Step 4:

Analyze the IT and Develop the Target Conceptual Solution Architecture

Version 1.5, December 2006

1. Step Description and Purpose

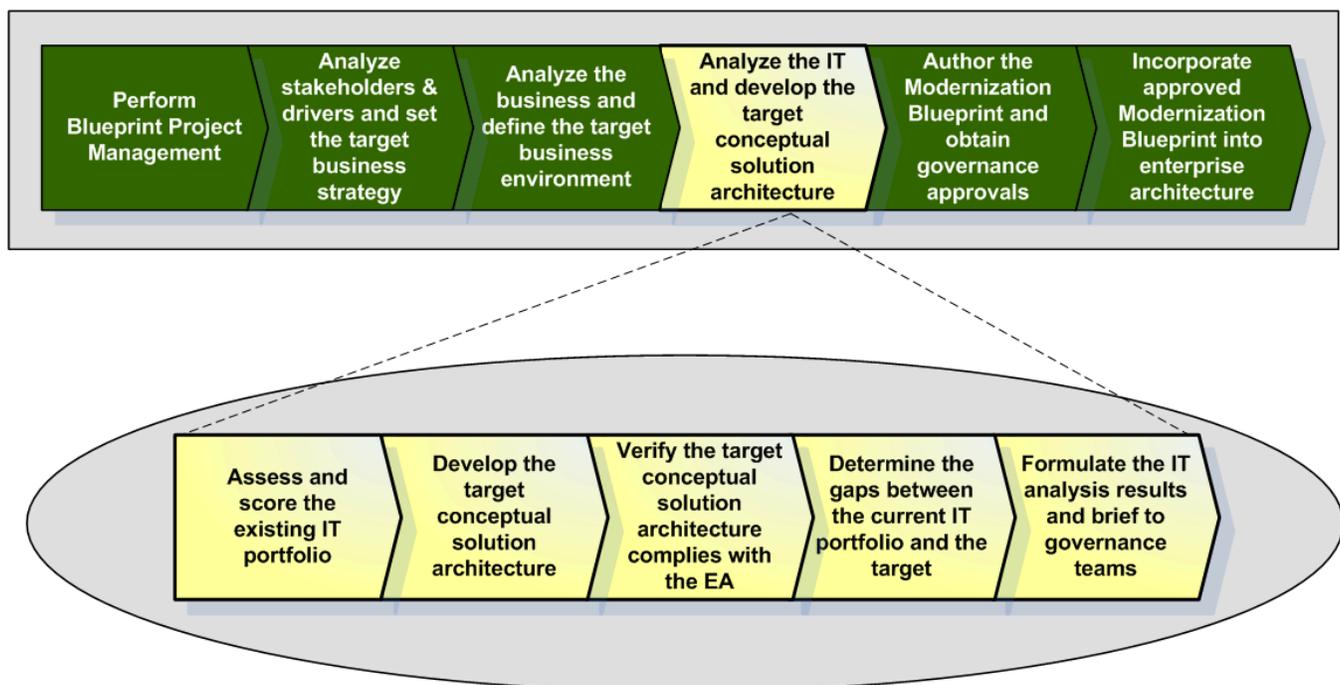Step 4: *Analyze the IT and Develop the Target Conceptual Solution Architecture,* builds on the analysis from Step 3 by focusing on the maturation of the IT Portfolio. With detailed analysis and scoring of the current IT portfolio, the analyst will be able to develop the target conceptual solution architecture as well as perform alternatives analysis where gaps are discovered.

The target state will include business, enabling, and support services that are either re-used from the current portfolio, leveraged from existing enterprise services, or established as new services via projects to develop them. Each service will have a view into what new or existing systems will support the service, identify the authoritative data sources (ADS) for the service, and have a clear view into what functions and/or stakeholders the service will be supporting.
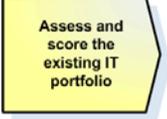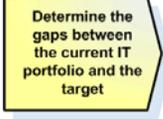
At the conclusion of this step, the analysis and service rationale are presented to and approved by the appropriate architecture governance teams.
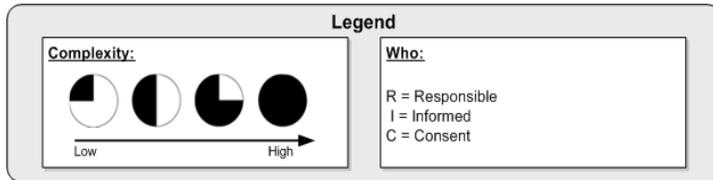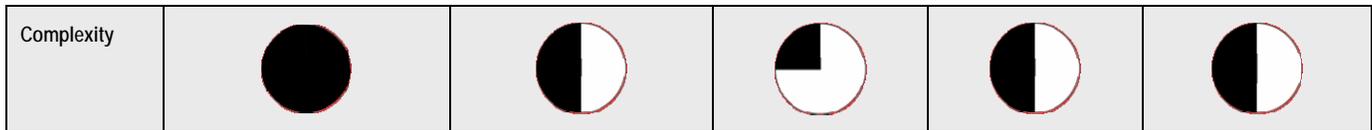
2. Activities within this Step

The table below provides a quick reference for the activities within this step.

CTRL + click the activities for activity details →	Assess and score the existing IT portfolio	Develop the target conceptual solution architecture	Verify the target conceptual solution architecture complies with the EA	Determine the gaps between the current IT portfolio and the target	Formulate the IT analysis results and brief to governance teams
Inputs (source)	EA Repository Portfolio Reports including: Inventory CIO Integration Portfolio Reference Model Mappings As-Is System Data Store Information Initial Business Focus Area Metadata (Step 2)	All previous work products with an emphasis on: Business Area Products and Services Maturity Model (Step 2) Activity Diagrams for Critical Value Chain Components (Step 3) ADS Analysis As-Is System Interface Diagram Systems and Services Description and Scoring (As-Is)	*Note: The input list is common for both Activities* As-Is System Interface Diagram Systems and Services Description and Scoring (Target) Integrated Target Services and Systems Model Solution Architecture Document Target Data Entity Stewardship Matrix (Step 3) Enterprise Horizontal Services Model (Step 6) Enterprise Data Stewardship Matrix (Step 6) Enterprise Modernization Sequencing Plan (Step 6) Enterprise Modernization Dependencies Matrix (Step 6)		Systems and Services Description and Scoring (Target) Integrated Target Services and Systems Model Solution Architecture Document Architecture Decision Document Enterprise Architecture Repository Portfolio Reports (Dashboard view)
Outputs	Initial Business Focus Area Metadata As-Is System Interface Diagram Systems and Services Description and Scoring (As-Is) Total Cost of Ownership (TCO) and Decommission Enterprise Architecture Repository BFA Portfolio Reports Authoritative Data Source Analysis (includes As-Is Data Store to Target Logical Data Model Entity Matrix; As-Is Data Store ADS Assessment Matrix; and the ADS Scoring Summary)	Systems and Services Description and Scoring (Target) Integrated Target Services and Systems Model Solution Architecture Document	None	Architecture Decision Document	Presentation on Systems, Services, and Investments Analysis
Who (role)	Enterprise Architect [R] EA Repository Team [I] Core Team [I] System Owners [I]	Enterprise Architect [R] Core Team [I]	Core Team [I] Enterprise Product Lead [I] Enterprise Architect [Support]	Enterprise Architect [R,I] Core Team [I,C]	Enterprise Architect [R] Governance Teams [C]
Duration (calendar days for an average project based on past projects)	45 days	10 days	5 days	5 days	5 days

Complexity					

Legend

Complexity:

Low   High

Who:

R = Responsible
I = Informed
C = Consent

Keys to Success:

The key to a business driven solution architecture is to gather quality information about the as-is solution environment and to leverage the business analysis results from previous steps. Be sure to also leverage Federal and eGov solutions. Start interviews for this step early.

3. Activity Details

Activity 1 – Assess and Score the existing IT Portfolio

Activity Short Description:

Now that the business services and business functions have been analyzed, the analyst focuses on the existing set of solutions that currently enable the business area. This step focuses on:

- setting BFA IT Portfolio based on line of sight and creating BFA EA reporting website

- gathering architecture information in support of system scoring and total cost of ownership input

- constructing As-Is System artifacts

- performing system scoring to guide target state recommendations.

Activity Tasks:

1. Populate the Business Focus Area Metadata template to establish the IT Portfolio scope based on the Line of Sight information gathered in previous MBT steps. Note that this activity can begin in parallel with MBT Step 2.

    a. Using the Blueprint Team Website and MBT Products previously produced (specifically URL Links) as a source for most fields, update the metadata about the Business Focus Area.

    b. Validate the IT Portfolio using the BFA line of sight information by performing heuristics analysis against the enterprise view of the repository reports. This will ensure a more comprehensive view that incorporates into the scope those items that may have been missed by looking solely at the portfolio from a BFA viewpoint.

        i. Go to the Enterprise View or, where appropriate, the organization-specific view, and review report sections where the IT Portfolio (Systems, Boundaries, Investments) are mapped to performance objectives, business functions, information classes/entities, and Services/Components

ii. Using this list of systems, determine if the BFA is a primary or secondary focus of the system. If systems were discovered in earlier steps that are not in the enterprise architecture repository, add those to the template as well, and plan for data collection interviews.

2. Coordinate with EA Repository Administrator to load BFA Metadata Template and establish a BFA-specific reporting site.

   a. By having this information, reports can be automatically generated based on the IT Portfolio and line of sight information. Review these reports for the BFA IT Portfolio analyze for discrepancies between what has been collected vs. what should be collected. List discrepancies and identify sources for gathering the missing information. Track the level of data collected for each system. This will guide you on how much system data collection interviews that will need to be performed in this step

3. With the IT Portfolio defined, conduct As-Is System/Service Interviews. Interviews are made up of four parts. Note that this activity can begin in parallel with MBT Step 2. Schedule interview and distribute any read-ahead materials to prepare the interviewees:

   a. Data Collection/Validation

      i. Follow the enterprise architecture repository activity guidance and data collection templates provided on the department public EA web site. Decide which activities will be necessary to complete the scoring template based on the scope and objectives of the blueprint (i.e., do not perform steps that are not necessary to complete analysis). If collection will be required on a medium to large scale, it is recommended to use the enterprise architecture guidance templates and create a workbook of forms.

      For example new or detailed guidance items such as System to Data Store Information, Data Entity Mapping, System to new BRM extension mappings, and Deployment information is likely not fully populated and will require data collection activity.

      ii. After collection, coordinate with the Managing Organization's Chief Architect to load this As-Is System information into the enterprise architecture repository. This is especially important for new systems, so that they can manage his information as part of MBT Step 13.

   b. Authoritative Data Source Analysis

      i. For the systems being evaluated and scored, identify and map their core underlying data stores to the Target Logical Data Model information classes and core entity types. This mapping will identify redundant sources of data that is being maintained in disparate systems, and candidates for scoring and selecting an Authoritative Data Source for cohesive grouping of data in the target solution architecture. These mappings will be recorded in the As-Is Data Store to Target Logical Data Model Entity Matrix (part of the ADS Analysis template).

      ii. For each core entity type or information class, perform an assessment of each of the as-is data stores mapped to a core entity type or information class in the Target Logical Data Model. The assessment includes evaluating at a high-level the data stores quality, reusability, and stewardship. Based on this assessment, each as-is data store is scored and an ADS is designated for each core entity or information class in the Target Logical Data Model. The assessment results are

recorded in the As-Is Data Store ADS Assessment and the scores are recorded in the ADS Scoring Summary (part of the ADS Analysis template).

    c. Total Cost of Ownership (TCO)

        i. Follow the guidance provided in template to adequately interview and assess the TCO for this system.

    d. System and Service Scoring Input Collection

        i. Review the Scoring template to get a better idea of the types of information that are important for these interviews. Pre-populate based on information provided in the enterprise architecture repository. To do this, here are a few suggestions:

        ii. Review the stakeholder exchange diagrams and SWOT in order to get an understanding of the stakeholder needs and their thoughts on the business area

        iii. Brainstorm a collection of solutions that are relevant for this interview process

4. After performing interviews, and documenting notes, make sure to catalog interview notes for future reference and input into other steps.

5. Construct as-is architecture artifacts listed for this activity and complete scoring template

6. Based on interviews and existing documentation, construct the As-Is System Interface Diagram. This diagram depicts systems and the data they exchange between the systems. These data items should be linked within the architecture repository to the entities in the logical data model that was constructed in earlier Activities.

7. Complete the As-Is Systems Scoring template following the guidance provided in the template

8. Brief the Core Modernization Blueprint Team on the results of the As-Is Systems Scoring

Activity Communications Considerations:

The data quality across organizations varies greatly. Therefore, coordinate early in performing the data collection planning steps and perform in parallel with MBT Steps 1 thru 3. Leverage data quality scorecards provided to organizations on a periodic basis as well to gain insight early into data completeness and accuracy.

To mitigate risk even further, it will be important to coordinate with organization's Chief Architect's as soon as you find out your IT Portfolio and Line of Sight.

Also, after establishing your IT Portfolio and Line of Sight, contact the enterprise architecture repository team early to plan on when your team will require the BFA Portfolio reporting site section in support of Step 4.

Suggest use the templates as noted in the activities to maintain submission, load, and QA status of the load effort.

Activity Work Products and Templates:

    Initial Business Focus Area Metadata: The spreadsheet captures the metadata about the business focus area. Only populate the following sections: Descriptive, Blueprint Status, MBT Products for Review, Business Mission and Vision, Team Information, Portfolio, Line of Sight (Reference Models).

    • **TEMPLATE:** [See Step 2 or 6 for Templates]

As-Is System Interface Diagram: This work product depicts the existing systems within the business area (and sometimes external to the business area) and the data that is exchanged between those systems in the current state.

- **TEMPLATE:** As-Is System Interface Diagram (PDF format)
- **TEMPLATE:** As-Is System Interface Diagram (VISIO format)

Total Cost Ownership (TCO) and Decommission Template: Total Cost of Ownership template captures activities and estimated for total cost to provide, deliver, support, and manage a system.

- **TEMPLATE:** Total Cost Ownership (TCO) and Decommission Template (Excel)

Enterprise Architecture Repository BFA Portfolio Reports: A reporting section will be created for you after working with the enterprise architecture repository team to load your IT Portfolio and Line of Sight information. Your section will be linked on this site, and can be pointed to from your Core Team Web Site.

- **TEMPLATE:** Enterprise Architecture Repository BFA Portfolio Reports Section (Intranet)

Systems and Services Description and Scoring (As-Is): 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.

- **TEMPLATE:** Systems and Services Description and Scoring (As-Is) (Excel format)

Authoritative Data Source Analysis: This work product contains the templates for the following: As-Is Data Store to Target Logical Data Model Entity Matrix; As-Is Data Store ADS Assessment Matrix; and the ADS Scoring Summary**.**

- **TEMPLATE:** Authoritative Data Source Analysis (Excel)

Activity 2 – Develop the target conceptual solution architecture

Activity Short Description:

This activity will focus on delivering the conceptual solution architecture. For each major business function, review the services required (as noted from Step 2) by stakeholders to:

- establish services interface needs
- identify authoritative data source requirements
- capture service qualities
- note initial gap findings and recommendations
- note repeatable patterns

These activities will result in documenting Target Business Services integrated with supporting systems and defined authoritative data sources (ADS) including rationale supporting these services.

NOTE: This activity focused on business services. Activity 3 focuses on enabling and support services from an enterprise perspective and Activity 4 identifies business, enabling, and support services where systems and ADS are not available (i.e., gap exists). In this activity, avoid diving too deep into the enabling and supporting services. Make placeholder notes to record and capture any observations and issues that can be revisited further in Activities 3 and 4.

Activity Tasks:

1. Review the Business Products and Services Matrix and the Value-Chain with Service Overlay from MBT Step 3

    a. Review the Business Services Model/Matrix to gain an understanding of the target service maturity needs. This will assure that the architecture maturity for each service is in line with the near-term and long-term needs of the service (i.e. will avoid over-engineering architecture to best of breed and instead to best of "need").

    b. Review Value-Chain with Service Overlay to gain an understanding of what functions require what service.

2. Load each service onto a new Integrated Services and System Model. In general organize the services on the diagram by the value-chain function.

    a. For each service added, add an item to the Target Services and Systems Scoring Template List in the Services Column.

3. For each SRM service or BRM value chain function above, using the enterprise architecture reports, discover which systems support those functions and services

    a. If a system is a target candidate based on As-Is System Scoring, update the rationale and score of the service on the template. Rationale should consider:

        i. Review and capture ADS candidates for this service using ADS Analysis input and Logical Data Model (from MBT Step 3).

        ii. Use of Service and define interface needs or new interfaces for each stakeholder of the functions. Note redundancy/repeatable business patterns in services.

        iii. Operational Qualities such as scalability, security, agility, reliability, flexibility, etc. i.e. consider whether systems were intended and can be used for a new target purpose, and what those target qualities are.

    b. Update Integrated Services and System Model by associating system to the service it is supporting, and add or describe the interfaces to other services. It may be necessary to keep multiple views with varying levels of detail and business focus. The template provides overview and system view.

    c. Optional: Capture Performance Measurement Results as well as Labor Costs Attribution of services. If the enterprise architecture repository environment is setup to support analytic annotation of symbols in a data-driven fashion, enable the capability to show the labor cost range as a super-note icon, and color-code symbols based on current performance

4. This is a very iterative process, so with each system you review, iterate on the services model and target scoring to assure all angles are captured.

5. Update the Solution Architecture Document Outline with key findings, rationale, and appropriate figures. Note and search on all areas where "Editors Notes" exist as these are the points where blueprint specific edits such as with key findings, rationale, and appropriate figures are required.

Activity Communications Considerations:

When looking at service models and considering or noting where service patterns will fundamentally change the way an organization may function, it will be critical to re-visit with Core Team the service

organizational impacts early so they can consider these impacts. It is typically these types of changes that impact the blueprint implementation success the most.

Activity Work Products and Templates:

Systems and Services Description and Scoring (Target): 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.

- **TEMPLATE:** Systems and Services Description and Scoring (Target) (Excel format)

Integrated Target Services and Systems Model: A diagram showing the target services and systems as well as the overview

- **TEMPLATE:** Integrated Target Services and Systems Model (PDF format)

- **TEMPLATE:** Integrated Target Services and Systems Model (Visio format)

Solution Architecture Document: Review Editor Notes and begin to capture notes of what needs to be updated in the solution architecture document. These notes will be based off activity 2 rationale

- **TEMPLATE:** Solution Architecture Document (Word format)

Activity 3 – Verify target conceptual solution architecture complies with the EA

Activity Short Description:

This activity focuses on all services available from an enterprise perspective to align and re-use enterprise and Federal-wide service investments. This activity is similar to Activity 2, except that it is performed from an enterprise service perspective.

This essentially is an iteration of the blueprint analysis performed in the three previous activities. The intent is to ensure that enterprise asset, service, and component re-use is considered as part of an overall portfolio analysis.

Activity Tasks:

1. Review the Enterprise Transition Plan, Enterprise Conceptual Architecture, and all Enterprise Architecture Artifacts created from previous Step 6 efforts.

   a. It is strongly suggested at this point to engage the overall enterprise architect support to collaboratively perform the next activity. This will assure that the architecture maturity for each enterprise service is in line with the near-term and long-term needs of the blueprint needs for service use. Gain familiarity with the Enterprise Architecture Principles, Guidance, and Strategy as well as the Enterprise Solution Architecture Guidance Template.

2. For each SRM service or BRM value chain function above, identify related Enterprise, Federal Business, Enabling, and Support/Infrastructure Services

3. If an enterprise service is a target candidate based on As-Is System Scoring, update the rationale and score of the service on the template. Federal services include e-Gov, LOB, and SmartBuy using FTF, OMB Segment Architecture Guidance. Department services include Enterprise Investments and Enterprise Infrastructure projects, along with others as described in the enterprise transition plan and related strategy documents

4. When documenting services, use rationale to capture impacts such as tolerance, impedance, and exceptions in each of the following service areas. These enterprise services can provide a foundation for reuse of applications, application capabilities, components, and business-enabling services. Some organizations will likely have limiting factors to the level of re-use that can be accommodated. Service related questions and other considerations include:

    a. Business Services – Are there different business rules, mandates, drivers, stakeholders that the enterprise business service has not considered?

    b. Enabling Services (white) – Are there competing investments in an organization providing Customer, Process Automation, Business Management, Digital Asset, Business Analytical, and Back Office Services?

    c. Support Services (orange) – Are their organization's involved in the blueprint which cannot use the enterprise support services due to complex network requirements, disconnected locations, or legislative limitations?

    d. ADS Candidates are reviewed and captured for the service based upon the existing ADS analysis.

    e. Use of Service can help define interface needs or new interfaces for each stakeholder or function. Note any redundancy/repeatable business patterns in the services.

    f. Operational Qualities such as scalability, security, agility, reliability, flexibility, etc. i.e. consider whether systems were intended and can be used for a new target purpose, and what those target qualities are.

5. Update Integrated Services and System Model as performed in Activity 2.

6. Update the Solution Architecture Document Outline with key findings, rationale, and appropriate figures

Activity Communications Considerations:

When considering leveraging Enterprise Services, validate your enterprise re-use impact document with Organizational IT Leadership such as a CIO, Chief Architect, Infrastructure Lead, or project representatives to confirm that indeed the enterprise services can be used in the organizational environment recommended or to capture limiting factors. These conversations will may lead to iteration on the target services and updating of the rationale.

Activity Work Products and Templates:

Updated Solution Architecture Document: Overall focus on highlighting the scope and level of change discovered including As-Is State of the Architecture, Target Service Architecture Overview, Portfolio Re-use Highlights, and Major Gaps and Alternative Analysis

- **TEMPLATE:** Solution Architecture Document (Word format)

Updated 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.

- **TEMPLATE:** Systems and Services Description and Scoring (Excel format)

Updated Integrated Target Services and Systems Model: A diagram showing the target services and systems

- **TEMPLATE:** Integrated Target Services and Systems Model (PDF format)

- **TEMPLATE:** Integrated Target Services and Systems Model (Visio format)

Activity 4 – Determine the gaps between the current IT portfolio and the target

Activity Short Description:

In previous steps, as-is and target blueprint business services were analyzed and all enterprise services, including business, enabling, and support enterprise services, have also been analyzed with respect to the BFA. It is likely that there may still be gaps where the target architecture new requirements are not fulfilled by the existing architecture systems, components, and data sources.

A gap analysis is performed to ensure that the IT portfolio gaps are identified, and raw inputs to IT Portfolio findings for the blueprint are captured. This step will facilitate documentation of such gaps, as well as provide a basis for performing alternative analysis for each service using the Integrated Target Services and Systems Model and the Systems and Services Description and Scoring.

Activity Tasks:

1. Review the Systems and Services Scoring template for any system stated in the As-Is but not is not referenced as Target or Both.

    a. Capture decommissioning activities required and estimate cost ranges. Use As-Is scoring results, note the gaps score and consolidation/retirement recommendation as part of gap rationale.

2. For each target service, identify and document all gaps in the Architecture Decision template using scoring results rationale as inputs into the gaps. This will facilitate scoping architecture decisions and the analysis of alternatives.

    a. In architecture decisions, capture migration / partial decommissioning activities required and estimate cost ranges where existing systems will be supporting target services. Wrapping legacy systems with service interfaces is a Development / Modernization / Enhancement (DME) investment that will need to be captured in Step 5, as well as noted in the findings. This will guide level of complexity for completing Step 11.

3. Update the Solution Architecture Document Outline with key findings, rationale, and appropriate figures.

Activity Communications Considerations:

Ultimately, this step captures notes that will be used in developing findings and recommendation in MBT Step 5. Any notes relative to the gaps will be documented in further detail as to impacts to implementing the architecture as needed in Steps 10 and 11.

The architecture decisions will be critical in guiding the open issues and resolutions to address gaps. Documentation should be as complete as necessary based on the complexity and clarity of the gap or issue.

Activity Work Products and Templates:

Architecture Decision: This work product contains the gap analysis, draft architecture decisions, including alternative analysis.

- **TEMPLATE:** Architecture Decision (Excel format)

Draft Solution Architecture Document: Overall focus on highlighting the scope and level of change discovered including As-Is State of the Architecture, Target Service Architecture Overview, Portfolio Re-use Highlights, and Major Gaps and Alternative Analysis

- • **TEMPLATE:** [Solution Architecture Document (Word format)](#)

Updated 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.

- • **TEMPLATE:** [Systems and Services Description and Scoring (Excel format)](#)

Updated Integrated Target Services and Systems Model: A diagram showing the target services and systems

- • **TEMPLATE:** [Integrated Target Services and Systems Model (PDF format)](#)
- • **TEMPLATE:** [Integrated Target Services and Systems Model (Visio format)](#)

Updated Total Cost Ownership (TCO) and Decommission Template: System Decommission, which is closely tied to the Total Cost of Ownership template captures activities and estimated for total cost to migrate, consolidate, retire, and finally decommission a system.

- • **TEMPLATE:** [Total Cost Ownership (TCO) and Decommission Template (Excel)](#)

Activity 5 – Formulate the IT analysis results and brief to governance teams

Activity Short Description:

This activity summarizes the as-is IT portfolio analysis, recommended target concept, and findings on the gaps discovered. The communications strategy should include periodic outreach to governance teams, and the review and approval of intermediate results, to help ensure acceptance and success of the overall Blueprint effort.

Activity Tasks:

1. Review, update, and finalize the Systems and Services Description and Scoring and Integrated Target Services and Systems Model to ensure that the results of the analyses performed during this step are adequately incorporated.

    a. When creating the Target Services and System Interaction diagrams it is important to note that this will be a critical communications product. When using it in presentations, create an Overview Diagram of the Target Services and System Interaction Diagram, as well as the As-Is System Interface Diagram.

    b. NOTE: Where the Target Services and System Interaction Diagram will have Functions which have services that have systems with interfaces at the services and system level, the Overview would have Functions which have services with system counts and rolled up services interfaces

2. Summarize target solution architecture and gaps, along with any recommendations, into a 2-3 page executive summary using the Solution Architecture Document template.

3. Schedule and perform governance reviews of Solution Architecture Document. The decision gates for completing this step include Business Governance, Data Governance, Technology Governance, Chief Architect Governance, and Capital Planning Governance.

4. Update the Solution Architecture Document, Systems and Services Description and Scoring and Integrated Target Services and Systems Model based on feedback from each governance team.

5. Create a briefing that depicts the target business products and services, architecture decisions, ADS target decisions, and Solution Architecture Overview

Activity Communications Considerations:

In general, each governance team will have a separate focus.

*   Business Governance (e.g., Interior Business Architecture Team [IBAT]) will focus on business services

*   Data Governance (e.g., Data Advisory Committee [DAC]) will review of data artifacts, ADS, and data services

*   Technology Governance (e.g., CTO Council and Technology Evaluation Teams [CTOC/TET]) will focus on Support services and enabling services. Feedback will likely focus on closing the gap on service rationale, gap/alternative analysis, and proposing enterprise license re-use opportunities.

*   Chief Architect Governance (e.g., Interior Architecture Working Group [IAWG]) will provide input on all services but likely focused on service re-use and identifying enterprise service opportunities

*   Capital Planning Governance (e.g., Capital Planning Working Team [CPWT]) will key in on portfolio re-use and new investment needs

Activity Work Products and Templates:

Updated Architecture Decision: This work product contains the gap analysis, draft architecture decisions, including alternative analysis.

*   **TEMPLATE:** Architecture Decision (Excel format)

Final Solution Architecture Document: Overall focus on highlighting the scope and level of change discovered including As-Is State of the Architecture, Target Service Architecture Overview, Portfolio Re-use Highlights, and Major Gaps and Alternative Analysis

*   **TEMPLATE:** Solution Architecture Document (Word format)

Final 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.

*   **TEMPLATE:** Systems and Services Description and Scoring (Excel format)

Final Integrated Target Services and Systems Model: A diagram showing the target services and systems

*   **TEMPLATE:** Integrated Target Services and Systems Model (PDF format)

*   **TEMPLATE:** Integrated Target Services and Systems Model (Visio format)

Presentation on Systems, Services, and Investments Analysis: This briefing will describe the summary results of the target business products and services, architecture decisions, ADS target decisions, and Solution Architecture Overview.

*   **TEMPLATE:** Presentation on Systems, Services, and Investments Analysis Template (PowerPoint)

4. Step References

Enterprise architecture Repository Guidance:

http://www.doi.gov/ocio/architecture/guidance/dearguidance.htm

Enterprise Transition Strategy

http://www.doi.gov/ocio/architecture/documents/doi_enterprise_wide_transition_plan_final.doc

Conceptual Architecture Document

http://www.doi.gov/ocio/architecture/documents/conceptual_architecture_final.doc

CTOC Intranet site

Chief Technology Officer Council (CTOC) intranet site on doi.net specifically referencing the Interior Solution Architecture Volume I: Target Logical Solution and Service-Oriented Application Reference Architecture as provided by the Service Oriented Integration Center of Excellence. This includes the Solution Architecture Template Guidance which has the Architecture Decision Template.

Enterprise Architecture Repository

EA Information Management Guidance Section: (If System Data Collection Required) Use this website for guidance on collection the following system information: System Inventory, CIO Integration, Reference Models, and MBT Modeling requirements.

Enterprise Architecture Repository - EA Information Management Guidance Section

Raines Rules (for use in System Scoring Criteria Validation)

http://www.balancedscorecard.org/bkgd/Raines_rules.html

Solution Architecture Artifacts

The following table lists the artifacts for a solution complying with the Enterprise Solution Architecture document (i.e. Interior Solution Architecture (ISA)) document published by the Solution Architecture Governance Group (i.e. Chief Technology Officer Council (CTOC)).

The table shows artifacts produced during the MBT and shows how they are relevant to the ISA's requirements for the solution architecture. The first three columns show the MBT step, product, and how the blueprint product supports the related artifact in the solution architecture documentation.

For Example, the first row states in MBT Step 2, a Vision document is produced which is the business description as captured as a brief narrative in the solution architecture document which is required.

MBT Step	MBT Product Name(s)	Blueprint Supported	Artifact	Related Sub-architecture	Comments	Required
2	Vision Document	is	Business Description	Business	Brief narrative	Required
3	Business Process Models	contributes to	Use Case Model	Business	Diagram or text high-level with text documenting each use case and actor	Required
3	Business Services Matrix	provides	Functional Requirements	Business	List	Required

Step 4 Guidance: Analyze the IT and Develop the Target Conceptual Solution Architecture

MBT Step	MBT Product Name(s)	Blueprint Supported	Artifact	Related Sub-architecture	Comments	Required
3, 6, 13	Enterprise DRM Taxonomy	is	Solution Subject Areas and Information Classes	Data	List	Required
3	Target System and Services Diagram, System Services Description/Scoring	is	SRM mapped to business functionality	Application	Diagram	As needed
4	Target System and Services Diagram	is	Solution Overview Diagram (SOD)	Business	Enhanced in subsequent steps with business and integration pattern and service components overlays	Required
4	EA Repository Portfolio Reports – Data Mapping Reports	contains	Solution data mapped to the enterprise entities or classes	Data	List	Required
4	Service Description	Yes	Application Reference Model	Application/ Technology	Diagram	Required for COTS products and new development
3, 9	Logical Data Model	is	Entity Relationship Diagram (ERD)	Data	Diagram	As needed for new development
3, 9	Logical Data Model	contributes to	Object Role Model (ORM) diagram	Data	Diagram	As needed for new development
11	Application Patterns and Tiers	is	Application Patterns and Tiers	Application	Diagram	As needed
11	User Roles and Security Levels	is	User Roles and Security Levels	Security	List	Required
11	Procedures	is	Procedures	Security	Document	Required
11	Data Security	is	Data Security	Security	Document	Required
11	Application Access	is	Application Access	Security	Document	Required
11	Application Security Boundaries	is	Application Security Boundaries	Security	Diagram	Required
11	Security Technology	is	Security Technology	Security	Document	Required
4,11	System and Service Scoring	provides	Non-functional Requirements	Application	List	Required