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Architecture Development Method

Enterprise Architecture and Interoperability Framework

Government of Grenada

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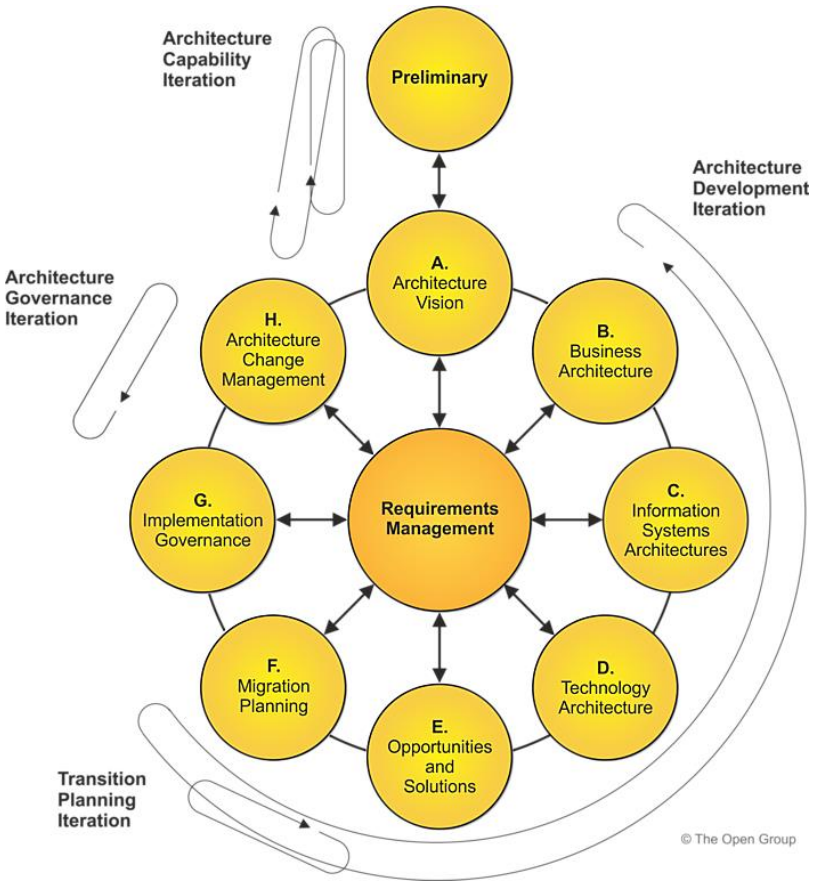
1 Introduction

Grenada ADM provides a structured approach for digital transformation initiatives within GoG. It encompasses key activities such as establishing a robust architecture framework, designing and refining architecture content, transitioning to target architectures, and ensuring effective governance throughout implementation. These activities are conducted within an iterative cycle, enabling continuous evolution and alignment of architecture with organizational goals. This approach empowers governments to drive digital transformation in a controlled and strategic manner, ensuring alignment with business priorities and maximizing opportunities for innovation and efficiency.



1.1 Approaches for architecture development

Various approaches are possible while applying the ADM to a project. However, it is dependent on the maturity and complexity of the enterprise to decide on the appropriate approach from below:

a) **Baseline first**

In this style, an assessment of the baseline landscape is used to identify problem areas and improvement opportunities. This process is most suitable when the baseline is complex, not clearly understood, or agreed upon.

a) **Target first**

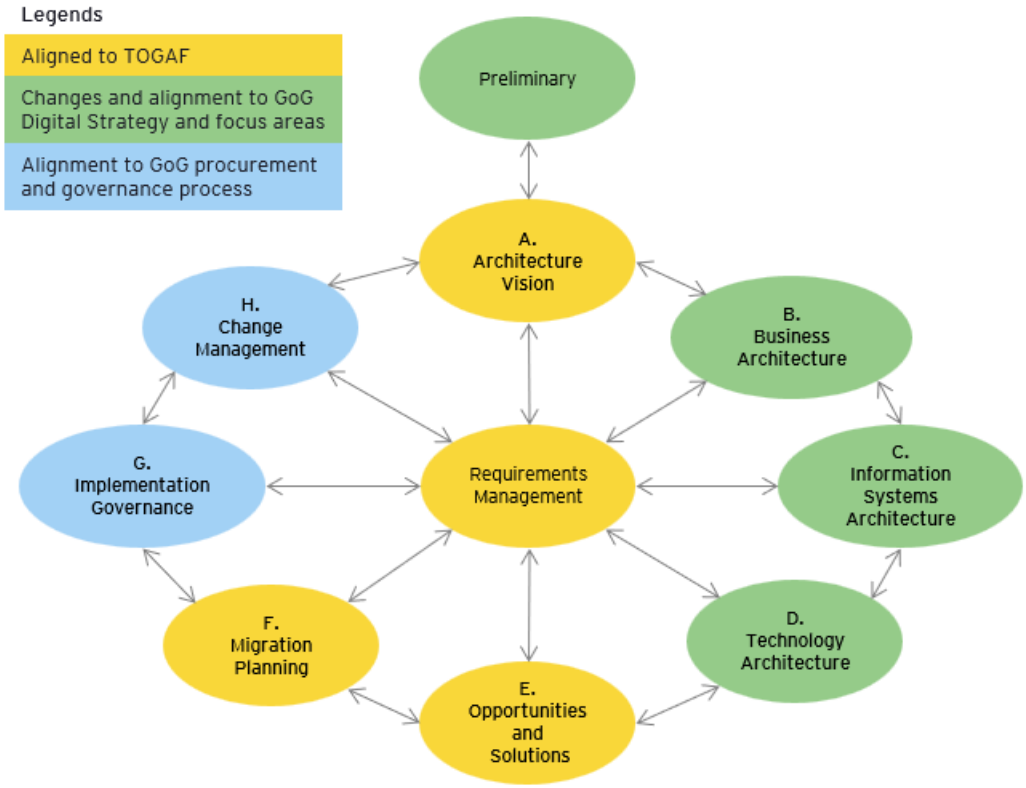
The target solution is elaborated in detail and then mapped back to the baseline, in order to identify change activity. This process is suitable when a target state is agreed at a high level and where the enterprise wishes to effectively transition to the target model.

For the GoG context, we believe that the baseline state of business architecture is complex from a government perspective. It is important to clearly identify the problems to be addressed through digital transformation. Hence, it is proposed to apply the baseline-first approach for developing the architecture views.

In this view, for phase B (Business architecture) to Phase D (Technology architecture), the baseline is studied and developed across the organization scope. This is usually followed with a maturity assessment and readiness assessment toolkit which allows the architects to identify gaps and improvement areas. These inputs are drawn to develop the target state architecture. If the changes are complex and large scale, transition architecture is developed to realise small, incremental changes to enterprise.

1.2 Proposed ADM for Grenada

The Grenada ADM has been inspired by TOGAF ADM structurally. However, basis of the digital agenda and consultations with industry and government representatives, it is understood that specific architecture domains require specific attention, baseline architecture is complex and limited documentation is available. Hence it is proposed to undertake a baseline-first approach and structure all government business architectures towards a service delivery mindset.



1) Architecture capability (Preliminary and Phase A)

Architecture capability ensures that an organization has the right people, tools, and processes in place to manage enterprise architecture effectively. It focuses on building a solid foundation by defining principles, setting up repositories, and creating governance structures. This helps organizations align business and IT strategies while managing changes smoothly and delivering value over time.

2) **Architecture development (Phase B-D)**

Architecture development is the process of creating and refining the architecture needed to support an organization's goals. This includes defining a vision, developing business, data, and technology architectures, and identifying opportunities for improvement. Using TOGAF's structured method, this process ensures all aspects of the organization work together and helps create roadmaps for achieving future objectives.

3) Transition planning (Phase E-F)

Transition planning helps move an organization from its current state to its desired future state. It involves creating detailed plans for changes, identifying steps to achieve them, and ensuring smooth progress. This ensures that improvements are implemented gradually, avoiding disruptions to essential operations while staying focused on long-term goals.

4) Architecture governance (Phase G-H)

Architecture governance ensures that all architecture-related activities follow clear rules and standards. It oversees the design, changes, and implementation of architectures to ensure they align with the organization's goals. Governance brings consistency, accountability, and compliance, ensuring architecture efforts deliver meaningful results.

No	Phases	Description as per TOGAF standard	Changes to be incorporated in Grenada EA construct
1	Preliminary	▪ preparation and initiation activities required to create an Architecture Capability including customization of the TOGAF framework and definition of Architecture Principles	▪ This will be undertaken one time during the initial development of Grenada EA framework
2	Architecture vision	▪ information about defining the scope of the architecture development initiative, identifying the stakeholders, creating the Architecture Vision, and obtaining approval to proceed with the architecture development.	▪ This is the initial step for all digital transformation projects where the user will be required to adopt or modify the architecture vision, principles and develop an architecture contract
3	Business architecture	▪ development of a Business Architecture to support the agreed Architecture Vision	▪ The focus will be on designing and transforming existing services for digital

No	Phases	Description as per TOGAF standard	Changes to be incorporated in Grenada EA construct
			(through service simplification framework). Proposed architecture method to be applied is baseline-first (except for standard ERP suite implementation)
4	Information systems architecture	▪ development of Information Systems Architectures to support the agreed Architecture Vision and aligned to business requirements	▪ These phases will focus on the interfaces, registry, platforms and infrastructure required by GoG to deliver the services to the end users. The proposed architecture development method to be applied will be baseline-first.
5	Technology architecture	▪ development of the Technology Architecture to support the agreed Architecture Vision and aligned to business requirements	
6	Opportunities and solutions	▪ initial implementation planning and the identification of delivery vehicles for the architecture defined in the previous phases	▪ This phase will be aligned with any existing government planning cycle adopted by MoF / MoMIT. Alternatively, a toolkit will be developed that is aligned to the government digital agenda.
7	Migration planning	▪ addresses how to move from the Baseline to the Target Architectures by	▪ No changes

No	Phases	Description as per TOGAF standard	Changes to be incorporated in Grenada EA construct
		finalizing a detailed Implementation and Migration Plan	
8	Implementation governance	▪ provides an architectural oversight of the implementation	▪ This will be contextualized under the governance operating model to meet the specific context and setup in Grenada within the stakeholder ecosystem and DTA construct.
9	Architecture change management	▪ establishes procedures for managing change to the new architecture	▪ Aligned to any existing change management procedures required by MoF for additional funding / time requirements as applicable
10	Requirements management	▪ operates the process of managing architecture requirements throughout the ADM	▪ No changes

2 Phase description

2.1 Preliminary

Objective:

GoG has developed a shared service strategy for centralizing enterprise architecture capability within DTA. DTA will house the required enterprise architects, solution architects and other architecture domain experts who will be assisting MDAs and government entities to develop their individual digital transformation strategy aligned to the digital vision of the nation.

However, it is important for each government entity to review the context for the digital transformation strategy. It is also essential to nominate a digital representative within GoG entities who understands the organization services and technology infrastructure.

Input	Steps	Output
▪ Digital vision ▪ Existing organization structure (MDA/ entity) ▪ Specific policies or changes requiring change	▪ Scope the enterprise organizations impacted ▪ Confirm governance and support frameworks ▪ Define and establish enterprise architecture team and organization ▪ Review and tailor architecture principles ▪ Request for architecture asset folder for the engagement	▪ Tailored framework to meet requirements ▪ Maturity assessment model (level 2 and 3) ▪ Architecture scope of work ▪ DTA service request (if required)

2.2 Architecture vision

Objective:

Develop a high-level architecture vision that outlines the capabilities and business value to be achieved through the proposed digital transformation journey.

Secure approval for a Statement of Architecture Work that defines the program of initiatives required to develop and implement the architecture described in the Architecture Vision.

Input	Steps	Output
▪ Architecture scope of work ▪ Service request (DTA)	▪ Establish the architecture project. ▪ Identify stakeholders, concerns, and business requirements. ▪ Confirm and elaborate service goals, drivers, and constraints. ▪ Assess readiness for business transformation. ▪ Define scope. ▪ Confirm and elaborate architecture principles, ▪ Develop Architecture Vision. ▪ Define Target Architecture value propositions and kpis. ▪ Identify business transformation risks and mitigation activities. ▪ Develop Statement of Architecture Work; secure approval.	▪ Approved scope of work ▪ Capability assessment ▪ Architecture vision statement ▪ Initial stakeholder requirements ▪ Baseline architecture (if available)

2.3 Business architecture

Objective:

The Target Architecture should outline how the enterprise will operate to deliver services effectively to citizens, aligning with the strategic focus areas of building people, simplifying lives, and enhancing resilience and sustainability.

It should address the stakeholder concerns while identifying candidate architecture roadmap components.

Input	Steps	Output
▪ Approved scope of work ▪ Architecture vision ▪ Stakeholder requirements ▪ Baseline architecture (inventory of	▪ Develop Baseline Service Architecture Description or leverage existing inventory of services ▪ Develop Target Business Architecture description of services. ▪ Perform gap analysis.	▪ Architecture definition document ▪ Target state architecture (services) ▪ Organizational structure (updated)

services and systems) ▪ Organizational structure	▪ Define potential roadmap components. ▪ Resolve impacts across the Architecture Landscape. ▪ Conduct formal stakeholder review. ▪ Finalize the Business Architecture. ▪ Create the Architecture Definition Document including service requirements	▪ Architecture requirements specifications (including gap analysis) ▪ Potential roadmap components

2.4 Information systems architecture

Objective:

The Target Architecture should outline how the enterprise will operate to deliver services effectively to citizens, aligning with the strategic focus areas of building people, simplifying lives, and enhancing resilience and sustainability.

It should address the stakeholder concerns while identifying candidate Architecture Roadmap components.

The information systems are aligned to the architecture domains – interfaces, registry, interoperability, and platforms. Each of these domains are required to be linked to the concerned business architecture (services) to identify how they can best support the services.

Input	Steps	Output
▪ Approved scope of work ▪ Architecture vision ▪ Stakeholder requirements	▪ Develop Baseline Information systems Architecture Description or leverage existing inventory of systems ▪ Develop Target Information systems Architecture Description.	▪ Architecture definition document ▪ Target state architecture (information systems

▪ Target architecture (services) ▪ Baseline architecture (existing interfaces, registry, interoperability, and platforms) ▪ Organizational structure	▪ Perform gap analysis. ▪ Define potential roadmap components. ▪ Resolve impacts across the Architecture Landscape. ▪ Conduct formal stakeholder review. ▪ Finalize the Information systems Architecture. ▪ Create the Architecture Definition Document including information system specifications	including interfaces, data registry, interoperability, platforms) ▪ Organizational structure (updated) ▪ Architecture requirements specifications (including gap analysis) ▪ Potential roadmap components

2.5 Technology architecture

Objective:

The Target Architecture should outline how the enterprise capability needs to be developed to support service metrics and information systems while being aligned to the focus area for boosting resilience and sustainability.

It should address any applicable infrastructure related stakeholder concerns while identifying candidate Architecture Roadmap components.

The technology architecture is proposed to be aligned to the architecture domains – infrastructure including cloud, data centre, network and security. The domains are required to be linked to the concerned business architecture (services) to identify how they can best support the services.

Input	Steps	Output
▪ Approved scope of work ▪ Architecture vision	▪ Develop Baseline Information systems Architecture Description or leverage existing inventory of infrastructure	▪ Architecture definition document

▪ Stakeholder requirements ▪ Target architecture (services) ▪ Target architecture (information systems) ▪ Baseline architecture (infrastructure – cloud / DC/DR, Network, Security) ▪ Organizational structure	▪ Develop Target Infrastructure Architecture Description. ▪ Perform gap analysis. ▪ Define potential roadmap components. ▪ Resolve impacts across the Architecture Landscape. ▪ Conduct formal stakeholder review. ▪ Finalize the Technology Architecture. ▪ Create the Architecture Definition Document and technology specifications	▪ Target state architecture (infrastructure) ▪ Organizational structure (updated) ▪ Architecture requirements specifications (including gap analysis) ▪ Potential roadmap components

2.6 Opportunities and solutions

Objective:

The primary goal of this phase is to generate a complete and detailed Architecture Roadmap based on the results of gap analysis and the identified potential roadmap components from previous phases (B, C, and D). The potential roadmap components are reviewed and prioritized through the prescribed EA toolkit (refer roadmap and initiative prioritization toolkit) which supports organizations and EA governance team to review the alignment with digital vision, identify quick-wins and prepare a phased approach for realizing the organizational vision.

Input	Steps	Output
▪ Organizational structure ▪ Governance framework ▪ Architecture definition document ▪ Requirements specifications	▪ Evaluate changes in government structure / model ▪ Identify dependencies and constraints ▪ Evaluate readiness for change and digital transformation including policy / regulations changes	▪ Architecture definition document (baseline and target state) ▪ Architecture roadmap ▪ Transition architectures

▪ Potential roadmap components	▪ Determine interoperability and integration requirements ▪ Identify potential reusability / sharing of GoG digital assets ▪ Evaluate procurement strategy ▪ Prepare work packages from candidate initiatives and align to procurement strategy ▪ Update transition and implementation strategy ▪ Define transition architectures ▪ Finalise architecture roadmap	▪ Implementation and migration strategy

2.7 Migration planning

Objective:

The primary goal of this phase is to generate a complete and detailed Architecture Roadmap based on the results of gap analysis and the identified potential roadmap components from previous phases (B, C, and D). The potential roadmap components are reviewed and prioritized through the prescribed EA toolkit (refer roadmap and initiative prioritization toolkit) which supports organizations and EA governance team to review the alignment with digital vision, identify quick-wins and prepare a phased approach for realizing the organizational vision.

Input	Steps	Output
▪ Organizational structure ▪ Governance framework ▪ Architecture definition document ▪ Requirements specifications ▪ Potential roadmap components	▪ Evaluate changes in government structure / model ▪ Identify dependencies and constraints ▪ Evaluate readiness for change and digital transformation including policy / regulations changes ▪ Determine interoperability and integration requirements ▪ Identify potential reusability / sharing of GoG digital assets ▪ Evaluate procurement strategy	▪ Architecture definition document (baseline and target state) ▪ Architecture roadmap ▪ Transition architectures ▪ Implementation and migration strategy

	▪ Prepare work packages from candidate initiatives and align to procurement strategy ▪ Update transition and implementation strategy ▪ Define transition architectures ▪ Finalise architecture roadmap	

2.8 Implementation governance

Objective:

The primary goal of this phase is to leverage the governance model and performance monitoring systems to ensure successful solution implementation in compliance to the architecture definition document.

The phase also supports in reviewing the solution is true to the target state architecture across all architecture domains.

Input	Steps	Output
▪ Implementation and migration plan ▪ Architecture definition document (final) ▪ Architecture roadmap (final) ▪ Implementation governance model ▪ Change requests ▪ Contract (draft)	▪ Confirm scope of solutions in line with architecture definition and roadmap documents ▪ Evaluate resource capability and capacity to undertake the digital transformation and solution development ▪ Support and guide the development of solutions ▪ Conduct EA compliance reviews ▪ Conduct business readiness and change assessment prior to go-live of solutions ▪ Identify reusable / shared building blocks that can be contributed to Grenada EA repository ▪ Evaluate setup for solution operations and maintenance	▪ Contract (signed) ▪ Service delivery specifications (requirements, performance metrics, SLAs) ▪ Compliance assessments ▪ Operating model ▪ Architecture building blocks

	▪ Establish service delivery requirements and development of performance metrics	

2.9 Change management

Objective:

The primary goal of this phase is to assess whether the architecture requirements meets the service requirements of the organization. If not, the value to be realized is documented and a new architecture development lifecycle is initiated through appropriate governance framework for change request.

Input	Steps	Output
▪ Roadmap ▪ Change requests (business / technical) ▪ Contract ▪ Governance model ▪ Implementation and migration plan	▪ Evaluate the realization of the target state architecture for services ▪ Conduct gap analysis to identify potential capability that requires additional architecture development ▪ Initiate a new architecture development lifecycle through a change request ▪ Activate change management	▪ New request for architecture work ▪ Compliance assessments ▪ Architecture updates