Blueprint Development Guidelines for GoR

Prepared by:

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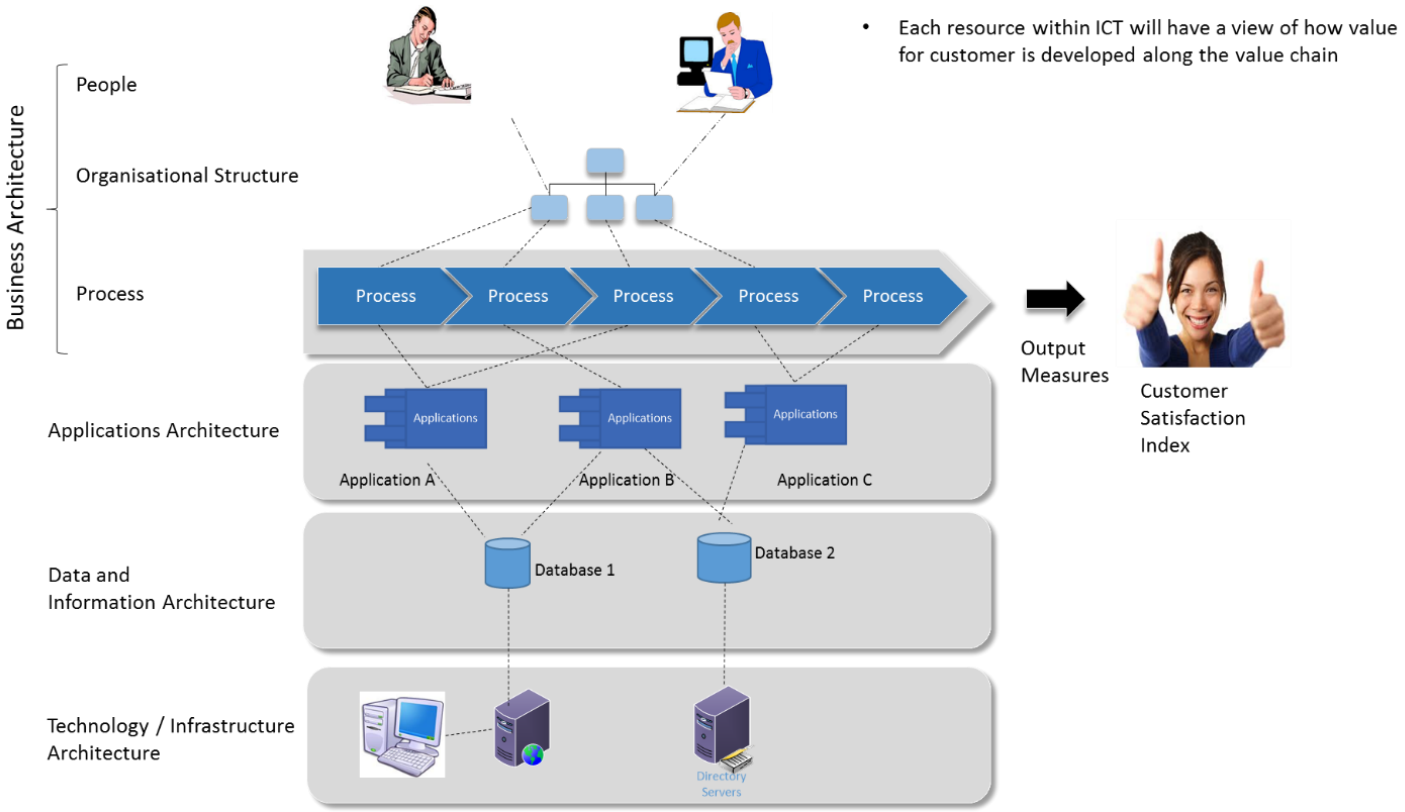
I. INTRODUCTION

The purpose of these guidelines is to help public entities and GoR's private partners to have a common understanding of EA practice and to guide the systematic mapping of the institution's IT landscape (Blueprint) in clear steps namely: the AS-IS situation, the To-Be situation, the Gap analysis and the Roadmap.

In order to bring alignment between business requirements and IT capabilities, the blueprints are implemented through five (5) domains namely Business, Information, Data, Application and Technology/Infrastructure Architectures. These are commonly referred to as the BIDAT stack.

Depicted below are the domains that make up the BIDAT stack.



Business Architecture

This domain documents the business strategy, governance, business rules, goals, structure, processes and services. Within this initiative, the business domain will concern itself with the documentation of business services that IT supports.

Information Architecture

This domain is concerned with the transfer of information between different business units using IT solutions

Data Architecture

This domain looks at how data sources are managed within an environment. It concerns itself with the structuring of databases, defines the standards and models for data collection, storage, use and management. All attributes for databases are stored within the Information Resource Catalogue (IRC). It documents the physical and conceptual data models, logical and physical data assets and data management resources. In some cases, due to the close association between the two domains, the Information and Data Architecture are combined and collectively referred to as Information System Architecture.

Application Architecture

This domain documents the systems to be deployed, their interactions, and their relationships to the core business processes of the organisation. The key deliverables for this domain include the application models and an Application Portfolio i.e. a catalogue of all applications within a given environment

Technology Architecture

This documents the hardware and software capabilities that are required to support the deployment of business, data and application services. This includes the documentation of the Enterprise Service Bus, IT Infrastructure, middleware, networks and communications channels

II. REFERENCE DOCUMENTS

For full guidance and overall context purpose, this document should be read in conjunction with the following documents:

Government of Rwanda Enterprise Architecture Governance: This document outlines the governance structure around enterprise architecture within government of Rwanda.

Government of Rwanda Enterprise Architecture Framework: This outlines the boundaries, approach and notation that is used to model the enterprise architecture within Rwandan public entities

Government of Rwanda Enterprise Architecture Principles: This defines the guiding principles for enterprise architecture that should be applied across all public entities

Government of Rwanda Enterprise Architecture Standards: This document defines the standards that should be adhered to in documenting enterprise architecture artefacts

III. COMPLIANCE

One of the key benefits for establishing an institution's blueprint is to ensure the right selection and right scoping of IT projects, making clear the direct linkage between the IT project and the institution's business requirements. The blueprint also serves as a framework to align with the integration and interoperability standards at national level.

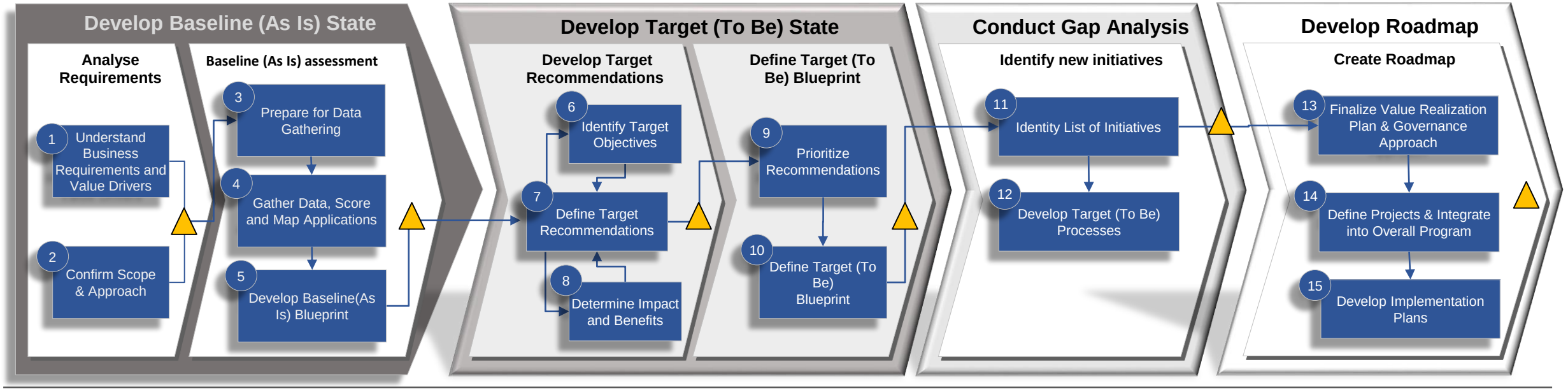
It is in this context that the development of institution's blueprint will be considered as the basic requirement for any IT project to be approved at RISA's level before a request for funds is sent to MINECOFIN.

IV. BLUEPRINT DEVELOPMENT GUIDELINES

For ease of consultation these guidelines are provided in the form of diagrams organized in the following flow:

1. EA Development Value Chain
2. Business Requirements Analysis
   2.1. Understand Business Requirements and Value Drivers
   2.2. Confirm Scope and Approach
3. Baseline Blueprint Development
   3.1. Prepare for Data Gathering
   3.2. Gather Data
   3.3. Develop Baseline Blueprint
4. Develop Target Recommendations
   4.1. Develop Target Recommendations
   4.2. Prioritise Target Recommendations
5. Target Blueprint Development
   5.1. Define Target Blueprint
6. Gap Analysis
   6.1. Conduct Gap Analysis
7. Create Roadmap for Target Blueprint Implementation
   7.1. Create Road Map

1. EA Development Value Chain



Key Activities

- Review business strategy
- Conduct stakeholder assessment
- Request/review existing documentation eg strategy, org structure etc
- Confirm business services and stewards
- Confirm application inventory and stewards
- Finalize scope & approach

- Gather application data
- Map applications to business Services / functions
- Analyze data and score applications
- Validate Baseline (As Is) Blueprint with the client
- Create Baseline (As Is) Models in Sparx Enterprise Architect
- Export models and develop Baseline (As Is) Blueprint

- Define recommendations for current environment
- Analyze data/scores and disposition applications
- Determine high-level impact and benefits
- Identify 'Quick Wins'
- Confirm recommendations and dispositions with Stakeholders

- Develop high-level business case
- Prioritize recommendations, identifying interdependencies
- Identify additional opportunity areas
- Confirm business case and prioritization with Stakeholders

- Identify gaps between Target and Baseline blueprints
- Compare best practice implementation of desired solutions
- Identify optimization opportunities and associated applications
- Confirm opportunities with Stakeholders
- Identify list of initiatives to close the gap
- Map initiatives to target drivers and business requirements

- Define Initiatives
- Develop Transition Plans
- Create value case appropriate for investment justification
- Create actionable roadmap
- Review final deliverables with Stakeholders

Key Deliverables

- Assessment scope and application inventory
- Data collection, analysis and scoring approach

- Application inventory with demographics
- Baseline (As Is) Blueprint

- Recommendation Summary
- Application Disposition Matrix
- Pain Gain Analysis
- Quick Win Initiatives

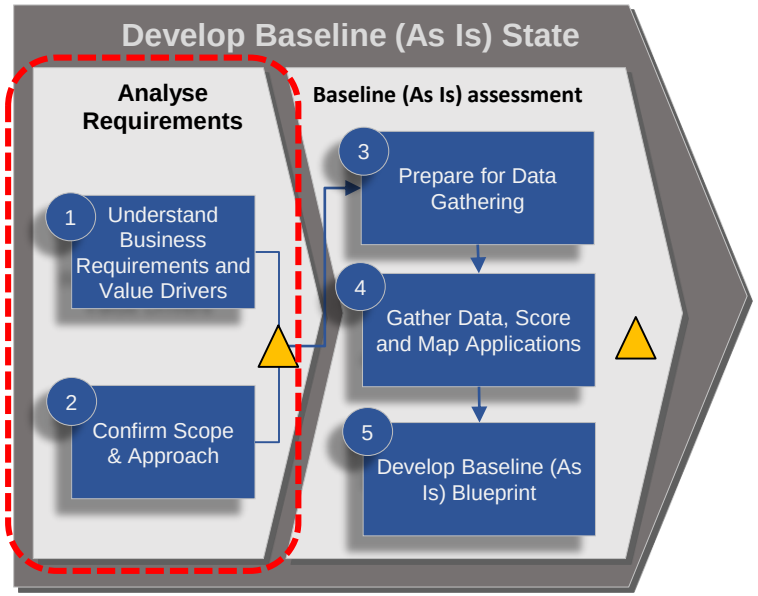
- Business Case
- Prioritized Recommendations
- Target (To Be) Blueprint

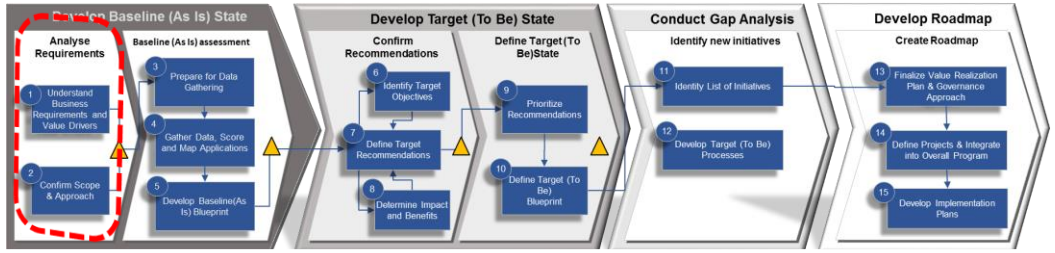
- High Level Opportunity / Benefit Identification
- Heat maps

- High Level Opportunity / Benefit Identification
- IT Roadmap
- Actionable quick win plans
- Communication Plan

2. Business Requirements Analysis

Liaise with RISA EA Team for alignment with project boundaries





Key Objectives

Work with the Project Sponsor to:

- Understand the client's strategic direction (IT and Business)
- Understand the assessment scope/boundaries (i.e. functional areas , geographic locations, business units, Business Services, number of applications etc)
- Determine assessment approach based on project objectives and goals
- Understand the availability of data and the level to effort to collect
- Understand and agree on data collection techniques, tools, templates
- Identify key business and technology personnel to interview/gather required information regarding people, process and technology

Key Activities

- Review business strategy, drivers and objectives
- Understand stakeholder requirements
- Request/review existing documentation
- Confirm application inventory and stewards
- Finalize scope & approach

Deliverables

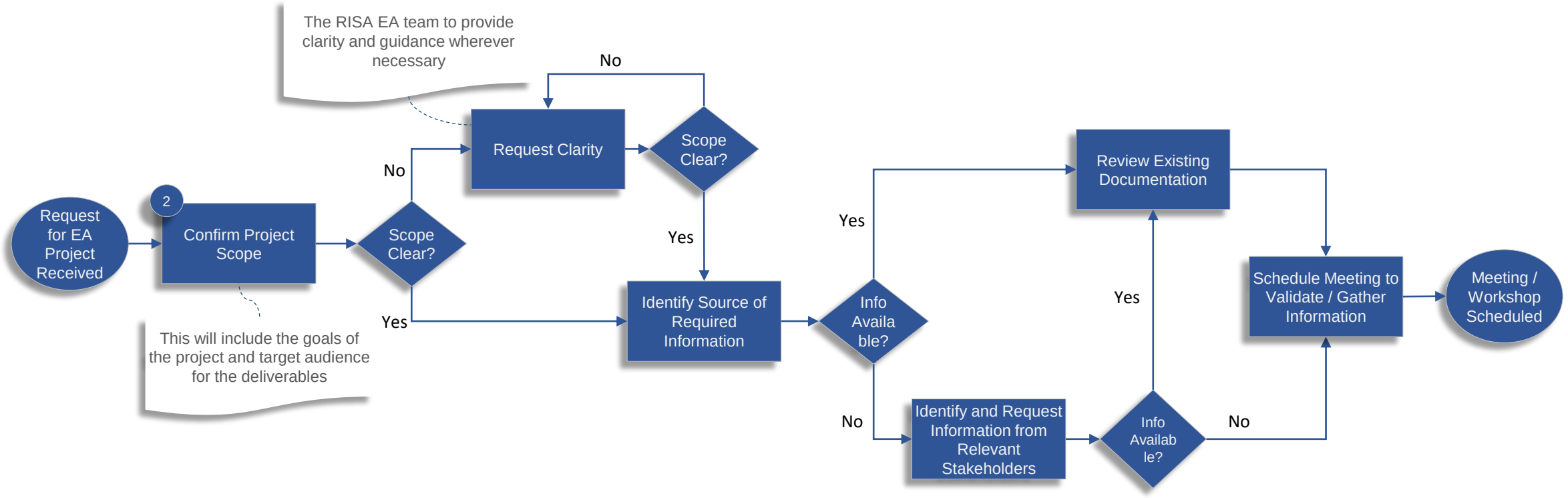
- Application Inventory & Demographics
- Confirmed Scope
- Data collection and analysis approach

Exit Criteria

- Scope and approach is confirmed
- Strategic direction, business strategy is known
- Application scoring method and participants are identified, and availability is confirmed
- Level of detail established for roadmap phase deliverables

2.1 Understand Business Requirements and value drivers

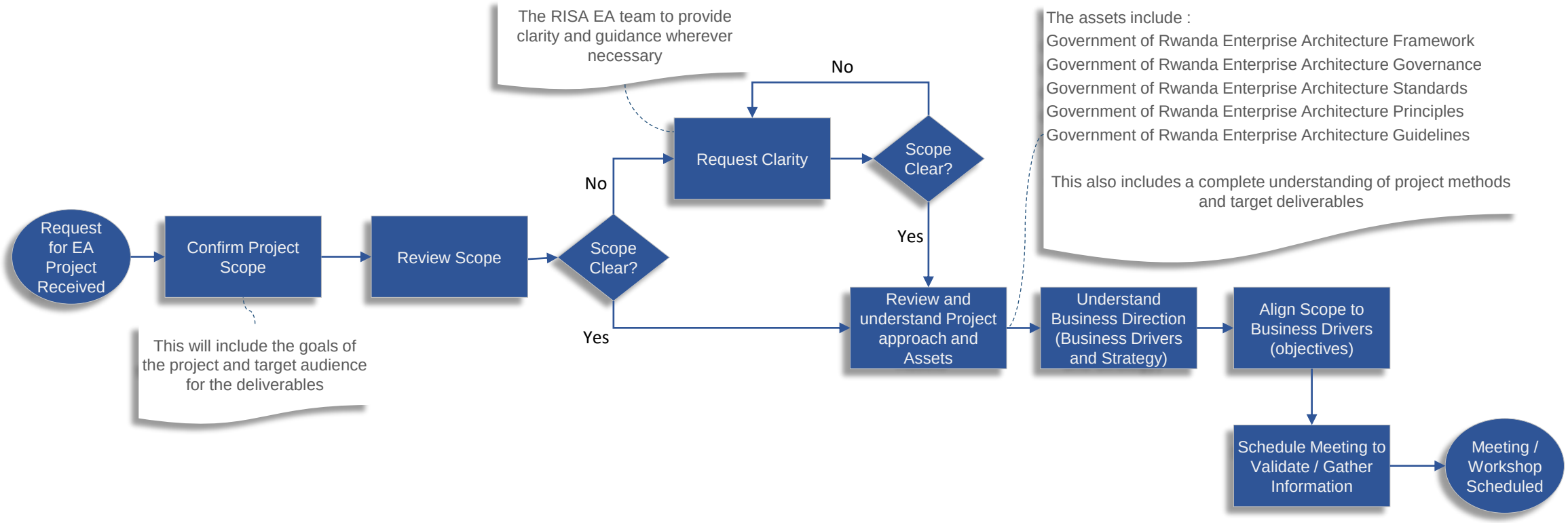
Review business strategy, government of Rwanda initiatives and goals



Review all available and relevant documentations including strategy documents, Operating models, Organisational structure, architecture models, government initiatives, mandates and drivers.

2.2 Confirm Scope and Approach

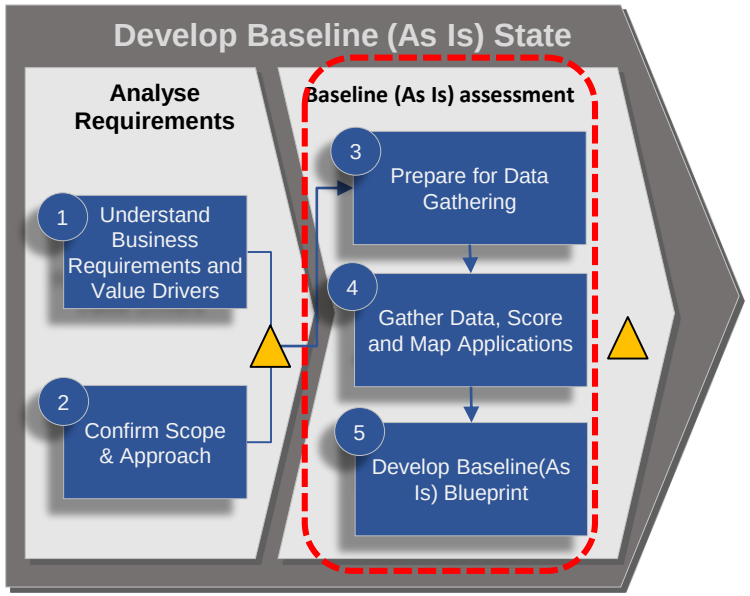
Establish project boundaries and familiarise oneself with the framework

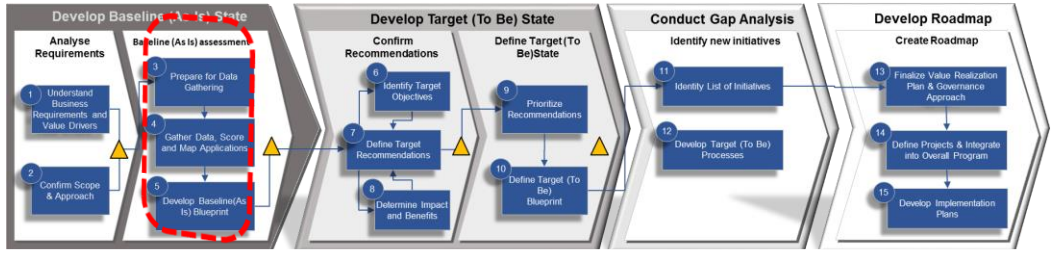


A clear understanding of both the scope of the project and framework will enable the architect to produce deliverables that are seamlessly align to the goals of Government of Rwanda.

3. Baseline Blueprint Development

Gain deep understanding of available assets that guide the project





Key Objectives

- Align Business drivers to applications and technology
- Determine technology strategic alignment
- Identify business capabilities and map them to supporting technologies (applications, infrastructure and data sources)
- Gain an understanding of the functional and technical health of applications
- Gain a high level understanding of the strategic alignment versus overall health of technologies
- Identify opportunities to optimize the application portfolio

Key Activities

- Gather Business services, processes, application and technology data
- Map applications to business functions
- Map applications to services
- All applications identified, inventoried

Deliverables

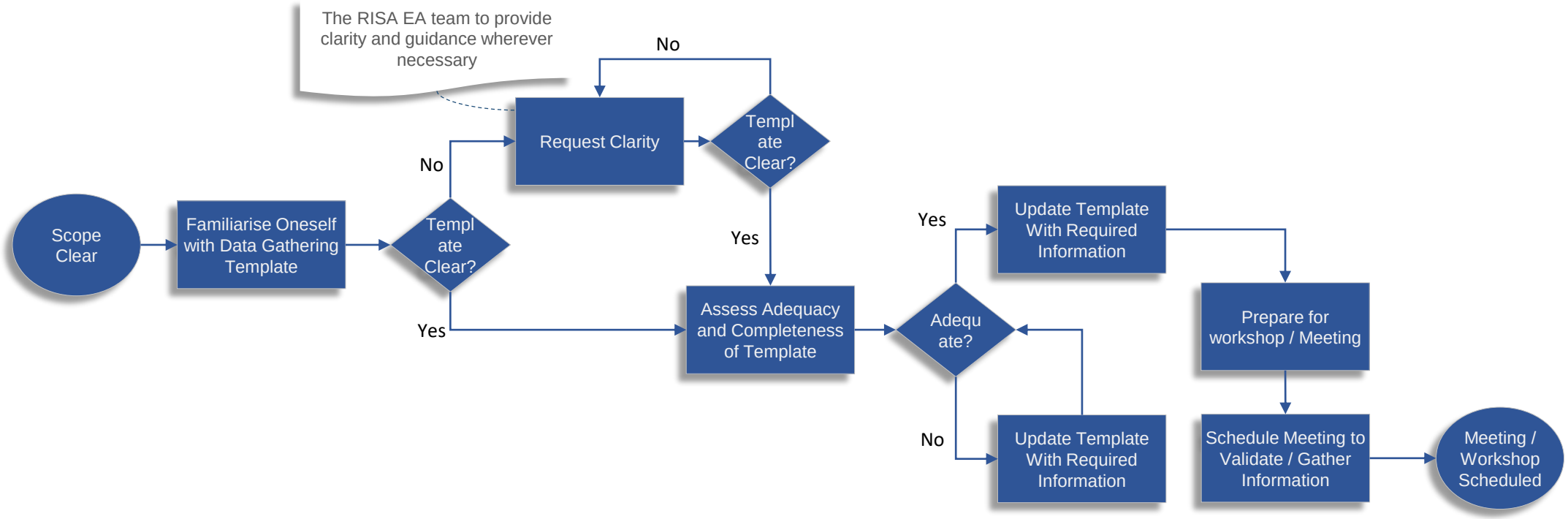
- Baseline (As Is) models for all architecture domains
- Baseline (As Is) Blueprint

Exit Criteria

- Data gathering templates completed completed and returned
- Baseline interviews/meetings/workshops are complete
- Optimization opportunities have been confirmed

3.1 Prepare for Data Gathering

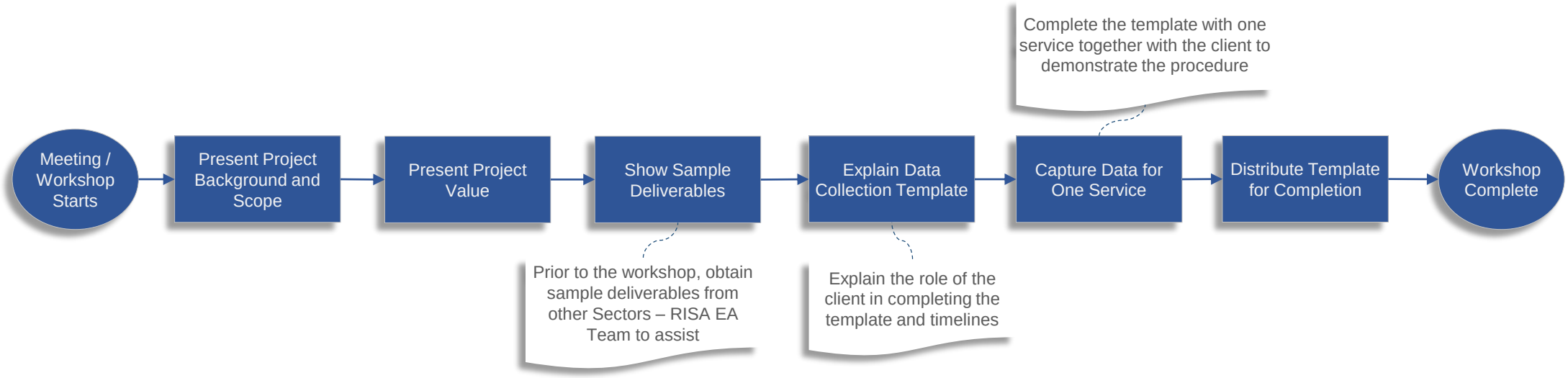
Pre-work for the exercise should involve learning how to apply the assets



Familiarity with the data gathering template will facilitate the running of the workshops and data gathering proceses. The pre-work should also include familiarization with the deliverables and supporting assets.

3.2 Gather Data

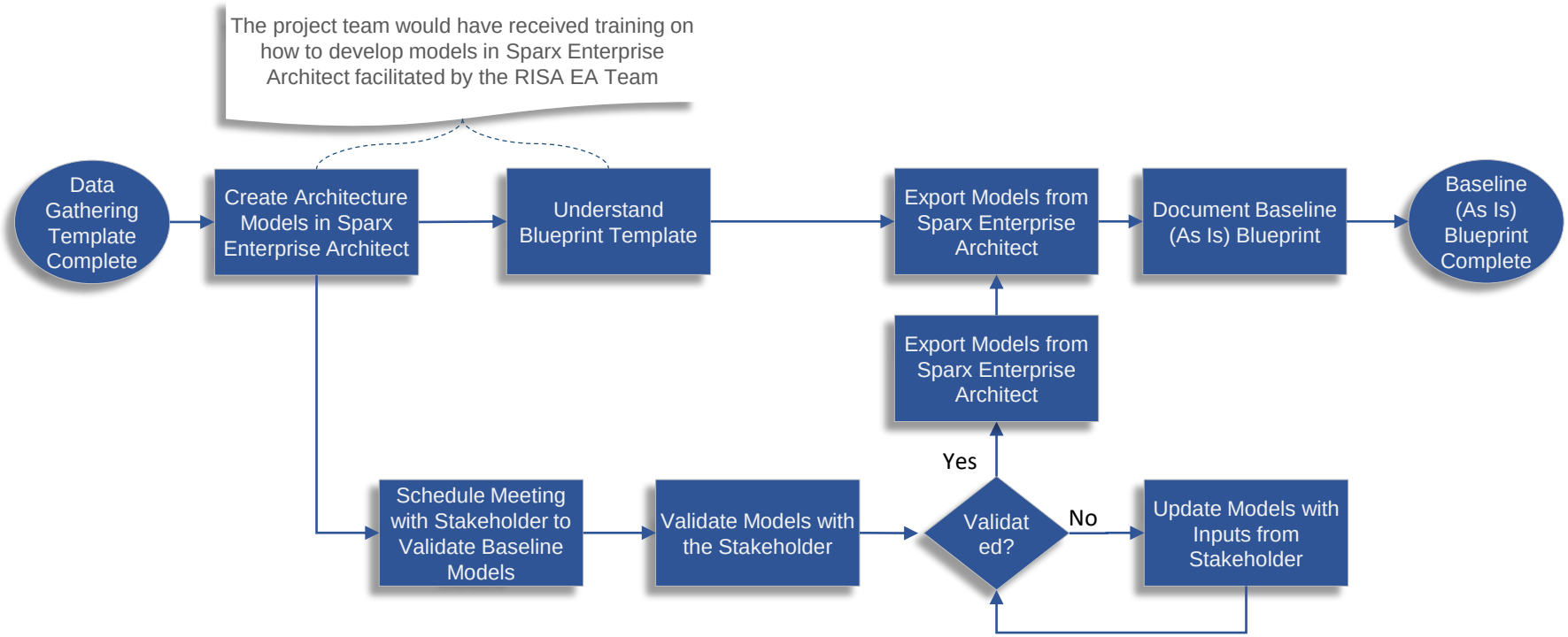
Before the meeting, ensure that the stakeholder is aware of the project



During the workshop, take time to explain expectations and target deliverables, use of assets such as Data Gathering Template, Framework, governance model etc.

3.3 Develop Baseline (As Is) Blueprint

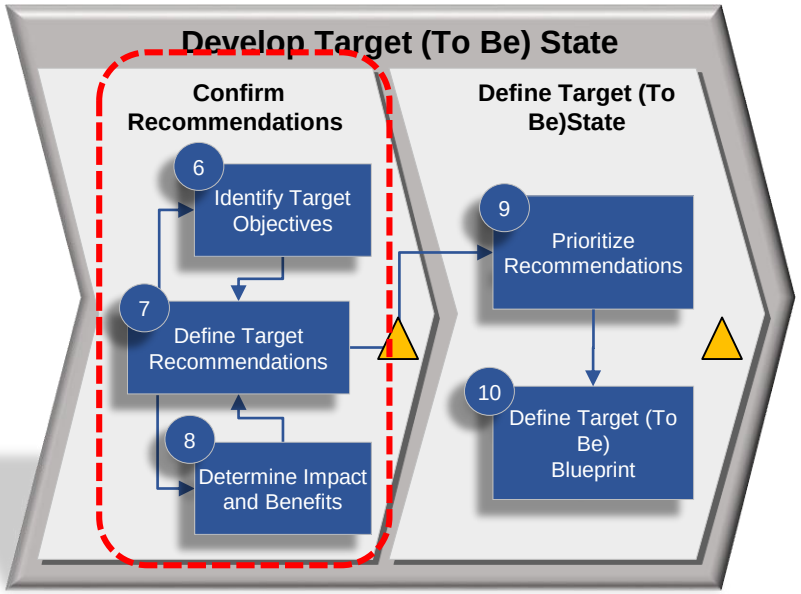
Use guideline and template for blueprint development

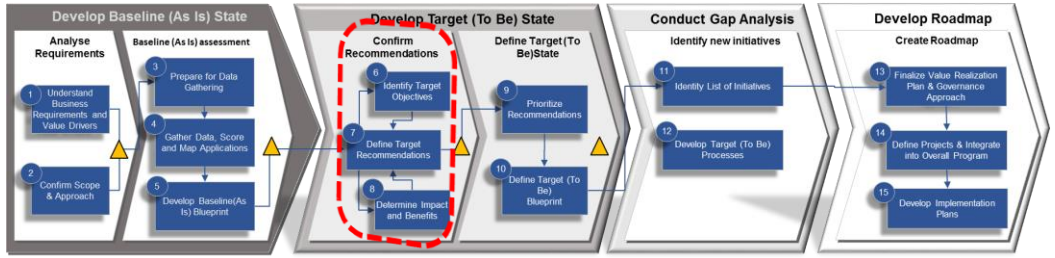


Use the structured template to complete the Baseline (As Is) Blueprint. The Blueprint must be developed in close collaboration with all stakeholders to ensure its acceptability and alignment with overall goals.

4. Develop Target Blueprint

Use available assets to create deliverables that are understood across the board





Key Objectives

Formalize optimization opportunities into recommendations:

- Gain an clear understanding of the technology scores/health
- Determine a high level technology strategy
- Understand the impact of the recommended Target (To Be) state
- Identify ‘Quick-Wins’

Key Activities

- Define recommendations for current environment
- Analyze data/scores and disposition technologies
- Determine high-level impact and benefits
- Identify ‘Quick Wins’
- Confirm recommendations and dispositions with Stakeholders

Deliverables

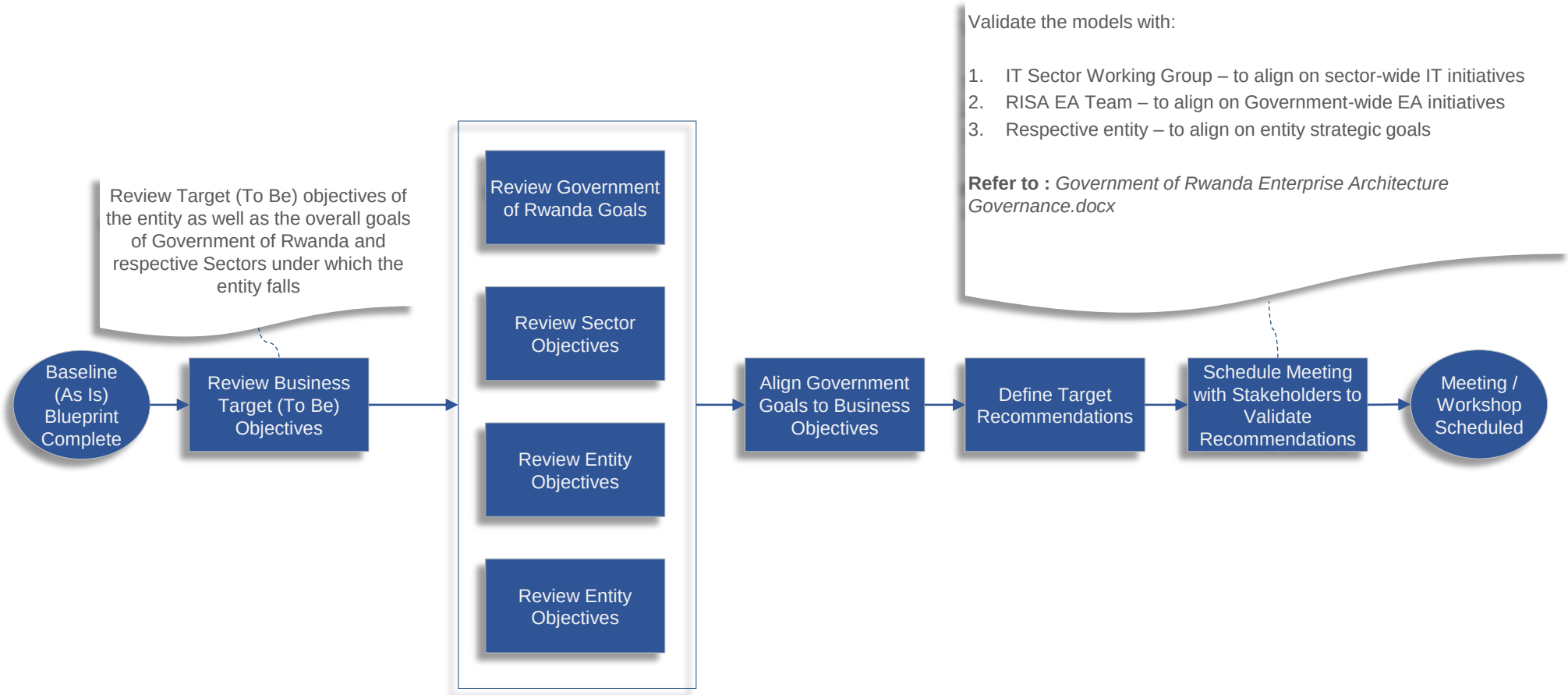
- Recommendation Summary
- Application Disposition Matrix
- Pain Gain Analysis
- Quick Win Initiatives

Exit Criteria

- Recommendations confirmed
- All applications dispositions identified an confirmed
- Impact /benefits of application dispositions are determined and confirmed

4.1 Develop Target (To Be) Recommendations

Recommendations must take into account overall government goals



Standard procedure in determining in whether to Build, Buy or Enhance current solutions should apply. This, however, should always take into account all stakeholder requirements and goals

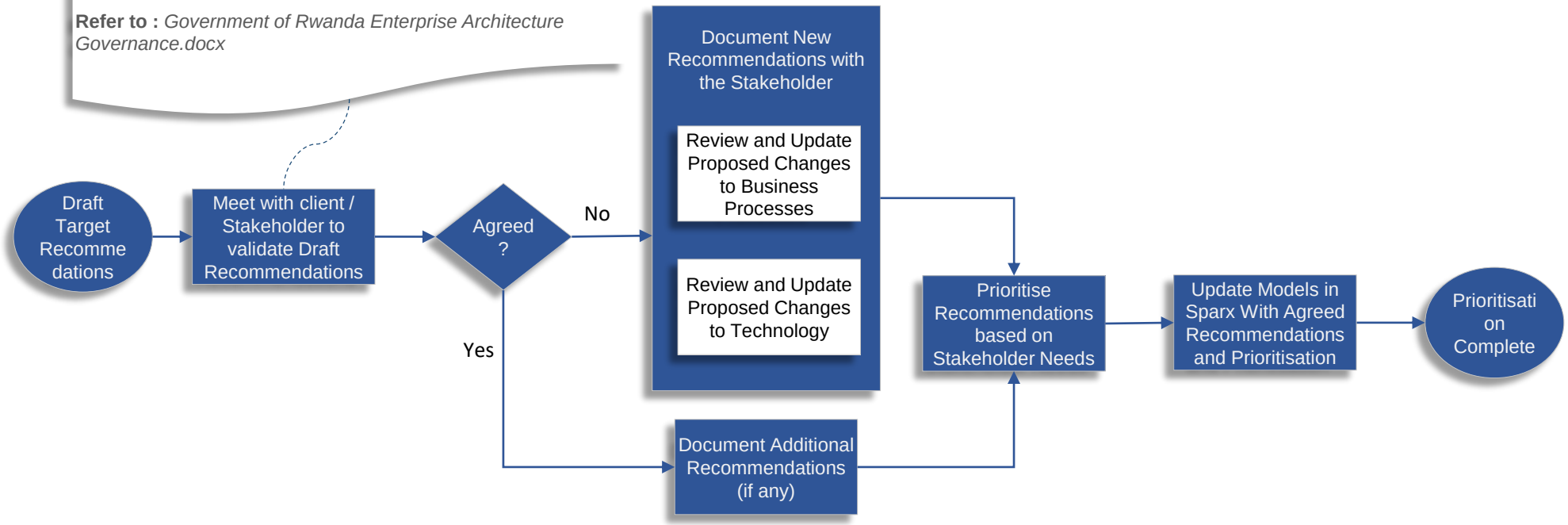
4.2 Prioritise Target (To Be) Recommendations

Stakeholder would be best placed to set priorities

The recommendations need to be aligned to the Government of Rwanda initiatives, Sector goals and objectives and entity strategy

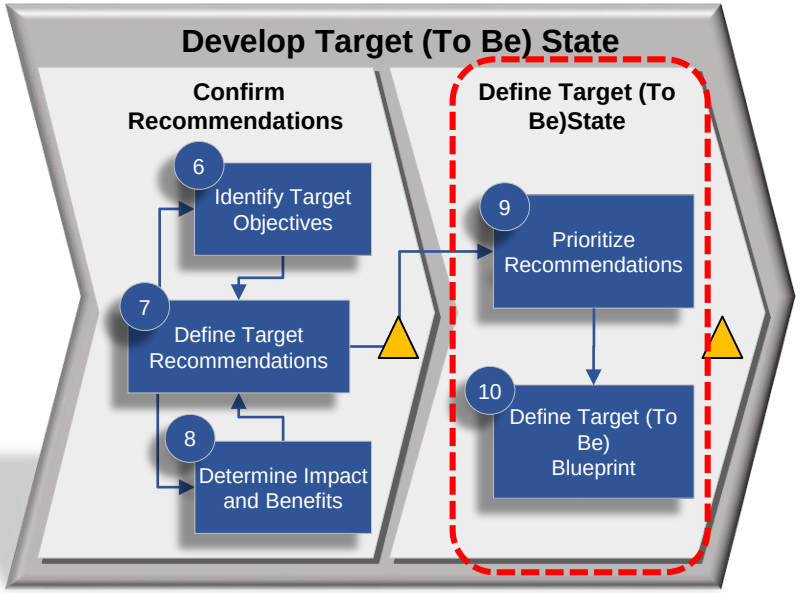
The validation to include IT Sector Working Group, RISA EA Team and entity stakeholders

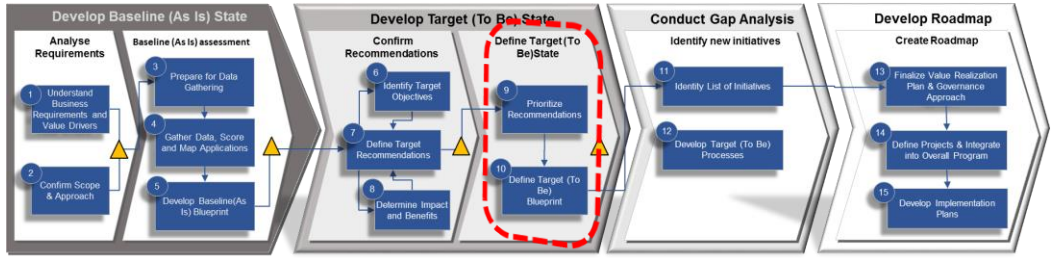
Refer to : *Government of Rwanda Enterprise Architecture Governance.docx*



5.Target Blueprint Development

Align with all stakeholders for completeness of the deliverables





Key Objectives

- Derive a business case for each recommendation to provide economic justification for execution
- Prioritize recommendations
- Develop Target (To Be) -state view of technology and business landscape

Key Activities

- Develop high-level business case
- Prioritize recommendations, identifying interdependencies
- Identify additional opportunity areas
- Define Target (To Be) Business and technology landscape
- Confirm business case and prioritization with Stakeholders

Deliverables

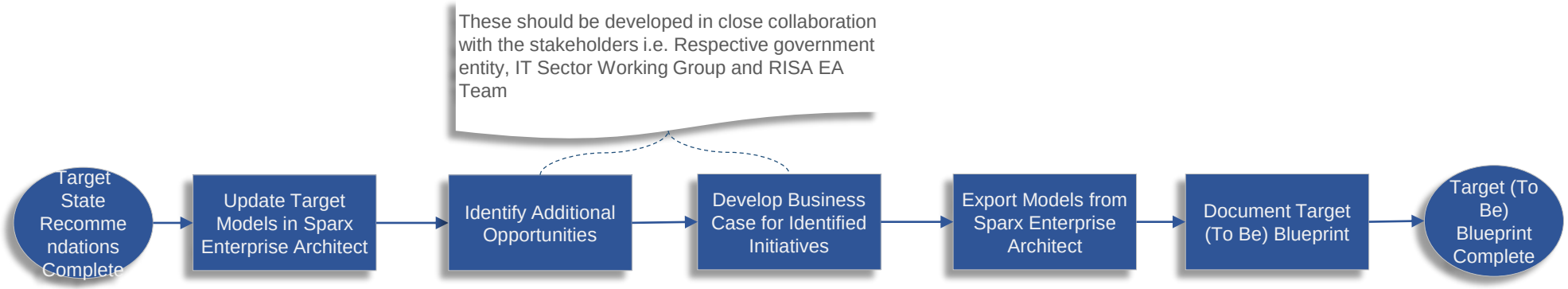
- Business Case
- Prioritized Recommendations
- Target (To Be) Blueprint

Exit Criteria

- Target (To Be) state Business and technology landscape defined.
- Business cases for each recommendation
- Recommendations prioritized and confirmed

5.1 Define Target (To Be) Blueprint

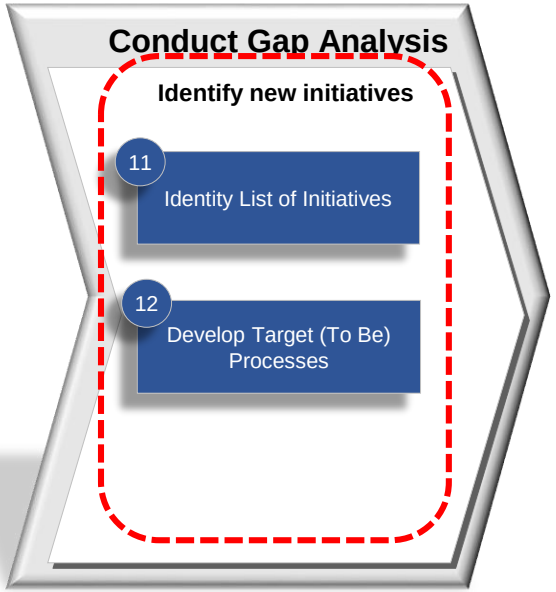
Use reference models to guide the development of Target Blueprints

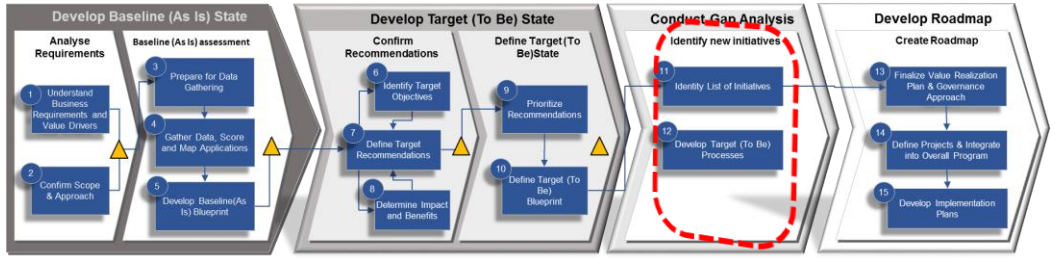


Depending on the changes to the architecture, various reference models are available to assist in developing Target Blueprints. Refer to RISA EA Team for assistance with overall strategic goals.

6. Gap Analysis

Recommended solutions to be aligned to Government of Rwanda capabilities





Key Objectives

- Run comparison of the Baseline (As Is) Landscape and Target (To Be) State
- Identify gaps between the two landscapes
- Benchmark recommendations against best practice implementation of the same
- Identify initiatives that need to be taken to close the gap

Key Activities

- Compare Baseline to Target Architecture
- Identify gaps between the two architectures
- Benchmark target architecture against best practice
- Identify initiatives to bridge the gap
- Review list of initiatives with Stakeholders

Deliverables

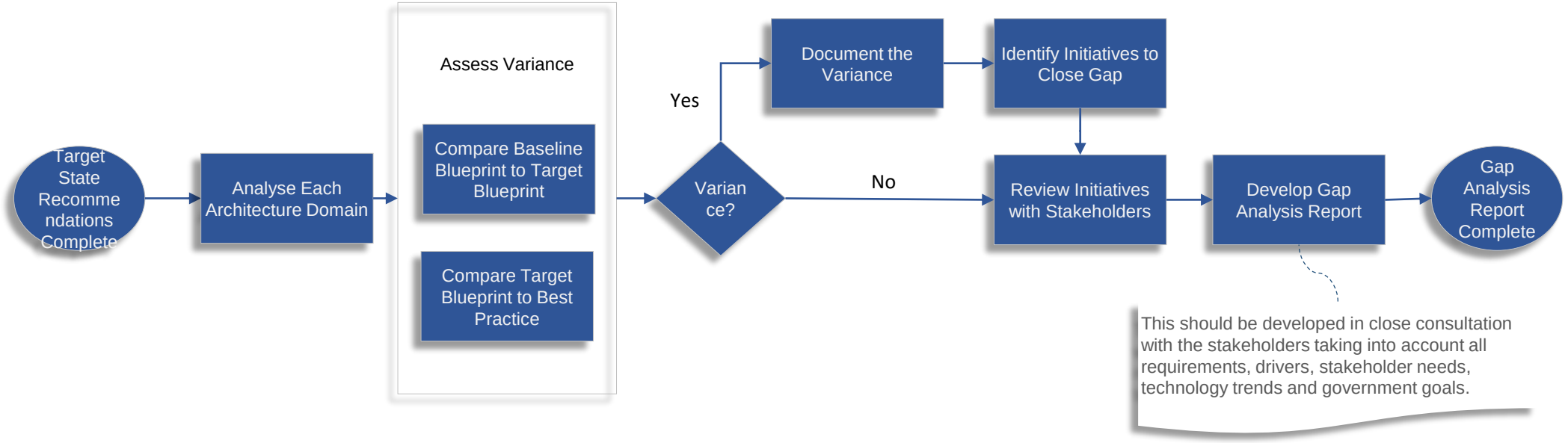
- Gap analysis report
- List of initiatives
- Impact assessment report

Exit Criteria

- Gap analysis defined

6.1 Conduct Gap Analysis

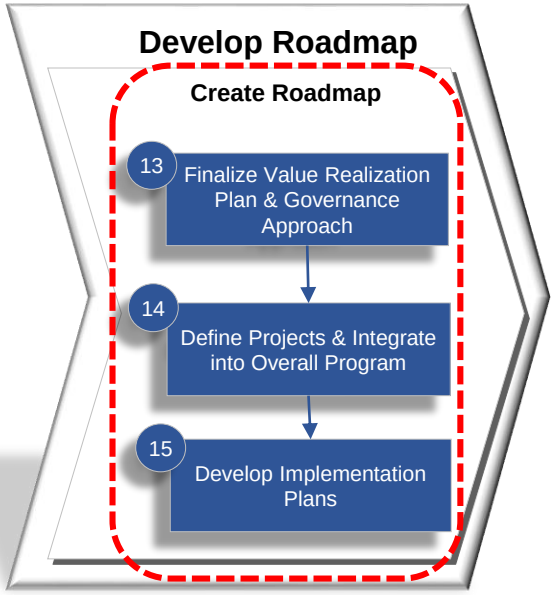
New initiatives and mandates should be considered in conducting gap analysis

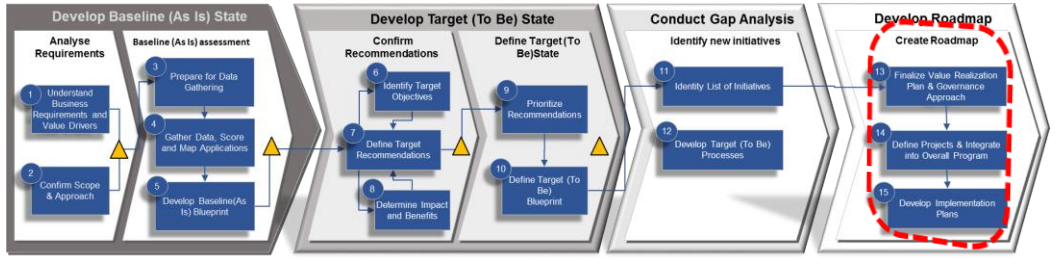


It is recommended that reference models be used to create ‘Heat Maps’ to depict highlight areas that need attention and new initiatives. This should be undertaken in close collaboration with stakeholders.

7. Create Roadmap for Target Blueprint Implementation

In close collaboration with all stakeholders to ensure seamless alignment





Key Objectives

- Develop roadmap or transition plan that defines the program necessary to implement the Target (To Be) state business and technology landscape
- Consolidate business cases for each recommendation into an overall value case for the transformation program to provide economic justification for all planned activities
- Create program plans that will be required to startup, govern, and navigate the roadmap
- Validate and gain consensus on Roadmap Deliverables with sponsors and stakeholders
- Transfer ownership of deliverables and roadmap to Sponsor that will drive the ensuing implementation

Key Activities

- Define Initiatives
- Develop Transition Plans
- Create value case appropriate for investment justification
- Create actionable roadmap
- Review final deliverables with Stakeholders

Deliverables

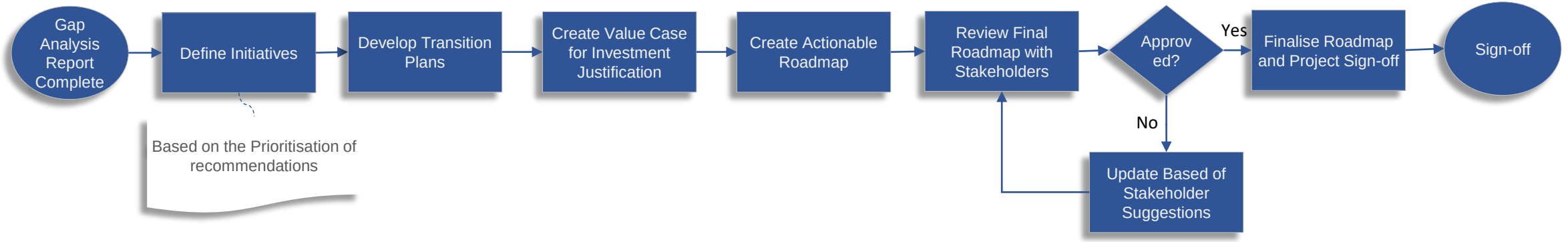
- High Level Opportunity / Benefit Identification
- Roadmap
- Actionable quick win plans

Exit Criteria

- Value Case and Roadmap Defined
- Next steps are defined/understood
- Deliverable sign-off

7.1 Create Roadmap

Roadmap development should be driven by the business case and initiatives prioritisation



Close collaboration with stakeholders in developing the roadmap will ensure ownership of the implementation plans by the same.