Enterprise Architecture Governance Procedure

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Version Control

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0.1	26/2/2014	Initial Document	CJD
0.2	14/3/2014	Amended following Peer Review	CJD
0.3	15/05/2014	Amended following TIS governance change	CJD
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Purpose

The purpose of the Enterprise Architecture Governance Procedure (EA Procedure) is to address how business processes within Plymouth University Enterprise Architecture Policy (EA Policy) are implemented.

Audience

The audience for this procedure are individuals who have direct responsibility for the strategic planning of Plymouth University's business, data, application and technology architectures.

Procedure

Overview

Purpose

At a more granular level the purpose of the EA Procedure is to define the business processes required to implement the EA Policy, which establishes the high level governance of the EA programme at Plymouth University. It directs and informs how investments in Information Technology (IT) will be evaluated for compliance with the Enterprise Architecture.

The ways in which the EA Procedure meets its objectives are as follows:

- Develops the EA practices existing governance as described within the EA Policy to:
  - o Define and detail roles and responsibilities for developing and approving Plymouth University's enterprise architecture and supporting artefacts.
  - o Ensures University participation throughout all enterprise architecture lifecycles.
  - o Ensures University review and approval at a formal level when agreeing the authoritative enterprise architecture.
- Provides a repository for all artefacts including procedures, standards and tools for maintaining the enterprise architecture available to all interested parties.
- Creates, documents and publishes the review and approval processes which ensures the creation of a compliant architectures at all levels (enterprise, segment and solution) including:
  - o Review and approval of segment architectures and compliance with the enterprise architecture.
  - o Review and approval of solution architectures and compliance with the enterprise architecture.
  - o Maintenance, review and approval of the enterprise baseline and target architectures and transition strategies including the introduction of approved solution and segment architectures.
- Enables a process for evaluating the conformance of segment and solution architectures with the enterprise architecture.

The development, review and approval processes are dealt with in detail later in this document; however, a simplified process diagram of the three component architectures is included here for clarity purposes and to provide a comparison of the processes for each.

Process Overview Schematic
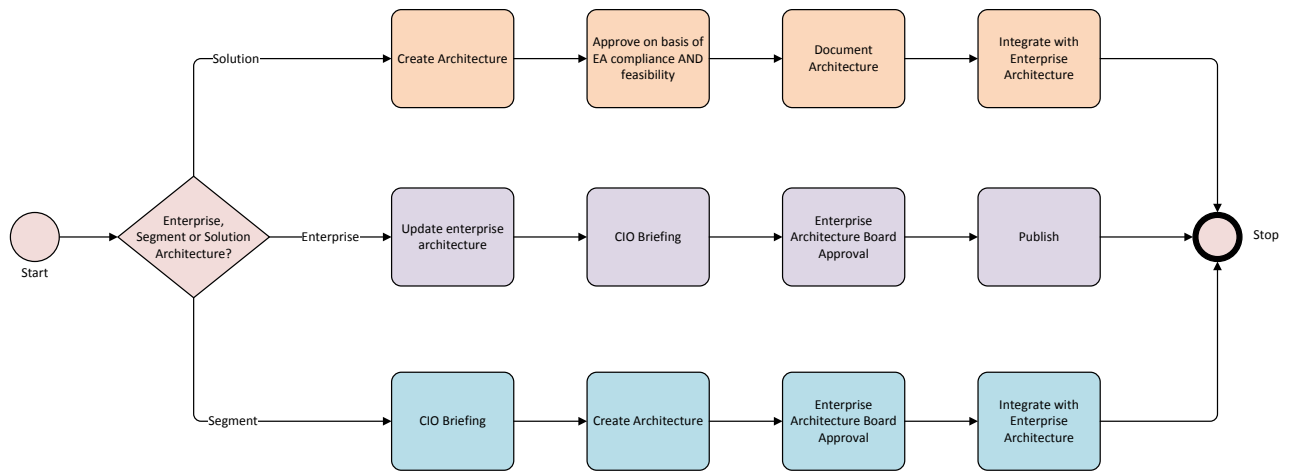
Component Architecture Development, Review, Approval and Compliance

The following sections describe the roles for developing and the process for reviewing and approving the different architectures. An Enterprise Architecture Design Document will be produced by the architect throughout the architectural work, this document will be utilised as evidence of compliance during the review cycles of the following processes.
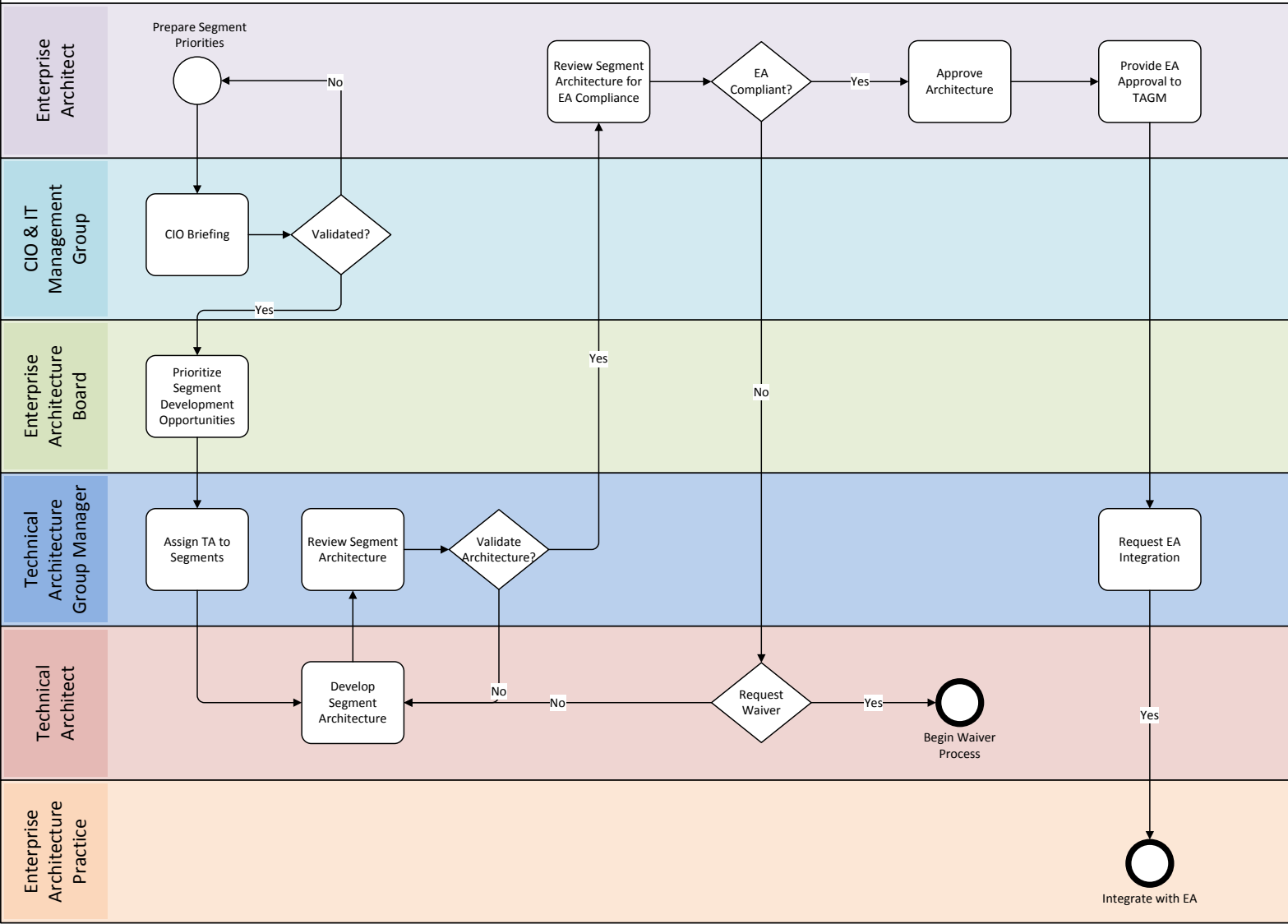
Segment Architecture Development, Review and Approval Process

1. On an annual basis, the Enterprise Architect (EA), working with the Technical Architects and the Enterprise Architecture Design Authority (EABDA) creates recommendations for segment architecture priorities taking into account any strategic drivers from the CIO and the IT Management Group (ITMG). The EA, following a CIO Briefing between CIO and the ITMG for validation and steering purposes, takes this list of priorities to the Enterprise Architecture Board (EAB) for approval. EAB approves the segment architecture priorities for the coming year on behalf of the CIO and ITMG.
2. The Technical Architecture Group Manager (TAGM) is accountable for all segment architectures and should utilise internal governance structures (including the Work Package Board (WPB)) to establish best practice.
3. TAGM assigns development responsibility for each segment architecture to a Technical Architect (TA) and structures governance of each segment architecture based on size and complexity of each,
4. The TA develops the segment architecture, using EA standards, guidance, tools and templates, to address the business requirement for each segment.
5. The TA delivers the segment architecture to the TAGM for validation. This should be done as the need arises throughout the year to ensure continual alignment with the enterprise architecture. The EA will notify TA's 6 weeks before the annual EA review in order to allow time for final updates prior to submission.
6. TAGM reviews the segment architectures to ensure they address the business requirements correctly or identify areas needing modification.
7. TAGM submits the validated segment architectures to the EA to ensure enterprise architecture compliance.

8. The EA conducts a compliance review to ascertain whether the segment architecture is in alignment with the enterprise architecture using predetermined criteria as defined within the EA standards.
9. If the segment architecture is compliant, the EA provides approval documentation to TAGM.
10. If it is not compliant, the EA indicates the areas on non-compliance to the TAGM. TAGM will then submit revised segment architecture or apply for a waiver.
11. When compliance is assured (or appropriate waivers secured), TAGM forwards the segment architectures and request for enterprise architecture update to the EA Practice.
12. EA Practice integrates it with the university's enterprise architecture following suitable change management procedures.
13. The segment architecture can be used to better inform business planning and forecasting.

Segment Architecture Review and Compliance Process

Enterprise Architect

Prepare Segment Priorities

Review Segment Architecture for EA Compliance → EA Compliant? —Yes→ Approve Architecture → Provide EA Approval to TAGM

CIO & IT Management Group

CIO Briefing → Validated?

Enterprise Architecture Board

Prioritize Segment Development Opportunities

Technical Architecture Group Manager

Assign TA to Segments

Review Segment Architecture → Validate Architecture?

Request EA Integration

Technical Architect

Develop Segment Architecture ←No— Request Waiver —Yes→ Begin Waiver Process

Enterprise Architecture Practice

Integrate with EA

No (from Validated? back to Prepare Segment Priorities)
Yes (from Validated? to Prioritize Segment Development Opportunities)
Yes (from Validate Architecture? to Review Segment Architecture for EA Compliance)
No (from Validate Architecture? to Develop Segment Architecture)
No (from EA Compliant? to Request Waiver)
Yes (from Provide EA Approval to TAGM to Request EA Integration)
Yes (from Request EA Integration to Integrate with EA)

Solution Architecture Development, Review and Approval Process

1. A Technical Architect (TA) develops solution architecture to address a segments business need utilising EA standards, guidance, tools and templates.
2. The solution architecture is developed and refined over iterative cycles of the Architecture Development Model.
3. The solution architecture is reviewed after each phase of the architecture development model, this is a standard development review undertaken by the SA and Technical Architecture Group Manager (TAGM) to ensure:
   3.1. Solution architecture accurately addresses the segments business need; and
   3.2. Checks for continued compliance with the enterprise architecture.
4. At the end of the development cycle the solution architecture is sent to the Enterprise Architect (EA) for an enterprise architecture review in conjunction with TAGM to fully assess enterprise architecture compliance.
5. If the solution architecture is found to be compliant, the architecture is forward to the Work Package (WPB) to assess technical feasibility. If it is not compliant the EA indicates areas of non-compliance to TAGM. TAGM will then submit revised solution architecture or apply for a waiver.
6. TAGM provides the TA with EA compliance documentation; this together with the finalised solution architecture is forwarded to the EA Practice.
7. The EA Practice integrates the solution architecture with the University's enterprise architecture following suitable change management procedures.

Solution Architecture: Review, Approval and Compliance Process

Technical Architecture Group Manager

Identify Segment Business Need → Assign Solution Architect → Project Review → Ready for EA Compliance Review?

Document EA Compliance

Technical Architect

Develop Solution Architecture

Send Solution to EA

Waiver Request? → Yes → Begin Waiver Process

Send Solution to EA Practice

No (from Ready for EA Compliance Review?)
Yes (from Ready for EA Compliance Review?)

Enterprise Architect

Review solution for EA Compliance → EA Compliant?

No
No

Technical Architecture Board

Yes → Review for Technical Feasibility → Technically Faeasible?

Yes

Enterprise Architecture Practice

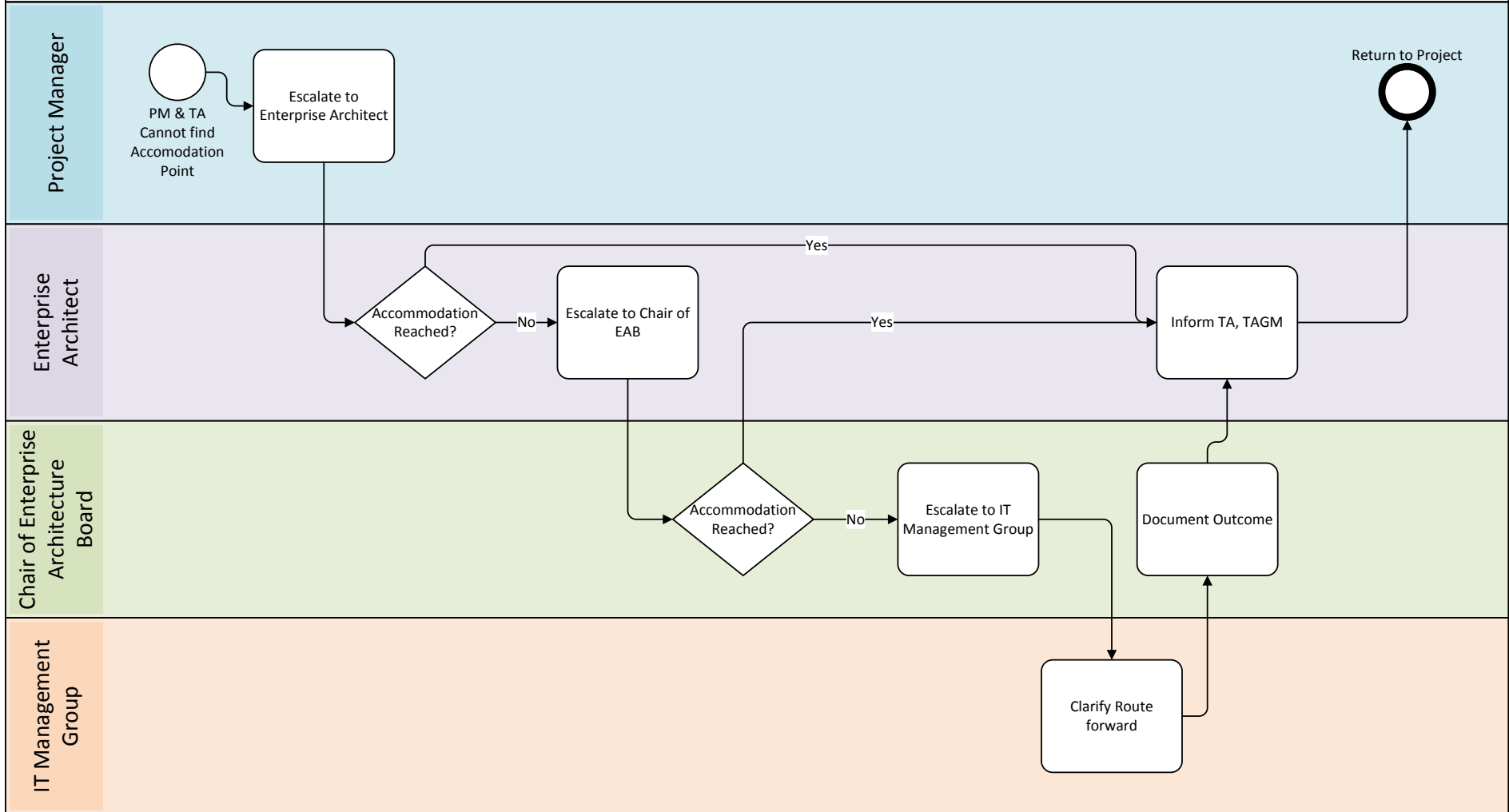Integrate with EA

Project Escalation Routes

During execution of projects and programmes the standard procedures as set out above should be followed. However, recognising the fact that waiting for the various governing bodies (EAB and WPB) to convene in order to consider the questions before them may impact negatively on the timescales of executing projects, the following route of escalation is available to the Project Manager (PM).

The Enterprise Architecture Design Document produced by the architect throughout the architectural work will be utilised as evidence of compliance during the escalation reviews in the following process.

In the unlikely event that during the course of project execution the assigned TA and PM cannot reach a point of accommodation between project deliverables and the required architecture, the PM may:

1. Escalate the issue to the EA; if EA and PM are able to reach accommodation EA will inform TA and TAGM accordingly and a revised solution will be worked upon within the project. If accommodation cannot be reached, the EA will refer the matter to the Chair of EAB.
2. Chair of EAB will work with the EA and PM to find accommodation, if reached the EA will inform TA and TAGM accordingly and a revised solution will be worked upon within the project. If accommodation cannot be reached, the Chair of EAB will refer the matter to the ITMG.
3. The IT Director, Chair of EAB and PM will meet to assess and discuss. The decision of the ITMG is final.
4. Chair of EAB will provide written confirmation of outcome to ITMG, PM, EA, TA and TAGM which will be actioned accordingly.

Project Escalation Route

Project Manager

PM & TA Cannot find Accomodation Point

Escalate to Enterprise Architect

Return to Project

Enterprise Architect

Accommodation Reached?

No → Escalate to Chair of EAB

Yes →

Yes →

Inform TA, TAGM

Chair of Enterprise Architecture Board

Accommodation Reached?

No → Escalate to IT Management Group

Document Outcome

IT Management Group

Clarify Route forward

Enterprise Architecture

Integration of Segment and Solution Architectures
Throughout the year upon receipt of approved architectures:
1. The EA Practice performs a quality assessment of released EA compliant solution and segment architectures
2. The EA Practice integrates quality assessed, EA compliant segment and solution architectures into the enterprise architecture by authorising change within the architecture repository

Enterprise Baseline Maintenance
The baseline enterprise architecture is maintained through periodic segment and solution architecture approval. As the enterprise architecture is modified with new segment and solution architectures as detailed in the Enterprise Architecture Design Document, the enterprise architecture baseline architecture is populated and updated as a result.

Annual EA Review
1. The EA, EABDA and the EA Practice draw on strategic planning information to undertake a review of the enterprise architecture; including the baseline and target architectures (segment and solution architectures are included). Based on the findings of this review, the EA may or may not decide to update the target enterprise architecture to reflect changes in strategic planning or other influencing factors.
2. The EA, EABDA and the EA Practice revisit and refine the target architecture for business, data, application and technology, it is expected that a higher level version of the Enterprise Architecture Design Document is will be produces to reflect the target architecture changes required.

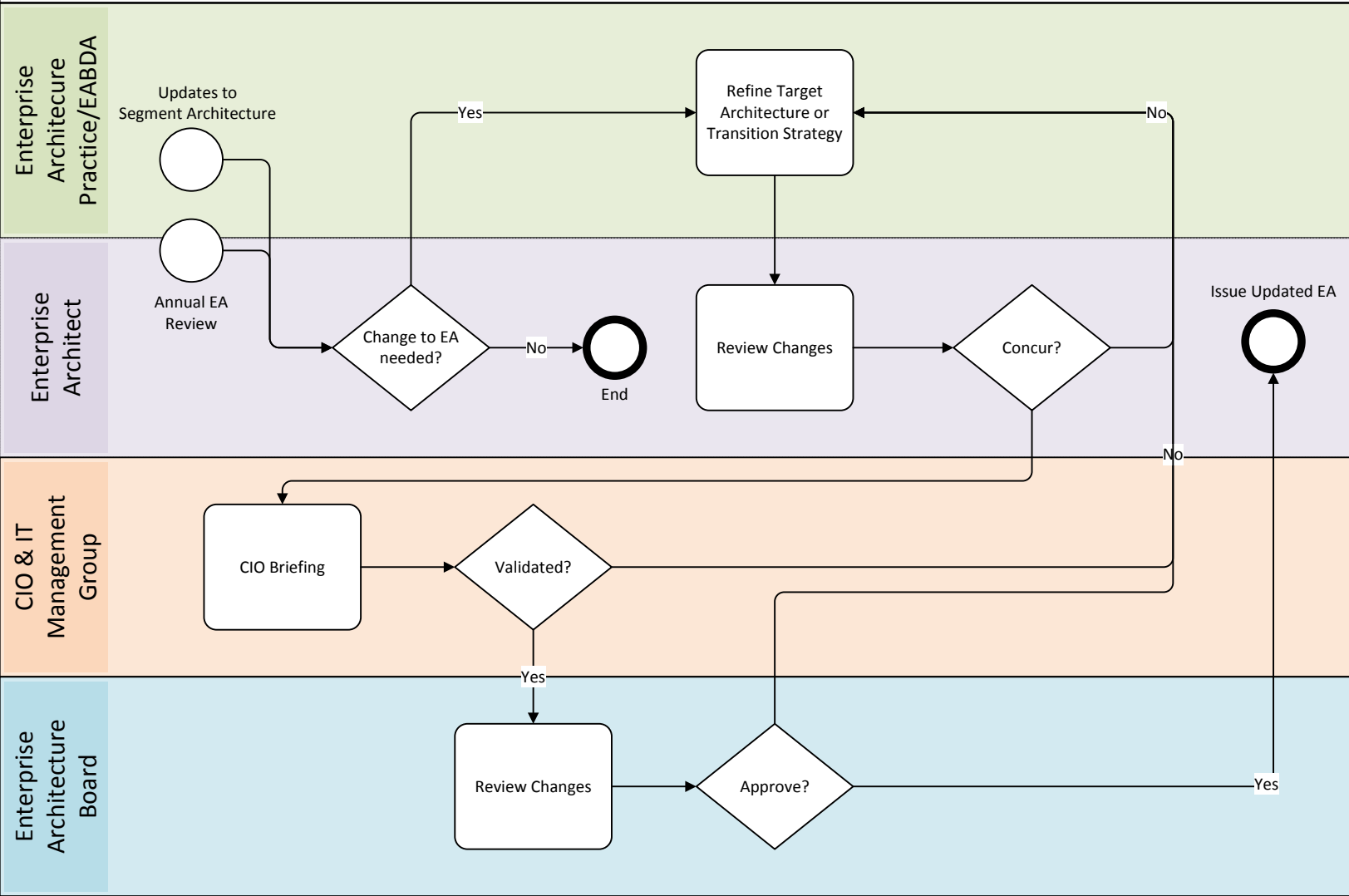## Target Architecture Review and Approval
1. The EA Practice, Technical Architects and the EABDA redefine and update the enterprise architecture target architecture based on the findings of the annual enterprise architecture review.
2. The EA reviews the target enterprise architecture and approves or identifies areas for modification to the EABDA and EA Practice.
3. EA presents enterprise target architecture to HoDSA in good time for a briefing with the ITMG for validation purposes. ITMG validates design and forwards to EAB for approval via EA or identifies areas of modification to EA. At their discretion the IT Director may escalate to the CIO if warranted.
4. EA presents enterprise target architecture to the EAB.
5. EAB review target architecture.
6. EAB approves the target architecture or identifies areas for modification to the EA.
7. EA issues updated enterprise architecture on behalf of the ITMG and the CIO.
8. Target Architecture is used to inform budget and capital planning.

Transition Strategy Review and Approval
1. The EA Practice works with Technical Architects and EABDA to define and update the transition strategy based on the findings within the annual enterprise architecture review and any resultant target architecture.

2. EA reviews the transition strategy and approves or identifies areas for modification the EA Practice and EABDA
3. EA presents transition strategy to HoDSA in good time for a briefing with the ITMG for validation purposes. IT Director validates strategy and forwards to EAB for approval via EA or identifies areas of modification to EA. At their discretion the ITMG may escalate to the CIO if warranted.
4. EA Presents transition strategy to EAB
5. EAB review transition strategy for technical feasibility
6. EAB approves strategy or identifies areas for modification to the EA.
7. EA published strategy on behalf of the ITMG and the CIO.
8. Transition Strategy is used to inform budget and capital planning

Enterprise Architecture Review and Approval Process

Enterprise Architecure Practice/EABDA

Updates to Segment Architecture

Refine Target Architecture or Transition Strategy

Yes

No

Enterprise Architect

Annual EA Review

Change to EA needed?

No → End

Review Changes

Concur?

No

Issue Updated EA

CIO & IT Management Group

CIO Briefing

Validated?

No

Enterprise Architecture Board

Yes

Review Changes

Approve?

Yes

Waivers

Requests for waivers from the EA Procedure must be addressed to the EA acting on behalf of the ITMG and CIO as set out in the Enterprise Architecture Waiver Policy.

When a solution or segment architecture is perceived to be non-compliant with the enterprise architecture the relevant architect may apply for an enterprise architecture compliance waiver. If the waiver is not approved, the architect should create an enterprise architecture compliance plan for approval by the EA.

Waivers are not permanent. Waiver terms are documented for each waiver specifying:
- Time period after which the architecture in question must be compliant with the enterprise architecture;
- The modifications necessary to the enterprise architecture to accommodate the solution; or
- Some combination of the above.

Whenever a waiver is approved, the EA and the EABDA will determine if a change to the enterprise architecture is required. If a change is required the EA implements measures to accommodate the non-compliant architecture. These changes will subsequently be approved by the ITMG and CIO during the next annual enterprise architecture review.

The result of a decision surrounding a waiver decision may be appealed to the EAB.

Roles and Responsibilities

The **Chief Information Officer (CIO)** is responsible for:

- Approving and issuing the EA Procedure, EA technical standards, and guidance.
- Ensuring University compliance with the EA Policy and EA Procedure.
- Approving and issuing the enterprise architecture and transition strategy.
- Ensuring compliance with enterprise architecture policy, procedures, and standards.
- Approving segment architecture submissions and using architecture to better inform budget and capital planning decisions.

The **IT management Group (ITMG)** is responsible for:

- Working with and deputising for the CIO
- Approving and issuing the EA Procedure, EA technical standards, and guidance.
- Ensuring University compliance with the EA Policy and EA Procedure.
- Approving and issuing the enterprise architecture and transition strategy.
- Ensuring compliance with enterprise architecture policy, procedures, and standards.
- Approving segment architecture submissions and using architecture to better inform budget and capital planning decisions.

The **Enterprise Architect** is responsible for:

- Leading the development, maintenance, review, and approval of the University's enterprise architecture including the baseline architecture, target architecture and transition strategy.
- Notifying Segment Architects of upcoming annual enterprise architecture review six weeks prior to commencing.
- Facilitating the annual enterprise architecture review.

- Certifying and providing documentation of enterprise architecture compliance for segment architectures.
- Certifying and providing documentation of enterprise architecture compliance for solution architectures.
- Providing templates, guidance, and toolsets to support segment and solution architecture submissions.
- Approving enterprise architecture program management documents (except for enterprise architecture policies, procedures, and standards).
- Developing segment architecture priorities, in conjunction with EABDA, and recommending priorities to the EAB.
- Communicating and implementing approved enterprise architecture documents.

The **Enterprise Architecture Board (EAB**) is responsible for:

- Reviewing and concurring on the enterprise architecture, including, but not limited to the target architecture, transition strategy and sequencing plan.
- Ensuring compliance with the EA Policy and the EA Procedure.
- Agreeing segment architecture priorities.
- Reviewing and concurring on enterprise architecture technical standards.
- Reviewing and concurring on technical feasibility of technology and security layers of the target enterprise architecture.
- Reviewing and concurring on technical feasibility of the transition strategy.

The **Enterprise Architecture Board Design Authority (EABDA)** is responsible for:

- Reviewing and concurring on the EA Policy and the EA Procedure.
- Reviewing and concurring on enterprise architecture compliance standards.
- Reviewing and recommending segment architecture priorities to the EAB.
- Leading segment architecture efforts, including developing and maintaining baseline and target segment architectures, and transition strategies using enterprise architecture standards and guidance.
- Reviewing and concurring on enterprise architecture management documents.
- Analyzing across segment architectures during the annual enterprise architecture review and reviewing and recommending solutions to issues identified during the annual enterprise architecture review as appropriate.
- Assisting the EA in the annual enterprise architecture review; evaluating internal and external business drivers that may influence change in the target enterprise architecture.
- Reviewing and recommending segment architecture priorities to the EA.
- Communicating and implementing approved enterprise architecture management documents.

The **Technical Architects** are responsible for:

- In Segment Architecture:
  - o Developing and maintaining their segment architecture using enterprise architecture standards and guidance and ensuring alignment with the enterprise architecture.
  - o Reviewing solution architectures project-level reviews and ensuring solution architectures reflect the best practical solution to serving the business needs of the segment while remaining in alignment with the University's enterprise architecture.
  - o Participating as a member of the EABDA.
  - o Assisting the EA in the annual enterprise architecture review; evaluating internal and

external business drivers that may influence change in the target enterprise architecture.

- o Providing their segment architecture to the EA for periodic validation and enterprise architecture compliance check.
- o Obtaining waivers from the EA Procedure and the enterprise architecture as appropriate.
- o Completing an Enterprise Architecture Design Document for each segment architecture created.
- In Solution Architecture:
  - o Developing and maintaining their solution architecture using enterprise architecture standards and guidance and ensuring solution architectures reflect the best practical solution to serving the business needs of the segment while remaining in alignment with the segment architecture and the University's enterprise architecture.
  - o Providing their solution architecture for enterprise architecture compliance check during project-level and control gate reviews.
  - o Forwarding their solution architecture to the EA Team upon completion of project-level and control gate reviews.
  - o Obtaining waivers from the EA Procedure where appropriate.
  - o Completing an Enterprise Architecture Design Document for each segment architecture created.

The **Technical Architect Group Coordinator (TAGM)** is responsible for:

- Assigning Solution Architects to Solutions
- Assigning Segment Architects to Segments
- Reviewing solution architectures for project alignment and enterprise compliance
- Reviewing and validating segment architectures
- Documenting solution architecture enterprise compliance
- Requesting enterprise architecture integration of segment architecture
- Ensuring Enterprise Architecture Design Documents are created for each piece of architecture work undertaken.

The **Work Package Board (WPB)** is responsible for:

- Approving technical feasibility of solution architectures
- Approving technical feasibility of transition strategy and sequencing plan.
- Concurring on technology and security layers of the target enterprise architecture.
- Concurring on enterprise architecture technology standards.

The **Enterprise Architecture Practice (EA Practice)** is responsible for:

- Day-to-day functions of managing the enterprise architecture program including developing, updating, and facilitating review of enterprise architecture management documents.
- Integrating segment and solution architectures with the University's enterprise architecture following change management procedures.
- Maintaining Plymouth University's enterprise architecture using enterprise architecture standards and guidance.
- Providing templates and tools to support architecture submissions for integration with the enterprise architecture.

http://blogs.plymouth.ac.uk/strategyandarchitecture/wp-content/uploads/sites/4/2014/07/Enterprise-Architecture-Governance-Procedure.pdf

- Facilitating and managing University enterprise architecture business processes (including the annual enterprise architecture review), and development of and updates to the University target architecture and transition strategy.
- Performing analysis across segment architectures and evaluating internal and external business drivers that may influence change in the enterprise target architecture.
- Responding to annual assessments.

Definitions

Architecture:
1. A structure representing an orderly arrangement of parts;
2. A method of design and construction;
3. A blueprint for design and construction (i.e., a description of structure and method); 4) a discipline dealing with the principles of design and construction.

Architecture Repository and Tool: ART is the authoritative reference for the University EA, comprising the baseline architecture, target architecture and transition strategy for the University.

Baseline: The current or "as-is" state of the architecture.

Baseline Architecture: Representation of the current state or "as is" for the architecture.

Enterprise: The desire and readiness to embrace uncertainty and the risk of the unknown; to think and act differently and boldly when facing problematic situations; to show initiative and resourcefulness, desire and determination. And;

The network of entities and interconnecting relationships, which form the University's extended organisation: students, staff, suppliers, the wider community, city, regional, national and international partners.

Enterprise Architecture: Embeds a way of thinking and working, in conjunction with an associated toolkit of techniques, focused on interweaving business and IT together, improving structural performance and delivering on commitments to stakeholders.

Successful EA influences both investments in change and decisions relating to how best to gain advantage from existing architecture.

Enterprise Lifecycle: The integration of management, business, and engineering life cycle processes that span the enterprise.

External Partners: Entities, external to Plymouth University, with relationships within Plymouth University's EA.

Methodology: A documented approach for performing activities in a coherent, consistent, accountable, and repeatable manner.

Segment: Individual architecture programs within the enterprise architecture that are developed around groups of business or service functions that supporting a common goal. In Plymouth University, these groupings can be:
1. Organizational, based on business or service functions within a Program Office;
2. Programmatic, based on business or service functions within a program; and
3. Cross-cutting, based on business or service functions performed in multiple organizations

and programs across the University.

Segment Architecture: An architecture that represents a selected portion (i.e., a segment) of the enterprise. Segment architecture provides the business and technical context for one or more related solution architectures. Segment architecture represents an independently developed architecture. Rather than necessarily representing an organization, it represents functions and processes that cross multiple organizations.

Solution: An answer to part or all of a specific business problem. A solution generally, but not necessarily, involves IT Solutions are funded through investments to solve a designated business problem or performance gap.

Solution Architecture: Specific investments or initiatives that solve a particular business problem (typically technology-based solutions). It is important to note that, while a single segment may contain a solution, multiple segments may use that solution.

Target: The future or "to-be" state of the architecture

Target Architecture: Representation of a desired future state or "to be built" for the architecture within the context of the strategic direction.

Technical Architecture Group Manager (TAGM): This is a role undertaken by a senior member of the technical architecture team. This is the person who normally has day-to-day line management responsibility for other members of the team.

Transition Strategy: Identifies the gaps between the baseline and target architecture, specifies alternative approaches to fill the gaps, establishes priorities, assesses dependencies, and includes the sequencing plan.