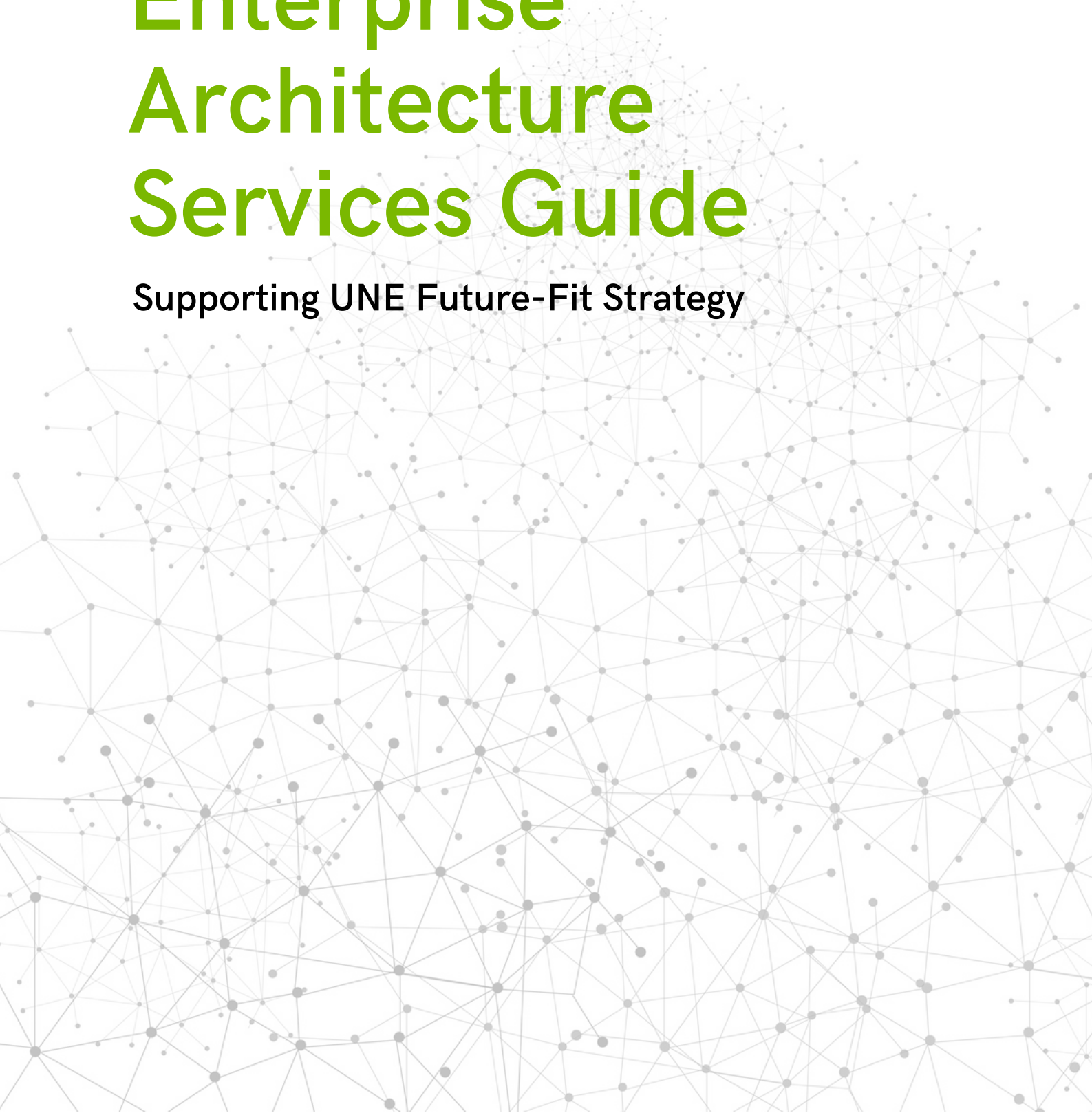# Enterprise Architecture Services Guide

Supporting UNE Future-Fit Strategy

Foreword

Enterprise architecture is a business capability that helps ensure digital and technology services are future-fit, integrated, secure, fit for purpose and cost-effective.

> **City planning analogy — Planning for an organisation's future is like urban planning. City dwellers want tolerable traffic, plenty of clean, safe parks, and manageable growth. Getting there requires planning that's comprehensive, well-understood and well-coordinated among all stakeholders. Enterprise architecture calls for a similar holistic approach toward the optimal future state of being future-fit.**

A perfect storm impacting higher education is here. UNE is taking the lead in redefining the value and function of the University of the future. Technology is rapidly changing, and as an organisation, we need to maximise the value and harness the power of digital to help the University do great things.

It is imperative that we combine adaptive strategies, technological expertise, and enterprise architecture-led planning to deliver sector-leading impact. Enterprise architecture roadmaps and blueprints are about master planning, whilst balancing the importance of continued operational services and ensuring mitigation of risks.

This brochure introduces enterprise architecture services, our approach, and the Technology Assurance Group (TAG). TAG supports the IT Governance Committee (ITGC) in monitoring, evaluating, and directing digital and technology investments to ensure technology assets are used effectively and efficiently and that IT risks are managed appropriately.

Professor Peter Creamer
Chief Operating Officer
University of New England

Introduction

Digital isn't just an essential part of our daily lives – it is the underlying narrative for every major story now and in the future. Our technology and digital footprints are evolving to support the Future-Fit strategy.

Multidisciplinary enterprise architecture services help the UNE achieve its strategic objectives and operational needs by supporting decision-making in relation to technology and digital assets' lifecycle by;

1. Planning and managing enterprise architecture roadmaps
2. Creating architecture blueprints and providing insights and actionable recommendations
3. Articulating a set of principles and standards, aligned to the enterprise architecture
4. Engaging with stakeholders across the University through application portfolio management
5. Reviewing technology impacts across the University
6. Evolving architecture with advances in technology to make it future proof

The introduction of enterprise architecture services provides the foundation for step-change to innovate and transform technology and digital services.

Angie Hendrick
Chief Information Officer
University of New England

Enterprise Architecture

DEFINITION

Enterprise Architecture (EA) is a management discipline that provides a holistic and proactive response to needs and opportunities with a view of the organisation's business, application, data, and technology capabilities, enabling the design and development of integrated strategies to achieve desired business outcomes.
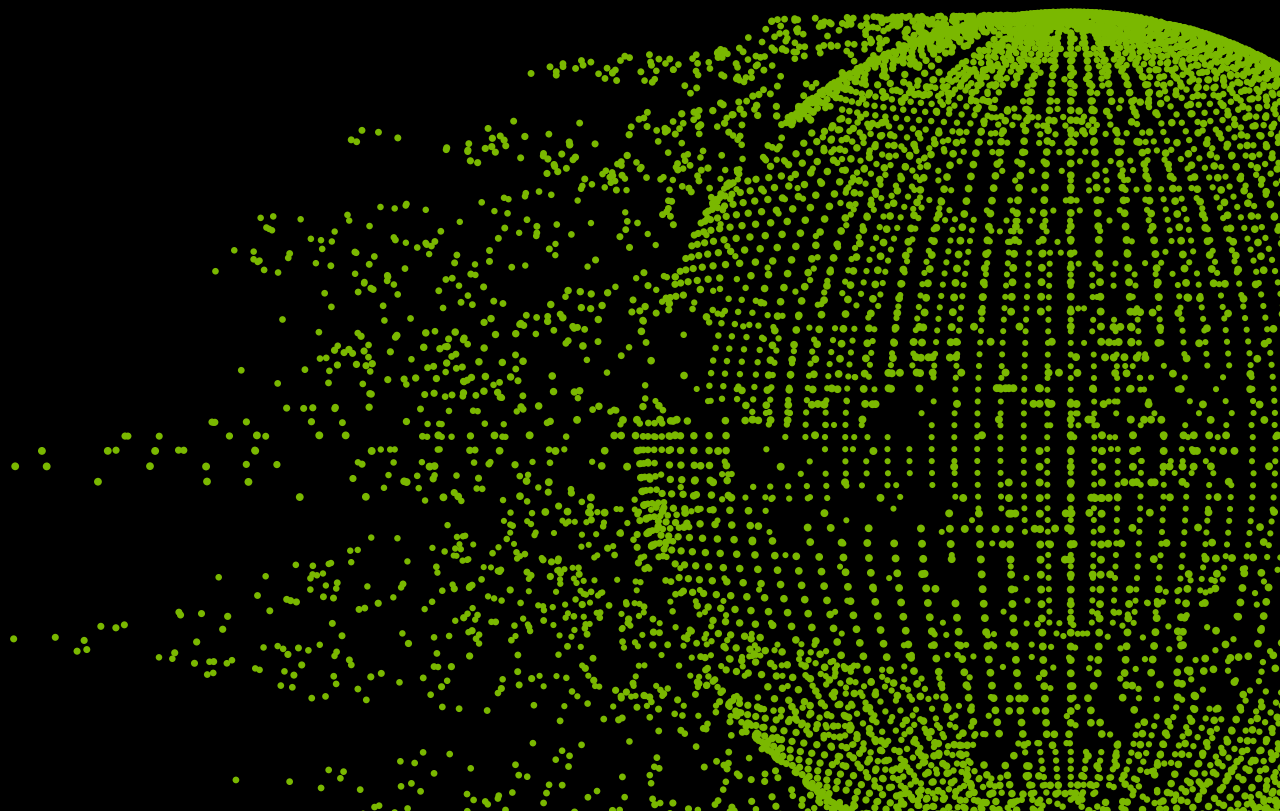
Services

The enterprise architecture services provide the University's decision-makers and stakeholders with support, analysis and recommendations to make informed plans and decisions to embrace and drive the successful adoption of technology and digital services to implement the Future-Fit strategy.

DISCOVERY SERVICE

The discovery service is about understanding the context, needs, risks and challenges requiring a new solution. This is a pre-project stage activity that helps formulate a case for change or a project brief.

This service creates a solid foundation by ensuring everyone has a common understanding of the problem to solve, next steps and desired outcomes. This understanding will help search, imagine, and identify fit-for-purpose solutions.

SOLUTION ARCHITECTURE SERVICE

Technology products such as business applications or IT infrastructures need to be designed, configured, integrated and implemented.

The solution architecture service identifies the impacts and creates an integrated solution by assembling the necessary building blocks to realise the identified needs or to address the problem at hand. The design will include security, integration, data, migration, and documentation of the assumptions, constraints, and technical work packages for implementation.

TECHNOLOGY PLANNING SERVICE

Enterprise architecture is a decision-making framework supporting IT planning and governance that helps the University develop scalable, secure, and resilient technologies and digital roadmaps.

The architecture enables the University to deliver personalised, modern, secure, integrated, sustainable, connected, and resilient digital services and experiences. It maximises the value of technology and digital investments, improves efficiency, and invests in strategic capabilities such as emerging technologies.

ENTERPRISE ARCHITECTURE MANAGEMENT

Architecture management establishes the structural foundation, principles, standards, patterns, and guidelines that act as the basis for collaborating and communicating systems knowledge to stakeholders.

Data-driven enterprise architecture requires continuous discovery and management of relationships between business capabilities, business processes, applications, data, integrations, IT infrastructure and security. LeanIX is the authoritative system of record for enterprise architecture. Maintaining the currency, coverage, and completeness is a collective function of stakeholders and TDS.

Approach

The services go through four stages - **the 4Cs**. These stages provide clarity, consistency, and clear visibility of milestone progress.

1. **Commence** is the start of the activation process upon qualifying the service request, including pre-planning to set up a successful engagement.
2. **Collect** stage is to identify and gather the required information to deliver the service.
3. **Create** stage involves analysing and producing the deliverables to meet stated objectives.
4. **Complete** establishes a baseline of the deliverables produced.

The approach is supported by applying The Open Group for Enterprise Architecture Framework (TOGAF) and industry best practices. TOGAF offers a multidisciplinary enterprise architecture, also known as enterprise architecture domains.

- **Business architecture:** includes information on business strategy, governance, organisation and how to adapt any existing processes within the organisation.
- **Applications architecture:** a blueprint for structuring and deploying application systems in accordance with business goals, other organisational frameworks and all core business processes.
- **Data architecture:** defining the organisation's data storage, management, and maintenance, including logical and physical data models.
- **Technical architecture:** also called technology architecture, describes all necessary hardware, software and IT infrastructure involved in developing and deploying business applications.

Figure 1 - The 4C Approach

One of the most important quality aspects of enterprise architecture is information security, and the way it can be managed. Secure by design means security is part of the enterprise architecture, it builds on enterprise information that is already available in the enterprise architecture, and it produces information that influences the enterprise architecture.

Enterprise architecture integrates multiple viewpoints — designing user experience and smarter processes for **personalised journeys**, making sense of data to **empower** users, securely integrating and harnessing the power of modern business applications, and adopting emerging technologies and digital infrastructure to **build resilience**.
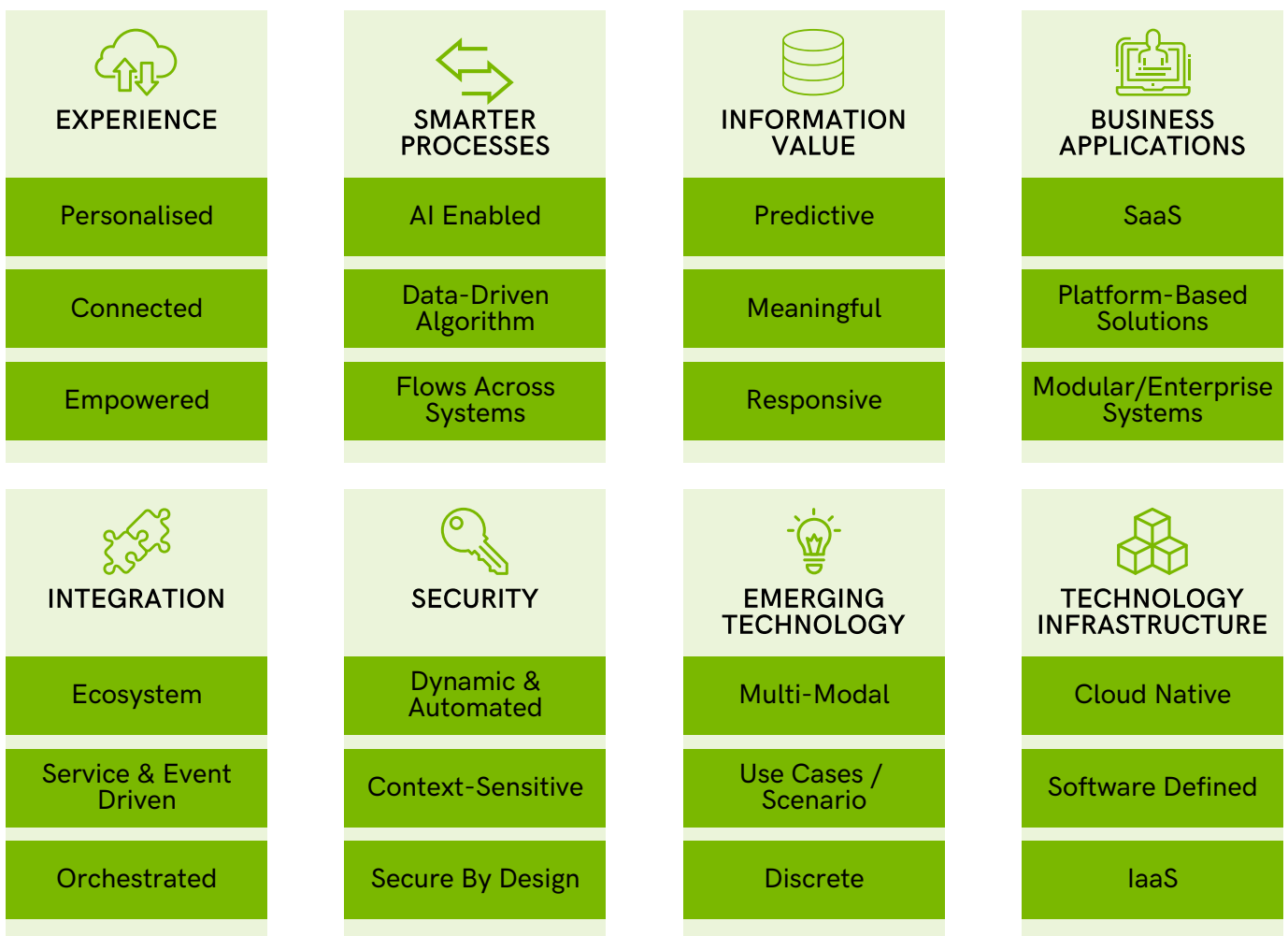
EXPERIENCE	SMARTER PROCESSES	INFORMATION VALUE	BUSINESS APPLICATIONS
Personalised	AI Enabled	Predictive	SaaS
Connected	Data-Driven Algorithm	Meaningful	Platform-Based Solutions
Empowered	Flows Across Systems	Responsive	Modular/Enterprise Systems

INTEGRATION	SECURITY	EMERGING TECHNOLOGY	TECHNOLOGY INFRASTRUCTURE
Ecosystem	Dynamic & Automated	Multi-Modal	Cloud Native
Service & Event Driven	Context-Sensitive	Use Cases / Scenario	Software Defined
Orchestrated	Secure By Design	Discrete	IaaS

Figure 2 - Enterprise Architecture Viewpoints

UNE Technology Management & Governance

INTRODUCTION

Considering digital transformation, information and technology have become crucial in an organisations' support, sustainability, and growth. Effective governance over digital and information technology is critical to business success, and there is a segregation between management and governance.

Technology governance is accountable for evaluating, directing, and monitoring performance and conformance. Governance ensures stakeholder needs, conditions and options are evaluated to determine objectives, that the direction is set through prioritisation and decision making, and performance and compliance are monitored against objectives.

The terms of reference for the IT Governance Committee, Data Governance Committee, Cyber Security Council, and Project Steering Committees set the context, purpose, objectives, and membership.

Management actions involve:
- Planning,
- Implementation and management of digital and technology resources,
- Services and risks align with the direction set by the governance body to achieve objectives.

Management actions are planned, managed and reported through respective forums or groups, such as the TAG, Data Management Group, Security Advisory, CAB, and the IT Management Team.

EXECUTION Operate	MANAGEMENT Plan, Manage & Report	GOVERNANCE Evaluate, Direct & Monitor
ENTERPRISE ARCHITECTURE SEVICES	TAG Technology	IT GOVERNANCE COMMITTEE
DATA STEWARDS & INTEGRATION SERVICES	DATA MANAGEMENT GROUP Data & Integration	DATA & INFORMATION GOVERNANCE COMMITTEE
SECURITY OPERATIONS (SECOPS)	SECURITY ADVISORY Security Risk & Compliance	CYBER SECURITY COUNCIL
IT CLIENT SERVICES	CAB Services, Configuration & Change	IT GOVERNANCE COMMITTEE
PROJECT PORTFOLIO SERVICES	PROJECT MGT GROUP (PMG) Scope, Resources & Schedule	PROJECT STEERING COMMITTEE

Figure 3 - Management & Governance Value Chain

TECHNOLOGY ASSURANCE GROUP

The technology assurance group evaluates and provides technology and architecture assurance on technology investments and lifecycle stages to ensure that technology resources are used effectively and efficiently and that IT risks and privacy are managed appropriately.

The TAG is responsible for ratifying non-compliance by the IT Governance Committee or as per the delegation of the CIO. The exceptions and technical debt registry serve as a record for management actions.

1. **What is TAG?** TAG is a management tool and assurance to support IT Governance.

2. **Who are the members of the TAG?** The Deputy CIO chairs the TAG. The representatives are as per the terms of reference, and it includes representatives from privacy and policy governance and TDS management. Stakeholders who attend relevant meetings will have an opportunity to present their case and respond to clarifications.

3. **When do you need TAG approval?** TAG approval is mandatory before the procurement or renewal of technology or digital services. An approved enterprise architecture roadmap from the IT Governance Committee (ITGC) simplifies the renewal process.

4. **What is an enterprise architecture roadmap?** An enterprise architecture roadmap visualises the enterprise architecture strategy for applications and the technology portfolio. As technologies and organisations evolve, it is essential to engage the right tools to manage and maximise growth — the enterprise architecture roadmap results from continuously evaluating and planning the economic lifecycle.

The technology planning service assesses applications and the technology portfolio with respective stakeholders to determine its lifecycle and roadmap.

5. **How do I seek approval from TAG?** A request can be submitted via ServiceNow or you can engage with the TDS Business Relationship Manager. The process for renewal with an approved roadmap from ITGC is auto-initiated 120-days prior to the renewal date.

IT GOVERNANCE COMMITTEE

The IT Governance Committee develops and implements university-wide technology and digital services strategies and provides oversight and governance of the technology portfolio.

DATA & INFORMATION GOVERNANCE COMMITTEE

The Data & Information Governance Committee is to ensure that effective data principles, policies, standards, processes, methods and systems are in place within the University, covering the entire lifecycle of the data owned and operated by the University.

SECURITY COUNCIL

The Security Council manages governance over Cyber Security. The council sets the direction through the information security strategy and policies and evaluates and monitors risks per the information security framework.

Enterprise Architecture Services

IMPLEMENTATION PLAYBOOK

The implementation playbook outlines the best practical way of delivering enterprise architecture services, and it allows service owners and partners to work consistently and collaboratively.

The activities in each of the 4C stages provide uniformity across enterprise architecture services. The service matrix outlines its roles and responsibilities.

CONTEXT	DATA	OPTIONS	BASELINE
Why	What	What If	How
COMMENCE	**COLLECT**	**CREATE**	**COMPLETE**
ENGAGE Identify objectives & stakeholders for the service	**DEFINE** identify data collection & stakeholders	**ANALYSE** Research & analyse options	**DESIGN** Produce the deliverable
QUALIFY Assess the engagement & service match	**GATHER** Gather the required data	**MODEL** Create a reference model	**CONSULT** Present & incorporate feedback
ACTIVATE Plan & activate service partners	**DOCUMENT** Catalogue the data for analysis	**DRAFT** Prepare the outline & information	**FINALISE** Baseline the deliverable

Figure 4 - 4C Stages & Activities

For more information on Enterprise Architecture Services, you may contact the Enterprise Architecture Services team on **eas@une.edu.au**