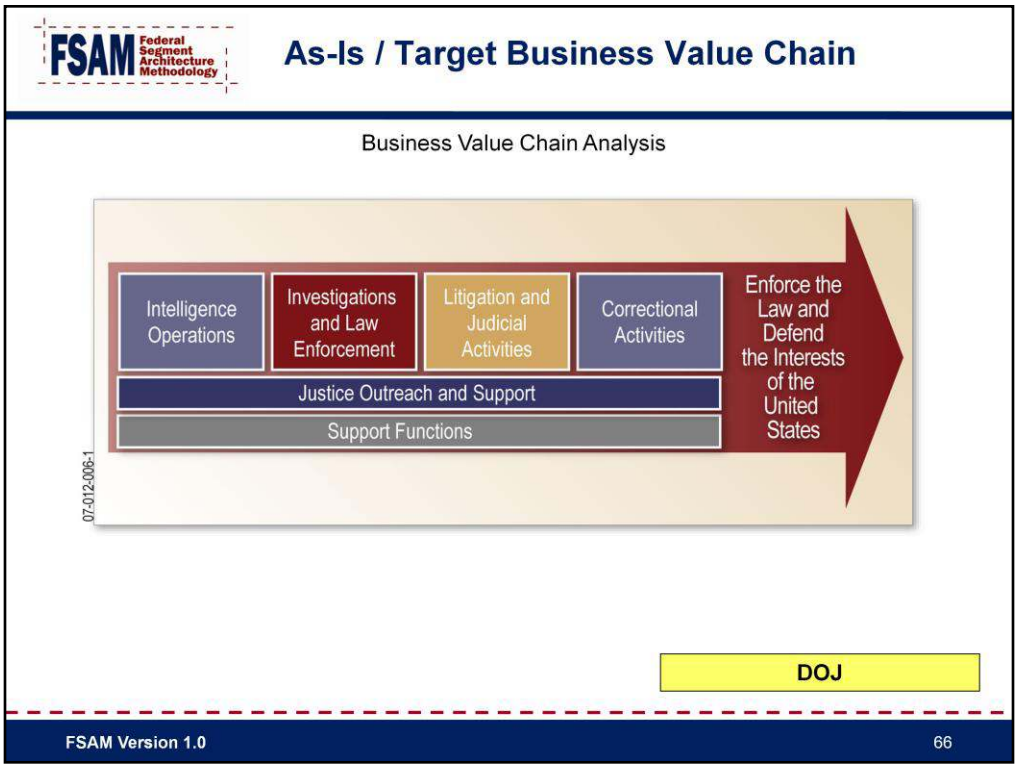
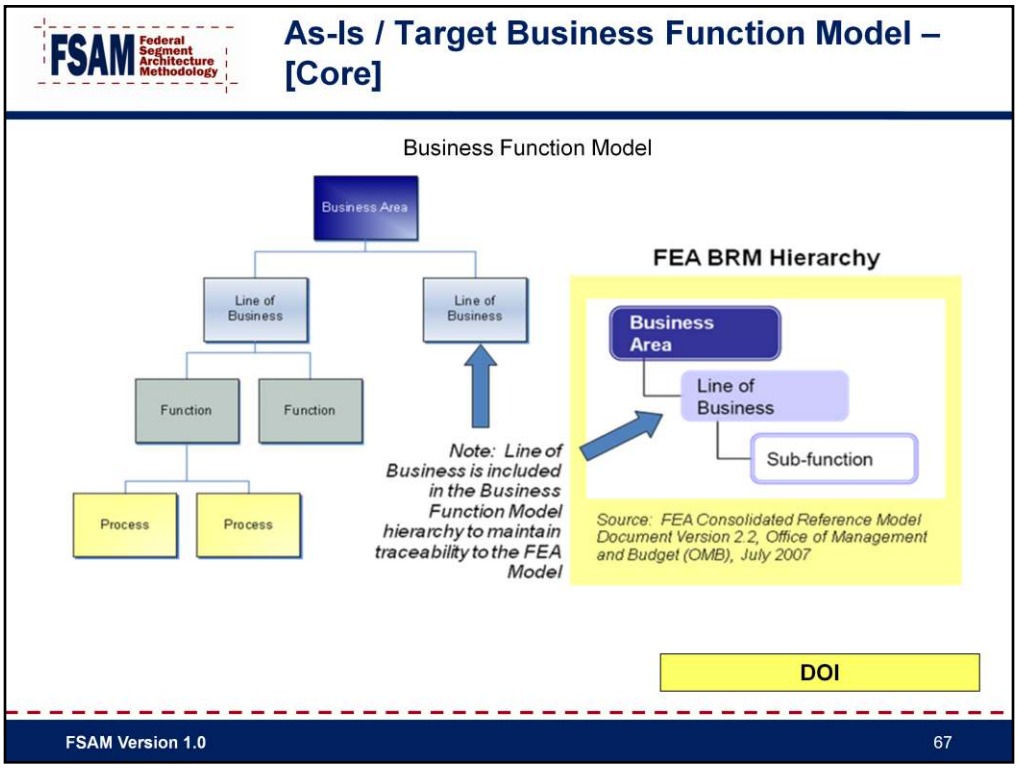


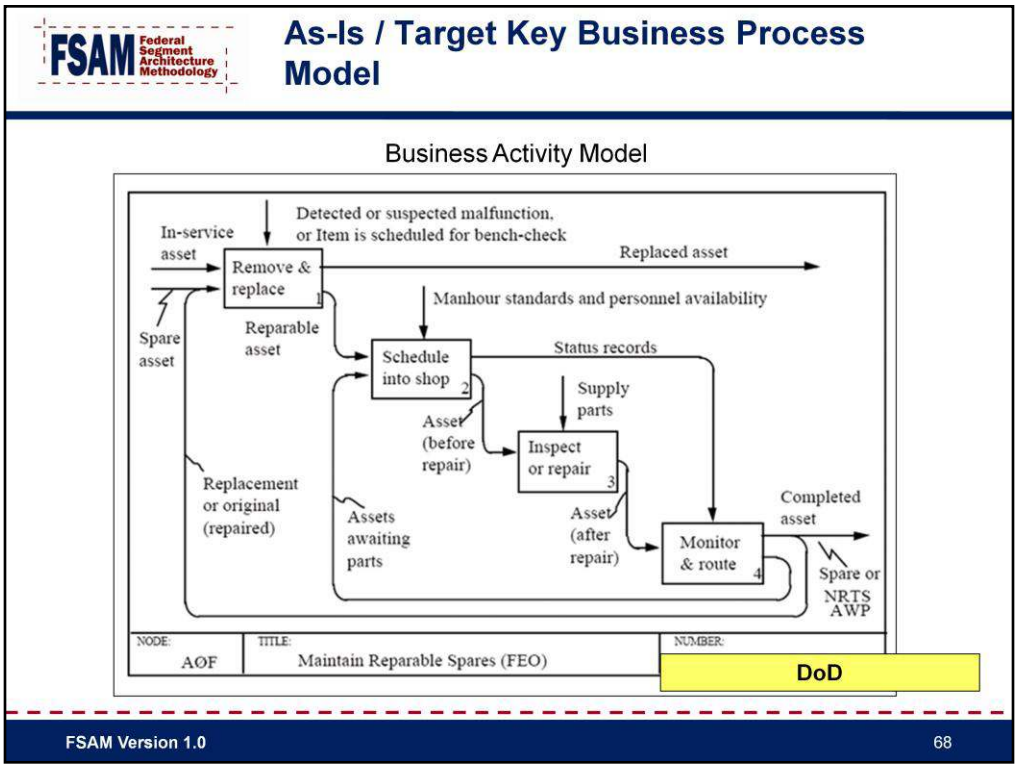
Business Value Chain Analysis

The value chain is used to identify the business processes and how they string together to deliver a product or service defined in Step 2. The value chain identifies the high-level logical ordering of the chain of processes that deliver value.



Business Function Model

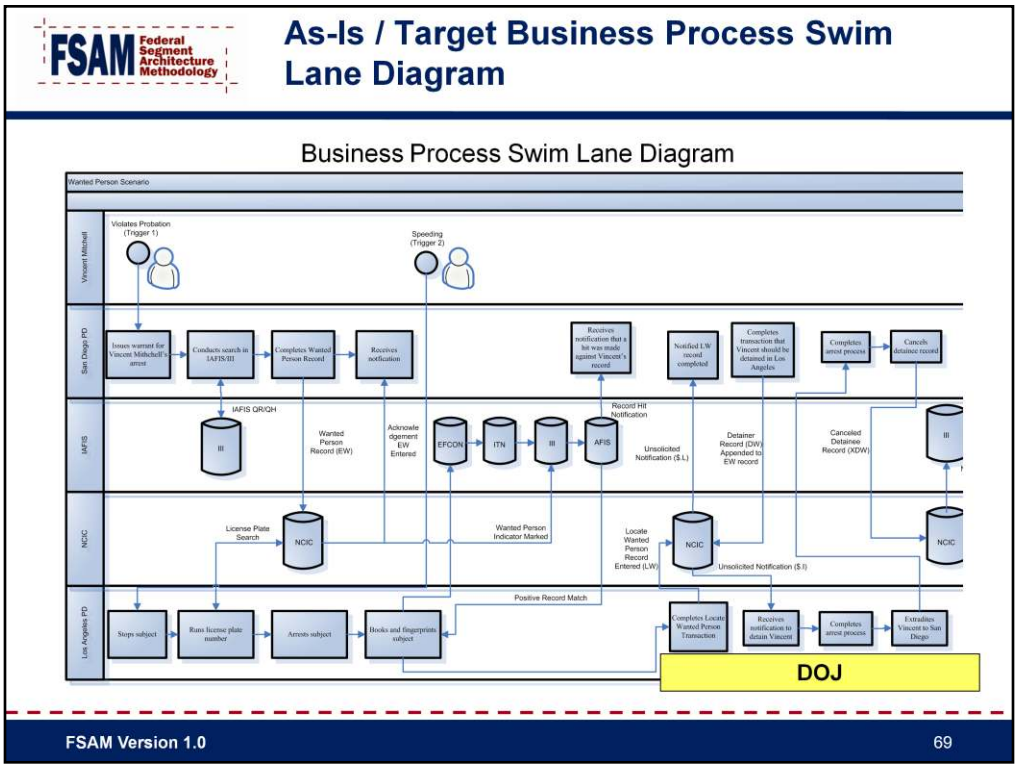
The business function model identifies the business functions that will be affected by potential process improvements and ensures that processes are analyzed in context with the correct business functions and that appropriate mappings to the FEA BRM are established.



Business Activity Model

The target key business process activity model defines optimized processes that are required to achieve segment performance objectives. This process modeling technique helps identify the high-level focus areas for downstream business process reengineering that will be performed during the actual execution of the segment transition plan.

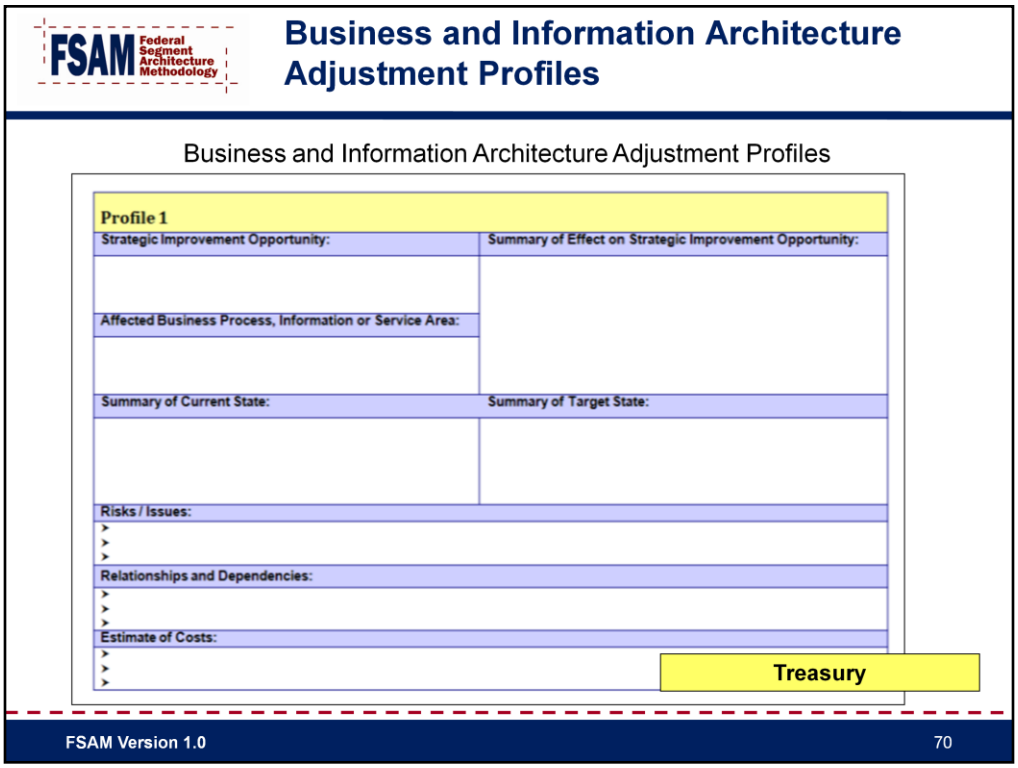
This analytical technique also assists in determining high-level information and information security requirements. Information exchanges identified in this analytical technique are further described in the FSAM Step 3 Information Sharing Matrix.



Business Process Swim Lane Diagram

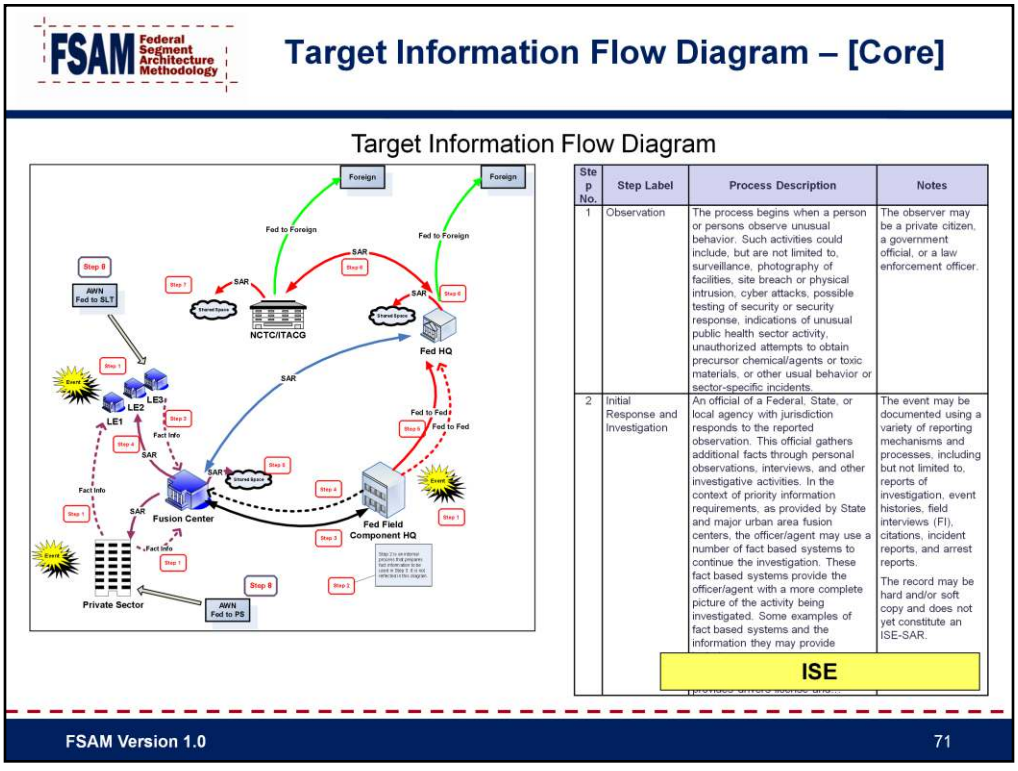
As an alternative to business process modeling, the swim lane diagram is used to show the organizational mapping of the target key business processes. This model is especially useful with both optimized process and organizational roles that are required to achieve segment performance objectives.

This analytical technique also assists in determining high-level information and information security requirements. Information exchanges identified in this analytical technique are further described in the FSAM Step 3 Information Sharing Matrix.



Business and Information Architecture Adjustment Profiles

The business and information architecture adjustment profiles group related opportunities and formally documents the limitations of the current state, desired characteristics of the target state, how the target state will help achieve strategic improvement opportunities, and risk and cost considerations.

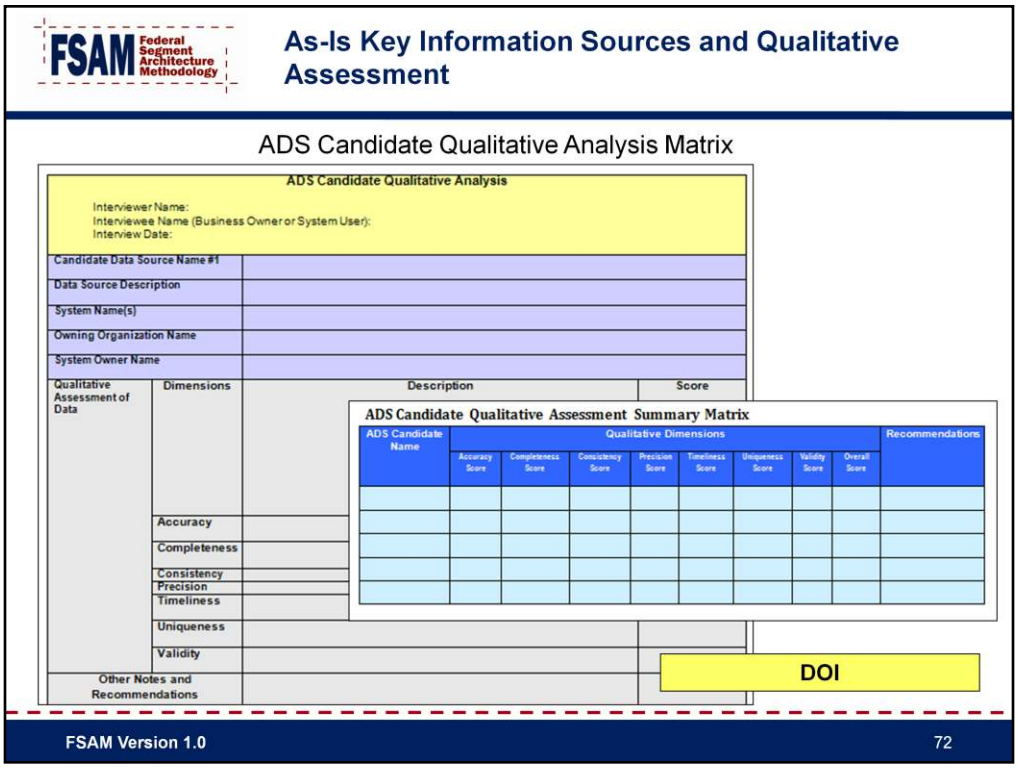


Target Information Flow Diagram

The target information flow diagram assists in discovery of opportunities for re-use of information in the form of information-sharing services, within and between segments. It essentially documents the use case for information sharing within the segment. Information exchanges identified in this analytical technique are further described in the FSAM Step 3 Information Sharing Matrix.

The example we see here of a Target Information Flow Diagram and its associated description is directly attributable to the Information Sharing Environment (ISE) business context associated with Suspicious Activity Reporting (SAR). The diagram depicts the flow of information across providers and consumers. The associated description provides the relevant detail for the business context associated with the target information flow.

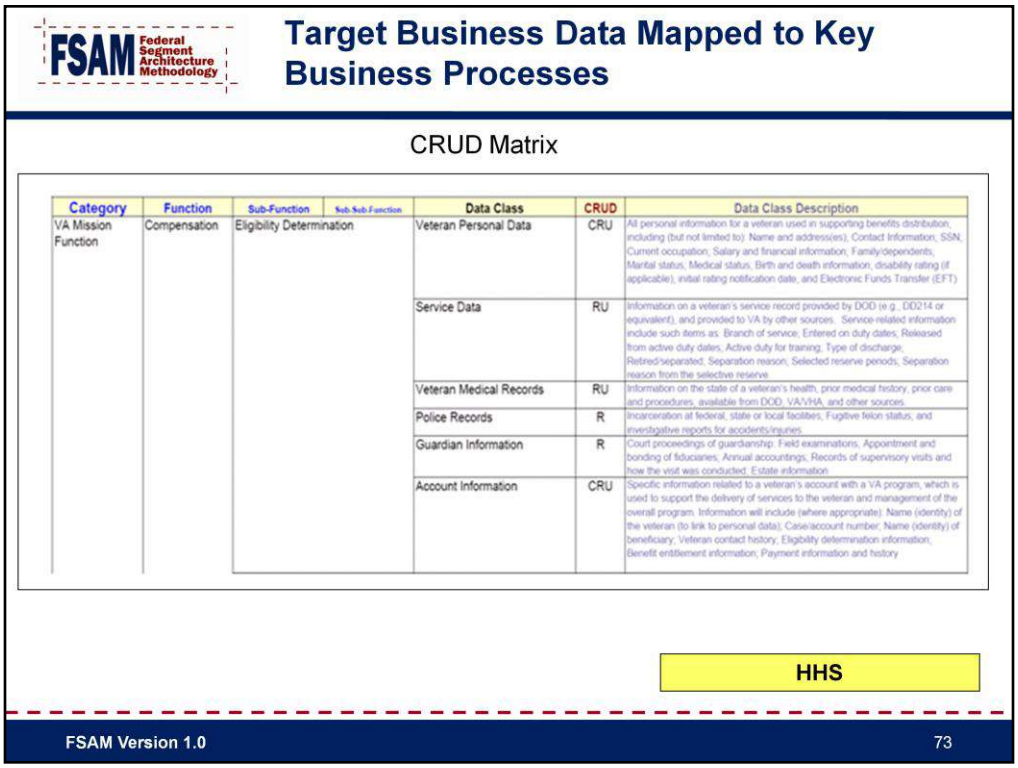
The diagram is accompanied by a table that provides a description of steps, process description and additional notes for the business context associated with the information flows. Steps provide a logical ordering of the processes that comprise the business context. Process descriptions provide detail of the activities related to the information flows described in the diagram



ADS Candidate Qualitative Analysis Matrix

The as-is key information sources and qualitative assessment documents the sources of information in the current state and determines the most trusted sources of data by information class and data entity.

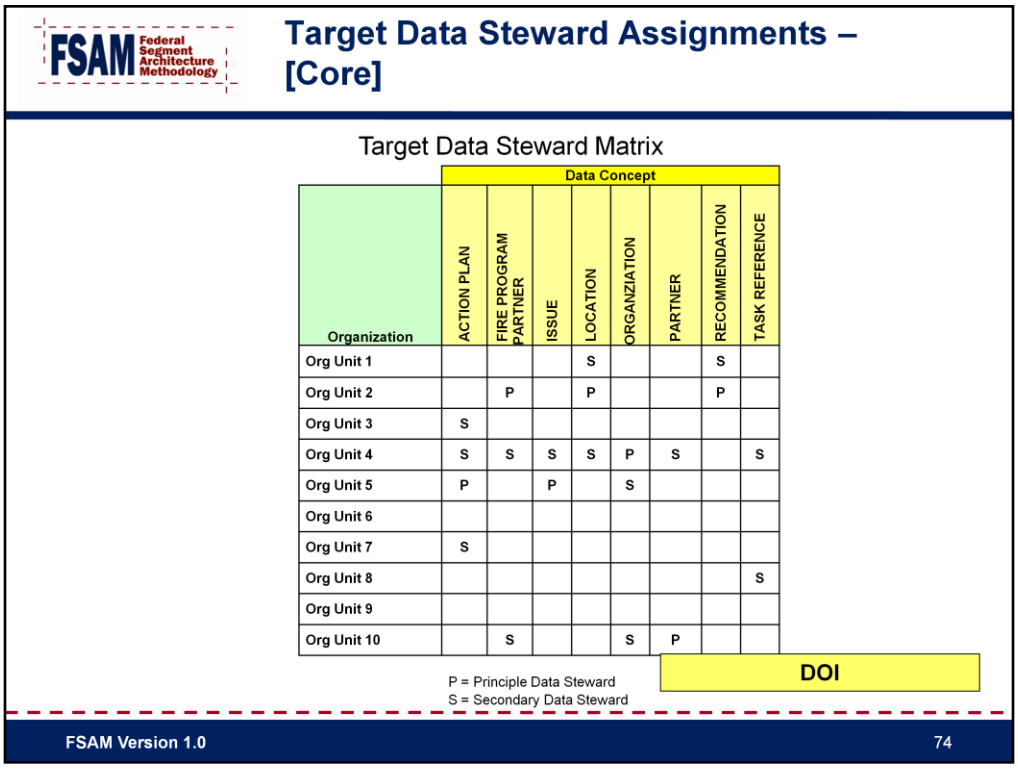
During this analysis, recommendations for candidate ADS may be developed. The goal of ADS identification is to determine the most trusted sources of data by information class and data entity through a structured analysis. This analysis produces DRM and SRM touch points for information exchanges.



CRUD Matrix

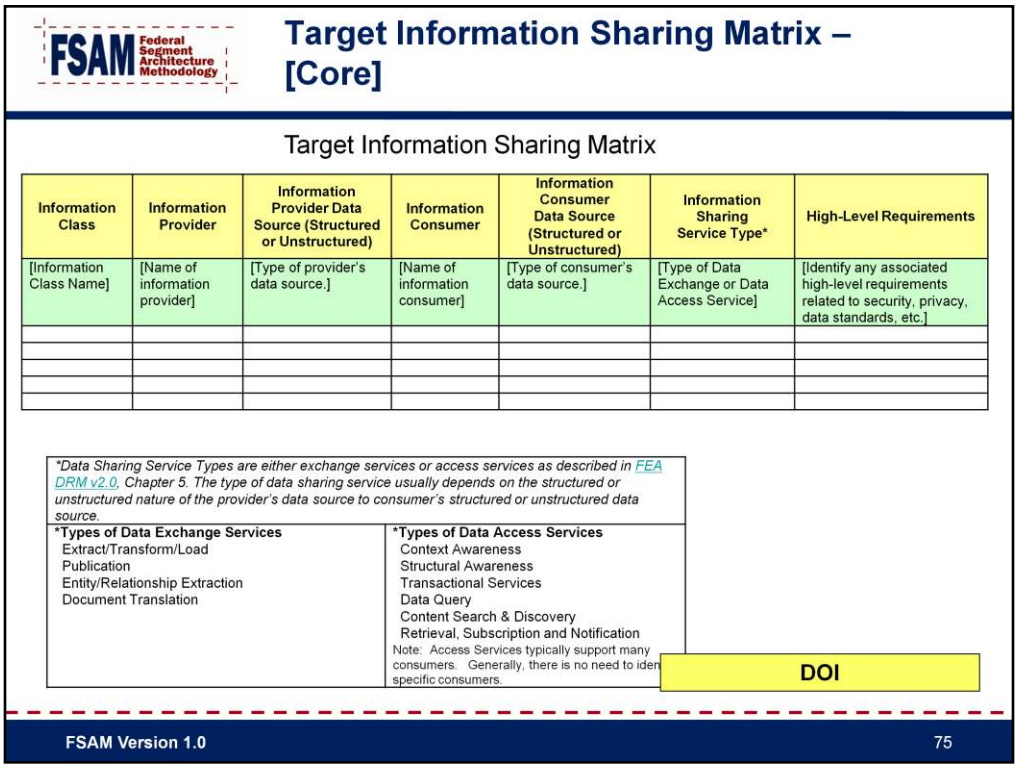
The CRUD (Create / Read / Update / Delete) matrix maps the data entities to the business processes and helps identify: (1) what data actions take place with each process, (2) what data are used by the business.

The CRUD matrix results table shows the alignment of each data object to business processes and specific activities (i.e., create, read, update, delete) that are performed on the data object. The activities are performed by specific business processes captured as part of the segment, so what this matrix will show is how segment business processes affect and change specific data within the segment.



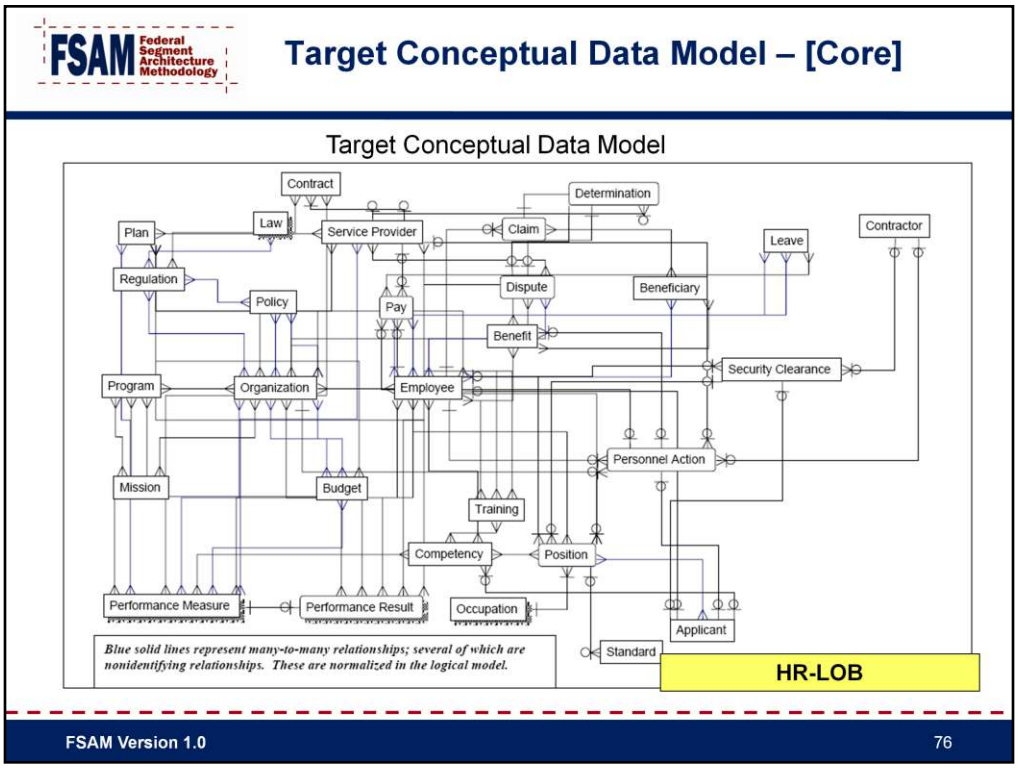
Target Data Steward Matrix

The target data steward matrix maps the information classes to the organizations containing the data stewards. Data stewards are responsible for the creation, maintenance, and quality of data to support target business activities in the target environment.



Target Information Sharing Matrix

Along with the target information flow diagram, the target information sharing matrix assists in discovery of opportunities for re-use of information in the form of information-sharing services, within and between segments. Specifically, the target information sharing matrix describes the type of information access and exchange services used for information classes associated with information flows that are described in the information flow diagram.



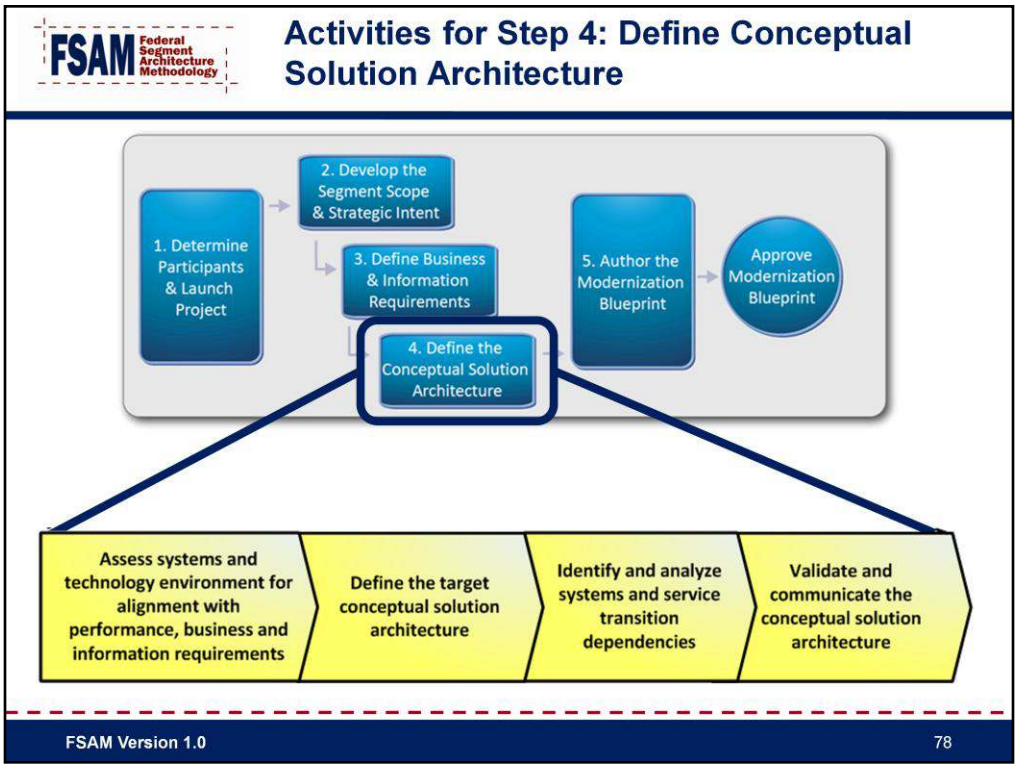
Target Conceptual Data Model

The target conceptual data model provides the structure and terminology for information and data in the target environment and includes subject areas, information classes, key entity types, and relationships.

The architect leverages the guidance in this process step to engage with key stakeholders in order to produce the *conceptual solution architecture*. The conceptual solution architecture is an integrated view of the combined systems, services, and technology architectures that support the target performance, business, and data architectures developed in the preceding process steps. This process step also includes guidance for developing recommendations for transitioning from the current (as-is) state to the target state. The conceptual solution architecture produced at the end of this step is of benefit to segment and solution architects as well as to downstream capital planning and budget personnel.

At the end of this section, you should be able to:

- Describe the outcome of this step.
- Identify the activities and tasks associated with this step.
- Identify the core outputs of this step along with the other recommended "non-core" outputs
- Describe how FSAM helps identify the existing systems and services are deployed within the as-is conceptual solution architecture.
- Describe the FSAM analytical technique(s) that help assess how well the existing systems and services currently support the mission and identify which systems and services should be considered for retirement and / or consolidation.
- Describe how FSAM provides guidance on selecting target systems, components, and services that are reusable (e.g., what external services (e.g., FTF) can be leveraged in the target architecture?)
- Describe how FSAM supports aligning the conceptual solution architecture with the target performance, business, and data architectures developed in prior steps.



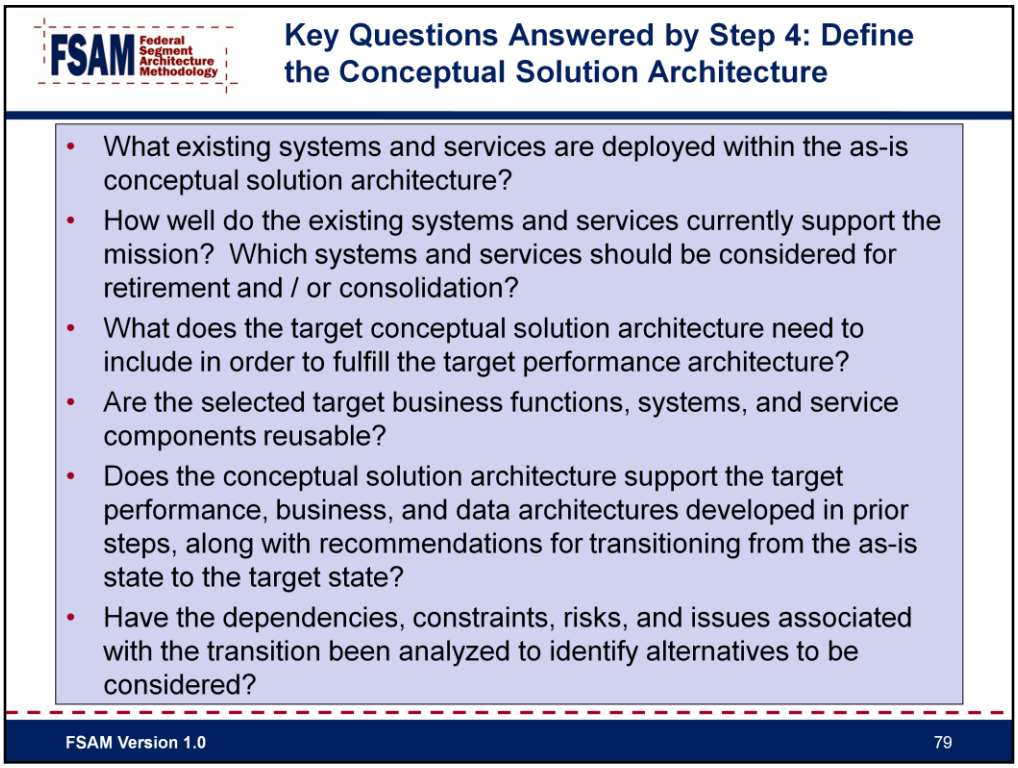
Step Purpose:

The *Define the Conceptual Solution Architecture* process step includes activities that help the architect define the *conceptual solution architecture* for the target state. The term *conceptual solution architecture* defines the segment target systems and services, the supported business functions, and the relationships between them and the technology that supports them, including the technical and service components and their underlying standards.

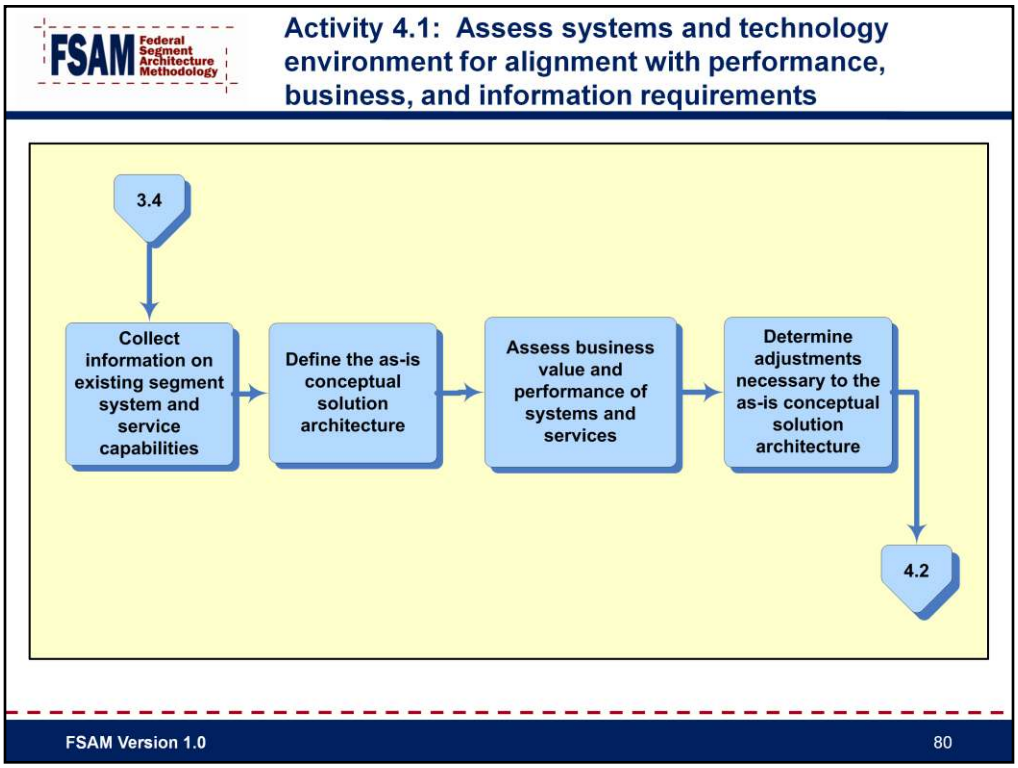
Target services may include business services, enterprise services, and other technical service components. The conceptual solution architecture also describes the segment boundaries defined by interfaces with external customers, systems, services, and organizations. As such, the conceptual solution architecture provides an integrated view of the combined systems, service, and technology architectures.

Step Outcome:

- The outcome of this step is the conceptual solution architecture that support the target performance, business and data architectures developed in the preceding steps, along with recommendations for transitioning from the as-is state to the target state.



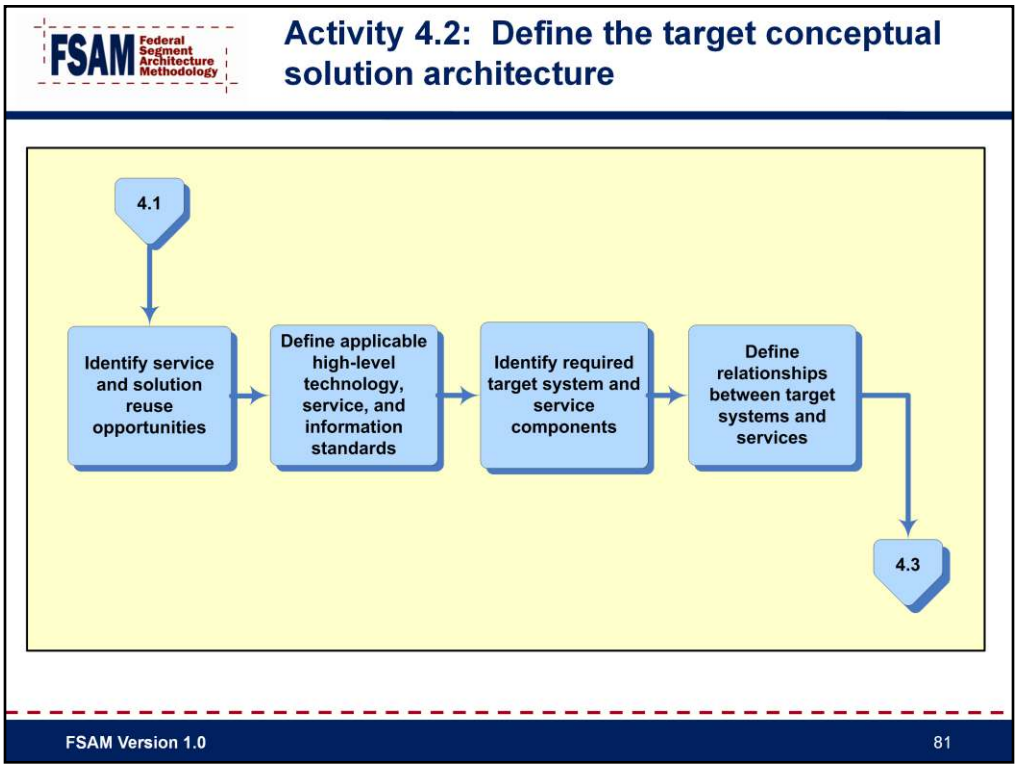
At the conclusion of Step 4, the core team should have answers to these questions as they relate to their segment.



This activity builds upon the analysis of the segment's business and information environment performed in process step 3 and is within the scope identified in process step 2. The focus of this activity is to collect and analyze information pertaining to the as-is use of systems and services and how well those systems and services support the performance, business, and data architectures. This activity includes assessing the segment's systems and services across several dimensions, including business, data and technology alignment; service management; and maturity. This activity also includes a high-level assessment of existing system interfaces within the segment and the data that is exchanged among those systems.

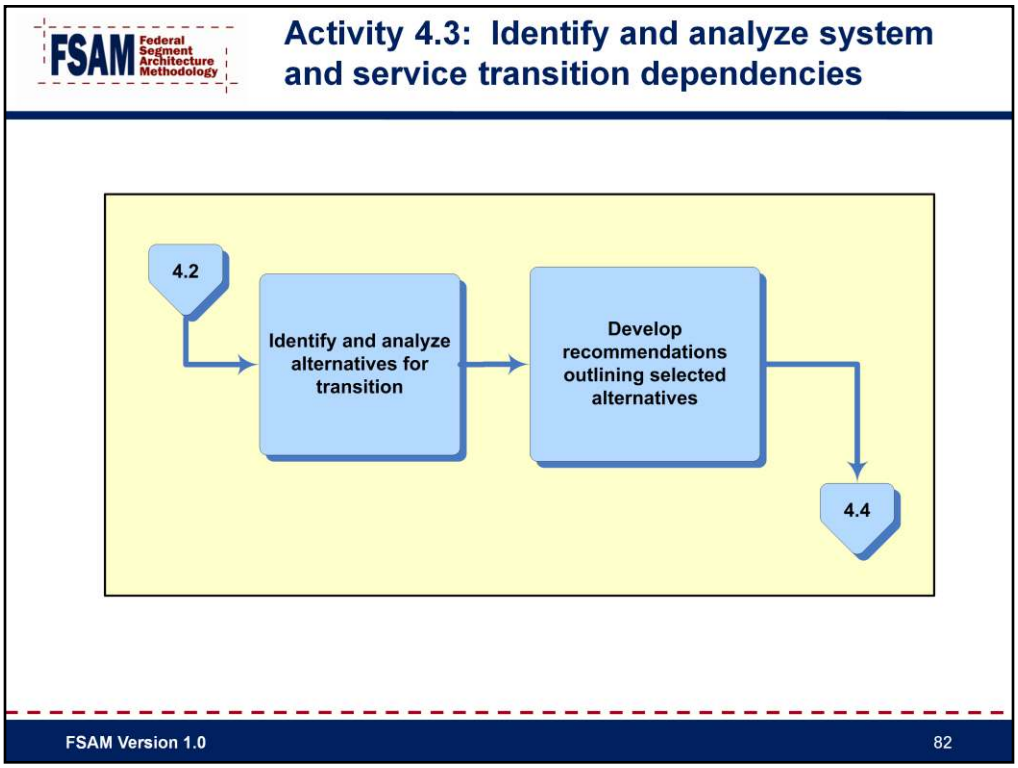
By performing an analysis of existing systems and services against the performance, business, and data requirements for the target state, the architect should be able to answer key questions related to the target conceptual solution architecture including:

- How are the systems and services in the segment performing to deliver business value for the costs associated with operating and maintaining them?
- What is the relationship between the existing systems, services and technologies (i.e., as-is conceptual solution architecture)?
- What existing systems or services are associated with authoritative data sources?

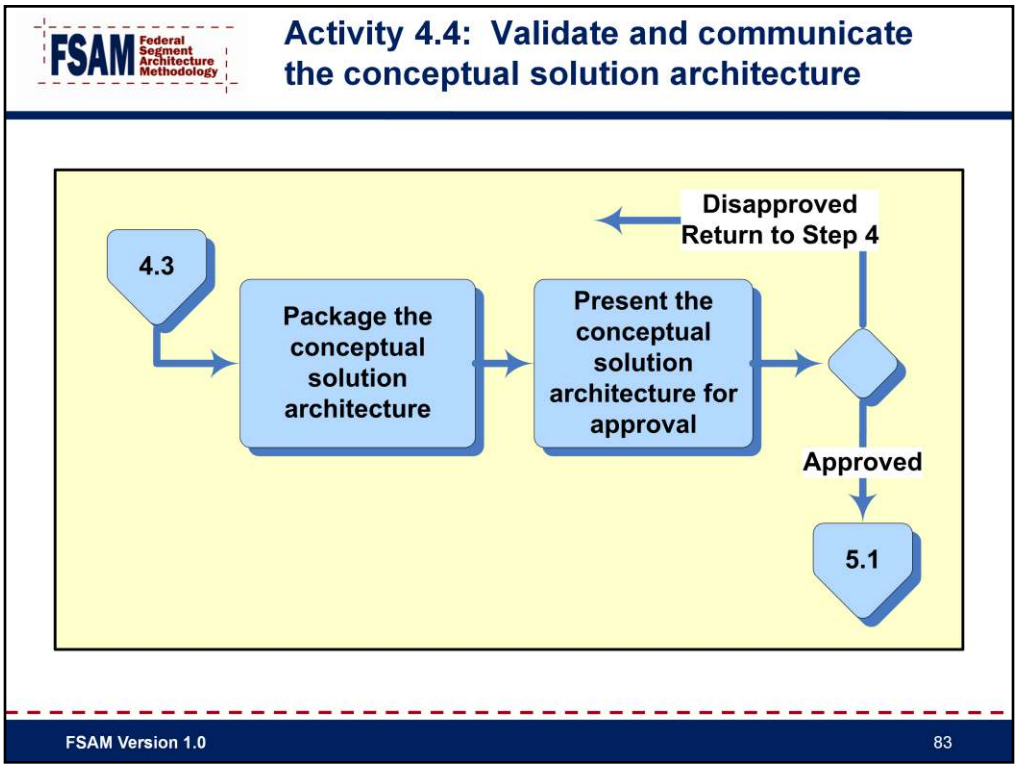


The purpose of this activity is to develop the target conceptual solution architecture that enables the performance, business, and data architectures defined in process steps 2 and 3. Although this guidance is for segment architecture, a complete segment architecture should include a conceptual depiction of the target systems and services architecture. Hence, the term *conceptual solution architecture* includes the segment target systems and services, the supported business functions, segment boundaries (as defined by interfaces with external customers, systems, services, and organizations), and the relationships between them. Target services may include business services, enterprise services, and other technical service components.

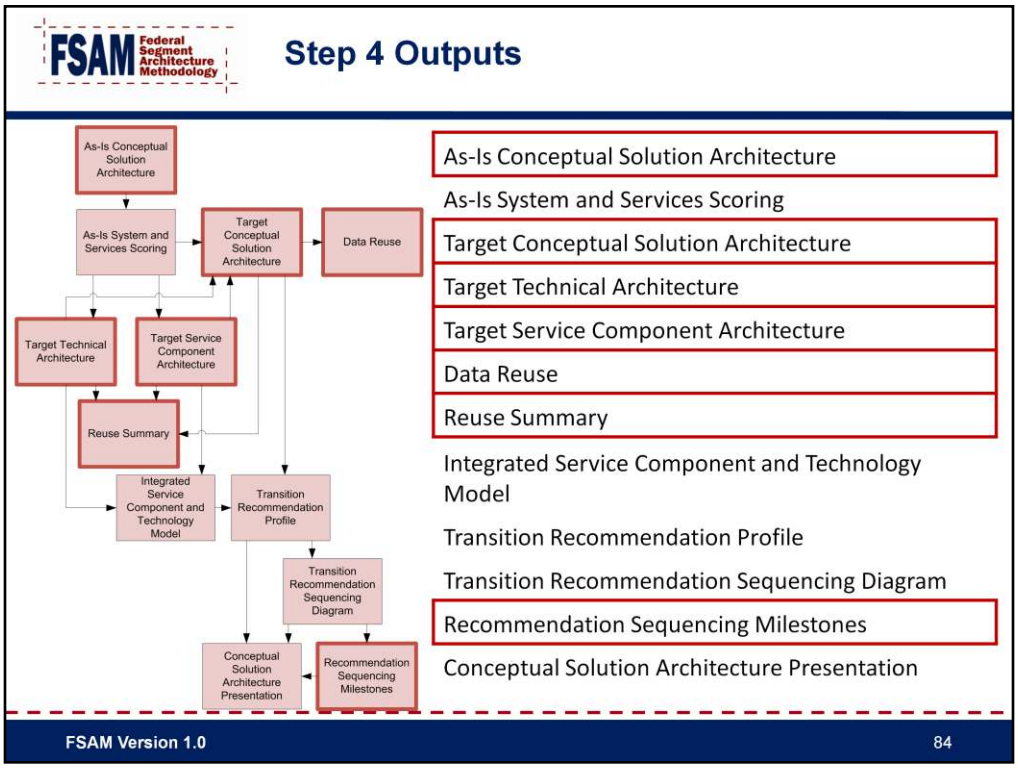
During this activity, the architect defines the systems and services for the target state, with an emphasis on reuse opportunities. This effort begins with the identification and selection of reusable service components from the Federal Transition Framework (FTF) Catalog, followed by the subsequent consideration of other available standard service, data, and technology components. Since segment-specific system and service solutions tend to involve higher costs for both development and operations, the specification of such unique service components and non-standard technologies should be considered only in situations where there are mission-critical needs or a lack of available reusable service or technology components.



During process step 5, transition options are developed and formulated into implementation recommendations. However, it is beneficial during process step 4 to analyze and explore transition alternatives that may be driven by logical dependencies, risks, or issues that may exist between as-is and target systems and services. This activity is focused on identifying, analyzing, and selecting recommendations for transition alternatives that are based on logical dependencies or other considerations (e.g., cost savings / cost avoidance) that may introduce intermediate transitional states along the path to achieving the target state. This analysis also helps to reduce and simplify the number of transition options to be included in the transition planning within process step 5.

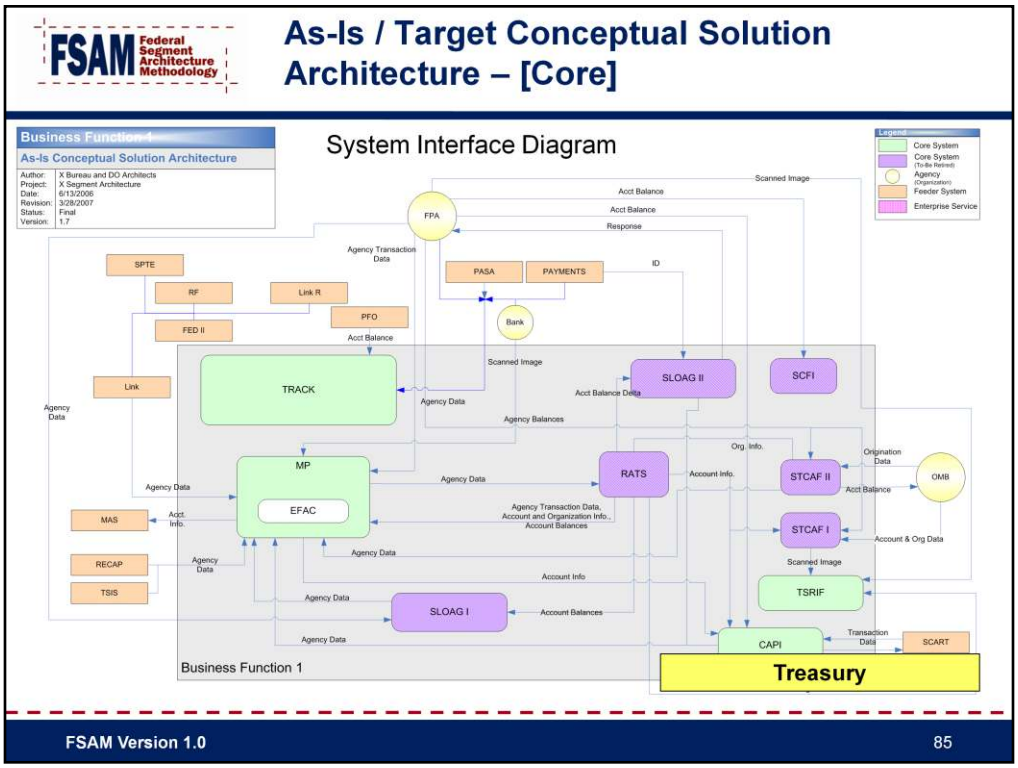


This activity includes packaging and gaining approval of the conceptual solution architecture by the executive sponsor and business owners.



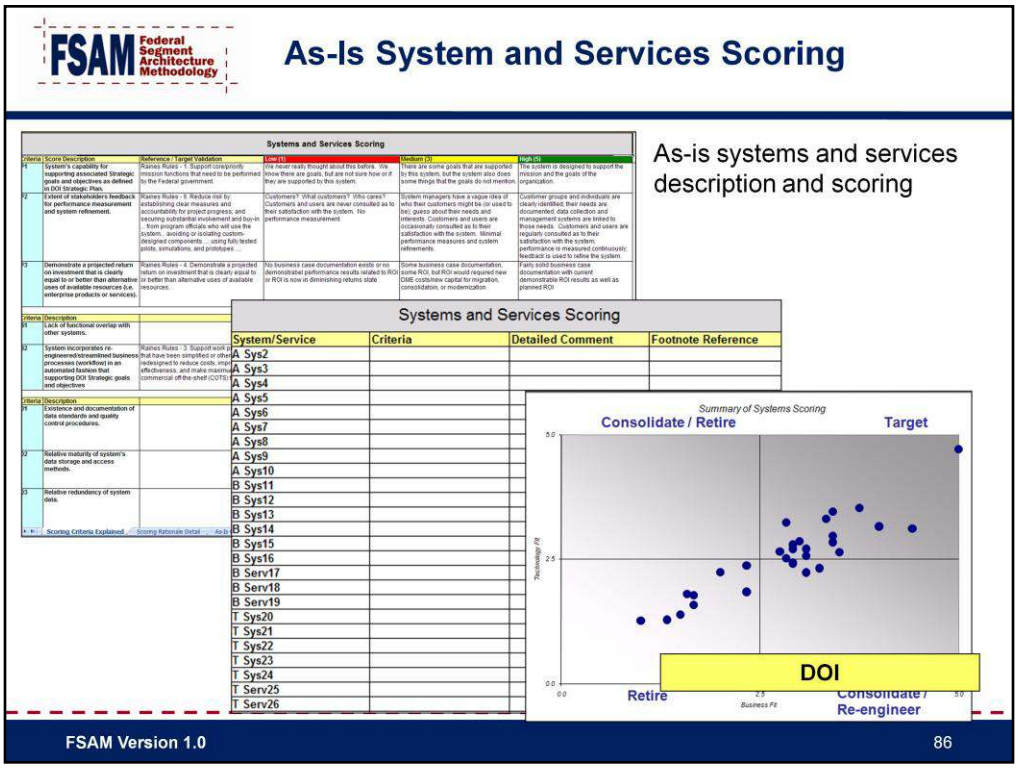
This graphic displays all of the outputs for Step 4. Each output is linked to a suggested analytical template. Outputs with red circles are "core" and the others are "recommended".

Note that suggested analytical techniques are included for activities within the methodology to better define what is core for a complete segment architecture in the form of descriptive (not prescriptive) guidance on how to accomplish the analysis. The suggested analytical techniques provide guidance as to what outputs are core for defining a complete segment architecture.



System Interface Diagram

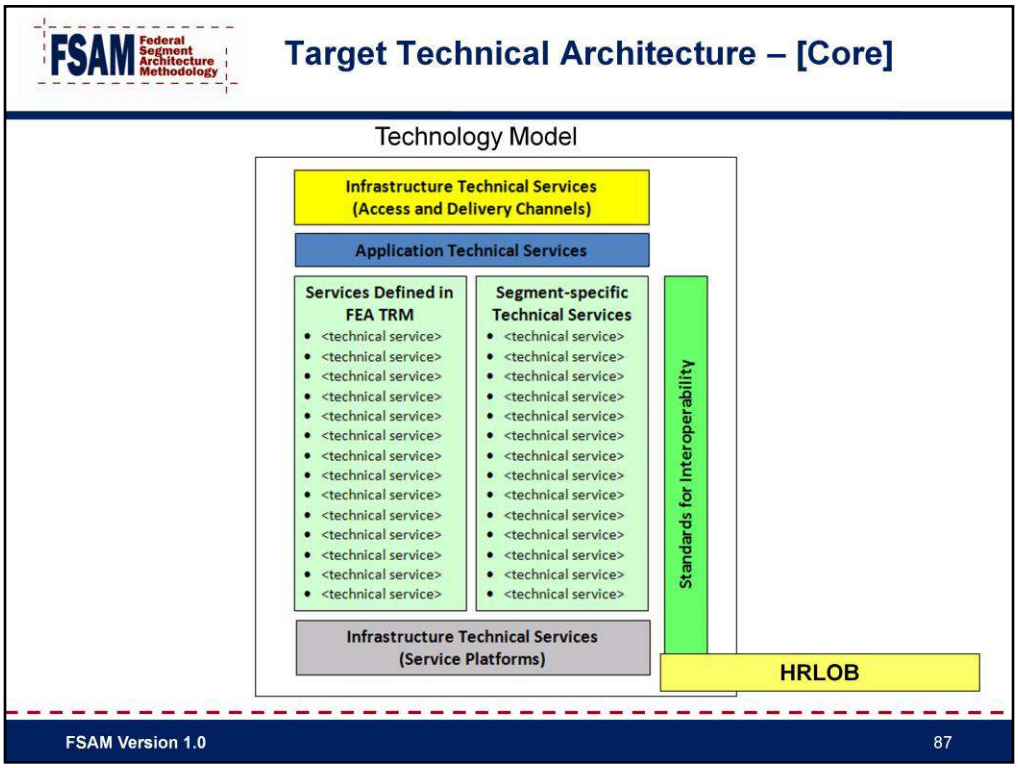
The as-is conceptual solution architecture system interface diagram shows the existing systems and services in the as-is state and identifies the relationships between them. This diagram may also include an overlay to show the boundaries of key business functions and external organizational interfaces along with security certification and accreditation boundaries.



As-Is Systems and Services Description and Scoring

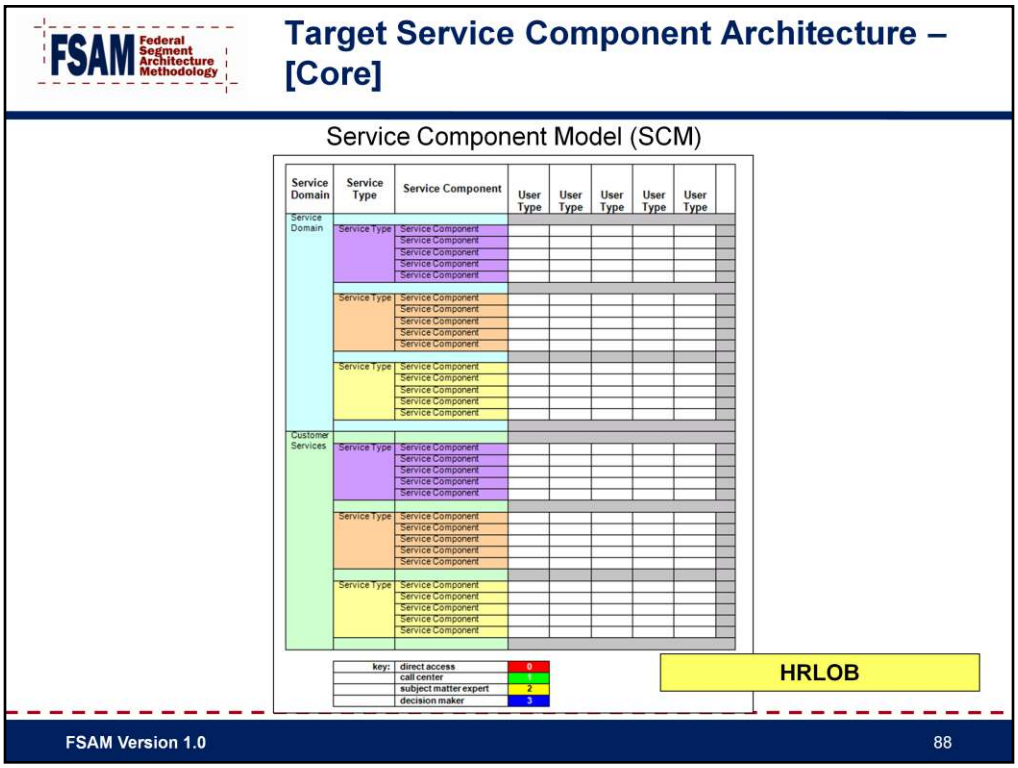
This work product is a quantitative assessment of the business area's systems and services across several dimensions including data, business fit, technology fit, applications design, service management, and security maturity.

This assessment provides a quantitative approach to assessing the current fit and performance of existing systems and services and provides a basis for determining which as-is systems should be considered for the target state
It helps inform decisions as to which as-is systems and services should be considered for reengineering, consolidation and/or retirement.



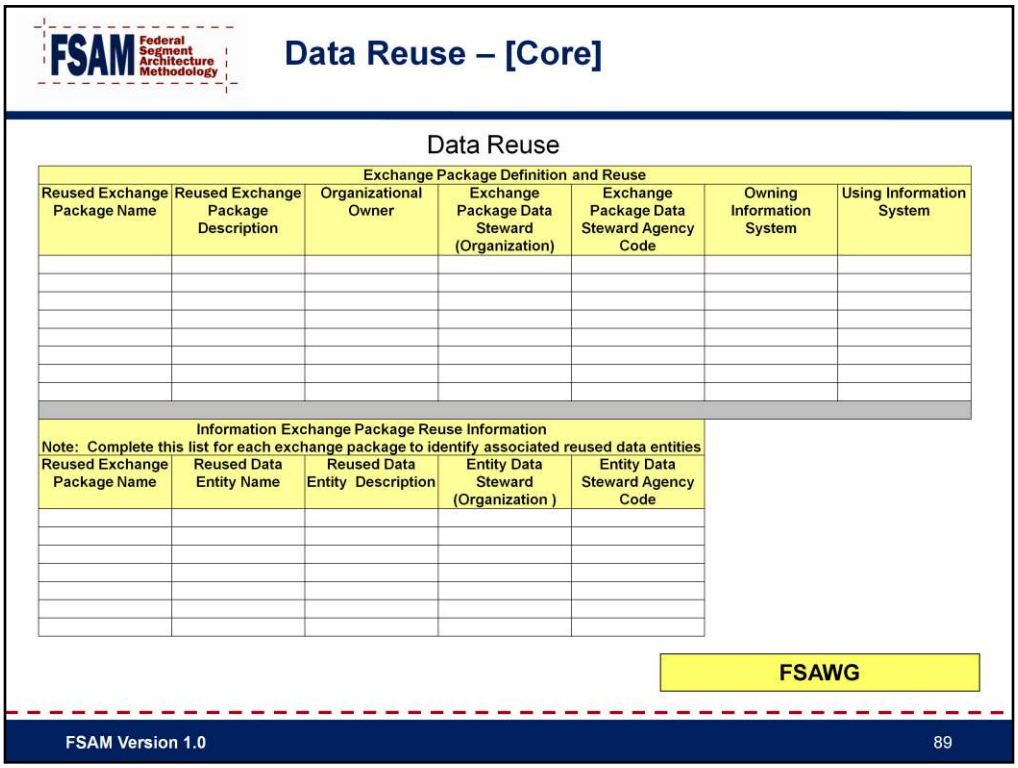
Technology Model

The technology Model (TM) is used to define the target technology architecture for the segment. The TM components are specified for each corresponding service component consistent with the technical components identified within the agency enterprise architecture technical reference model (TRM). The TM may also include the identification of infrastructure access, delivery, and service platforms along with applicable interoperability standards. Segment specific-technical services may also be defined for technical components not included in the TRM.



Service Component Model (SCM)

- The service component model (SCM) defines the target service architecture.
- The SCM identifies which service components from the service reference model (SRM) support the segment architecture.
- It also shows how services will be delivered to different user types.

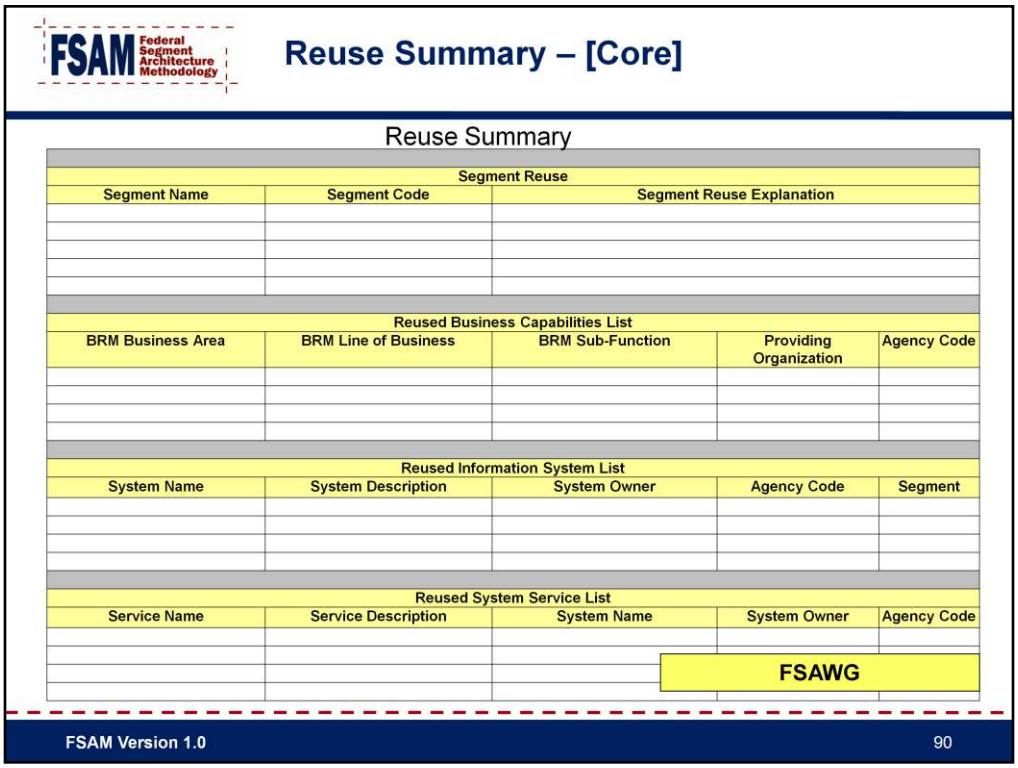


Data Reuse

The data reuse document describes segment reuse of information exchange packages and data entities from other segments and by other segments. This output conforms to EAAF 3.0 reporting requirements. Data reuse consists of shared Data Reference Model (DRM) Exchange Packages which are composed of DRM Entities.

Data Reuse includes:

- Data Exchange Packages – representing Information Sharing among segments (sharing does not require an information system intermediary)
- Data Entities – In the FEA DRM, a data exchange package is composed of one or more Data Entities. 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 are reused by default.



Reuse Summary

Reuse focuses on the business, data, and information system/services that can be leveraged and reused from another segment. This artifact is used to collect information that describes the segment reuse

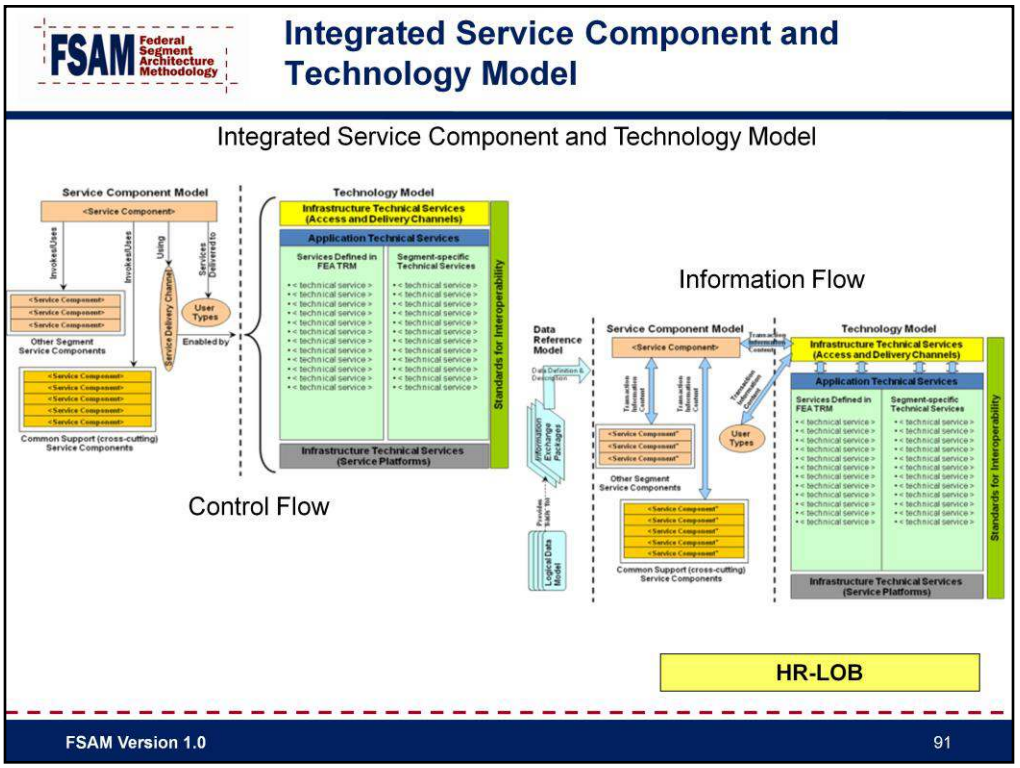
Business Reuse

• Business Capabilities – successful Business Capabilities may be replicated to other organizations – at the Federal level, this is likely represented by a BRM sub-function. of business capabilities, systems and services.

Information System/Service Reuse

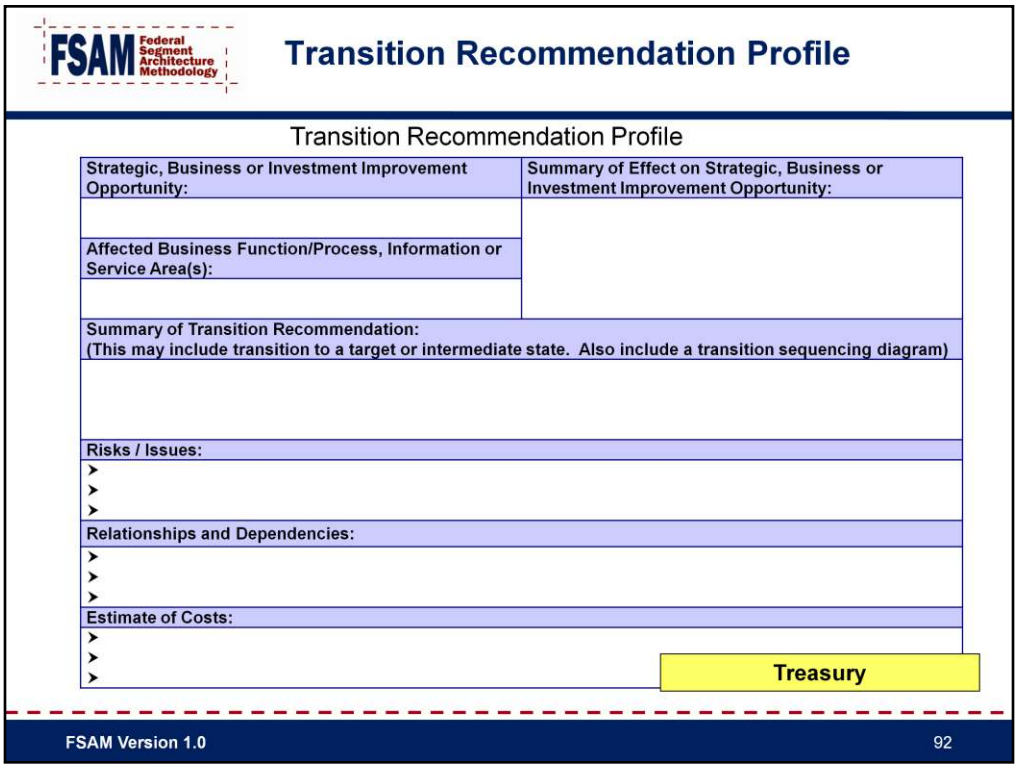
• Information System reuse – where the information system is reused (in total) by another segment. The most common occurrences are where a Mission Segment uses the Information Systems Services of an Enterprise Service

• System Services (think SOA here) where a Segment creates a service that may be usable by a wide variety of segments. Analogous terms that may be used in other agency architectures include Information System Modules, Application Capabilities, Service Components.



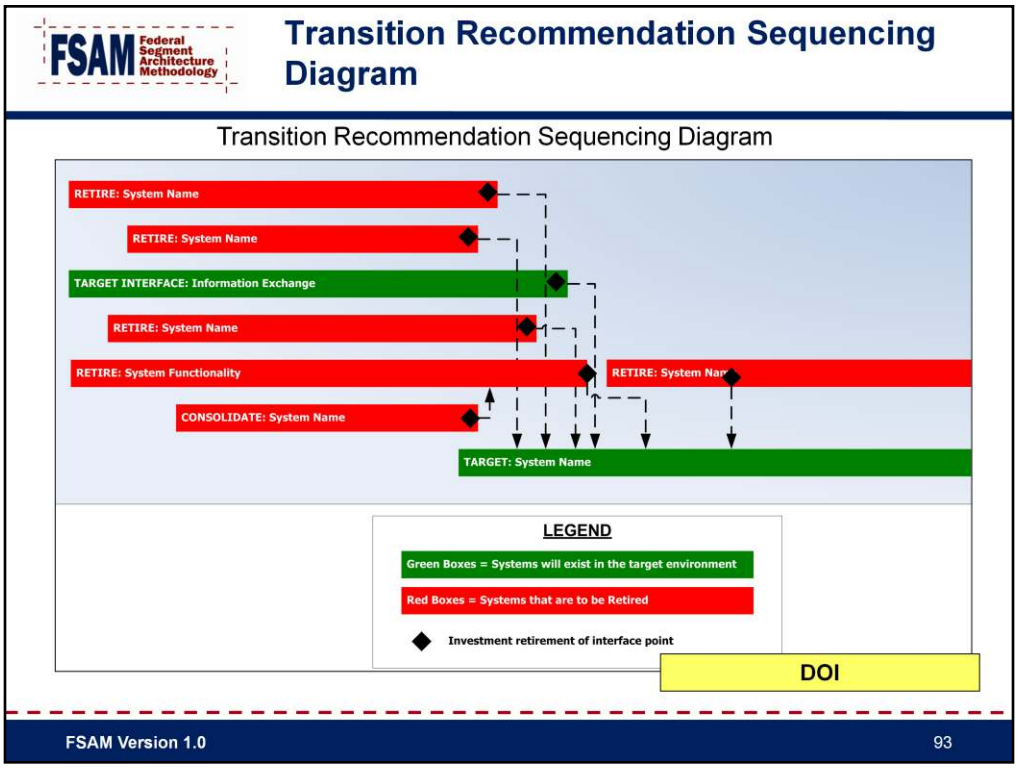
Integrated Service Component and Technology Model

The Integrated Service Component and Technology Model is a visual representation of how the "delivery" of the "service" is enabled by "technology components" to the "user / user types". It is a tool for developing the Technology Model and has two aspects: Control Flow and Information Flow. A service component is NOT independent and self-contained. It may invoke/use other service components for fulfillment. Information flowing between service components and/or a service component and user is defined in the Data Reference Model as an Information Exchange Package. There is a many-to-many relationship between service components. It means that the one Information Exchange Package (or a subset of it) can be exchanged between one or more pairs of Service Components.



Transition Recommendation Profile

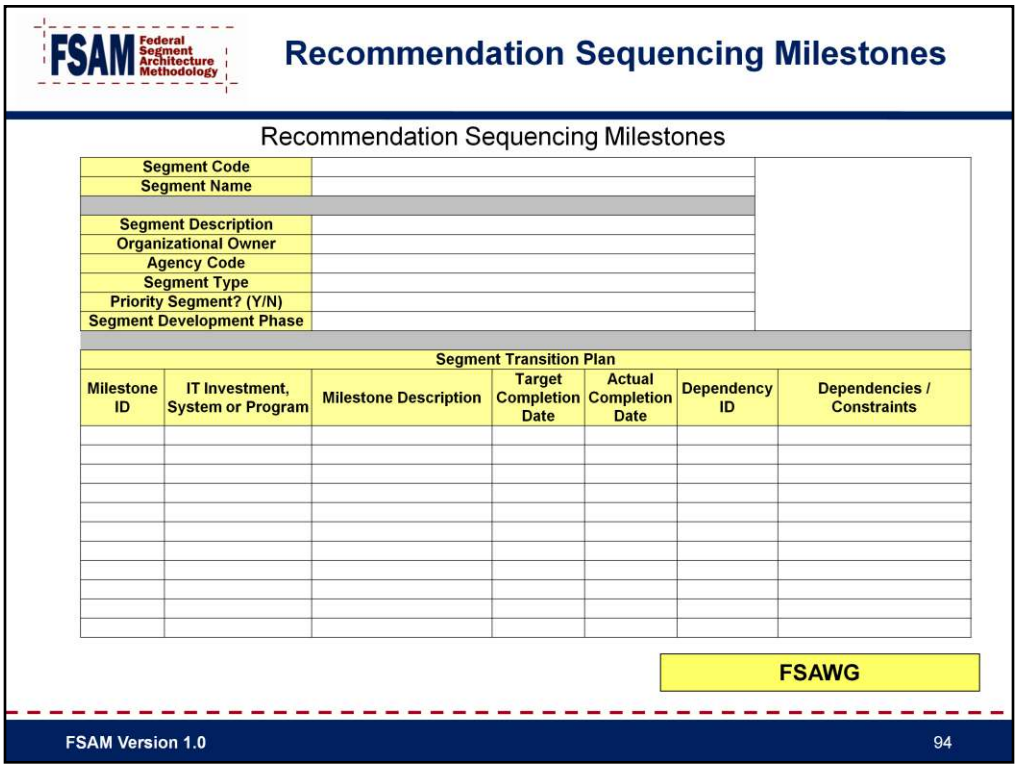
The transition recommendation profile is a table which summarizes at a high-level the recommendation for the segment transition.



Transition Recommendation Sequencing Diagram

The transition recommendation sequencing diagram provides a visualization of the transition from the as-is to the target state solution architectures associated with a set of transition alternatives. It highlights the phased transition of systems and investments and includes the milestones associated with both the retirement of investment and the establishment of interfaces among target systems.

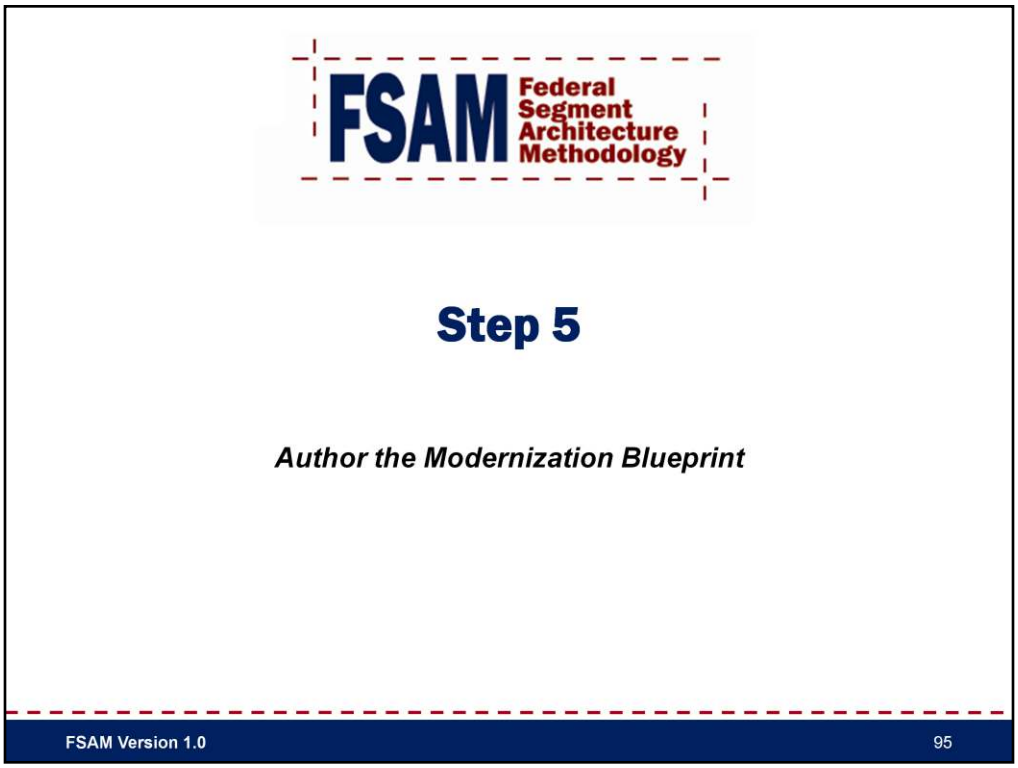
Note that this diagram will be refined, updated and finalized based on the alternative and risk analysis performed in Step 5.



Recommendation Sequencing Milestones

The recommendation sequencing milestones provide an integrated view of performance and schedule milestones associated with a specific set of transition alternatives. This analytical technique aligns with the milestones reported in Exhibit 300s for all investments aligned with the segment and also reflects the milestones associated with non-major DME spending reported for the segment on the Exhibit 53. Data should be drawn from the BY OMB reports provided the previous September and reflect updates made to Exhibits during the first quarter of the current fiscal year.

These milestones will be refined, updated and finalized based on the alternative and risk analysis performed in Step 5.

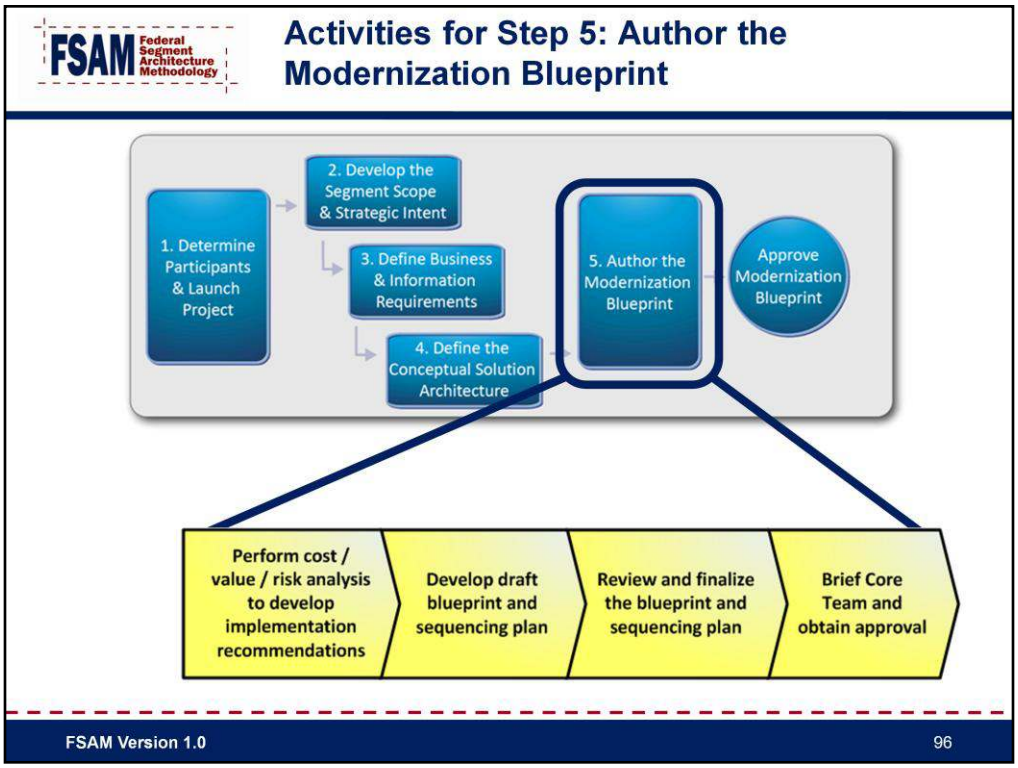


The architect leverages outputs from previous process steps to engage with key stakeholders to create a segment architecture blueprint including sequencing and transition plans. The outcome of this process step is a series of validated implementation recommendations supported by holistic analysis of segment business, data, technology, systems, and service components.

The modernization blueprint includes findings and recommendations as well as supporting artifacts and diagrams that illustrate the analysis performed throughout the architecture development process. For instance, artifacts such as the SWOT analysis and the conceptual solution architecture are key visuals in the modernization blueprint. Note that recommendations in the modernization blueprint typically span a strategic time horizon on the order of 3-5 years.

At the end of this section, you should be able to:

- Describe the outcome of this step.
- Identify the activities and tasks associated with this step.
- Identify the core outputs of this step along with the other recommended “non-core” outputs.
- Describe the FSAM suggested analytical techniques that help ensure that the cost, risks, and business value are analyzed to identify and select alternatives for transition.
- Describe how FSAM suggested analytical techniques help maintain alignment with the strategic improvement opportunities from process step 2 in the analysis, recommendations, and transition planning.
- Describe the overall structure and high-level content of a typical modernization blueprint.
- Identify the FSAM suggested analytical techniques that facilitate the overall review and approval of the modernization blueprint by the executive sponsor, business owner(s), and core team.

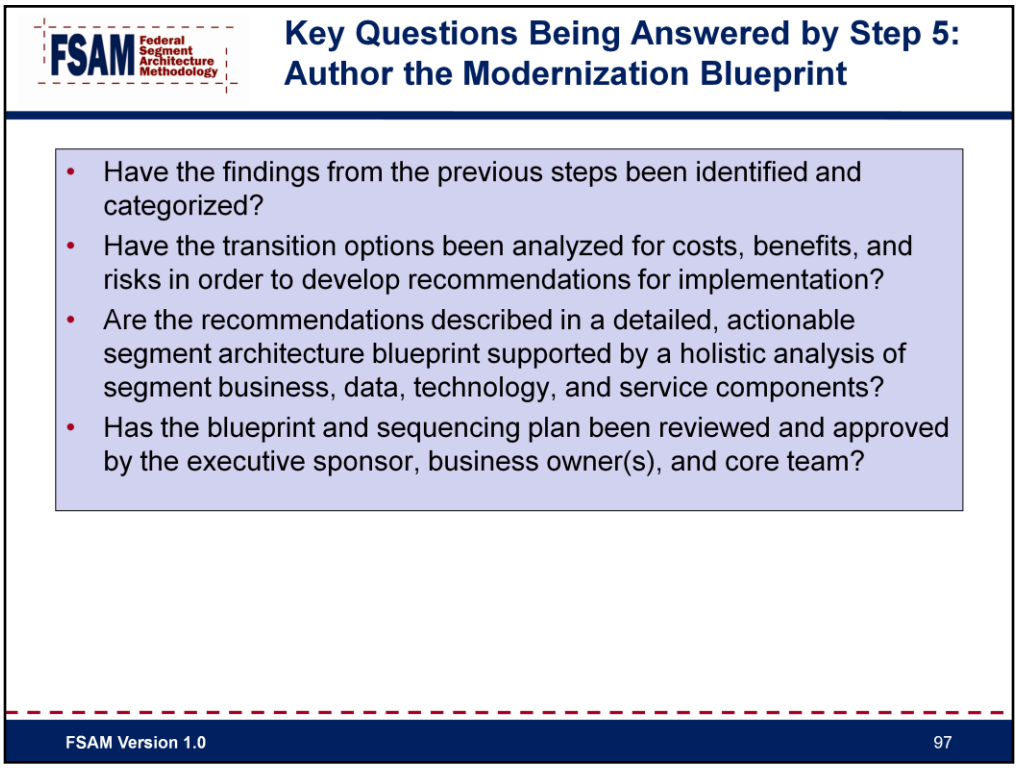


Step Purpose:

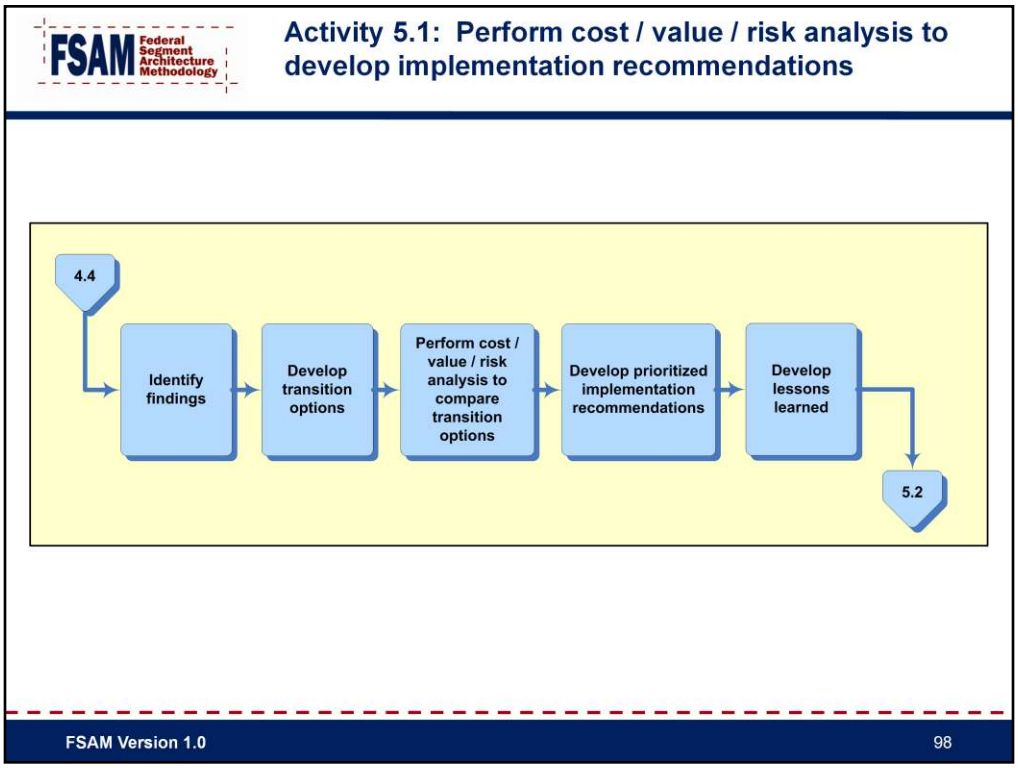
The overall purpose of this step is to document the segment architecture in the form of a modernization blueprint that includes the overall segment architecture sequencing and transition plan.

Step Outcome:

The outcome of this step is a series of validated implementation recommendations described in a detailed, actionable segment architecture blueprint supported by holistic analysis of segment business, data, technology, and service components. The outcome of this step is also the review and approval of the blueprint and sequencing plan for target architecture implementation by the executive sponsor, business owner and core team.



At the conclusion of Step 5, the core team should have answers to these questions as they relate to their segment.

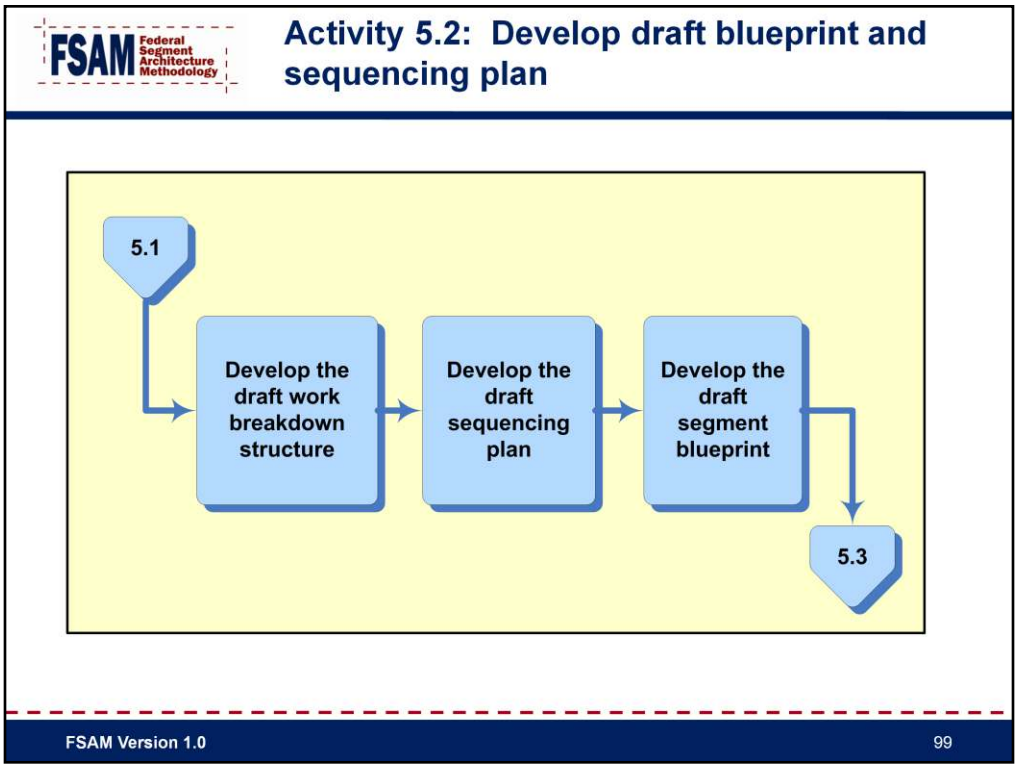


This activity includes guidance for architects to produce findings and transition options that business owners can use to develop a prioritized strategy to drive business improvements. These business improvement activities ultimately will take the form of a formal business case submission(s) and may include specific project or activities to conduct business process re-engineering, systems integration, establishment of formal partnerships, policy development or other transformational approaches.

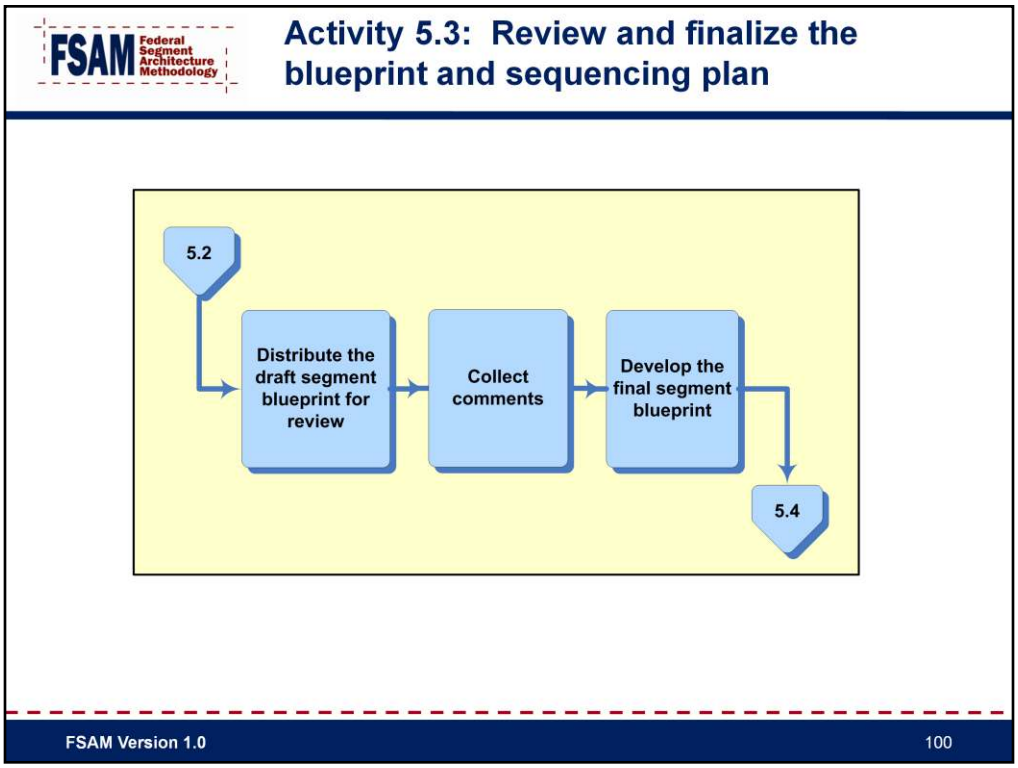
Findings can represent almost any issue, from outdated technologies, to poor business process fit, to redundancies, etc. Findings are developed using the relevant artifacts from process steps 2, 3 and 4 and should be categorized according to the associated business products and services. Transition options are then developed for each of the findings. Transition options are a set of one or more alternatives for transitioning from the as-is to the target state. The transition options may be categorized further according to the service components, business processes or capability areas that are impacted.

For each set of transition options, analysis is performed to determine the associated cost, benefit and risk. This requires a balance between the depth of analysis (e.g., high-level cost breakdown), available data (e.g., risk analysis assumptions), and the type of recommendations under consideration (strategic vs. tactical). The results of this analysis are a key input to finalizing the sequencing for implementation of the transition options.

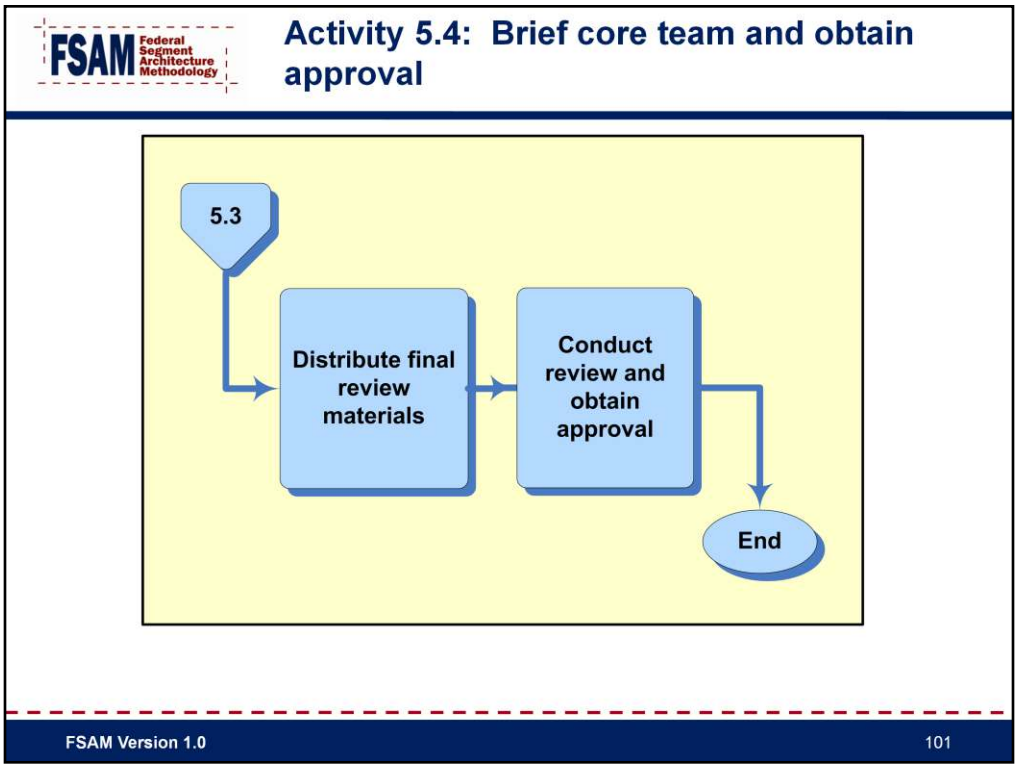
The implementation recommendations are reviewed with key stakeholders and other governance teams as needed to achieve consensus. This review should also include a validation that the segment architecture as developed in process steps 2, 3, and 4 provides the necessary context and level of detail to inform downstream solution-level implementation activities. Any changes to the implementation recommendations resulting from these reviews must also be reviewed and approved by the core team.



The validated implementation recommendations provide the basis for producing the detailed blueprint document and sequencing plan. The draft blueprint document summarizes the results of the business analysis and strategy and provides an overview of the target data, services, and technology environment along with the results of analysis of the findings, transition options, and associated implementation recommendations.

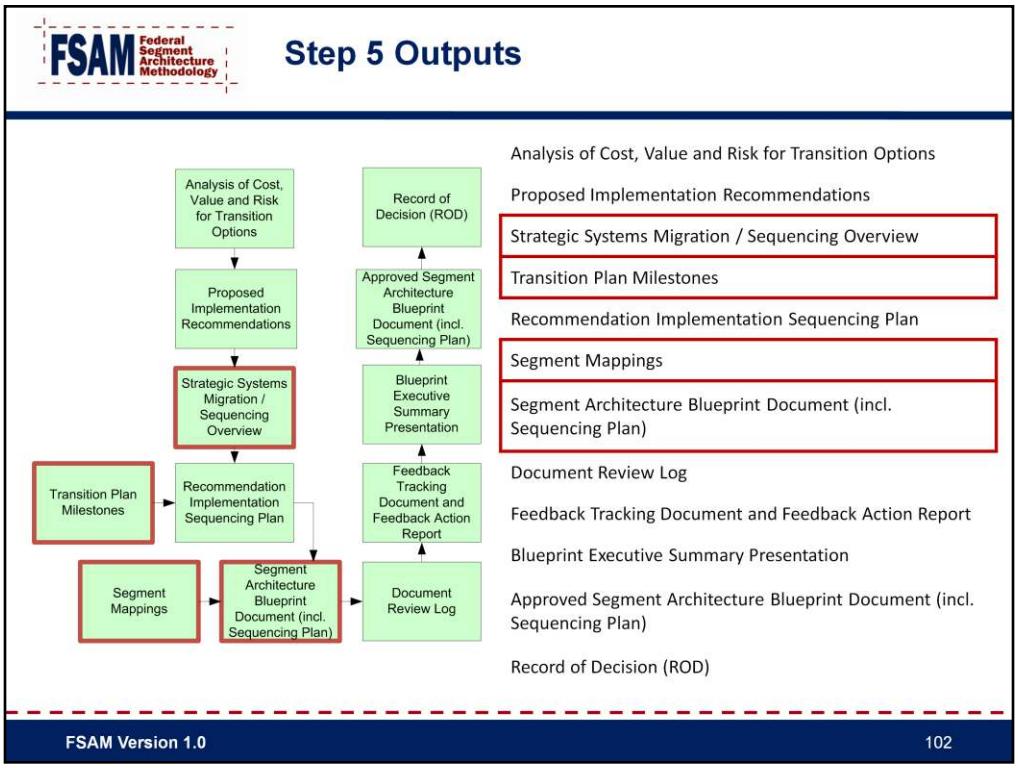


The draft segment architecture blueprint is distributed to the core team for review. Throughout the review process, feedback is recorded and consolidated, and resulting actions are tracked. Once the review is completed, the final segment architecture blueprint document is prepared for submission to the appropriate governance teams.



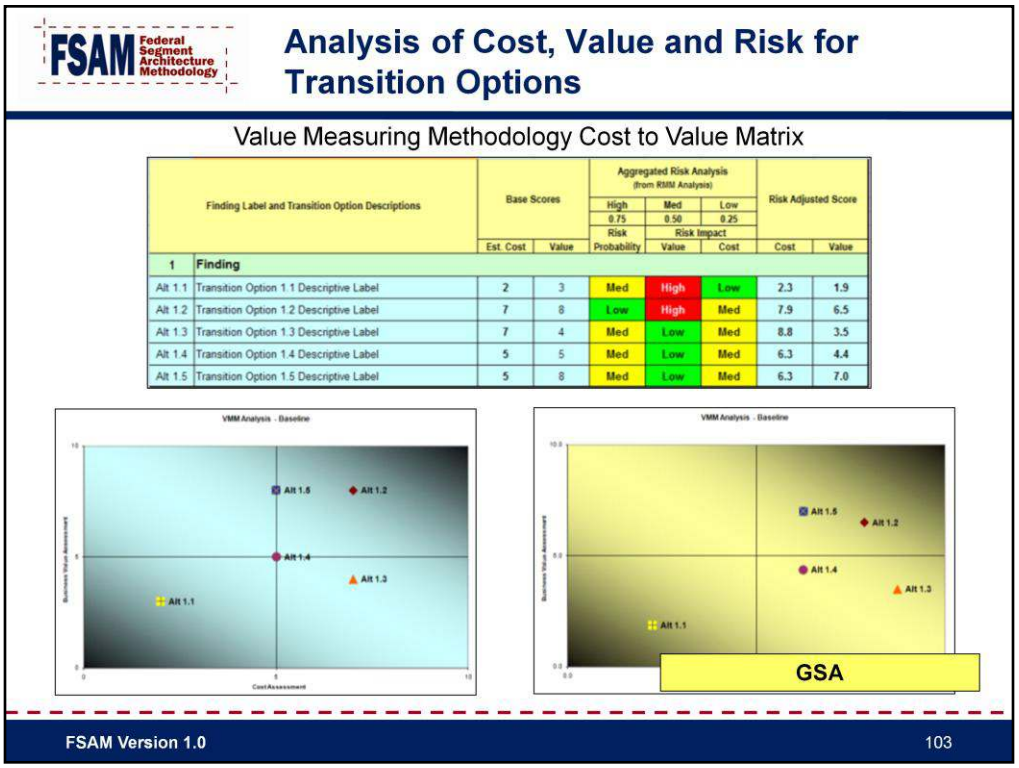
In this activity, a formal presentation of the segment blueprint is made to the core team, business owner(s), and the executive sponsor, after which the decision to approve the segment blueprint is recorded either as a separate signed document or in the form of published meeting minutes. Any issues that arise during the final review are addressed and closed as needed.

The formal presentation may also be accompanied by an executive overview document describing the need for the transformation and a summary of the analysis of findings, transition options and implementation recommendations. Once this activity is complete, the executive sponsor, business owner(s) and core team can move forward with gaining approvals from the broader business community and capital planning governance teams such as the Investment Review Board (IRB).



This graphic displays all of the outputs for Step 5. Each output is linked to a suggested analytical template. Outputs with red circles are "core" and the others are "recommended".

Note that suggested analytical techniques are included for activities within the methodology to better define what is core for a complete segment architecture in the form of descriptive (not prescriptive) guidance on how to accomplish the analysis. The suggested analytical techniques provide guidance as to what outputs are core for defining a complete segment architecture.

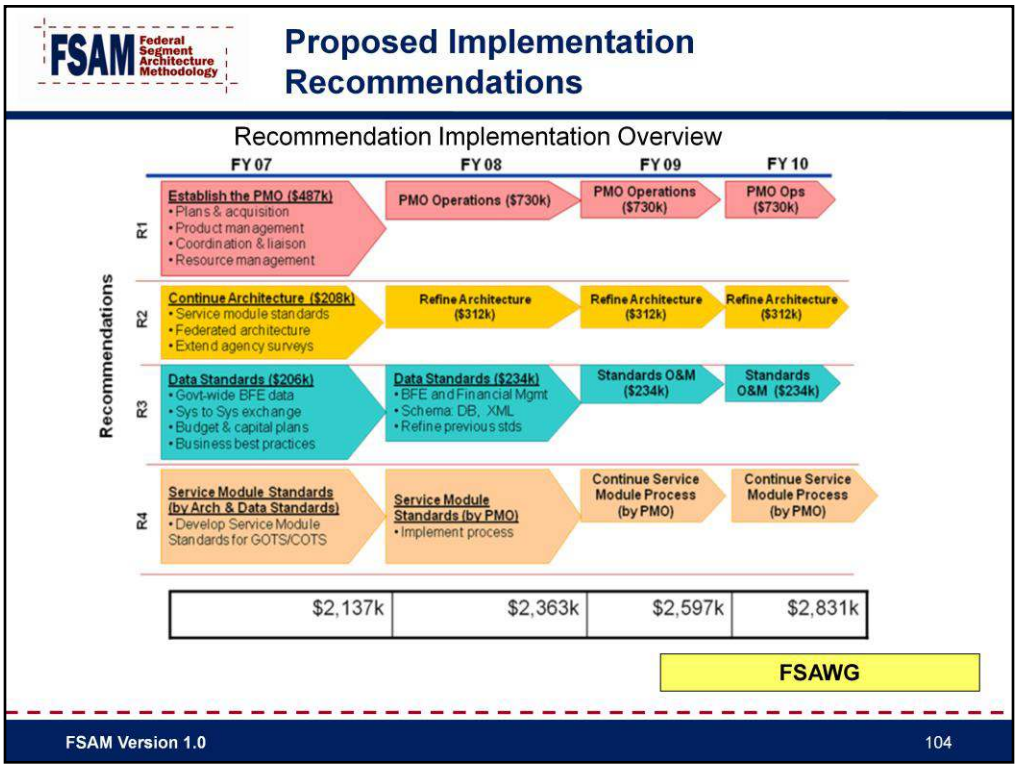


Value Measuring Methodology Cost to Value Matrix

The VMM cost to value matrix provides the results of a structured cost / benefit analysis of the recommendations and can be depicted graphically as shown. VMM analyzes the value per dollar and associated risk to determine which recommendations provide the most "bang for the buck".

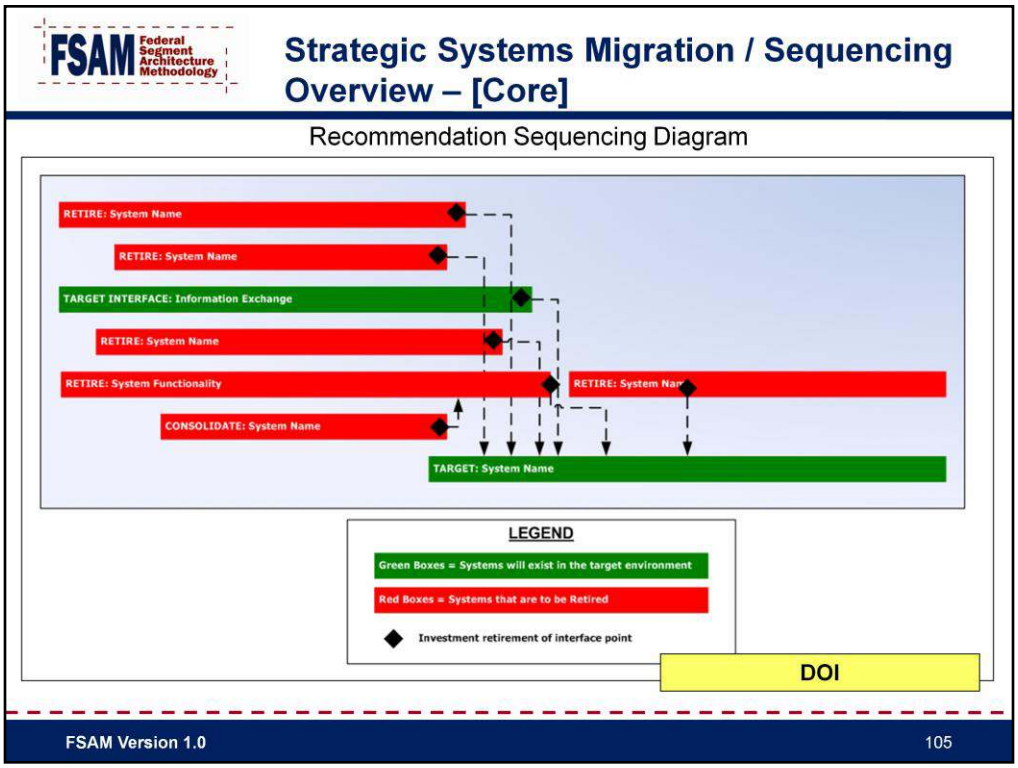
Cost, value, and risk estimates for each recommendation are input into the VMM Analysis tab. The toolkit provides the overall cost, value score, risk adjusted cost, and risk adjusted value score. The toolkit also provides a graphical value-to-cost comparison chart that summarizes the risk-adjusted cost/benefit for each recommendation in the corresponding tabs.

The worksheet is configured to accommodate up to five alternatives for a finding. Additional findings and alternatives can be added as needed. However, note that this will require corresponding modifications to the data series in the charts in order for additional results to be displayed. Modifications to the charts can be effected using standard Microsoft Excel formatting commands.



Recommendation Implementation Overview

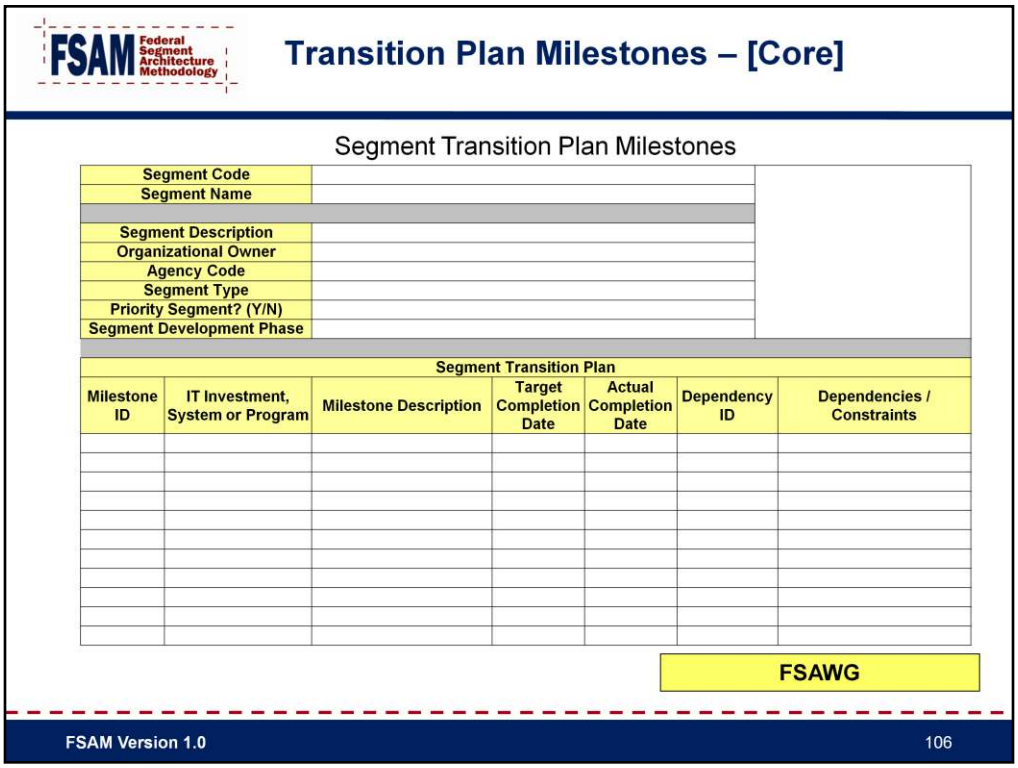
The recommendation implementation overview diagram depicts 'what' will be implemented, 'when' it will be implemented, and the associated costs for implementation in each year.



Recommendation Sequencing Diagram

The recommendation sequencing diagram provides a visualization of the transition from the as-is to the target state solution architectures. It highlights the phased transition of systems and investments and includes the milestones associated with both the retirement of investment and the establishment of interfaces among target systems.

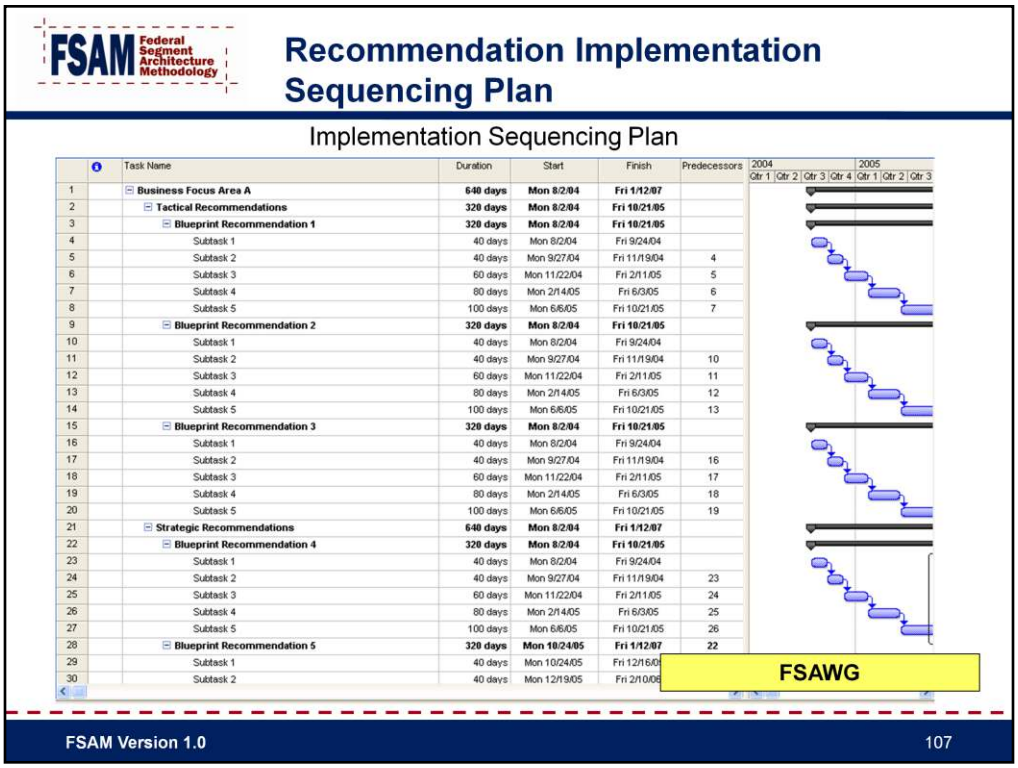
Note that this diagram represents a refined / finalized version of the sequencing diagram associated with transition recommendations as developed in Step 4. This refined version will incorporate the results of alternative and risk analysis performed in Step 5.



Segment Transition Plan Milestones

The segment transition plan provides an integrated view of performance and schedule milestones for the segment. It aligns with the milestones reported in Exhibit 300s for all investments aligned with the segment and also reflects the milestones associated with non-major DME spending reported for the segment on the Exhibit 53. Data should be drawn from the BY OMB reports provided the previous September and reflect updates made to Exhibits during the first quarter of the current fiscal year.

Note that this table represents a refined / finalized version of the segment transition milestones associated with transition recommendations as developed in Step 4. This refined version will incorporate the results of alternative and risk analysis performed in Step 5.

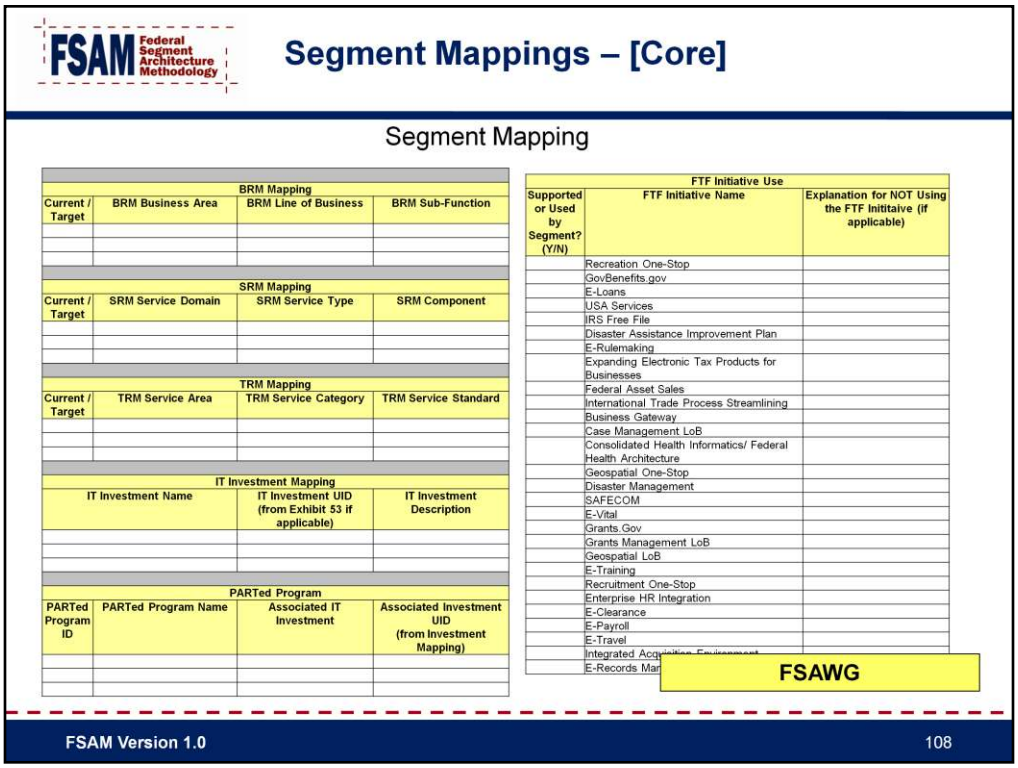


	Task Name	Duration	Start	Finish	Predecessors
1	**Business Focus Area A**	**640 days**	**Mon 8/2/04**	**Fri 1/12/07**	
2	**Tactical Recommendations**	**320 days**	**Mon 8/2/04**	**Fri 10/21/05**	
3	**Blueprint Recommendation 1**	**320 days**	**Mon 8/2/04**	**Fri 10/21/05**	
4	Subtask 1	40 days	Mon 8/2/04	Fri 9/24/04	
5	Subtask 2	40 days	Mon 9/27/04	Fri 11/19/04	4
6	Subtask 3	60 days	Mon 11/22/04	Fri 2/11/05	5
7	Subtask 4	80 days	Mon 2/14/05	Fri 6/3/05	6
8	Subtask 5	100 days	Mon 6/6/05	Fri 10/21/05	7
9	**Blueprint Recommendation 2**	**320 days**	**Mon 8/2/04**	**Fri 10/21/05**	
10	Subtask 1	40 days	Mon 8/2/04	Fri 9/24/04	
11	Subtask 2	40 days	Mon 9/27/04	Fri 11/19/04	10
12	Subtask 3	60 days	Mon 11/22/04	Fri 2/11/05	11
13	Subtask 4	80 days	Mon 2/14/05	Fri 6/3/05	12
14	Subtask 5	100 days	Mon 6/6/05	Fri 10/21/05	13
15	**Blueprint Recommendation 3**	**320 days**	**Mon 8/2/04**	**Fri 10/21/05**	
16	Subtask 1	40 days	Mon 8/2/04	Fri 9/24/04	
17	Subtask 2	40 days	Mon 9/27/04	Fri 11/19/04	16
18	Subtask 3	60 days	Mon 11/22/04	Fri 2/11/05	17
19	Subtask 4	80 days	Mon 2/14/05	Fri 6/3/05	18
20	Subtask 5	100 days	Mon 6/6/05	Fri 10/21/05	19
21	**Strategic Recommendations**	**640 days**	**Mon 8/2/04**	**Fri 1/12/07**	
22	**Blueprint Recommendation 4**	**320 days**	**Mon 8/2/04**	**Fri 10/21/05**	
23	Subtask 1	40 days	Mon 8/2/04	Fri 9/24/04	
24	Subtask 2	40 days	Mon 9/27/04	Fri 11/19/04	23
25	Subtask 3	60 days	Mon 11/22/04	Fri 2/11/05	24
26	Subtask 4	80 days	Mon 2/14/05	Fri 6/3/05	25
27	Subtask 5	100 days	Mon 6/6/05	Fri 10/21/05	26
28	**Blueprint Recommendation 5**	**320 days**	**Mon 10/24/05**	**Fri 1/12/07**	**22**
29	Subtask 1	40 days	Mon 10/24/05	Fri 12/16/0	
30	Subtask 2	40 days	Mon 12/19/05	Fri 2/10/06	

2004 Qtr 1 Qtr 2 Qtr 3 Qtr 4 | 2005 Qtr 1 Qtr 2 Qtr 3

Implementation Sequencing Plan

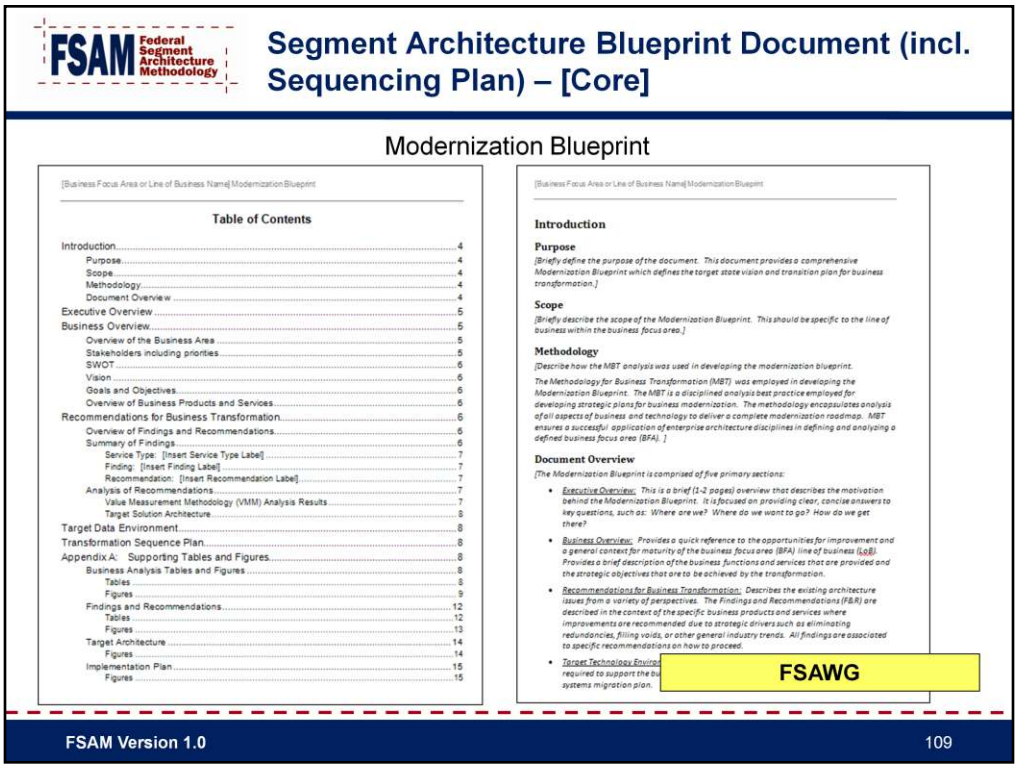
This is a project management analytical technique that provides a planning and monitoring tool for the execution of the modernization blueprint recommendations. This project plan should be structured to include key milestones related to investments and performance improvements associated with the implementation of the transition plan. The milestones included in this plan should be incorporated into the overall enterprise transition strategy.



Segment Mappings

The Segment Mappings provide the FEA CRM mappings for the segment and shows the relationship between the segment and its investment portfolio, PART programs supported, and government-wide FTF and e-Gov initiatives.

This artifact is used to provide a summary of the segment mappings developed during prior steps. Segment mappings show the relationship between the Segment and the investments, programs, and initiatives that comprise it. Segment mappings also include FEA Reference Model mappings, usage of FTF Initiatives within the Segment, and alignment between Investments and PARTed Programs. Segment mappings are intended to provide a general overview of the business processes, IT initiatives, and relationships that define the segment. Agencies may be required to report similar mappings in other reports to OMB, such as the Exhibit 53s and in PARTed programs. The mappings for this section should reflect the information that has already been reported to OMB.



Modernization Blueprint

The modernization blueprint is a description of the overall segment transition plan that is focused on implementation of the business transformation recommendations. Contains descriptions of some of the key analysis performed in prior process steps.

FSAM provides additional tools to support the document review and comment process

Document Review Form

Reviewer Name	
Title / Organization:	
Email and/or Phone No:	

Reviewer Comment or Change Request	Section and Page No.	Paragraph, Figure, Table or Other Reference	Rationale

Feedback Tracking and Action Report

Feedback Tracking and Action Report

Feedback ID	Date	Document / Version	Reviewer Comment or Change Request	Section and Page No.	Paragraph, Figure, Table or Other Reference	Rationale	Reviewer Name	Title / Organization	Email and/or Phone No:	Feedback Owner	Action	Date Completed	Updated Document and Version

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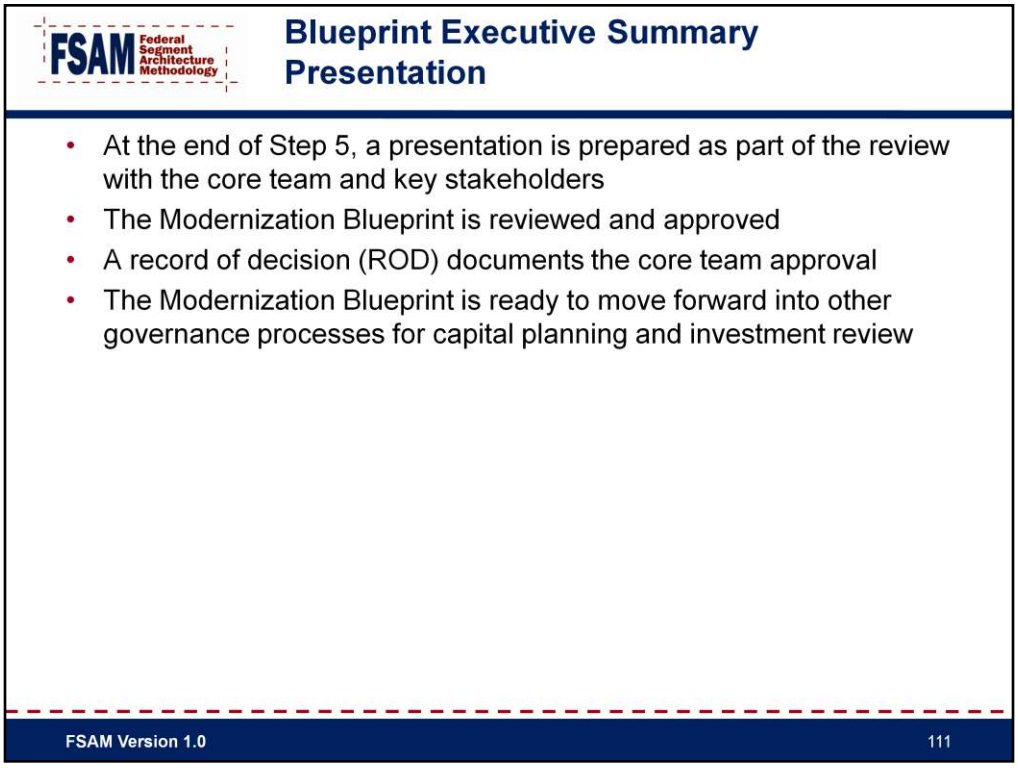
The document review form and feedback tracking / action report can be used to facilitate the formal review of the draft modernization blueprint and to adjudicate any resulting comments or other feedback.

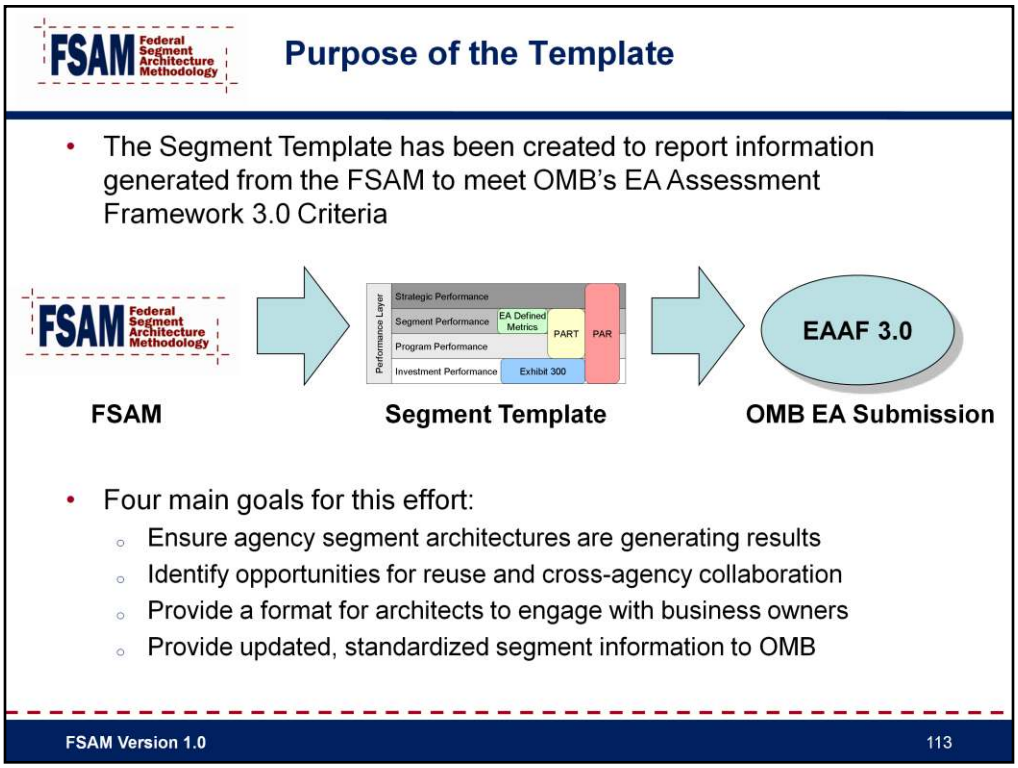


Once the blueprint is approved by the core team, business owner and executive sponsor, the executive sponsor and business owner should be prepared to present the blueprint to other governance teams (e.g. Investment Review Boiard) for additional approval as may be required.

With the release of Enterprise Architecture Assessment Framework (EAAF) v3.0, FSAM artifacts have been aligned with the Enterprise Architecture Segment Report (EASR) and with the information collection requirements presented by EAAF 3.0 Key Performance Indicators (KPI's). The EASR integrates data available in and reported from the agency capital planning and investment control (CPIC) process with data available in agency segment architectures. With the EASR, the CPIC portfolio is linked directly and precisely to the agency segment architectures in agency IT budget justification submissions, the OMB Circular A-11 Exhibit 53 and Exhibits 300.

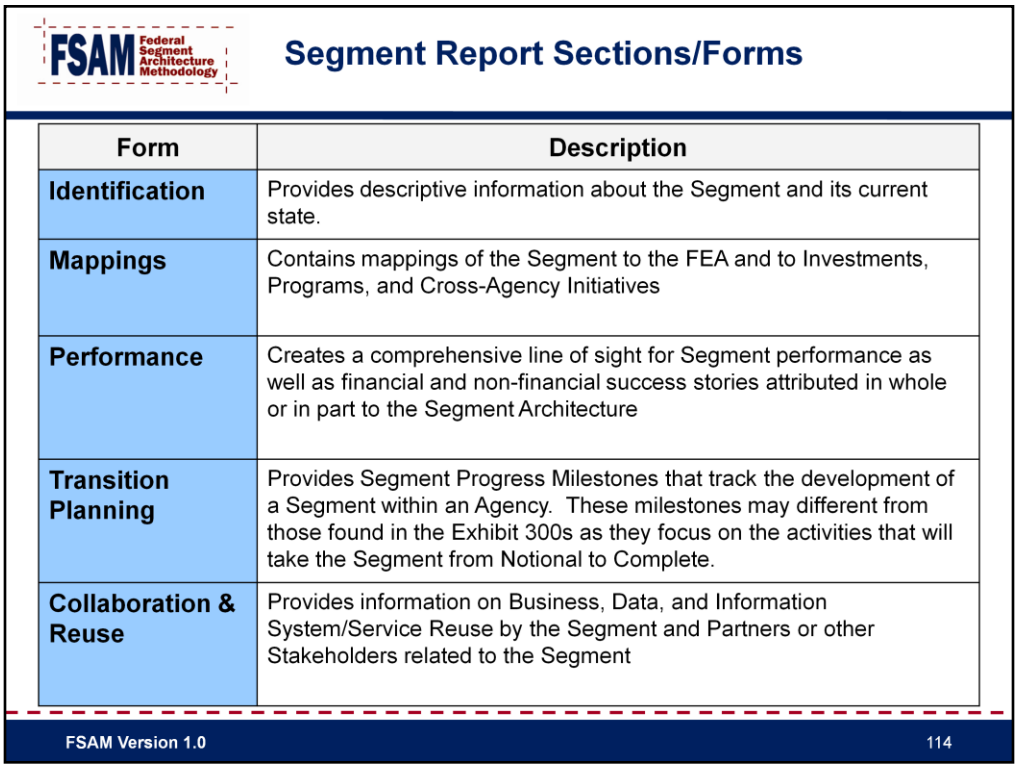
At the end of this section, you should be able to:

- Describe the EASR data requirements and the FSAM outputs and associated suggested analytical techniques that provide this information

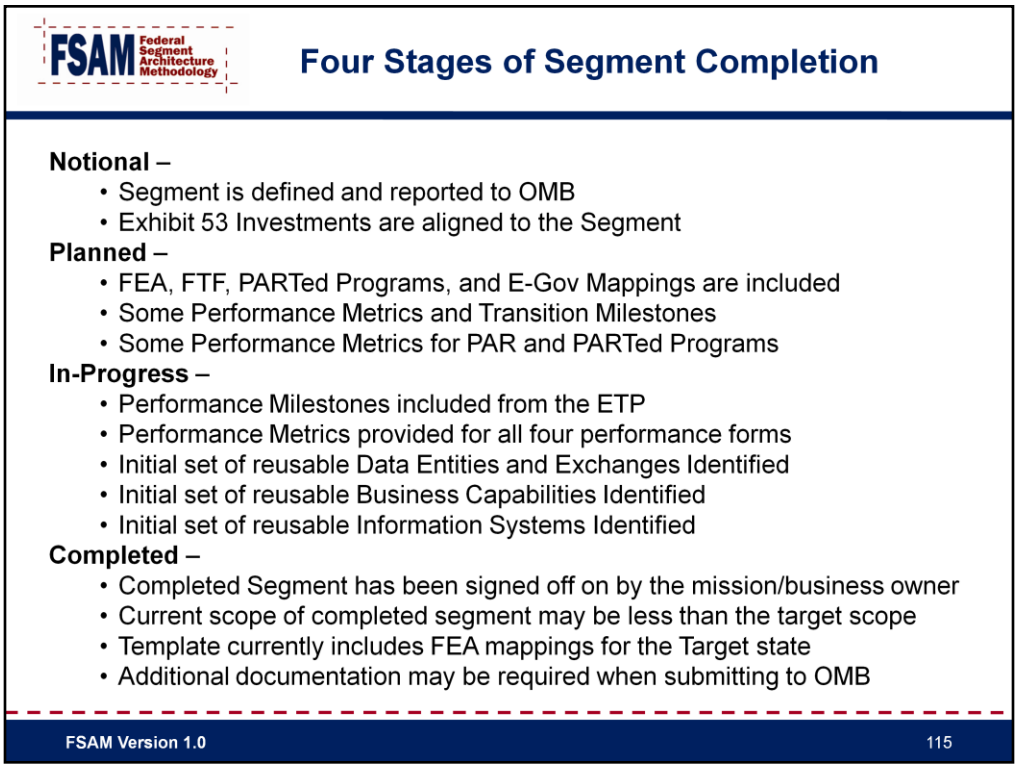


The purpose of the Enterprise Architecture Segment Report (EASR) is to provide a format for Agencies to use in reporting on the performance and development of their segment architectures to the Office of Management and Budget (OMB). Agencies will complete segment reports as part of the annual OMB EA Assessment and provide quarterly updates on the development of their segments. In requiring this report, OMB has four main goals:

- Ensure agencies are doing segment architecture well and generating results
- Identify opportunities for re-use and cross-agency collaboration based on agency segment architecture information
- Provide a platform for agency chief architects to engage with business owners
- Provide updated Segment information as part of the annual OMB EA Assessment

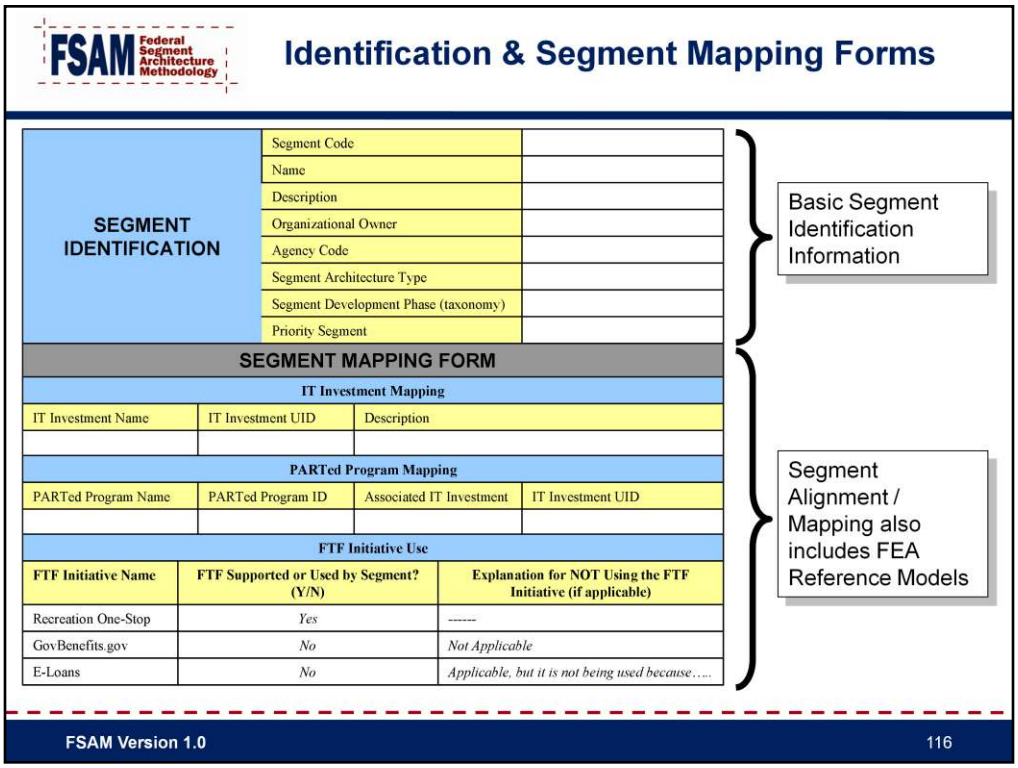


The Segment Report consists of five sections: Segment Identification, Segment Mapping, Segment Performance, Segment Transition Plan, and Segment Reuse.



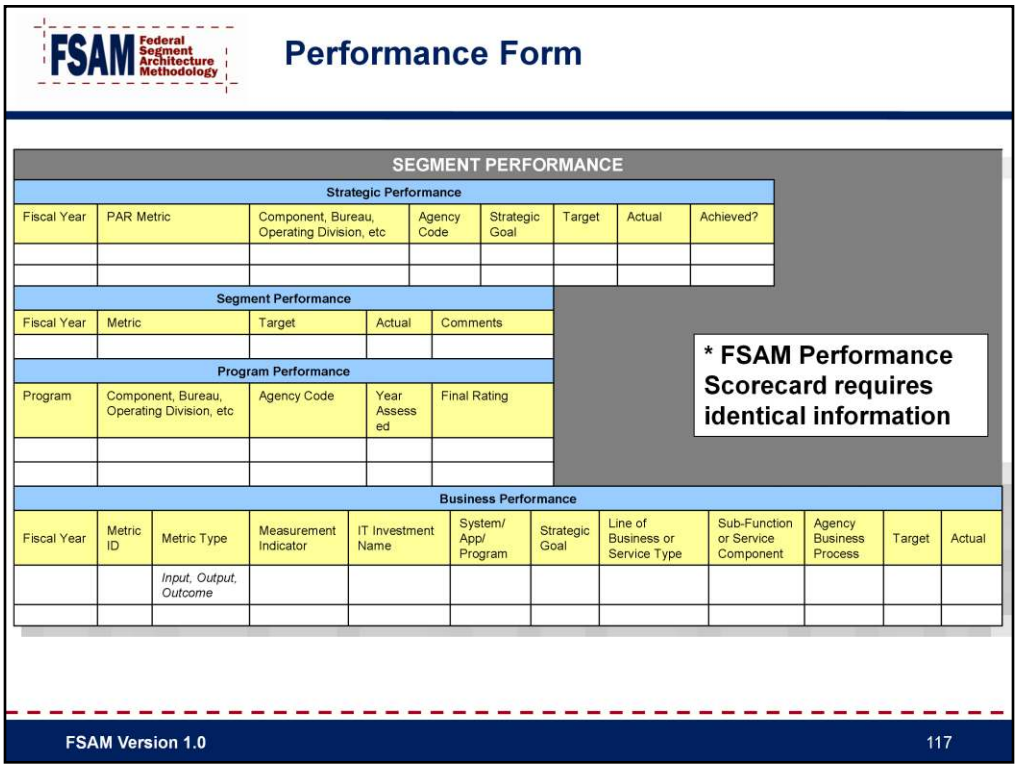
The EASR provides a template for reporting on several aspects of a Segment's maturity. Agencies will be required to complete only certain portions of the EASR based on a Segment's maturity. OMB has defined four development phases for Segment maturity.

The EASR is an integral part of the annual EA submission to OMB. Agencies are expected to submit a Segment Reports for each of the segments that they have defined with OMB, even if the segments are only notional. These reports are required to be updated on a quarterly basis as a means of providing updates as the segment develops and matures. The level of completeness of the EASR will depend on the maturity of the segment. Agencies are expected to have complete segment reports only for 'Completed' segments and not for all segments that they have defined.



The first form in the EASR indentifies and describes the segment, its current status and mappings to the segment. This section is based on the form Agencies used initially to define their segments as disclosed to OMB and will be used to define Segment maturity, priority, and type. Segment Priority has been included to identify segments that have been identified within the Agency's Segment Prioritization Document. Agencies may consider many factors when developing segment priority, including statutory requirements, Agency strategic planning, and performance gaps.

The Segment Mappings Form is designed to show the relationship between the segment and the investments, programs and initiatives that compose it. This section also includes FEA Reference Model mappings, usage of FTF Initiatives within the Segment, and alignment between Investments and PARTed Programs. This form is intended to provide a general overview of the business processes, IT initiatives, and mappings that define the segment. Agencies are required to report similar mappings in other reports to OMB, such as the Exhibit 53s and in PARTed programs. The mappings for this section should reflect the information that has already been reported to OMB.

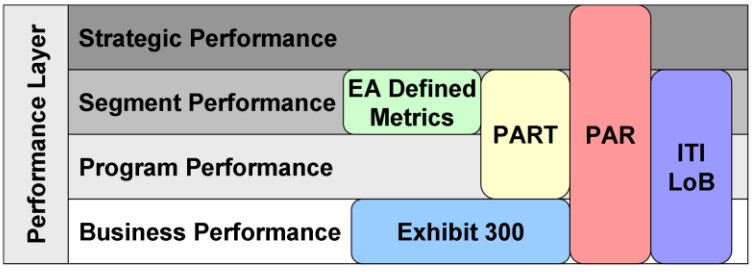


The purpose of the Segment Performance Report is to create a framework in which to measure how well the activities and investments within a segment are performing. Performance metrics may cover a wide range of systems, technologies, processes, activities and outcomes within a Segment. A successful segment should demonstrate a line of sight from IT Investment performance up to Strategic success. Segment line of sight is developed by gathering metrics from many layers that are aligned to a common purpose. This line of sight will show how strategic performance is supported by segment performance that is supported by program performance that is supported by business performance.

Leveraging common and accepted processes for collecting performance metrics in important in comparing performance metrics across the government. Performance for investments, systems, and Segments across the government can be measured in many ways, and 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.

Performance Form

- The Performance Form is intended to capture Segment Performance at multiple levels;
  - Strategic Layer – High level metrics showing support of Agency Strategic Goals
  - Segment Layer – Segment specific metrics such as Cost Savings and Avoidance
  - Program Layer – Program and PART specific metrics
  - Business Layer – IT Investment and Activity metrics based on the PRM Line of Sight
- Segment Performance should leverage current performance architecture activities as indicated in the diagram below



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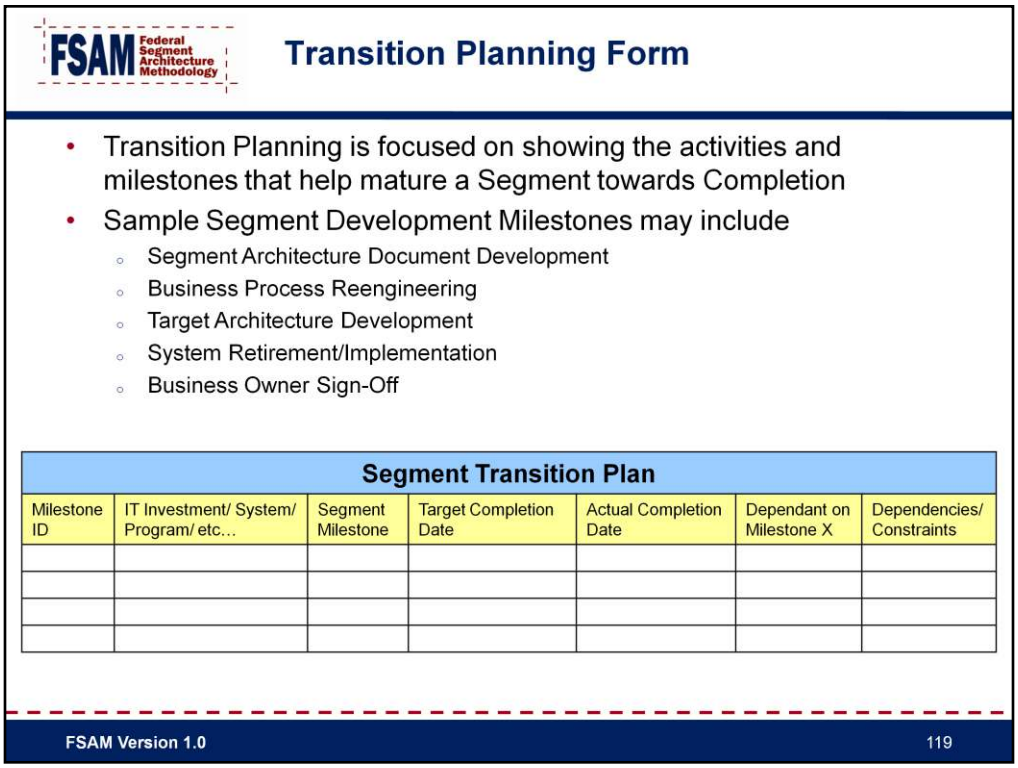
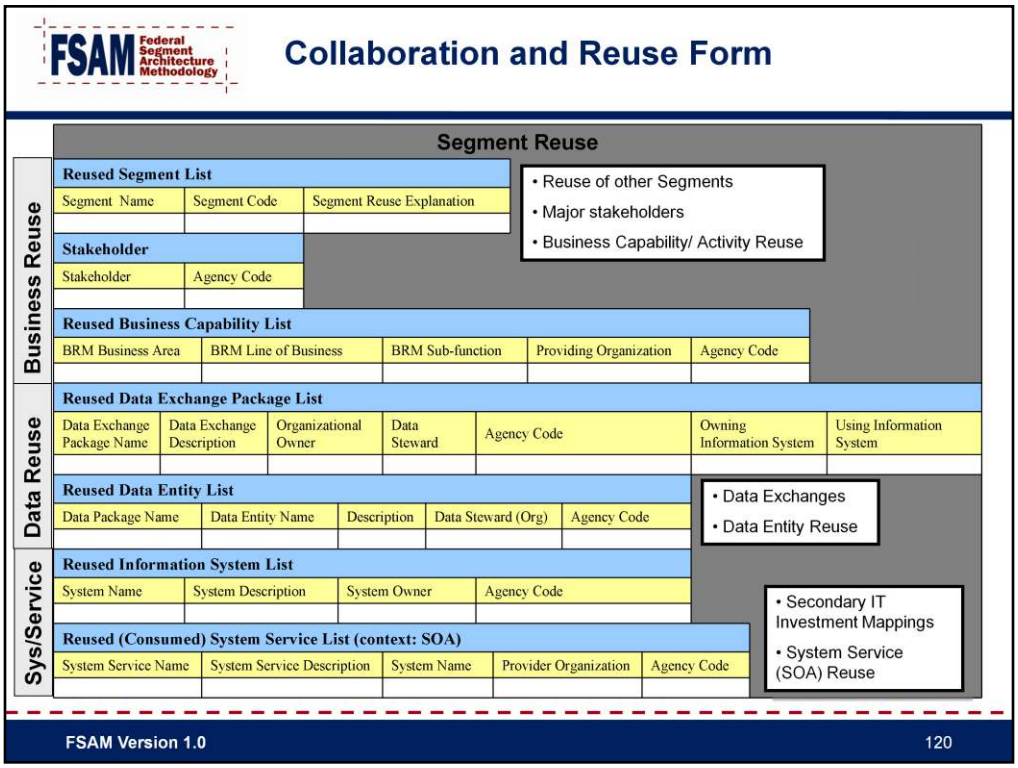
This form contains four main sections: Strategic Performance, Segment Performance, Program Performance, and Business Performance. To complete these forms, Federal Agencies should leverage current ongoing performance-gathering activities such as the Performance Accountability Report (PAR), IT Infrastructure Line of Business (ITI LOB) performance metrics, the Performance Section of the OMB Exhibit 300, and the Program Assessment Rating Tool (PART).



The Segment Transition Plan is intended to capture the development milestones that occur as a segment matures. This component is a critical part of an effective EA practice because it shows that Agencies have a plan and set milestones to move a segment from Notional through to Completed. The Segment Transition Plan should describe an organization's overall plan for achieving its target EA within a specified timeframe. The Segment Transition Plan provides an agency-wide view of all modernization activities that move the segment towards completion.

The Transition Plan is not intended to repeat the investment milestones as captured within the Exhibit 300s, but should focus instead on the development activities that occur 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 the agency marks the transition towards the Target Architecture. Agencies should focus on reporting actions they take to mature the segment, such as undertaking a BPR project and implementing the segment conceptual solution architecture via the execution of solution development projects.

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



Segment Reuse focuses on the business, data, and Information System/Services that can be leveraged and reused from a Segment. This form focuses on three types of reuse within a Segment; Business, Data, and Information System/Service Reuse.

Business Reuse

Segment Reuse – OMB classifies segments as Core Mission, Business Service, or Enterprise Service. Segment reuse could occur by segments in any of these classifications; typically a Mission Segment would be reusing 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 by other organizations; at the Federal level, this replication is likely to be used in a BRM sub-function while, at the Agency level, the replication may be seen at a business process level.

Data Reuse

Data Exchange Packages – Data exchange packages represent information sharing among segments. Note that this sharing does not require an information system intermediary.

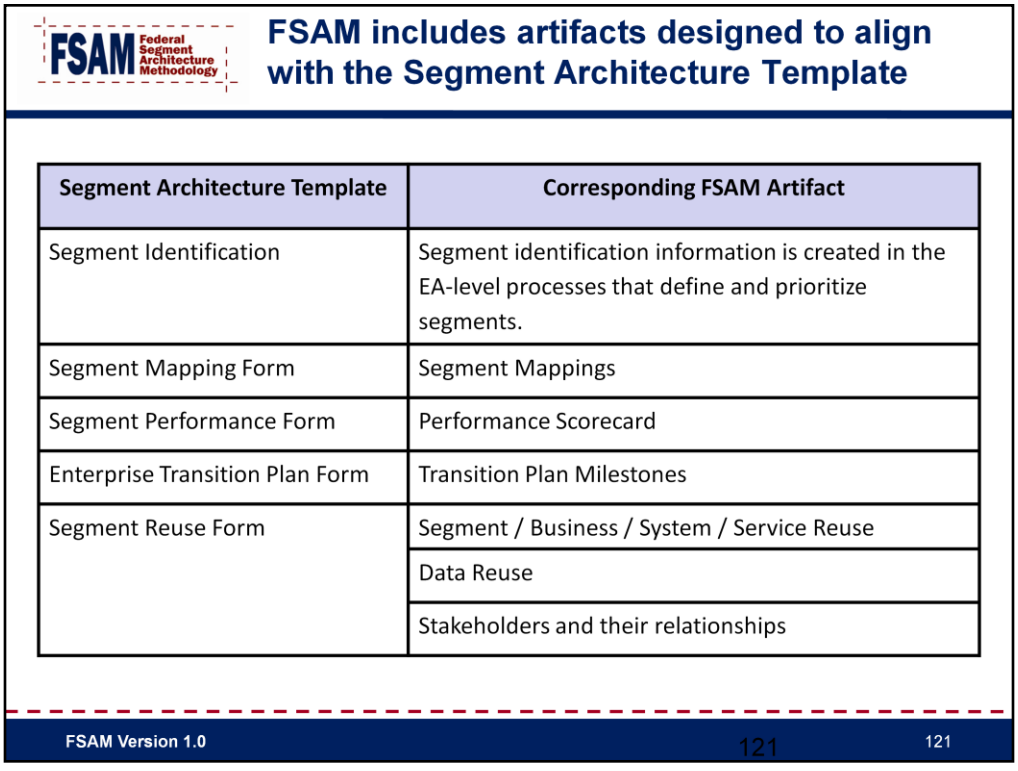
Data Entities – In the meta-model (as based on the FEA DRM), a data exchange package is composed of one or more Data Entities. These may include things like Person, Facility, Claim, etc. The entity may be common across many agencies whether it is ever exchanged or not. If data exchange packages are reused, then the constituent Data Entities should be listed.

Data Assets – A managed, repository for data (i.e. a relational database; a website, a document repository, directory or data service, etc.)

Information System/Service Reuse

Information System Reuse – Information system reuses occurs when the information system is reused (in total) by another segment. The most common occurrences are where a Mission Segment uses the Information Systems Services of an Enterprise Service

System Services – (think SOA here) System services are services provided by a segment that may be usable by a wide variety of segments. Analogous terms that may be used in other agency architectures include Information System Modules, Application Capabilities, Service Components, etc.



The Federal Segment Architecture Methodology has recently been published to provide Agencies guidance on how to develop a Segment Architecture. This guidance has been created through the joint effort of several Agencies and provides a step-by-step process for developing a Segment Architecture. OMB is not requiring Agencies to follow this methodology and previously completed Segments do not have to be revised to adhere to the FSAM. Agencies should leverage the FSAM to when developing new Segments since it has been developed to assist in reporting Segment information to OMB. The FSAM provides a crosswalk between the elements in the EASR and FSAM artifacts in Appendix II: FSAM Logical Data Model Supporting EA Reporting Requirements.

Congratulations! You have completed the Federal Segment Architecture Methodology (FSAM) Practitioner's Training!

You should now be equipped with the knowledge as to what is FSAM and the steps in the FSAM process. You should also be familiar with the FSAM outputs and associated suggested analytical techniques that can be used collectively to describe a segment architecture and how these outputs support OMB segment reporting requirements.

For additional information, please access the FSAM website at: FSAM.gov

Thank you!