

Procedure

Document Number # QH-PCD-402-6-2:2014

Enterprise Architecture Policy

Enterprise Architecture Development Method Procedure

1. Purpose

The purpose of this document is to:

- Describe the processes that will be used to define and evolve the Department of Health's Enterprise Architecture.
- Describe the processes that will be used to refine and evolve the governing Enterprise Architecture Framework as described in the Enterprise Architecture Policy and supporting documents.
- Describe and highlight common process components. This promotes artefact reuse and ensures an integrated approach in developing the Enterprise Architecture.

The Enterprise Architecture Development Method Procedure is a component of the Department of Health Enterprise Architecture as defined in the Enterprise Architecture Policy and supporting documents.

2. Scope

This procedure applies to all employees, contractors and consultants within the Department of Health divisions, agencies and commercialised business units.

3. Supporting documents

- Queensland Health ICT Governance Framework

Authorising Policy and Standard/s:

- Enterprise Architecture Policy
- Enterprise Architecture Framework Implementation Standard
- Enterprise Architecture Foundations Implementation Standard
- Enterprise Business Architecture Implementation Standard
- Enterprise Information Architecture Implementation Standard
- Enterprise Applications Architecture Implementation Standard
- Enterprise Technology Architecture Implementation Standard

4. Related documents

Department of Science, Information Technology, Innovation and the Arts (DSITIA):

- Queensland Government Enterprise Architecture Framework 2.0 (QGEA)
- Queensland Government Enterprise Architecture ICT resources strategic planning policy (IS2)

5. Development Method Process

5.1 Enterprise Architecture Development Method Overview

The Enterprise Architecture Development Method describes the processes, inputs, outputs, guides, and enablers that guide the development and maintenance of the Enterprise Architecture including the governing Department of Health Enterprise Architecture. Figure 1 presents an overview of the Enterprise Architecture Development Method.

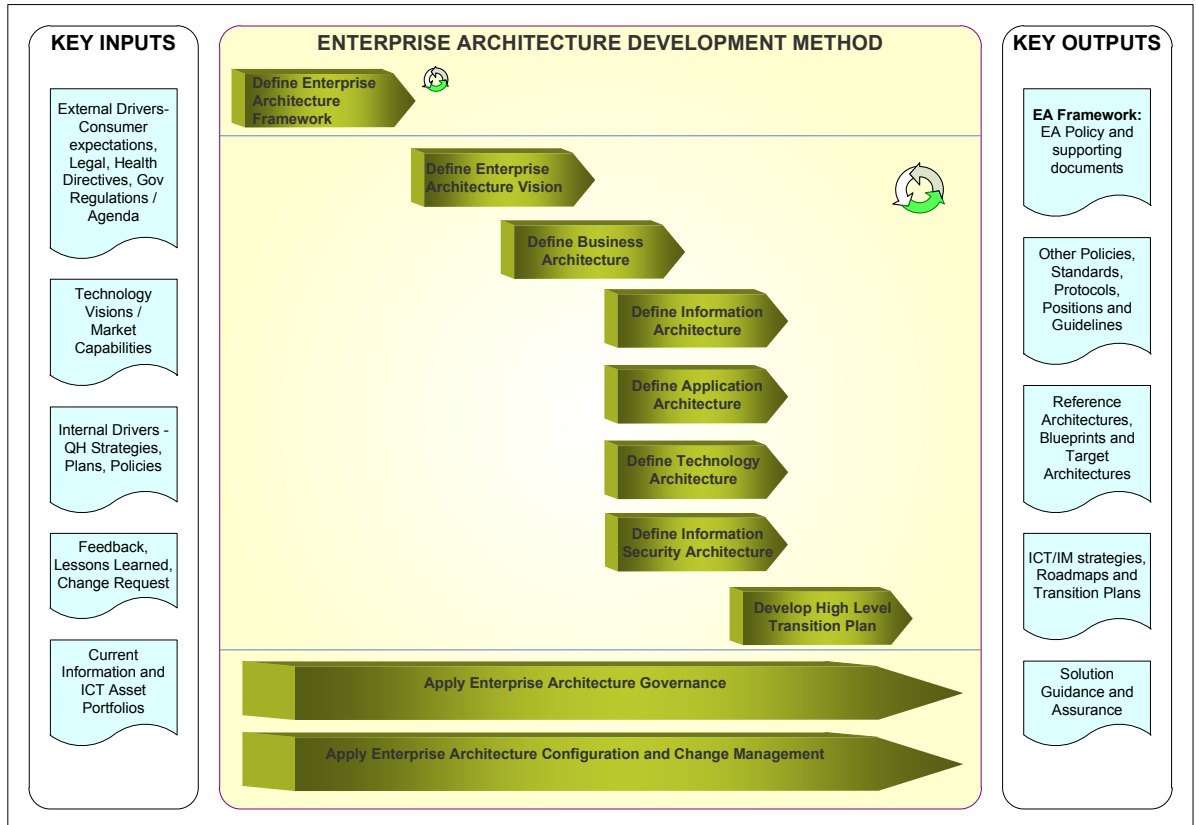


Figure 1 Enterprise Architecture Development Method

In order to promote repeatability and reuse of practice and artefacts, this method is prescriptive in nature. However, guidance will be provided to enable architects to determine the appropriate inputs, activities, and outputs they require in developing and maintaining the Enterprise Architecture within a given scope of architecture work.

The following describes each of the high level processes identified in Figure 1:

- **Define Enterprise Architecture Framework**
Defines or revises the Enterprise Architecture Framework Implementation Standard and related documents that will guide and constrain any architecture work undertaken.
- **Define Enterprise Architecture Vision**
Defines or revises the architecture scope and vision of the enterprise.
- **Define Business Architecture**
Defines or revises the Business Architecture, relevant standards, policies, and Business Architecture views that will inform the implementation work.

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- **Define Information Architecture**
Defines or revises the Information Architecture, relevant standards, policies, and Information Architecture views that will inform the implementation work.
- **Define Application Architecture**
Defines or revises the Application Architecture, relevant standards, policies, and Application Architecture views that will inform the implementation work.
- **Define Technology Architecture**
Defines or revises the Technology Architecture, relevant standards, policies, and Technology Architecture views that will inform the implementation work.
- **Define Information Security Architecture**
Defines or revises the Information Security Architecture, standards, policies, and Information Security Architecture views that will inform the implementation work.
- **Develop High Level Transition Plan**
Develops a high-level view of the sequence and timing of a program of initiatives formulated to transition the enterprise to align with the business goals and direction. Using information gathered or created during previous phases, this phase identifies alternative solution scenarios and prioritises their implementation.
- **Apply Enterprise Architecture Governance**
Applies the governance processes established for managing architecture processes and products, managing lifecycle of the Enterprise Architecture Policy and associated documents, setting architecture priorities, and defining accountabilities to ensure that the Enterprise Architecture is realised. This process will be aligned with the Queensland Health ICT Governance Framework.
- **Apply Enterprise Architecture Configuration and Change Management**
Applies configuration management and change management processes to the Enterprise Architecture Policy and associated documents. The Enterprise Architecture Development Method will use the change management process and procedures that are already in place for the department. This process is aligned with the Queensland Health ICT Governance Framework and will leverage existing change management processes. Details of how this process will be used in managing the changes to the Enterprise Architecture and the Enterprise Architecture Policy and supporting documents.

5.2 Enterprise Architecture Development Method Phases

The following sections describe the various phases and tasks in more detail.

5.2.1 Define Enterprise Architecture Framework

Description

This phase defines and refines the Enterprise Architecture Framework Implementation Standard and related documents that collectively represent the Department of Health Enterprise Architecture. These documents will inform any architecture work undertaken.

Value

This phase ensures that everyone who will be involved in, or benefit from this approach, is committed to applying the Enterprise Architecture Framework as described in the

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Enterprise Architecture Framework Implementation Standard and related documents thereby reaping the benefits of a successful implementation of the Enterprise Architecture.

Objectives

The objectives of this Phase are:

- To gain commitment from key stakeholders to ensure success of the architectural process.
- To define and refine the policy and implementation standards used for developing the Enterprise Architecture.
- To confirm the fitness-for-purpose of the defined policy and implementation standards.
- To define and refine a set of criteria for evaluating architecture tools, repositories, and repository management processes to be used to capture, publish and maintain architecture artefacts.

Approach

Use the Enterprise Architecture Framework Implementation Standard and related documents as a starting point. Consolidate lessons learned, requests for change and identified gaps. Review and update architecture principles that will guide the development of the policy. Use the Queensland Health ICT Governance Framework to refine the policy and continuously capture feedback and lessons learned.

Inputs and Outputs

The table below lists the inputs required in the definition and refinement of the Enterprise Architecture Policy and outputs produced.

Inputs	Outputs
• Lessons learned, feedback, change request from using the Enterprise Architecture Policy and associated documents • Business drivers, business constraints • Business Vision • Business Strategies • Business Goals • Business Objectives • Business Models • Research • Best Practice Requirements • QGCIO ICT Planning Methodology V3.0 • QG Enterprise Architecture	Main Outputs • Enterprise Architecture Policy • Enterprise Architecture Framework Implementation Standard • Enterprise Architecture Foundations Implementation Standard • Enterprise Architecture Development Method Procedure • Enterprise Business Architecture Implementation Standard • Enterprise Information Architecture Implementation Standard • Enterprise Applications Architecture Implementation Standard • Enterprise Technology Architecture Implementation Standard Supporting Documents • Stakeholder Register • Meeting Notes • Issues and Risks • Research Materials and Summary • Enterprise Architecture Evaluation Criteria and Success Measures

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High Level Process Flow

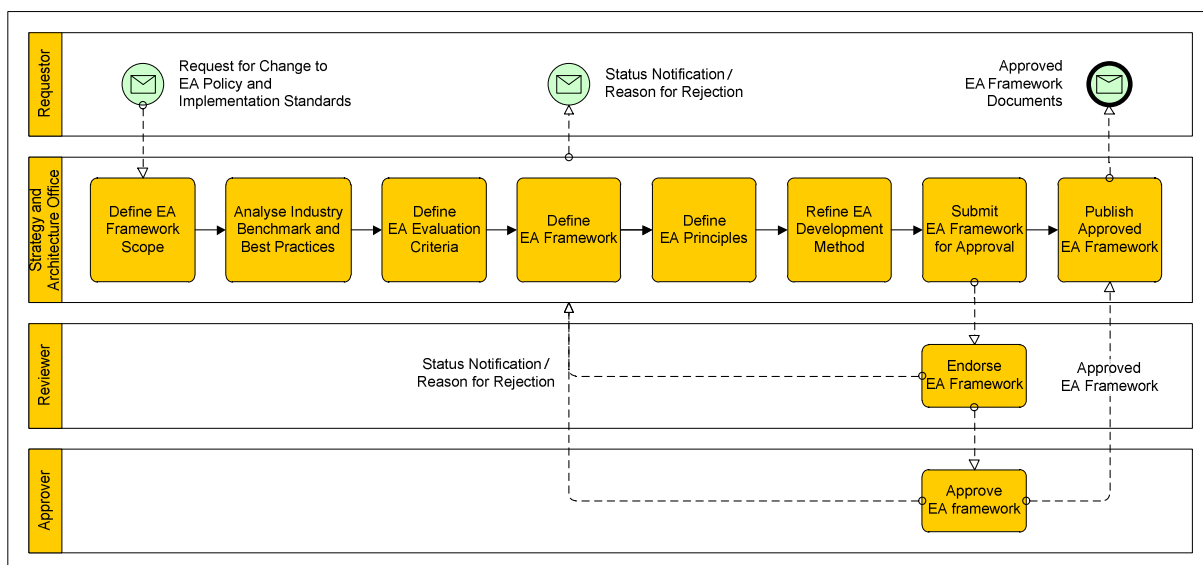


Figure 2 Define Enterprise Architecture Framework

Define Enterprise Framework Scope

By defining the scope of an architecture engagement, this activity ensures that everyone who will be involved in or benefit from this approach is committed to the success of the Enterprise Architecture development through a shared understanding of the extent of the Enterprise Architecture Framework.

Analyse industry benchmark and best practices

Conduct industry research to identify sample organisations that have successfully implemented Enterprise Architecture and gather detailed Enterprise Architecture success scenarios and frameworks. This activity ensures that best practice and expertise in Enterprise Architecture, including frameworks and development approaches, are considered during the development or refinement of the Enterprise Architecture Policy and supporting documents.

Define Enterprise Architecture Evaluation Criteria

Define the measures by which the organisation's Enterprise Architecture will be evaluated for success. This activity ensures that Department of Health specific criteria are defined against which the Department of Health Enterprise Architecture can be assessed for its fitness for purpose.

Define Enterprise Architecture Framework

Revise and update the Enterprise Architecture Framework as described by the Enterprise Architecture Framework Implementation Standard and related documents.

The Enterprise Architecture Framework will be the guiding structure that provides direction to the Enterprise Architecture development team when developing the Enterprise Architecture.

Define Enterprise Architecture Principles

Establish the initial core foundations that will guide the development of and implementation of the Enterprise Architecture. This includes architecture principles.

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The Enterprise Architecture principles form part of the constraints on any architecture work undertaken. This includes the business and architecture principles. These principles are recorded in the Enterprise Architecture Framework Implementation Standard.

Refine the Enterprise Architecture Development Method

Review the existing Enterprise Architecture Development Method Procedure, refine the structure, assemble and document the new Enterprise Architecture Development Method Procedure.

The Department of Health's Enterprise Architecture will be developed in accordance with the Enterprise Architecture Development Method Procedure.

Submit the Enterprise Architecture Framework for Approval

Prepare and lodge the submission materials for formal endorsement and approval as defined in the Enterprise Architecture Policy and supporting documents.

Publish Approved *Enterprise Architecture Framework*

Update the Enterprise Architecture knowledgebase with the updated Enterprise Architecture Framework Implementation Standard and supporting documents and publish the documents in the relevant portals.

5.2.2 Define Enterprise Architecture Vision

Description

This phase defines the scope of the architecture effort, acknowledging any constraints. It then defines the strategic intent for the Enterprise Architecture and refines the Enterprise Architecture principles.

This activity develops a high level vision of the target state, from business and technical perspectives, in a way that guides and supports delivery of the Department of Health's strategic plan, consistent with architectural principles. This vision is subsequently clarified and described in more detail in each architectural domain (business, information, application, technology and information security).

The Enterprise Architecture Vision includes a high-level description of the baseline and target environments, from business and technical perspectives. These high level descriptions are then built upon in subsequent phases. The constraints will be informed by the business and architecture principles.

Value

This phase ensures that subsequent decisions are made on the basis of a practical assessment of availability of capability; definitions of business principles, business goals and strategic drivers are current and areas of ambiguity defined; and the architecture vision demonstrates a consolidated response to these drivers, requirements and constraints.

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Objectives

- To ensure that the maintenance of the enterprise architecture has proper recognition and endorsement from the Department's leadership, and the support and commitment of the necessary line management.
- To validate business principles, business goals, and strategic business drivers of the organisation.
- To define the scope of and to identify and prioritise the components of, the architecture effort.
- To define relevant stakeholders, their concerns and objectives.
- To articulate an architecture vision that is aligned with business objectives and responds to the architecture requirements and constraints.

Approach

The goal of the architecture vision is to articulate how the proposed architecture will enable the business goals, respond to the strategic drivers, conform to the principles, and addresses the stakeholder concerns and objectives.

Key elements of the architecture vision - such as the enterprise mission, vision, strategy, and goals are documented as part of a wider business strategy or enterprise planning activity that has its own lifecycle within the enterprise. In which case, this phase is concerned with verifying and understanding the documented business strategy and goals, and beginning to give architectural form to those strategies and goals within the scope of the architecture project, aligning current and planned information and technology related assets with those strategies and goals.

In other cases, where few business drivers have been described, there will be a need to assist in establishing the key business objectives and processes that the architecture is to support. This may be done as a free-standing exercise, either preceding architecture development, or as part of the Define Enterprise Architecture Framework Phase

Inputs and Outputs

Inputs	Outputs
• Business vision, goals, objectives, strategies • Business Models • Enterprise Architecture Vision • Enterprise Architecture Policy • Enterprise Architecture Framework Implementation Standard • Enterprise Architecture Foundations Implementation Standard	Main Outputs • High Level Business Requirements and Traceability Matrix • Enterprise Architecture Vision • Initial baseline Enterprise Architecture • Initial target Enterprise Architecture Supporting Documents • List of Improvements and Opportunities • Stakeholder Register • Meeting Notes • Issues and Risks • Business Profile • Business Strategic Intent

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High Level Process Flow

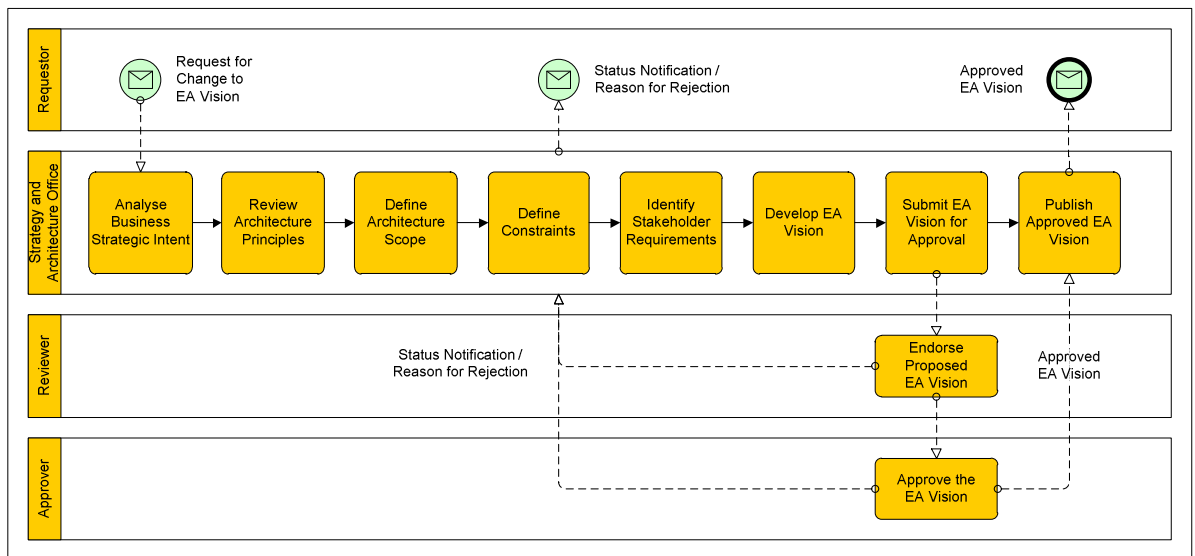


Figure 3 Define Enterprise Architecture Vision

Analyse Business Strategic Intent

Identify the business goals and strategic drivers of the organisation. The organisation's business vision, goals, objectives and strategies are the driving force behind the development of the Enterprise Architecture. An important measure of success of the Enterprise Architecture is in deriving business benefits measured against those goals and objectives

The use of the Value-Discipline Model assists the department in understanding how well it has aligned itself to that strategic focus.

Review Principles

Review the principles under which the Baseline Architecture is to be developed. Architecture principles are normally based on the business principles developed as part of the Preliminary Phase. This activity ensures that the existing definitions are current, and clarifies any areas of ambiguity.

Define Architecture Scope

Define the boundaries or coverage expected of the architecture effort to ensure the development of the Enterprise Architecture is both complete and appropriately confined to business expectations. This will identify:

- the breadth and depth of the architecture effort,
- the priority architecture domains
- existing capabilities and assets to be considered for reuse

Define Constraints

Define any limitations or requirements that confine the development of the Enterprise Architecture based on the available resources.

Identify Stakeholder Requirements

Define the key business requirements to be addressed by the Enterprise Architecture.

Define Enterprise Architecture Vision

Define and articulate the vision for the Enterprise Architecture that will address the requirements within the defined scope and constraints in accordance with the Enterprise Architecture Principles.

The organisation's business vision, goals, objectives and strategies are the driving force behind the development of the Enterprise Architecture. An important measure of success of the Enterprise Architecture is in deriving business benefits. The vision for Enterprise Architecture assists in focussing how business benefits will be derived from Enterprise Architecture.

Submit the Enterprise Architecture Vision for Approval

Prepare and lodge the submission materials for formal endorsement and approval as defined in the *Queensland Public Health Service ICT Governance Framework*.

Publish Approved Enterprise Architecture Vision

Update the Enterprise Architecture knowledgebase with the updated architecture vision and publish the documents in the relevant portals.

5.2.3 Define Business Architecture

Description

This Phase describes the process for developing the Business Architecture. The Business Architecture provides a foundation of knowledge for the work that is performed to realise the Department of Health's vision, mission and goals. Upon this foundation linkages can be developed to the information, application and technology architectures.

A knowledge of the Business Architecture is a prerequisite for architecture work in any other domain (Information, Applications, Technology, Information Security), and is therefore the first architecture activity that needs to be undertaken, if not catered for already in other organisational processes (enterprise planning, strategic business planning, business process re-engineering, etc.).

In practical terms, the Business Architecture is also often necessary as a means of demonstrating the business value of subsequent technical architecture work to key stakeholders, and the return on investment to those stakeholders from supporting and participating in the subsequent work.

Value

This phase ensures that a good understanding of the business is achieved which will form the foundation upon which the other domains of the Enterprise Architecture can be built.

Objectives

- To describe the Baseline Business Architecture.
- To develop a Target Business Architecture, describing the product and/or service strategy, and the organisational, functional, process, information, and geographic aspects of the business environment, based on the business principles, business goals, and strategic drivers.
- To analyse the gaps between the Baseline and Target Business Architectures.
- To select the relevant architecture viewpoints that will enable the architect to demonstrate how the stakeholder concerns are addressed in the Business Architecture.
- To select the relevant tools and techniques to be used in association with the selected viewpoints.

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Approach

The extent of the work in this phase will depend largely on the maturity of the existing information about the department. In some cases, key elements of the Business Architecture may be developed through other key strategic governance processes; for example, the enterprise mission, vision, strategy, and goals may be documented as part of some wider business strategy or enterprise planning activity that has its own lifecycle.

Inputs and Outputs

Inputs	Outputs
- Enterprise Architecture Vision and Principles - Enterprise Architecture Framework Implementation Standard - Enterprise Architecture Foundations Implementation Standard - Initial baseline Enterprise Architecture - Business Domain Architecture - Initial target Enterprise Architecture - Business Domain Architecture - Business Services Taxonomy - Enterprise Architecture Patterns, viewpoints, standards Library - Existing architecture building blocks - Healthcare Reference Models	Main Outputs - Target Enterprise Architecture – Business Domain Architecture models - Target Enterprise Architecture – Business Domain Architecture viewpoints - Target Enterprise Architecture – Business Security Architecture viewpoints - Updated High Level Business and Information Requirements and Traceability Matrix - Policies and Standards - Enterprise Architecture Report updated with sections relevant to Business Architecture Supporting Documents - Updated List of Improvements and Opportunities - Selected patterns and architecture building blocks - Stakeholder observations (minutes, workshop deliverables, etc.) - Enterprise Architecture consulting processes

High Level Process Flow

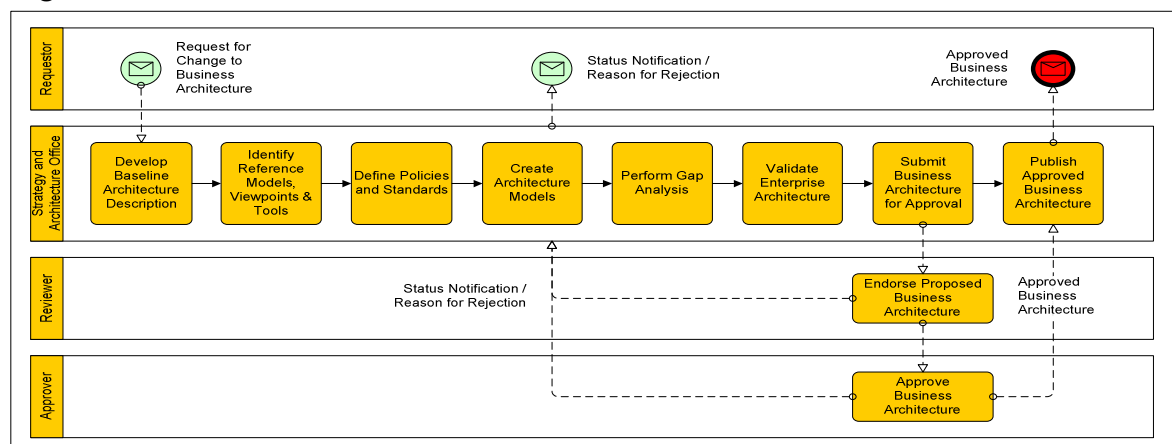


Figure 4 Define Business Architecture

Develop Baseline Architecture Description

Review baseline Enterprise Architecture, summarise key findings and conclusions and develop baseline Business Architecture descriptions to the degree necessary to inform decisions and subsequent work.

Detail the baseline Business Architecture to the level necessary to determine which business elements will be brought forward into the target Business Architecture.

The baseline Business Architecture ensures that teams have a good understanding of the current business environment, drivers and constraints, and documented baseline understanding of the current Enterprise Architecture footprint.

Identify Reference Models, Viewpoints and Tools

Select the relevant Business and Security Architecture viewpoints, reference models, patterns and tools required. Provides the Enterprise Architecture development team with a list of relevant reference models, viewpoints and tools available for their use.

Define Policies and Standards

Define relevant policies and standards that guide the definition of the business architecture. Standards set out the technical or other specifications necessary to ensure consistency. Policies are mechanisms for gaining consensus and providing a basis for making decisions.

Create Architecture Models

Create the Business Architecture models as required to identify and frame changes to the business architecture or to provide sufficient context to changes in the other architecture domains considering all pertinent viewpoints. These include (as required):

- models such as organisation structure, business domain, policy models, business services, processes, functions and roles. Classify each business service, process, function and role against the selected reference models and EAF domain classifications
- viewpoints such as business interaction models, business enterprise models, and business context models
- Develop Business Security Architecture viewpoints.

Perform Gap Analysis

Perform a gap analysis between the baseline Business Architecture and the target Enterprise Architecture (business domain) to identify alternate courses of action to arrive at the target state. Identify course of action to improve the current business environment in order to support identified goals and direction.

Validate Enterprise Architecture

Assess impact of target Business Architecture on other architecture domains, identify areas to be addressed and complete the Enterprise Architecture. Bring together all of the information into a consolidated Enterprise Architecture report.

Submit Business Architecture for Approval

Prepare and lodge the submission materials for formal endorsement and approval as defined in the *Queensland Health ICT Governance Framework*.

Publish Approved Business Architecture

Update the Enterprise Architecture knowledgebase with the updated business architecture. Publish the documents in the relevant portals.

5.2.4 Define Information Architecture

Description

Define the Information Architecture and relevant standards, policies, and Information Security Architecture views that will form the basis of ensuing implementation work.

Value

Information Architecture is important to the department for defining information standards and requirements, providing consistency of terminology usage, and definition and fostering common understanding of enterprise information.

Approach

The Enterprise Architecture Development team needs to consider what relevant Information Architecture resources are available within the department. Health Industry reference models will be used to provide a framework for developing the Department of Health's Information Architecture.

Inputs and Outputs

Inputs	Outputs
• Enterprise Architecture Vision and Principles • Enterprise Architecture Foundations Implementation Standard • Initial baseline Enterprise Architecture – Information Domain Architecture • Initial target Enterprise Architecture – Information Domain Architecture • Information Classification models • Enterprise Architecture Pattern, viewpoints, standards Library • Existing architecture building blocks • Healthcare Information Management Reference Models • Target Enterprise Architecture – Business Domain Architecture models • High Level Business and Information Requirements and Traceability Matrix	• Target Enterprise Architecture – Information Domain Architecture models • Target Enterprise Architecture – Information Domain Architecture viewpoints • Target Enterprise Architecture – Information Security Architecture viewpoints • Updated High Level Business and Information Requirements and Traceability Matrix • Policies and Standards • Enterprise Architecture Report updated with sections relevant to Information Architecture Supporting Documents • Updated List of Improvements and Opportunities • Selected Information Architecture viewpoints in scope • Selected Reference Models for Information Management • Selected Information Architecture patterns and architecture building blocks

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High Level Process Flow

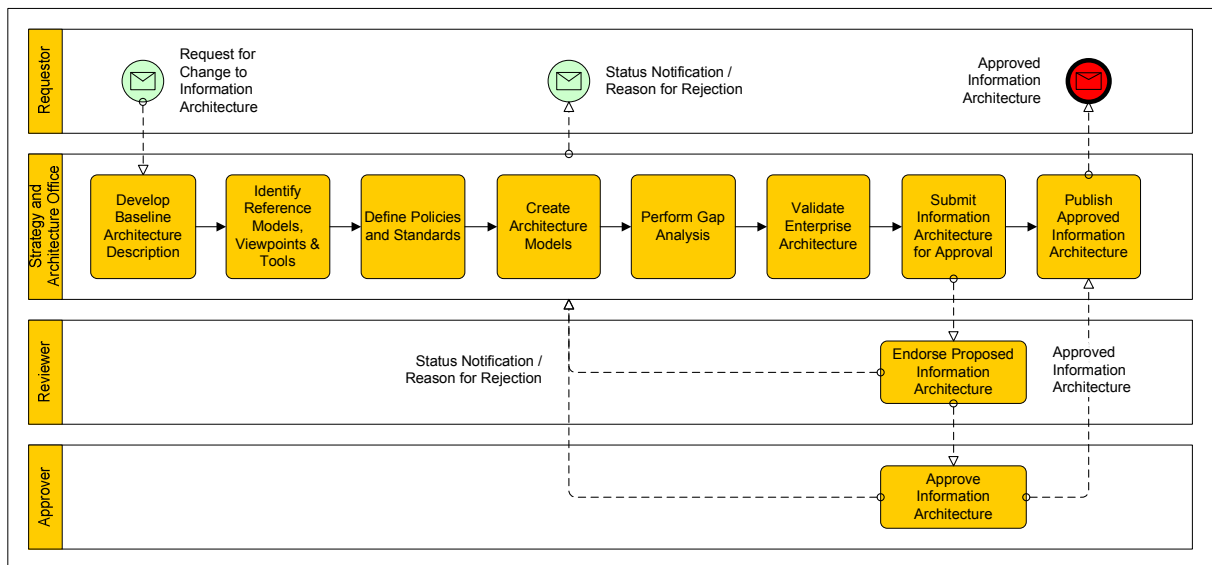


Figure 5 Define Information Architecture

Develop Baseline Architecture Description

Review baseline Enterprise Architecture, summarise key findings and conclusions and develop baseline Information Architecture descriptions to the degree necessary to inform decisions and subsequent work. Detail the baseline Information Architecture to the level necessary to determine which elements will be carried forward to the target Information Architecture.

This ensures that the development team has a good understanding of the current business environment, drivers and constraints, and documented baseline understanding of the current Enterprise Architecture footprint.

Identify Reference Models, Viewpoints and Tools

Select the relevant Information Architecture and Information Security Architecture viewpoints, reference models, patterns and tools required. This provides the Enterprise Architecture development team with a list of relevant reference models, viewpoints and tools available for their use.

Define Policies and Standards

Define relevant policies and standards required and validate with stakeholders. Standards set out the technical or other specifications necessary to ensure consistency. Policies are mechanisms for gaining consensus and providing a basis for making decisions.

Create Architecture Models

Create the Information Architecture models. This allows the Enterprise Architecture development team to build the architecture models that are required for the Enterprise Architecture development effort.

Perform Gap Analysis

Perform a gap analysis between the baseline Information Architecture and the target Enterprise Architecture – Information domain architecture to identify alternative course of action to arrive at the target state.

Validate Enterprise Architecture

Assess impact of target Information Architecture on other architecture domains, identify areas to be addressed and complete the Enterprise Architecture. Brings together all the information into a consolidate enterprise architecture report.

Submit Information Architecture for Approval

Prepare and lodge the submission materials for formal endorsement and approval as defined in the *Queensland Health ICT Governance Framework*

Publish Approved Information Architecture

Update the Enterprise Architecture knowledgebase with the updated information architecture. Publish the documents in the relevant portals.

5.2.5 Define Application Architecture

Description

Define the Application Architecture and relevant policies, standards and Application Security Architecture views that will form the basis of ensuing implementation work.

Value

Determine applications relevant to the enterprise, and define what the applications need to do in order to manage data and to present information to the human and computer actors in the enterprise.

Objectives

The following list provides a snapshot of the strategic objectives for the Application Architecture:

- Define the department's enterprise application assets in terms of concepts, definitions and relationships.
- Promote a service oriented approach to the Application Architecture.
- Promote the implementation of quality based systems through the application of open standards.
- Promote consistency in implementation of systems.

Approach

Application Architecture should define and describe the elements of a system at a relatively coarse granularity. It should describe how the elements fulfil the system requirements, including which elements are responsible for which functionality, how they interact with each other, how they interact with the outside world, and their dependencies on the execution platform.

Further to this the Application Architecture should also describe how these elements act as a cohesive unit and support the non-functional requirements of the system (or qualities) that define the operational needs of the system (common examples might be that the service is only available to authorised subscribers, and that the service be functioning properly 99.999 per cent of the time). A significant aspect of the Application Architecture is the identification of the trade-offs required to ensure that the critical business requirements can be delivered and how these trade-offs impact, or are represented by, the elements of the architecture.

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Inputs and Outputs

Inputs	Outputs
- Enterprise Architecture Vision and Principles - Enterprise Architecture Foundations - Target Enterprise Architecture – Business Domain Architecture models - Initial baseline Enterprise Architecture – Application Domain Architecture - Initial target Enterprise Architecture – Application Domain Architecture - Application Classification models - Enterprise Architecture Pattern, viewpoints, standards Library - Existing application architecture building blocks - Department of Health Applications Portfolio - Application Classification models - QG CIO ICT Application Portfolio	- Target Enterprise Architecture - Application Domain Architecture models - Target Enterprise Architecture - Application Domain Architecture viewpoints - Target Enterprise Architecture - Applications Security Architecture viewpoints - Updated High Level Business Requirements and Traceability Matrix - Policies and Standards - Enterprise Architecture Report updated with sections relevant to Application Architecture Supporting Documents - Updated List of Improvements and Opportunities - Selected Application Architecture patterns and architecture building blocks

High Level Process Flow

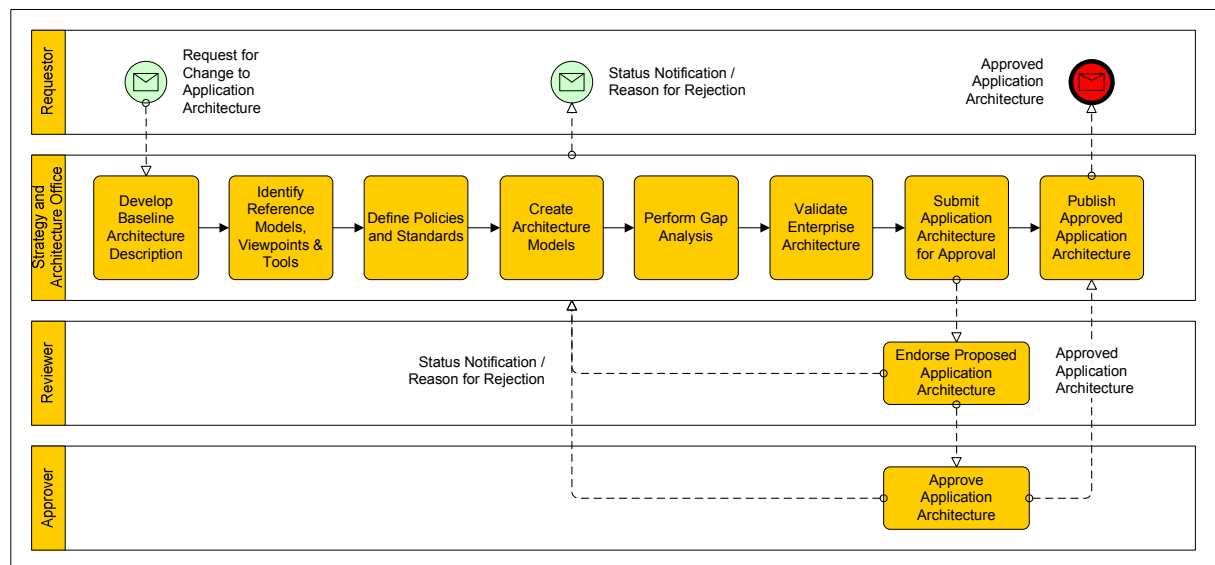


Figure 6 Define Application Architecture

Develop Baseline Architecture Description

Detail the Baseline Application Architecture to the level necessary to determine which current state elements will be carried forward to the target Application Architecture. The baseline Application Architecture ensures that the development team has a good understanding of the current environment, drivers and constraints.

Identify Reference Models, Viewpoints and Tools

Select the relevant Application Architecture viewpoints, reference model, patterns and tools and Security Architecture viewpoints required. This provides the Enterprise Architecture

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development team with a list of relevant reference models, viewpoints and tools available for their use.

Define Policies and Standards

Define relevant policies and standards required and validate with stakeholders. Standards set out the technical or other specifications necessary to ensure consistency. Policies are mechanisms for gaining consensus and providing a basis for making decisions.

Create Architecture Models

Create the architecture models to allow the Enterprise Architecture development team to build the architecture models that are required for the Enterprise Architecture development effort.

Perform Gap Analysis

Perform a gap analysis between the baseline application environment and the target Enterprise Architecture - Application domain architecture to identify an alternative course of action to arrive at the target state. Identify a course of action to improve the current environment in order to support Department of Health's identified goals and direction.

Validate Enterprise Architecture

Assess impact of target Application Architecture on other architecture domains, identify areas to be addressed and complete the Enterprise Architecture. This brings together all of the information into a consolidated enterprise architecture report.

Submit Application Architecture for Approval

Prepare and lodge the submission materials for formal endorsement and approval as defined in the *Queensland Public Health Service ICT Governance Framework*.

Publish Approved Application Architecture

Update the Enterprise Architecture knowledgebase with the updated Application architecture. Publish the documents in the relevant portals.

5.2.6 Define Technology Architecture

Description

This Phase defines the Technology Architecture, standards, policies, and Technology Security Architecture view that will form the basis of ensuing implementation work.

Value

The technology architecture provides the technology structure to support the information, application; security architectures and ICT service delivery management.

Objectives

The objective of this Phase is to develop a Technology Architecture that will form the basis for the future technology implementation work.

Approach

Review baseline Enterprise Architecture, to gain a holistic view of the extent to which existing technology components are likely to be carried over into the Target Technology Architecture, and determine whether existing architectural descriptions exist. Adopt an iterative approach to the development of target architectures and validation of the architectures with stakeholders to ensure that these architectures support the business goals and direction. For completeness, assess the impact of the Technology architecture on the other domain architectures prior to completing the technology architecture.

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Inputs and Outputs

Inputs	Outputs
- Enterprise Architecture Vision and Principles - Enterprise Architecture Foundations - Initial baseline Enterprise Architecture - Technology Domain Architecture - Initial target Enterprise Architecture - Technology Domain Architecture - Technology Classification models - QG CIO ICT Technology Portfolio - Enterprise Architecture Pattern, viewpoints, standards Library - Existing technology architecture building blocks - Department of Health Technology Portfolio	- Target Enterprise Architecture - Technology Domain Architecture models - Target Enterprise Architecture - Technology Domain Architecture viewpoints - Target Enterprise Architecture - Technology Security Architecture viewpoints - Updated High Level Business Requirements and Traceability Matrix - Technology Policies - Standards - Enterprise Architecture Report updated with sections relevant to Technology Architecture Supporting Documents - Updated List of Improvements and Opportunities - Selected Technology Architecture viewpoints in scope - Selected Technology Architecture patterns and architecture building blocks

High Level Process Flow

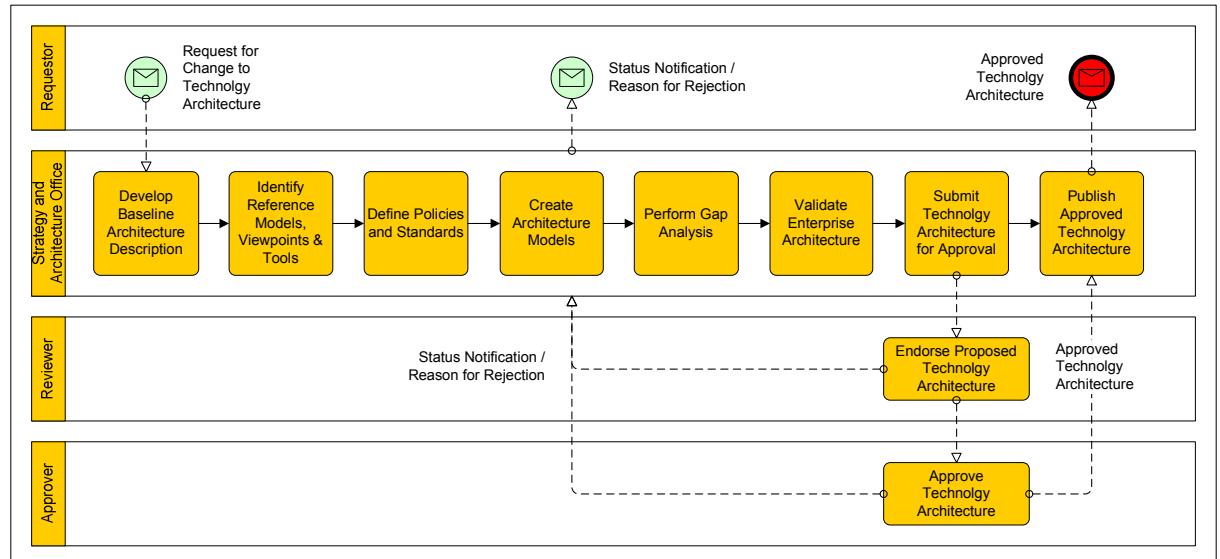


Figure 7 Define Technology Architecture

Develop Baseline Architecture Description

Review baseline Enterprise Architecture, summarise key findings and conclusions and develop baseline Technology Architecture descriptions to the degree necessary to inform decisions and subsequent work. The documented baseline is the understanding of the current Enterprise Architecture footprint.

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Review Baseline Business Architecture, Baseline Information Architecture, Baseline Information Security Architecture and Baseline Applications Architecture, to the degree necessary to inform decisions and subsequent work.

Develop and validate a baseline description of the existing Technology Architecture, to the extent necessary to support the Target Technology Architecture. The scope and level of detail to be defined will depend on the extent to which existing technology components are likely to be carried over into the Target Technology Architecture, and on whether existing architectural descriptions exist.

Identify Reference Models, Viewpoints and Tools

Perform an analysis of the Technology Architecture from a number of different concerns (requirements) or viewpoints and document each relevant viewpoint to ensure that all relevant stakeholder concerns are considered in the target Technology Architecture. This can be cascaded down to the implemented system(s) and that these systems will meet all the requirements they are intended to support.

Define Technology Policies and Standards

Define technology policies and standards. Standards set out the technical or other specifications necessary to ensure consistency. Policies are mechanisms for gaining consensus and providing a basis for making decisions.

Create Architecture Models

Create the technology architecture models to broadly determine how the services required in the target architecture will be grouped after considering all pertinent viewpoints.

Perform Gap Analysis

Perform a gap analysis between the baseline technology environment and the target Enterprise Architecture – Technology domain architecture to identify alternative course of action to arrive at the target state.

Identify course of action to improve the current environment in order to support Department of Health's identified goals and direction.

Validate Enterprise Architecture

Assess impact of the target Technology Architecture on other architecture domains, identify areas to be addressed and complete the Enterprise Architecture. This brings together all of the information into a consolidated enterprise architecture report.

Submit Technology Architecture for Approval

Prepare and lodge the submission materials for formal endorsement and approval as defined in the *Queensland Public Health Service ICT Governance Framework*

Publish Approved Technology Architecture

Update the Enterprise Architecture knowledgebase with the updated technology architecture. Publish the documents in the relevant portals.

5.2.7 Define Information Security Architecture

Description

This Phase defines the Information Security Architecture standards, policies, and Information Security Architecture views that will form the basis of ensuing implementation work.

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Value

The information security architecture provides the information security structure to support the business, information, application and technology architectures and ICT service delivery management.

Objectives

The objective of this Phase is to develop an Information Security Architecture that will form the basis for the future technology implementation work.

Approach

Review baseline Enterprise Architecture, to gain a holistic view of the extent to which existing technology components are likely to be carried over into the Target Information Security Architecture, and determine whether existing architectural descriptions exist. Adopt an iterative approach to the development of target architectures and validation of the architectures with stakeholders to ensure that these architectures support the business goals and direction. For completeness, assess impact of the Information Security architecture on the other domain architectures prior to completing the Information Security architecture.

Inputs and Outputs

Inputs	Outputs
• Enterprise Architecture Vision and Principles • Enterprise Architecture Foundations • Initial baseline Enterprise Architecture - Information Security Domain Architecture • Initial target Enterprise Architecture - Information Security Domain Architecture • Technology Classification models - QG CIO ICT Technology Portfolio • Enterprise Architecture Pattern, viewpoints, standards Library • Existing technology architecture building blocks • Department of Health Information Security Portfolio	• Target Enterprise Architecture - Information Security Domain Architecture models • Target Enterprise Architecture - Information Security Domain Architecture viewpoints • Updated High Level Business Requirements and Traceability Matrix • Information Security Policies • Standards • Enterprise Architecture Report updated with sections relevant to Information Security Architecture Supporting Documents • Updated List of Improvements and Opportunities • Selected Information Security Architecture viewpoints in scope • Selected Information Security Architecture patterns and architecture building blocks

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High Level Process Flow

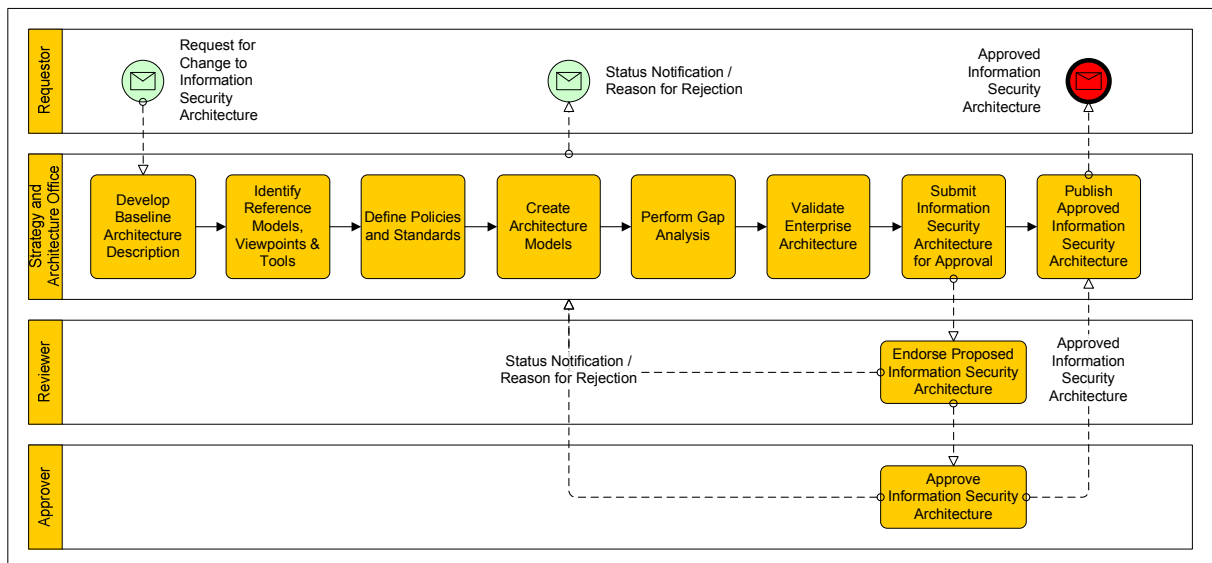


Figure 8 Define Information Security Architecture

Develop Baseline Architecture Description

Review baseline Enterprise Architecture, summarise key findings and conclusions and develop baseline Information Security Architecture descriptions to the degree necessary to inform decisions and subsequent work. The documented baseline is the understanding of the current Enterprise Architecture footprint.

Identify Reference Models, Viewpoints and Tools

As applied to the Information Security Domain, perform an analysis of the Information Security Architecture from a number of different concerns (requirements) or viewpoints and to document each relevant viewpoint.

To ensure that all relevant stakeholder concerns are considered in the target Information Security Architecture, so that this can be cascaded down to the implemented system(s) and that these systems will meet all the requirements they are intended to support.

Define Information Security Policies and Standards

Define Information Security policies and standards. Standards set out the technical or other specifications necessary to ensure consistency. Policies are mechanisms for gaining consensus and providing a basis for making decisions.

Create Architecture Models

Create the Information Security architecture models.

To broadly determine how the services required in the target architecture will be grouped after considering all pertinent viewpoints.

Perform Gap Analysis

As applied to the Information Security domain, perform a gap analysis between the baseline technology environment and the target Enterprise Architecture - Information Security domain architecture to identify alternative course of action to arrive at the target state.

Identify course of action to improve the current environment in order to support Department of Health's identified goals and direction.

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Validate Enterprise Architecture

Assess impact of target Information Security Architecture on other architecture domains, identify areas to be addressed and complete the Enterprise Architecture. This brings together all of the information into a consolidated enterprise architecture report.

Submit Information Security Architecture for Approval

Prepare and lodge the submission materials for formal endorsement and approval as defined in the *Queensland Public Health Service ICT Governance Framework*.

Publish Approved Information Security Architecture

Update the Enterprise Architecture knowledgebase with the updated information security architecture. Publish the documents in the relevant portals.

5.2.8 Develop High Level Transition Plan

Description

Develop a high-level view of the sequence and timing of the solutions that are formulated which align with the business goals and direction. Using information gathered or created during previous phases, this phase develops transition strategies, identifies solution scenarios, and prioritises their implementation.

Value

Ensure that the optimum solutions are considered and targeted for implementation.

Objectives

The objectives are to:

- Evaluate and select among the high level solution options.
- Identify the strategic parameters for change and the top-level work packages or projects to be undertaken in moving from the baseline environment to the target.
- Assess the dependencies, costs, and benefits of the various projects.
- Prioritise implementation of the chosen solutions.
- Generate an overall implementation and migration strategy and high level transition plan(s).

Approach

Address the gaps, opportunities and actions identified during the development of Business, Information, Application, Technology and Information Security Architectures, by developing solution scenarios and creating high level plans to transition the Enterprise Architecture from its current state to the defined target state.

Inputs and Outputs

Inputs	Outputs
• Existing Technology (Infrastructure Plans) • Existing Business Plans • Current Program and Project Register • Improvement and Opportunities List • High Level Business Requirements and Traceability Matrix • Target Enterprise Architecture	• High Level Transition Plans • Business Case • High Level Solution Definitions • Supporting Documents • Transition Strategies • Initiative Definitions

Department of Health: Enterprise Architecture Development Method Procedure

High Level Process Flow

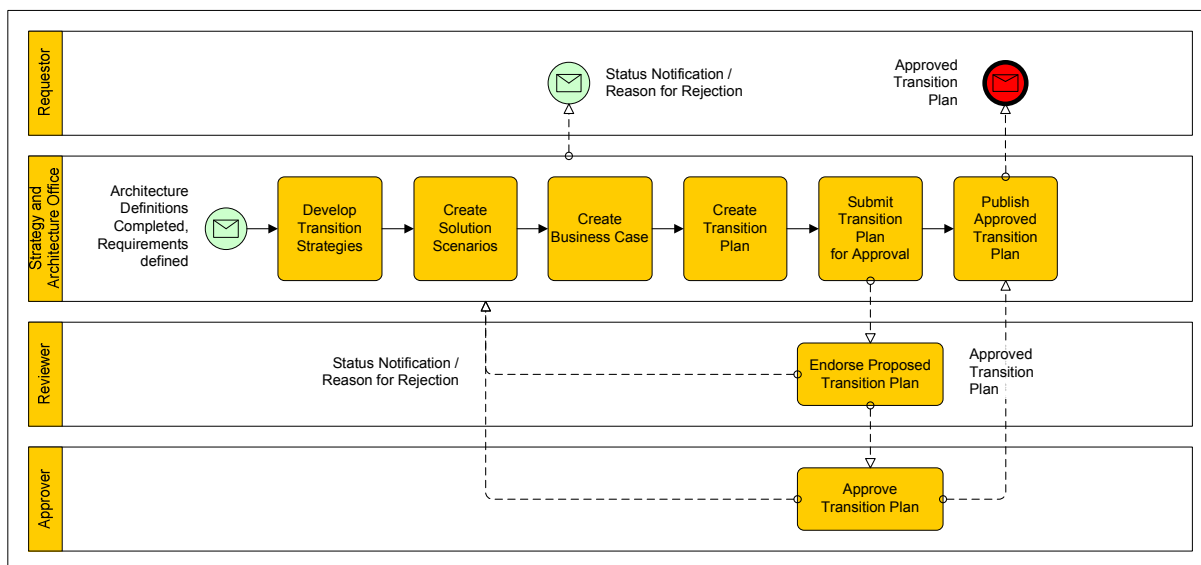


Figure 9 Develop High Level Transition Plan

Develop Transition Strategies

Determine the overall approach for moving the Enterprise Architecture from its current to target state. Transition strategies ensure appropriate attention to business, organisation, cultural, and other types of issues while focusing the transition toward the target Enterprise Architecture.

The transition strategies use the Enterprise Architecture principles to determine the overall approach for the transition activities. The strategies establish guidelines for creating and executing the initiatives, and they describe the philosophy that will be used to make decisions and to evaluate transition progress. The initiatives focus on various objectives as needed to bridge the gap between the current state and the target Enterprise Architecture.

Create Solution Scenarios

Analyse solution options, propose solutions and gain stakeholder commitment to provide the capability to determine initiatives that will deliver short-term pay-offs and so create an impetus for proceeding with longer-term initiatives. Ensures adherence to the Enterprise Architecture principles of re-use, buy then build.

Create Business Case

Develop the Business Case to implement the selected solutions. This provides a mechanism to understand the estimated value to the business for each solution option and a basis for making informed decisions.

Create Transition Plan

Create high level transition plan to ensure that the sequence and timing of the implementation of the initiatives supports the business goals and direction.

Key activities include assessing the dependencies, risks and benefits of the various initiatives while developing the transition schedule. The prioritised list of initiatives will form the basis of the high level transition plan.

Submit Transition Plan for Approval

Prepare and lodge the submission materials for formal endorsement and approval as defined in the *Queensland Public Health Service ICT Governance Framework*.

Department of Health: Enterprise Architecture Development Method Procedure

Publish Transition Plan Architecture

Update the Enterprise Architecture knowledgebase with the updated Transition Plan.
Publish the documents in the relevant portals.

6. Review

This Procedure is due for review on: 05 June 2016

Date of Last Review: N/A

Supersedes: New

7. Business Area Contact

Senior Director, Strategy, Governance and Architecture, Planning, Engagement and Performance Directorate, Health Services Information Agency (HSIA)

8. Definitions of terms used in this procedure

Term	Definition / Explanation / Details	Source
Applications	A software system deployed by the agency which has part of an agency's business process embedded with it, for example, SAP.	Queensland Government Chief Information Office (QGCIO) Glossary
Artefact	Artefacts are documents that are components of the Department of Health Enterprise Architecture including but not limited to the policy, standards, protocols, procedures and guidelines.	Adapted from QGCIO Glossary
Enterprise	The Department of Health and the Hospital and Health Services (HHSs) make up the public healthcare system known as Queensland Health. The use of the word enterprise within this document indicates the public healthcare system as it is influenced by enterprise architecture.	Department of Health Strategy and Architecture Office
Enterprise Architecture	The practice of applying a comprehensive and rigorous method for describing a current and future structure and behaviour for an organisation's processes, information, applications, technology and human resources, so that they align with the organisation's strategic direction.	QGCIO Glossary
Principles	Principles represent the Information and Communication Technology (ICT) interpretation and application of the organisation's mission and philosophy. They are fundamental and apply to all levels of ICT initiatives from EA to specific solution implementations. Adherence to the principles ensures alignment to organisational strategy and intent and results in a sustainable ICT environment.	Department of Health Strategy and Architecture Office
Processes	A series of logically related activities or tasks performed together to produce a defined set of results. Processes are defined in the Business Process Classification document.	Department of Health Strategy and Architecture Office

9. Approval and Implementation

Policy Custodian:

Executive Director, Planning, Engagement and Performance, HSIA

Responsible Executive Team Member:

Chief Information Officer, HSIA

Approving Officer:

Ray Brown, Chief Information Officer, HSIA

Approval date: 05 June 2014

Effective from: 05 June 2014

Version Control

Version	Date	Prepared by	Comments
1.0	09/05/2014	ICT Policy	Finalised for approval