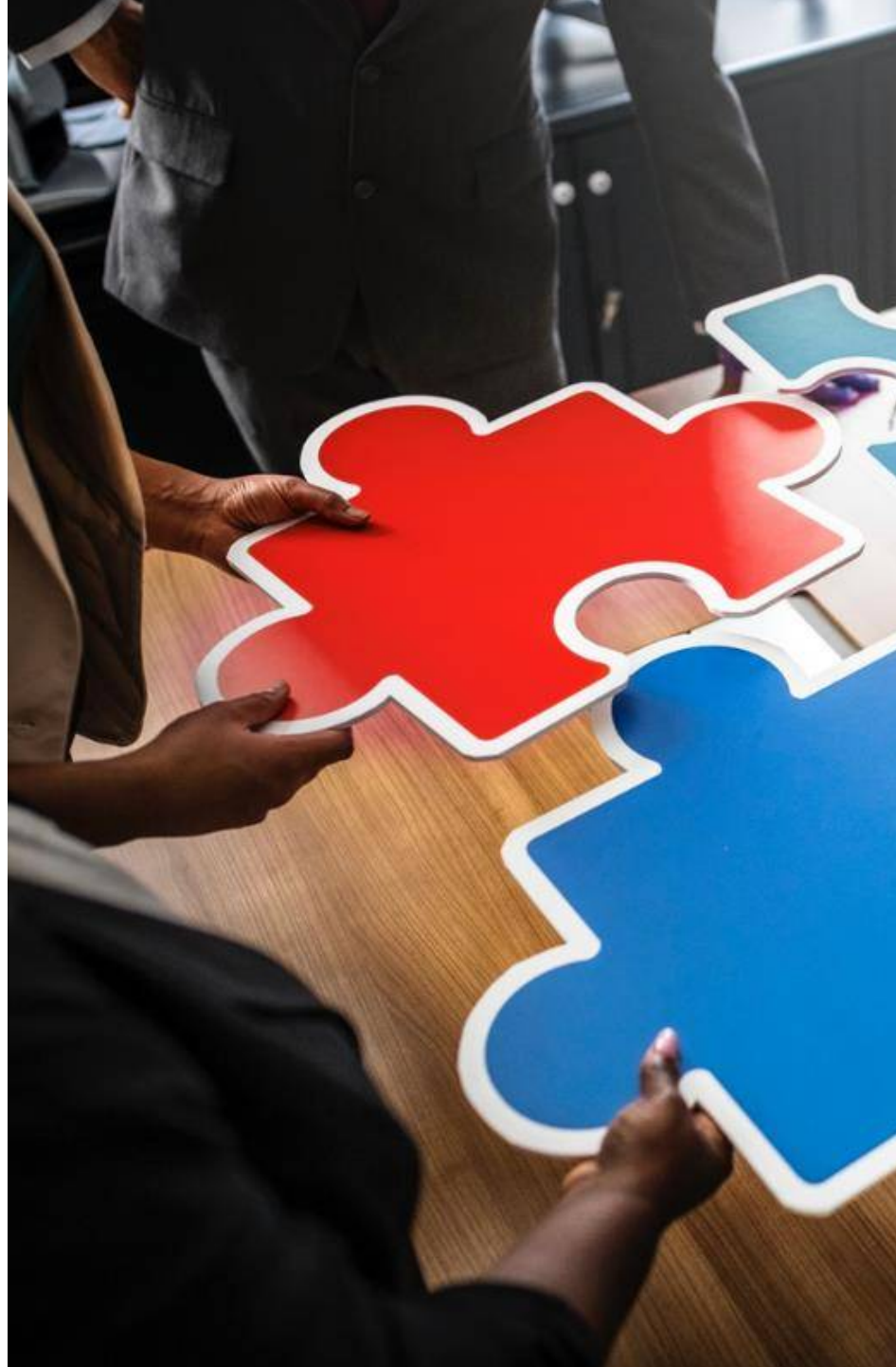# Infrastructure Delivery Management System (IDMS)

Pilot roll out in selected municipalities through stakeholder engagement and training

**Training
Module A0:
Executive Overview**

**Participants
Manual**

March 2019

MISA
Municipal Infrastructure Support Agent
REPUBLIC OF SOUTH AFRICA

Table of Contents

Section 1

About this module

Section 1: About this module

Purpose of this module

The purpose of this training module is to introduce the Infrastructure Delivery Management System (IDMS) to the District Municipal Executive Management. This module provides guidance on IDMS processes and deliverables that the Executive are accountable for, and provides guidelines on the roles and responsibilities of the officials responsible for implementing the IDMS.

Learning outcomes

By the end of the training on this module you:

- Will understand the **context** of the IDMS
- Will have a high level knowledge of the **key concepts** and components of the IDMS
- Will have a high level knowledge of the Infrastructure Delivery Management **Control System**
- Will have a high level knowledge of the infrastructure delivery management **processes**, namely portfolio, programme, project and operations and maintenance management
- Will have a detailed understanding of the IDMS **Placemat** and its processes showing how to plan and deliver infrastructure
- Will complete a **"walk through"** as a case study to apply the Placemat as a practical example
- Will know what is expected of Executives to **institutionalise** the IDMS across your Municipality

Audience for this module

The audience for this module is intended for Executives of your District Municipality:

- Political leadership oversight roles - Chairpersons of Portfolio Committees (or the equivalent) of:
    - Water services
    - Technical services
    - Human settlements planning and development
    - Budget and treasury
    - Standing committee on municipal public accounts
    - Audit Committee
- Municipal Executive leadership
    - Municipal Manager
    - Director budget and treasury
    - Director Community Services
    - Director Rural and economic development

Who's responsible

Note: the participants may vary from DM to DM depending on the structure
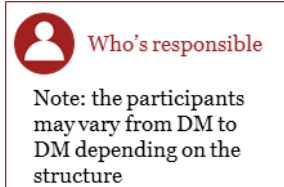
- o   Director internal audit office
- o   Corporate services
- o   Water and sanitation services
- o   Technical services

Context of this module

National Treasury is the custodian and driver of the development and roll out of the IDMS. They have also introduced the associated Standard on Infrastructure Procurement and Delivery Management (SIPDM) (recently revised to FIPDM and effective as of 1 October 2019). Training on both of these standards for government officials at National and Provincial has taken place over recent years, but with limited training at local government level.

With this in mind, the Municipal Infrastructure Support Agent (MISA) has been tasked with the roll out and implementation of the IDMS at local government level. Given the fact that MISA are already engaged in providing technical support on infrastructure delivery to municipalities, MISA has identified three District Municipalities (DM's) in the Eastern Cape, namely Alfred Nzo, Amathole and OR Tambo as initial target municipalities for the roll out of the IDMS. These DM's are regarded as pilot Municipalities for potential further rollout in due course.

> **Tip**
> Since your DM is part of the pilot you have the opportunity to be in the forefront of new developments.
> Also when compliance requirements are establised, your DM will have a head start

This pilot roll out will take place via training and stakeholder engagement. MISA have appointed PwC to provide this training and stakeholder management over a period of 14 months, ending at the end of March 2020. The expectation is that Municipalities will institutionalise the IDMS as a standard set of processes and tools to plan and implement infrastructure moving forward.

The training and support to the Municipalities will include

- Formal training – four modules, of which this module is the first.
    - o   **Module A0** – a one day intensive Executive Overview (this module)
    - o   Modules 1 to 3–two-day training sessions per module
- Formal Skills Transfer – five skills transfer contact sessions that mirror the training modules.
- Ad hoc support – support to provide day-to-day assistance in the institutionalisation of the IDMS

MISA is already providing technical support in two of the three municipalities, namely Alfred Nzo and OR Tambo, through the Regional Management Support Contract programme (**RMSC**). Collaboration between the two initiatives will take place as appropriate to limit duplication of work.

How to use this module

This module can be used in conjunction with notes and presentation material during your classroom session.

You will also be issued with a standalone version of the IDMS Placemat that you can use as a separate companion as you follow the IDMS processes.

This placemat is intended to be an everyday reference for officials and executives alike as a quick reference guide/
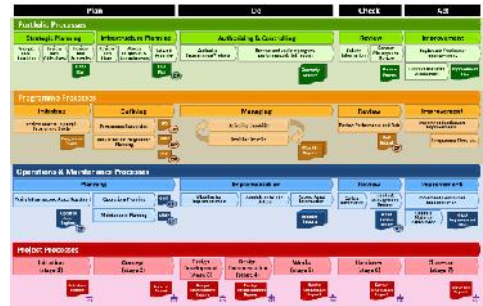
This manual will include the following icons:

These icons will highlight particular issues of interest and practical tips on how to implement IDMS processes and source materials.

Who's responsible

Tip

Checklist

Where can I find it

Question

Good practice

Section 2

What is the IDMS

Background and key concepts

Section 2: What is the IDMS

What is the IDMS

The IDMS is Government's policy for implementing its strategy to enhance socio-economic growth and development through infrastructure delivery.

The IDMS and the Infrastructure Delivery Management (IDM) Toolkit were developed by National Treasury to provide a:

> *Set of processes and a body of knowledge for infrastructure delivery management in the public sector.*

The history of the IDMS

The IDMS has evolved over the years. In 2002, National Treasury commissioned an independent assessment to understand the reason for infrastructure underspending and constant needs for rollovers by provincial departments. The assessment report identified several gaps and blockages in the infrastructure delivery management chain. The report identified the following root causes, amongst others:

Good practice
"Learning and leadership are indispensable to each other."
John F. Kennedy

- Poor planning,
- Lack of skills and inappropriate skills in technical positions,
- Lack of uniformity in procurement procedures,
- Poor reporting and monitoring.

The report recommended that a standard, uniform set of processes be developed to guide and structure the delivery and management of infrastructure within the public sector.

From that review the IDMS and its associated IDM Toolkit was developed, with a number of updates, culminating in the latest update in 2018. The diagram below shows the journey in the development of the IDMS.
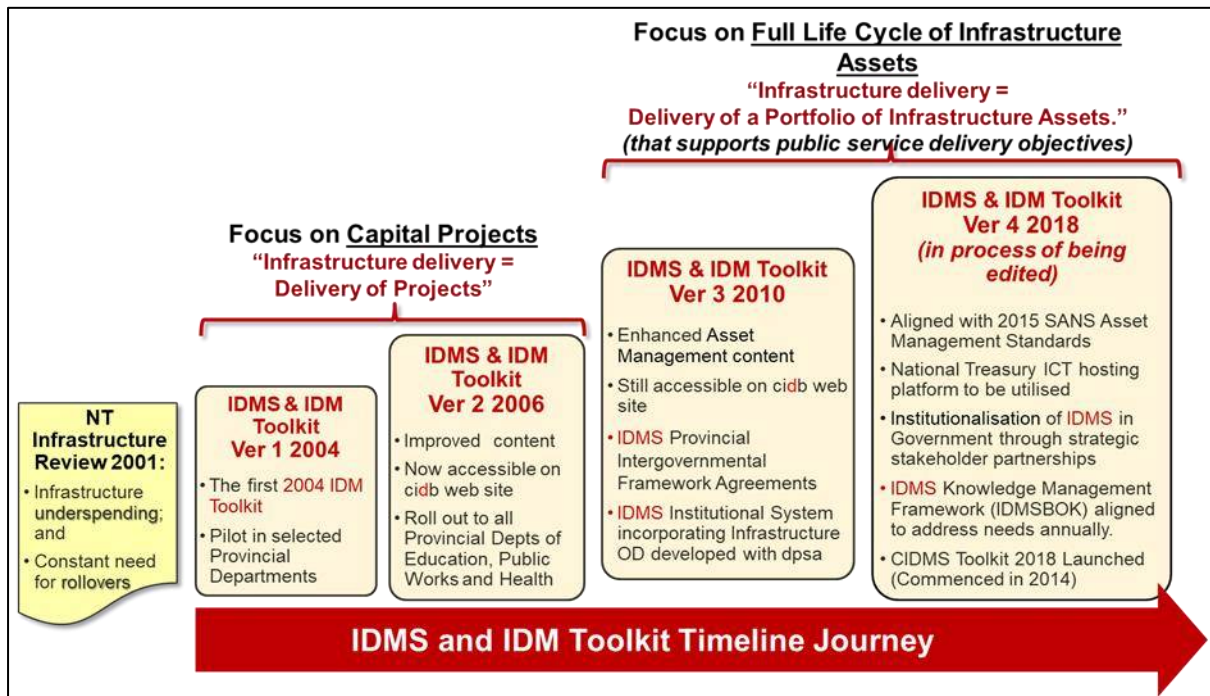
Figure 1 : The IDMS and the IDM Toolkit Journey

In addition, South African Public-Sector legislation, standards and best practices have all had influence on the evolution of IDMS and the IDM Toolkit, as depicted in the figure below.
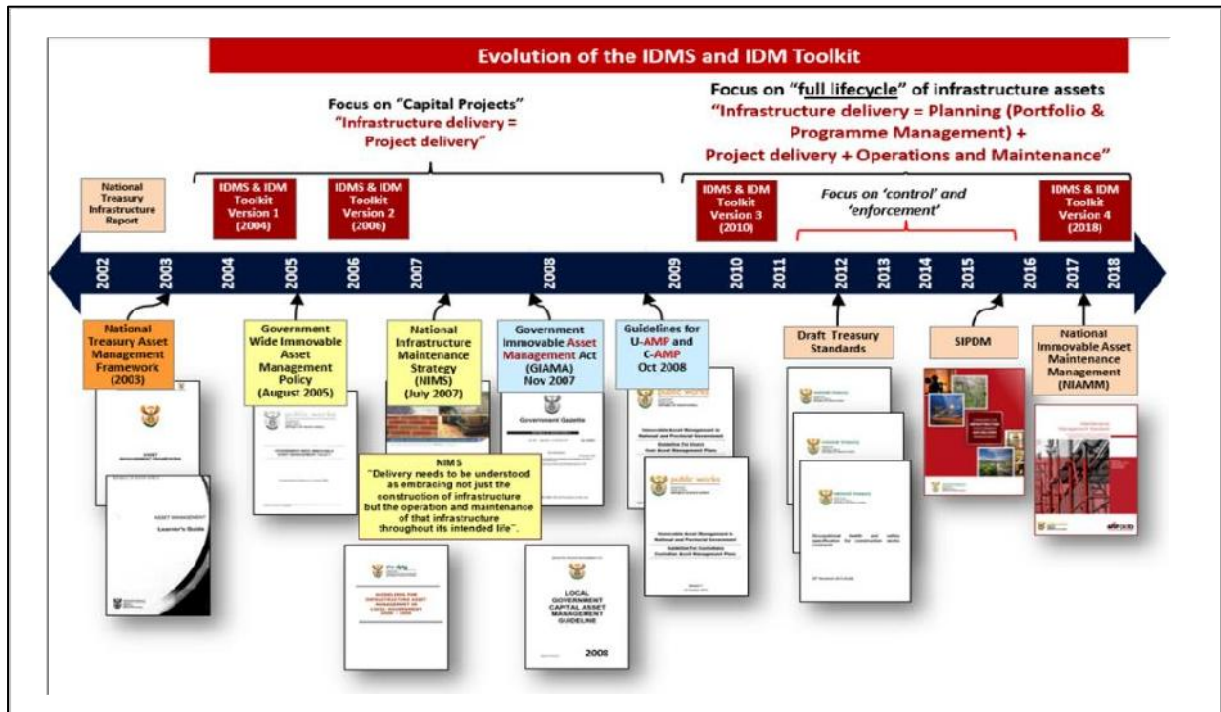
Figure 2: Influences and Evolution of the IDMS and the IDM Toolkit

Section 3

Overview of the IDMS
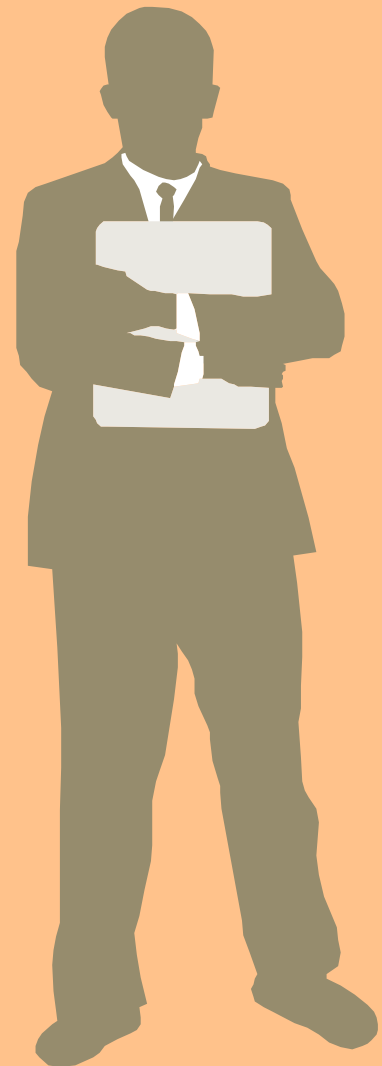
Target audience, objectives, principles, benefits

Section 3: Overview of the IDMS

Overview

The legality of the IDMS for application in all spheres of government is endorsed by:

- The 9 Provincial IDMS Framework documents, which have been approved by Provincial EXCO's (thereby endorsing IDMS in each Province);
- Sections within the annual issue of the Division of Revenue Act (DoRA);
- Endorsement of the IDMS by the Presidential Infrastructure Coordination Committee (PICC);
- The Standard for Infrastructure Procurement and Delivery Management (SIPDM) issued by National Treasury in November 2014. [Note: The FIDPM is now published and effective on 1 October 2019].

The Infrastructure Delivery Management System, or IDMS, is represented in IDMS Concept Diagram, which depicts the structure and relationships between the concepts, as shown in the figure below. The IDMS Concept Diagram inner interconnecting circles represent the Core Legislative Requirements of the IDMS, namely, asset management, planning and budgeting, and supply chain management. Infrastructure Delivery Management comprises portfolio, programme, operations, maintenance and project management processes. Performance and risk management are integrated in the delivery management processes, while the outer circle represents the institutional system that provides organisations with guidance on a generic approach towards building an institutional Infrastructure Delivery Management System (IDMS). Collectively, these two outer circles are referred to as the Infrastructure Delivery Enablers.

Figure 3: The IDMS concept diagram
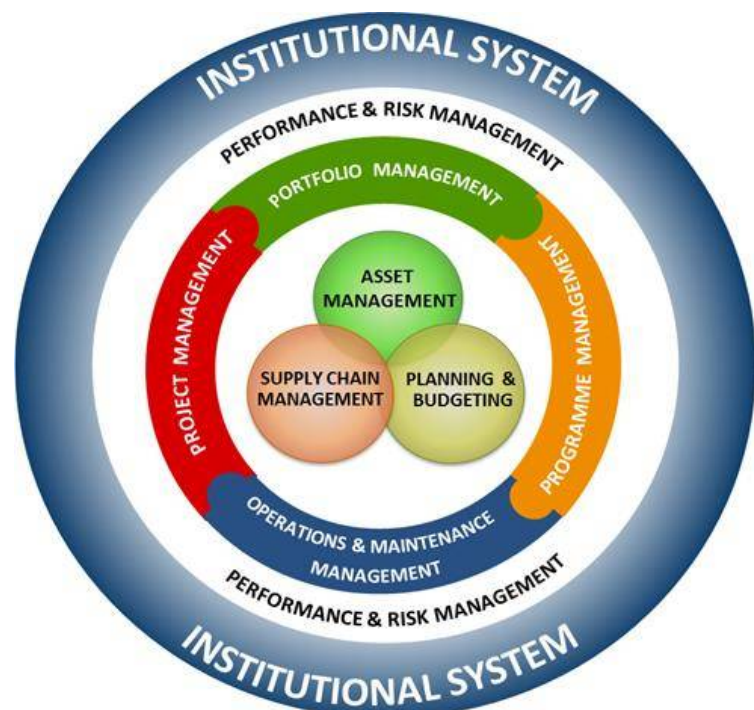
The IDMS Concept diagram depicts the structure and relationships between the concepts that enable the generic application of the infrastructure delivery management principles to all of Government.
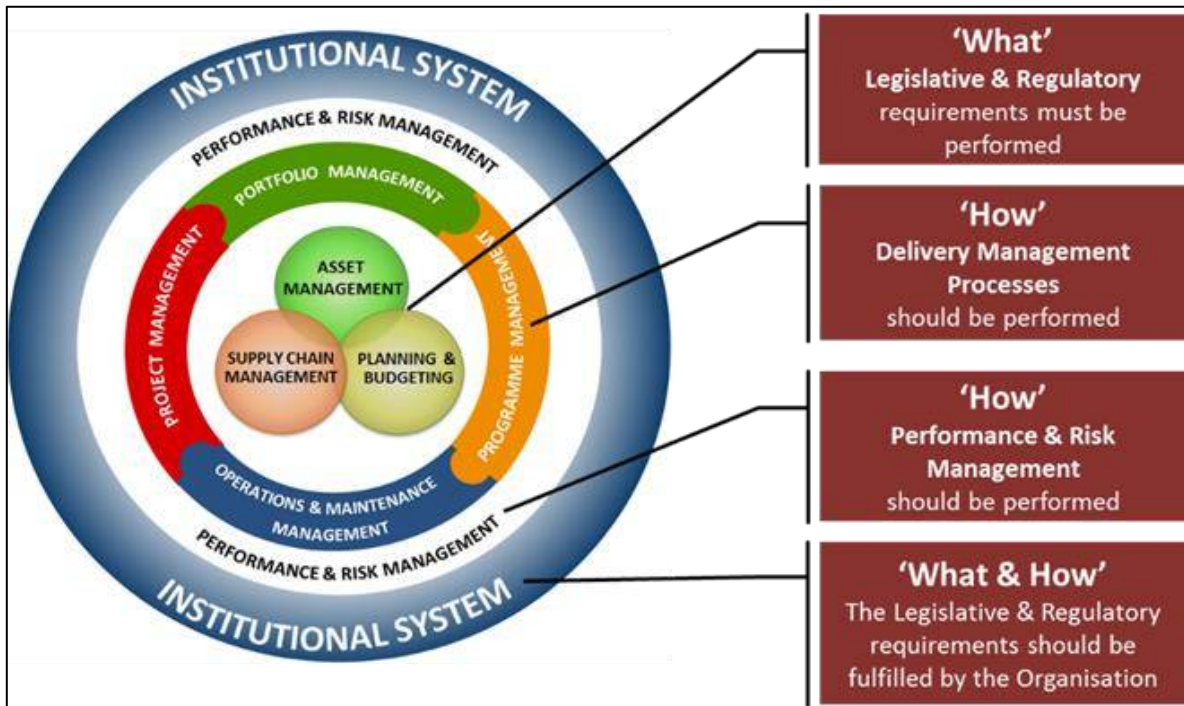
Figure 4: The IDMS 2018 concept diagram explained

The IDM Processes Placemat in the figure below provides high level processes that need to be followed in relation to the portfolio, programme, operations and maintenance and project management. The required deliverables are reflected as control points and control gates.
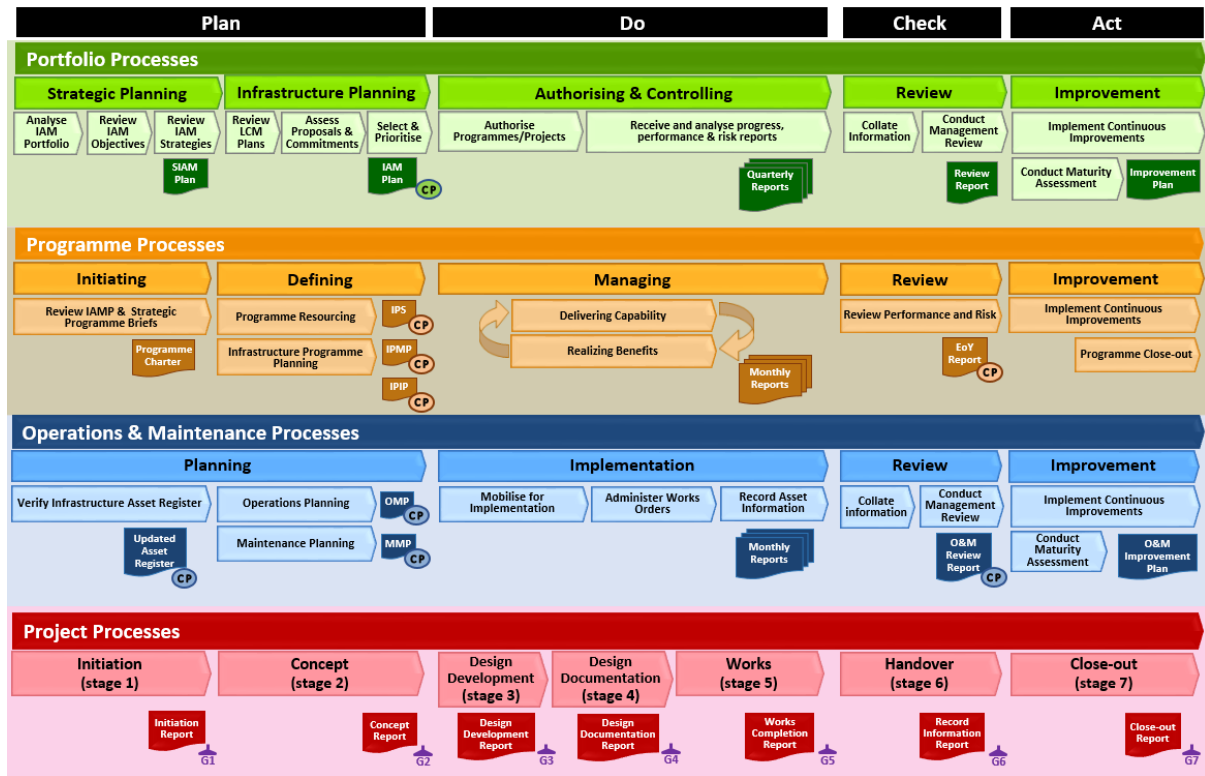
Figure 5: IDM Processes Placemat

The IDMS is informed by Policy, Standards and Best Practices and has a substantial area of impact within the hierarchy of policy, strategy and planning, aligned across the three spheres of Government shown in the figure below.

Tip
The IDMS, when applied, will assist organisations in complying with applicable legislation.
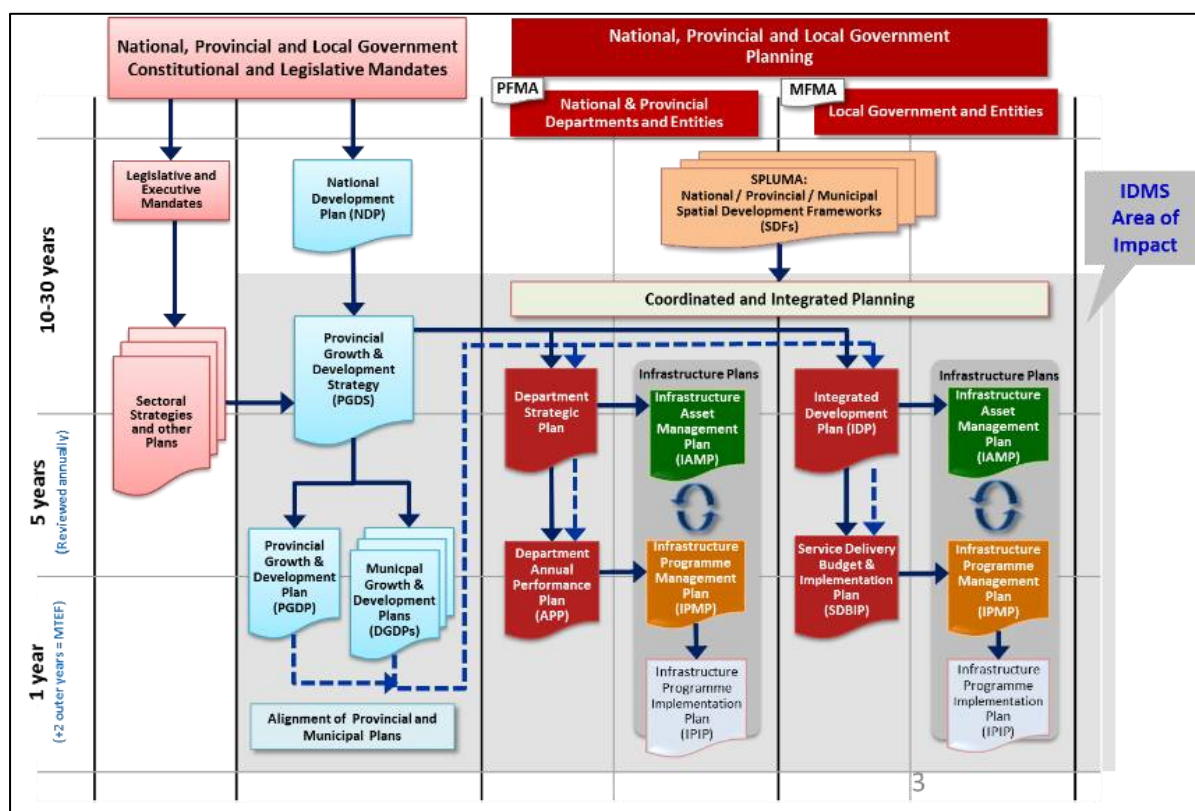
Figure 6: The Hierarchy and Alignment of Policy, Strategy and Planning in Government

The IDMS target audience

The target audience of the IDMS and IDM Toolkit is primarily South African government personnel, across all spheres of government, working within the infrastructure planning and delivery space, and operating as the Client / infrastructure budget holder and/or Implementer / Implementing Agent. The target users include both technical and non-technical managers, and infrastructure practitioners in the public and private sector. Typically, these would include Heads of Department (HoD's), Municipal Managers (MM), Chief Directors (CD's), Directors, Deputy Directors (DD), Chief Financial Officers (CFO's), Portfolio Managers, Programme Managers and Project Managers, or the equivalent.

> **Good practice**
>
> "Education is the most powerful weapon which you can use to change the world."
> *Nelson Mandela*

Objectives of the IDMS

The primary objectives of the IDMS are to:

- Contribute to a transformed society, through improving infrastructure delivery and achieving developmental objectives;

- Promote reliable, repeatable, predictable Infrastructure Delivery Management (IDM)processes, based on best practice and legislative requirement;
- Create long term certainty in planning and delivery of IDM processes, using the five Life Cycle Strategies, which lead to the development and implementation of the 5 Life Cycle Programmes;
- Promote standardisation and uniformity on how infrastructure assets must be delivered and managed throughout the three spheres of government

IDMS Principles

The effective development and implementation of infrastructure strategies depends on the ability to build unity in action, through the application of the following seven principles of the IDMS:

1. Broad ownership;
2. Policy consistency;
3. Planning alignment;
4. Clarity of responsibility and accountability;
5. Evidence-based decision making;
6. Continuous Improvement and scalability;
7. Continuous capacity and capability building;

Full integrated system with a structured hierarchy of interdependencies and sequence of impacts within subsets.

IDMS Benefits

Benefits to Accounting Officers:

- Improved alignment of national and sector strategies with the infrastructure asset strategies, as well as the organisation strategies;
- Understanding of delivery and procurement management processes;
- Improved control of infrastructure delivery, due to appropriate decision points within the delivery and procurement management processes;
- Consistent, reliable reporting, based on the full life cycle costs of infrastructure, through to infrastructure asset disposal;
- Understanding of governance obligations.

Benefits to infrastructure delivery managers:

- Understanding of delivery and procurement management processes and identification of the specific actions associated with such processes;
- Identification of appropriate delivery options;
- Development of programme plans, using simple templates and guides;
- Alignment of the allocated budgets to infrastructure programmes;
- Identification and prioritisation of projects;
- Improved operations and maintenance management;
- Improved management of the procurement of supplies, services and engineering and construction works;
- Improved management of the planning and design of projects;
- Improved management of procurement and project delivery processes;
- Improved oversight of the implementation of projects and performance of the contract administration functions;
- Improved performance and risk management

Organisational benefits:

- Organisations will be better empowered with good practice guidelines, within a simple structured system, based upon well-defined processes that are necessary to achieve effective infrastructure delivery;
- Greater level of uniformity of infrastructure project implementation, across different organs of state;
- Greater level of certainty achieved within the construction industry of how programmes and projects are rolled out by the public sector; including specific knowledge of process steps and RASCI;
- The Toolkit will provide a structured environment for inexperienced delivery managers to thrive and gain understanding well beyond their years of experience, using templates formulated from years of distilled good practice;
- Senior management will have a tool to hold delivery managers accountable for performance;
- Reporting of progress, performance and impact will be uniformly documented;
- The quality and value for money of service delivery will improve.

Infrastructure Delivery Management Toolkit

The following principles were selected to enable good governance performance, and to achieve sustained success in the organizations.

1.   **Authenticity** - Confidence that users are genuinely dealing with government information and services that are current.

2.   **Consistency** - Trustworthiness of the information provides informed decision-making.

3.   **Reliability** - Trust that information is protected, and that it is complete, accurate and trustworthy.

4.   **Accessibility** – Access to all parts of the toolkit that hold the information or services to users, is seamless and a pleasant experience.

5.   **Scalability** – The IDM Toolkit supports infrastructure delivery managers and practitioners at all levels of understanding, from a novice right through to an advanced level of expertise. The IDM Toolkit is also structured to assist all sizes of organisations, ranging from a small Local Municipality to a National Department. As the IDM Toolkit website covers all life cycles ranging from a 30-year NDP to a quarterly budget update, it is scalable for a wide range of life cycles.

6.   **Uniformity** – Promotes uniformity in the various spheres of government in the interpretation and application of government's infrastructure delivery management systems and processes.

IDMS, the IDM Toolkit and the IDMSBOK relationships

The IDMS, the IDM Toolkit and the IDMSBOK are aligned and integrated to support infrastructure delivery in the public sector. The figure below illustrates this symbiotic relationship.
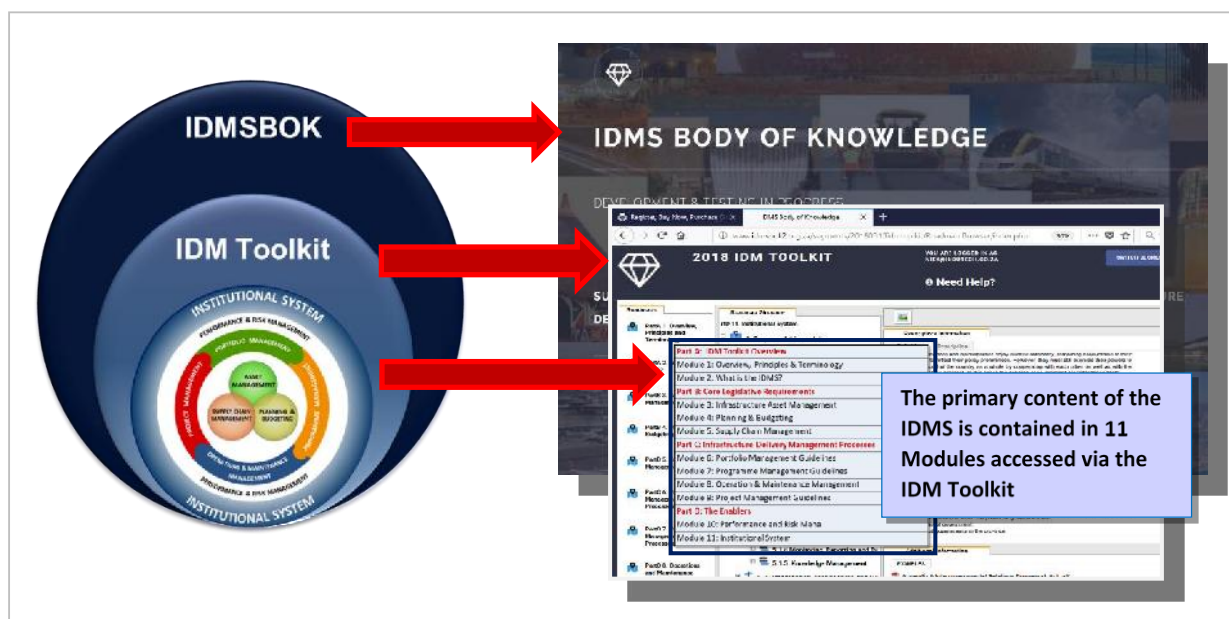
Figure 7: The Relationship between the IDMSBOK, the IDM Toolkit and the IDMS

The structure of the IDM Toolkit which provides guidelines, templates, supporting information and examples is shown in the figure below.

Figure 8: The Structure of the IDMS

Key Concepts

1. The PDCA (Plan, Do, Check Act) cycle enables an organization to ensure that its processes are adequately resourced and managed, and that opportunities for improvement are determined and acted on.

Figure 9: The PDCA Cycle

2.   Risk-based thinking Risk-based thinking makes preventive action part of the activity in the all the processes applied throughout the PDCA cycle. Risk-based thinking enables an organization to determine the factors that could cause its processes and its quality management system to deviate from the planned results, to put in place preventive controls to minimize negative effects and to make maximum use of opportunities as they arise.

3.   Maturity models are widely used as a best practice for 'continual improvement' of asset and other management processes, i.e. improvement actions based on the (usually) annual maturity assessments of asset management processes. Maturity is strongly linked to one of IDMS principles namely 'scalability' aimed at making the IDMS implementable in all spheres of government, and in all organisations within government, whether, big or small.

4.   Value for money may be regarded as the optimal use of resources to achieve the intended outcomes and most of all achievement of public value ensuring that the communities realise the benefits intended through infrastructure delivery programmes and projects.

5.   IDMS Control System provides controls for the implementation of the IDMS and can be readily used as a checklist to monitor IDMS compliance by various stakeholders responsible to provide oversight roles on infrastructure delivery and management such as the Auditor General, National and Provincial Treasuries and some national departments

6.   Line of Sight refers to ensuring that activities in strategic, tactical and operational levels are integrated and contributing to the broader achievement of the organisation's mandate and strategic goals.

7.　　　Systems Thinking approach: the IDMS is based on systems thinking and therefore the elements of the IDMS and their processes cannot operate on their own or in isolation from each other. They are interrelated, interdependent and mutually reinforcing.

The IDM Control System

The Infrastructure Delivery Management (IDM) Control System is a specific governance control of the IDMS that is aligned to the IDM Processes Placemat.

Good practice
Infrastructure procurement must be used as a vehicle to drive socio-economic and developmental objectives of a developmental state such as South Africa .

The IDM Control System comprises of:

- Control Cycles that are specific to portfolio, programme, operations and maintenance management processes. The Control Cycles produce Control Points (CP) Deliverables, each of which must be signed off but are not seen as pre-requisites for moving to another process as these processes are generally cyclical in nature and inform, or are informed by, each other. A CP Deliverable supports legislative requirements, including DoRA, PFMA, MFMA, GIAMA and IGRFA.
- Control Stages are specific to Project Management Processes. Control Stages outline and describe the stages in the life of a project, from start to end. The specific stages are determined by the specific project's governance and control needs. The stages follow a logical sequence with a start and an end, the latter normally being accompanied by a deliverable. When this deliverable is approved and signed off, it is considered to have passed through the relevant stage gate, and the project then moves on to the next sequential stage.

Portfolio Management Processes:
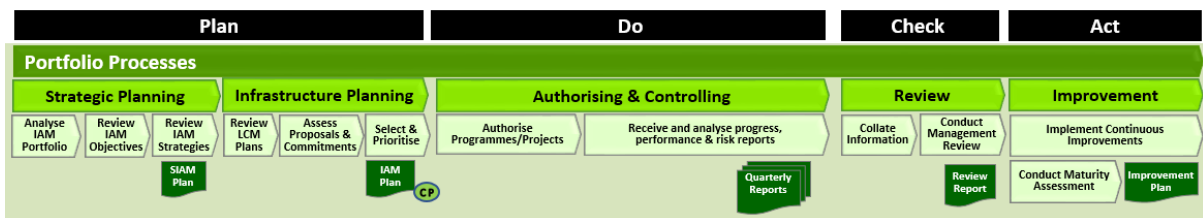
Figure 10: Portfolio Management Processes:

Table 1: Portfolio Management Control Cycle

Process	Control Cycle	
Name	Control CP Point Deliverable	Description
Infrastructure Planning	Infrastructure Asset Management Plan (IAMP) Note: In National & Provincial Government the CP Deliverable is a UAMP & RAMP	The IAMP is a description of the current and expected role infrastructure assets play in the organisation's service delivery offering, how risks to service delivery using infrastructure assets will be managed and an assessment of the financial implications of using and managing infrastructure assets to deliver services. The IAMP includes a list of programmes and projects over the prescribed planning period as well as a prioritised list to be implemented against a forecasted infrastructure budget. Minimum contents of the IAMP include: 1. Executive Summary 2. Introduction 3. Levels of Service 4. Future Demand 5. Lifecycle Management Plan 6. Management Risks 7. Financial Summary 8. Plan Improvement and Monitoring 9. Resourcing Strategy 10. Appendices

Programme Management Processes

Figure 11: Programme Management Processes

Table 2: Programme Management Control Cycle

Process	Control Cycle	
Name	Control Point **CP** Deliverable	Description
Defining	Infrastructure Programme Management Plan (IPMP)	The IPMP is a formally approved document prepared by an organisation that specifies how its infrastructure programme will be executed, monitored and controlled over the planned MTEF period. The IPMP documents the deliverables to be achieved by each party in accordance with the designated roles and responsibilities defined in the agency agreement. Minimum contents of the IPMP include: 1. Programme Objectives 2. Programme Scope Management 3. Programme Cost Management 4. Programme Time Management Plan 5. Key success factors and the performance indicators 6. Review Programme and Project Quality requirements 7. Review health, safety, socio-economic and environmental risks 8. Review Communication plan 9. Review Internal and external resources 10. Programme Resources The programme governance framework is also developed during this process, by defining the strategies for quality, stakeholder engagement,

Process	Control Cycle	
Name	Control Point CP Deliverable	Description
		risks and issues, benefits, resources, planning and control and information management.
	Infrastructure Procurement Strategy (IPS)	The Infrastructure Procurement Strategy was set as a control point as per the FIDPM effective on 1 October 2019
	Infrastructure Programme Implementation Plan (IPIP)	Infrastructure Programme Implementation Plan was set as a control point as per the FIDPM effective on 1 October 2019
Review	End of Year (EoY) Report	The EoY report assesses the performance of the organisation against its annual objectives and goals and the completeness of delivery of the IPMP, Delivery Management Strategy and an Infrastructure Procurement Strategy. The EoY Report forms an integral part of other planning and reporting documents, thus there should be consistency and alignment between the different reports as prepared in terms of different stages of the IDMS. The main purpose of the EoY Evaluation is to assess: • Progress made by the end of financial year by the Programmes against the objectives and outcomes. • Past financial and non-financial performance of the infrastructure delivery of the Department. • Impact that the previous year's performance will have on planning and implementation on the next and subsequent year's delivery. • Monitoring and the key competencies deployed to track and report on progress. • Risks on Programme and Project Management levels. • Overall management of the Programme.

Process	Control Cycle	
Name	Control Point CP Deliverable	Description
		• Organisation capability and individual capacity to manage infrastructure. Minimum contents of the EoY Report include: 1. Introduction 2. Description of Funding Source 3. Financial Allocation and Expenditure Overview 4. Nature of Investment, Commitments, Rollovers and State of Readiness 5. Programme Management 6. Operations and Maintenance 7. Project Management 8. Infrastructure Results 9. Conclusion and Way Forward 10. Glossary

Operations and Maintenance Management Processes

Figure 12: Operations and Maintenance Management Processes

Good practice
The Operations and Maintenance team must be brought on board as early as the initiation process to contribute towards the handover strategy and to undergo training

able 3: Operations and Maintenance Control Cycle

Process	Control Cycle	
Name	*Control Point* **CP** *Deliverable*	*Description*
Infrastructure Asset Verification	Updated Asset Register (for a Facility or IA Network)	Updated record of infrastructure asset information and data attributes, preferably quarterly, but at a minimum annually. These updates are required on completion of work carried out on the infrastructure assets i.e. acquisition, construction, renewal, maintenance and disposal. Minimum contents: As prescribed by National Treasury and the National Immovable Asset Maintenance Management (NIAMM) Standard.
Operations Planning	Operations Management Plan (OMP)	The OMP contains the Operations Work Schedules with the organizational structure and institutional arrangements for the planning, implementation, monitoring and controlling of all operational activities. Minimum contents: (Annual Operations Management Plan describing operations requirements) includes: 1. Operating procedures. 2. Scheduling activities. 3. Emergency procedures. 4. Resource (staff, funding, equipment, materials, etc.) requirements. 5. Performance and quality requirements. 6. Risks and OHS provisions
Maintenance Planning	Maintenance Management Plan (MMP)	Annual Maintenance Management Plan describing the actions required to keep infrastructure assets in as near as is practical to their original condition (without renewal) and to ensure their minimum availability and reliability.

Process	Control Cycle	
Name	Control Point **CP** Deliverable	Description
		Minimum contents: 1. Maintenance procedures and activities. 2. Scheduling of activities. 3. Resource (staff, funding, equipment, materials, etc.) requirements. 4. Performance and quality requirements. 5. Risks and OHS provisions.
Management Review	Maintenance Management Review Report (MMRR)	Management reviews provide top management with an opportunity to evaluate the continuing suitability, adequacy and effectiveness of the assets, asset management, and asset management system. Minimum contents: a) Achievement of the O&M objectives b) O&M performance in terms of the pre-determined performance measures c) Review of the O&M risks as documented in the Risk Register The Management Review Report should be presented to and signed-off by the accounting officer of the facility or network.

Checklist
Operations and Maintenance activities (often referred to as 'Jobs' and initiated via 'Job Cards' / 'Works Orders') are:
- Generally ongoing (though objectives might be re-defined from time-to-time), and repetitive in nature;
- Focussed on sustaining levels of service;
- Much smaller in scope than projects;
- Much shorter in timespan than projects;
- Generally, not comprised of stages and associated deliverables.

Project Management Processes:
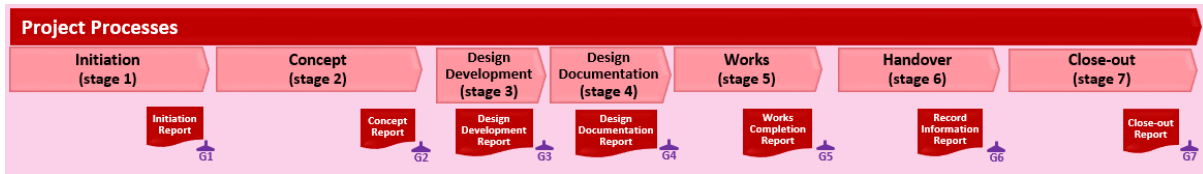
Figure 13: Project Management Processes:

Table 4: Project Management Control Framework

Stage		Control Gate	
No	*Name*	*Stage Deliverable*	*Description*
1.1	Initiation (Stage 1)	Initiation Report: Strategic Brief / Prefeasibility Report, Handover Strategy v1 Project Charter, Project Baseline Plan v1	Prepare Project Charter, Handover Strategy v1; Risk Assessments; Establish 1st version of the Control Budget; Conduct preliminary investigations, stakeholder consultations, site visits, desk top studies; Identify procedures, organizational structure, key constraints, statutory permissions & utility approvals etc. to take project forward; Prepare Project Baseline Plan v1
1.2	Concept (Stage 2)	Planning Report: Concept Report / Feasibility Report, Handover Strategy v2, Project Baseline Plan v2	Review & update Handover Strategy, Risk Assessments; Obtain site studies & specialist advice; Establish feasibility of satisfying strategic brief; within control budget – if not feasible, establish 2nd version of Control Budget; Determine initial design criteria & design options to carry out the work; Investigate alternative solutions, recommend preferred solution; Establish detailed brief, scope, scale, form & cost plan; Develop indicative schedule; Produce site development plan / schematic layout of works; Obtain statutory permissions, funding or utility approvals to proceed with works; Prepare Project Baseline Plan v2

Stage		Control Gate	
No	Name	Stage Deliverable	Description
1.3	Design Development (Stage 3)	Design Development Report, Handover Strategy v3, Project Baseline Plan v3	Review & update Handover Strategy, Risk Assessments; Produce final detailing, performance definition, specification, sizing & positioning of all systems & components enabling construction (except in certain instances, the Manufacture, Fabrication and Construction Information for specific components of the work that the contractor might only need to provide once construction has begun); Project Baseline Plan v4
1.4	Design Documentation (Stage 4)	Design Documentation, Handover Strategy v4, Project Baseline Plan v4	Review & update Handover Strategy, Risk Assessments; Produce final detailing, performance definition, specification, sizing & positioning of all systems & components enabling construction (except in certain instances, the Manufacture, Fabrication and Construction Information for specific components of the work that the contractor might only need to provide once construction has begun); Project Baseline Plan v4
1.5	Works (Stage 5)	Completed Works capable of being used or occupied; Handover Strategy v5; Project Baseline Plan v5; completion certificates (Certificate of Practical Completion, Completion Certificate etc.)	Produce the Manufacture, Fabrication and Construction Information for approval by implementer; Provide temporary works; Provide permanent works; Manage risks wrt OHS & environment; Administer contract in accordance with the terms and provisions of contract and ensure compliance with requirements, incl: - Conducting of site meetings - Quality assurance - Issuing of Site Instructions - Monitoring of construction quality and progress

Stage		Control Gate	
No	*Name*	*Stage Deliverable*	*Description*
			- Control of scope and cost - Payment certification Review & update handover strategy; Prepare Project Baseline Plan v5
1.6	Handover (Stage 6)	Works which have been taken over by user or owner; completed training; Record Information; Handover Strategy implemented, final version of Project Baseline Plan	Complete and implement Handover Strategy, including, as appropriate, signing of, handover certificate; Complete training for personnel for both operation and maintenance; ensure receipt of compliance certificates; prepare & finalise Record Information; Correct defects; Prepare final version of Project Baseline Plan & Handover Strategy
1.7	Close-Out (Stage 7)	Defects Certificate or Certificate of Final Completion; Final Account; Close-Out Report, Section 42 Transfer to Asset Register	Correct final defects (where applicable); issue relevant Defects Certificate or Certificates of Final Completion, in terms of the contract; certification and payment of Final Accounts; Record updated asset information on Asset Register; Prepare Close Out Report

Exercise 1: Holding officials accountable

How should Accounting Officers hold officials accountable for implementation of IDMS requirements?

Your notes:

....

....

....

....

....

The table below summarises the key Control Points or Deliverables that are required in implementing the IDMS. The table then describes what the Control Point should contain, and when Officials are required to deliver.

Table 5: How to hold officials accountable

Control Point Deliverable	Description	Submission / review
Portfolio management control points		
Infrastructure Asset Management Plan	Long-term plans (usually 20 years or more for infrastructure assets), that outline the asset activities for each facility or asset network, and the resources to provide a defined level of service in the most cost- effective way	End of June (provincial departments) (The date for District Municipalities is still to be determined) End of 1st Quarter of the financial year
Programme management control points		
Infrastructure Asset Management Plan (IPMP)	The IPMP is a formally approved document prepared by an organisation that specifies how its infrastructure programme will be executed, monitored and controlled over the planned MTEF period. The IPMP documents the deliverables to be achieved by each party in accordance with the designated roles and responsibilities defined in the agency agreement.	End of August (for provincial departments) (The date for District Municipalities is still to be determined)
End of the Year Evaluation Report (EoY)	The EoY report assesses the performance of the organisation against its annual objectives and goals, and the completeness of delivery of the	End of May (for provincial departments)

Control Point Deliverable	Description	Submission / review
	IPMP, Delivery Management Strategy and an Infrastructure Procurement Strategy.	(The date for District Municipalities is still to be determined) One month after financial year end
Operations and maintenance control points		
Updated Asset Register	Updated record of infrastructure asset information and data attributes, These updates are required on completion of work carried out on the infrastructure assets i.e. acquisition, construction, renewal, maintenance and disposal.	Quarterly or at least annually
Operations Management Plan	The OMP contains the Operations Work Schedules with the organizational structure and institutional arrangements for the planning, implementation, monitoring and controlling of all operational activities.	Annual
Maintenance Management Plan	Maintenance Management Plan describes the actions required to keep infrastructure assets in as near as is practical to their original condition (without renewal) and to ensure their minimum availability and reliability.	20 -25 years MTEF Cycle Annual Quarterly
Maintenance Management Review Report	Management reviews provide top management with an	Quarterly

Control Point Deliverable	Description	Submission / review
	opportunity to evaluate the continuing suitability, adequacy and effectiveness of the assets, asset management, and asset management system.	
Project management control gates *(All the gate deliverables must be completed and signed off and recorded or filed for audit trails)*		
Initiation Report	Prepare Project Charter, Handover Strategy v1; Risk Assessments; Establish 1st version of the Control Budget; Conduct preliminary investigations, stakeholder consultations, site visits, desk top studies; Identify procedures, organizational structure, key constraints, statutory permissions & utility approvals etc. to take project forward; Prepare Project Baseline Plan v1	
Planning Report	Review & update Handover Strategy, Risk Assessments; Obtain site studies & specialist advice; Establish feasibility of satisfying strategic brief; within control budget – if not feasible, establish 2nd version of Control Budget; Determine initial design criteria & design options to carry out the work; Investigate alternative solutions, recommend preferred solution; Establish	

Control Point Deliverable	Description	Submission / review
	detailed brief, scope, scale, form & cost plan; Develop indicative schedule; Produce site development plan / schematic layout of works; Obtain statutory permissions, funding or utility approvals to proceed with works; Prepare Project Baseline Plan v2	
Design Development Report	Review & update Handover Strategy, Risk Assessments; Develop, in detail, accepted concept to finalise design and definition criteria; Establish 3rd version of Control Budget; Establish detailed form, character, function & cost plan, defining all components in terms of overall size, typical detail, performance & outline specification; Confirm or revise cost plan; Prepare Project Baseline Plan v3	
Design Documentation	Review & update Handover Strategy, Risk Assessments; Produce final detailing, performance definition, specification, sizing & positioning of all systems & components enabling construction (except in certain instances, the Manufacture, Fabrication and Construction Information for specific components of the work that	

Control Point Deliverable	Description	Submission / review
	the contractor might only need to provide once construction has begun); Project Baseline Plan v4	
Completion Certificates	Produce the Manufacture, Fabrication and Construction Information for approval by implementer; Provide temporary works; Provide permanent works; Manage risks wrt OHS & environment; Administer contract in accordance with the terms and provisions of contract and ensure compliance with requirements, incl: - Conducting of site meetings - Quality assurance - Issuing of Site Instructions - Monitoring of construction quality and progress - Control of scope and cost - Payment certification Review & update handover strategy; Prepare Project Baseline Plan v5	
Record Information	Complete and implement Handover Strategy, including, as appropriate, signing of, handover certificate; Complete training for personnel for both operation and maintenance;	

Control Point Deliverable	Description	Submission / review
	ensure receipt of compliance certificates; prepare & finalise Record Information; Correct defects; Prepare final version of Project Baseline Plan & Handover Strategy	
Close-out Report	Correct final defects (where applicable); issue relevant Defects Certificate or Certificates of Final Completion, in terms of the contract; certification and payment of Final Accounts; Record updated asset information on Asset Register; Prepare Close Out Report	
Post Occupancy Evaluation Report	Conclude activities listed in Handover Strategy, implement Post Occupancy Evaluation; review of Project Performance and Project Outcomes	

Section 4: IDMS core legislative requirements
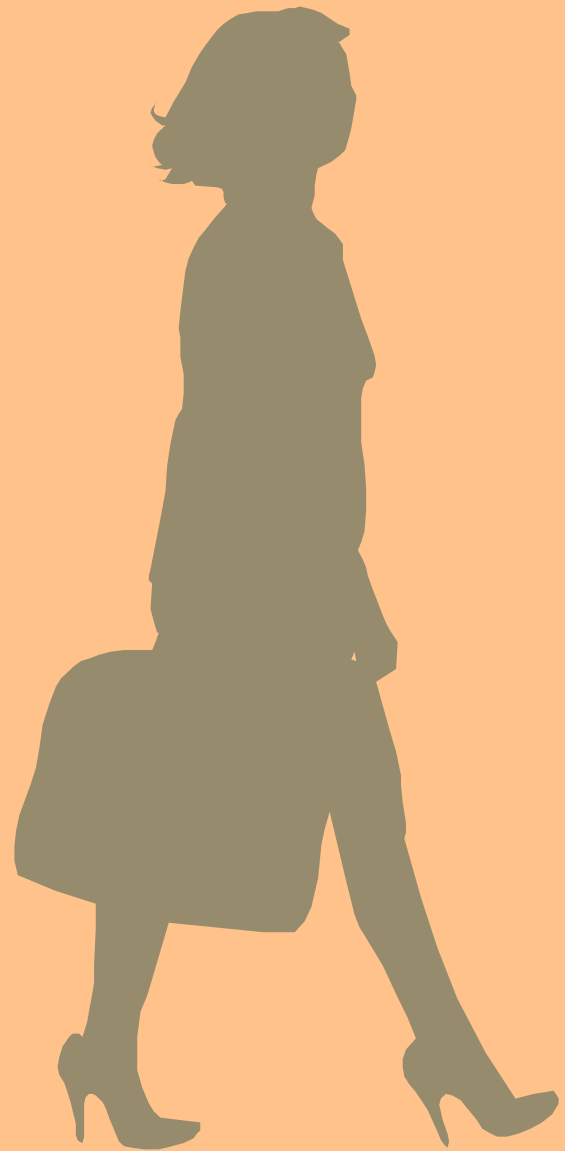
Some of the core legislation that affects the IDMS

Section 4: IDMS core legislative requirements

Some of the core legislative framework that affects the IDMS is listed in the table below.

Table 6: IDMS core legislative requirements

Act / Regulations / Standard	Requirement	IDMS Impact / Implication
Asset Management		
Local Government Capital Asset Management Guidelines, (2008)	Infrastructure asset management is required to take account of the latest GRAP requirements, as they are developed and become applicable to organisations.	Input to an organisation's Asset Management System and infrastructure asset management planning and maintenance

Act / Regulations / Standard	Requirement	IDMS Impact / Implication
SANS/ISO 55000	Sets out the fundamentals of infrastructure asset management including the use of a life cycle management approach to realise value from (infrastructure) assets	Input to an organisation's Asset Management System
National Treasury: Local Government Capital Asset Management Guideline (2008)	assist municipalities in their financial management improvement processes, by implementing sound asset management practices, as required by the MFMA and GRAP	Input to an organisation's Asset Management System
SANS 55000/1/2 (2015)	establishes the Overview, Requirements and Guidelines for an Asset Management System	Input to an organisation's Asset Management System
International Infrastructure Management Manual (IIMM), 2015 Edition	Provides the "how to" guidelines to meet the Asset Management requirements set out in SANS 55000/1/2 (2015);	Input to an organisation's Asset Management System
Planning and budgeting		
Municipal Systems Act No, 32 of 2000	Municipalities must draw up an IDP as a single, inclusive and strategic development plan that must be aligned with other municipalities and other spheres of government;	Input to infrastructure planning
The Constitution, Section 215	Budgets and the budgetary process "must promote transparency, accountability and the effective financial management of the economy, debt and the public sector" and for national legislation to "prescribe"	Infrastructure budgeting process

Act / Regulations / Standard	Requirement	IDMS Impact / Implication
	budget formats for all the spheres of government;	
The Municipal Standard Chart of Accounts (mSCOA) Regulations, April 2014	Provides for additional breakdowns on both capital and maintenance expenditure and a mechanism to assist with life cycle budgeting, thus facilitating budgeting, infrastructure asset management, and budget reporting.	Planning, budgeting and reporting alignment
Municipal Systems Act (2000)	Facilitates compliance with this constitutional duty by ensuring that municipalities' priorities, plans, budgets, implementation actions and reports are properly aligned	Planning, budgeting and reporting alignment
Division of Revenue Act	provide for the equitable division of revenue raised nationally, among the national, provincial and local spheres of government for the current financial year	Funds allocation alignment
Constitution of the Republic of South Africa, (Act No 108 of 1996, as amended	a system which is fair, equitable, transparent, competitive and cost-effective and must further advance the development of disadvantaged individuals	Procurement support function to the IDMS
The Preferential Procurement Regulations of August 2001	provides a framework for the implementation of procurement policies including guidance on the point system	Procurement support function to the IDMS

Act / Regulations / Standard	*Requirement*	*IDMS Impact / Implication*
Standard for Infrastructure Procurement and Delivery Mmanagement	Provides a control framework for infrastructure procurement management	Procurement support function to the IDMS
CIDB: Standard for Uniformity	Provides a uniform and standard compilation of procurement documentation	IDMS Alignment
Supply Chain Management		
Prevention and Combating of Corrupt Activities Act, Act 12 of 2004	regulates offences in respect of corrupt activities relating to contracts,, as well as offences in respect of corrupt activities relating to procuring and withdrawal of tenders and auctions	IDMS Alignment
CIDB Act, 2000	Promotes and implement policies, programmes and projects aimed at procurement reform, standardization and uniformity in procurement documentation, practices and procedures	Procurement Reform Alignment
SANS/ISO 10845-2 CP, Part 2, 2015	Formatting and compilation of procurement documentation	Procurement Reform Alignment
SANS/ISO 10845-3 CP, Part 3, 2015	Standard conditions of tender	Procurement Reform Alignment
SANS/ISO 10845-4 CP, Part 4, 2015	Standard conditions for the calling for expressions of interest.	Procurement Reform Alignment
Portfolio Management		

Act / Regulations / Standard	Requirement	IDMS Impact / Implication
Spatial Planning and Land Use Management Act No 16 of 2013 (SPLUMA)	a municipal spatial development plan must be prepared as part of the Integrated Development Plans in accordance with the provisions of the Municipal System's Act	Input to the strategic planning process
New Growth Path Framework (NGP) (2010)	Categorises the jobs through infrastructure investment into construction of new infrastructure; operation of the new facilities; expanded maintenance; the manufacture of components for the infrastructure programme.	Input to the strategic planning process – developmental objectives
Provincial Growth and Development Strategy	must incorporate issues and proposals of national, provincial and strategic significance arising from metropolitan and district IDPs	Input to the strategic planning process
Government Immovable Asset Management Act	Requires the development of User Asset Management Plans and Custodian Asset Management Plans	Infrastructure Asset Management Plans
Asset Management Framework, 2004, National Treasury	Municipalities are required to prepare Infrastructure Asset Management Plans, describing their life cycle infrastructure asset management strategies.	Infrastructure Asset Management Plans (align with IDMS IAMP)
Local Government Capital Asset Management Guidelines, (2008)	Infrastructure asset management is required to take account of the latest GRAP requirements, as they are developed and become applicable to organisations.	Infrastructure Asset Management Plans

Act / Regulations / Standard	Requirement	IDMS Impact / Implication
SANS/ISO 55000 IIMM (2015)	Describes the fundamentals of infrastructure asset management include the use of a life cycle management approach to realise value from (infrastructure) assets	IAM Policy Strategic, Infrastructure Asset Management Plans, Infrastructure Asset Management Plans
DORA (Note that DoRA is revised annually).	an Infrastructure Asset Management Plan (IAMP), which includes an Infrastructure Plan (e.g. a user asset management plan) for all infrastructure programmes for a period of at least 10 years.	IAMP
SANS/ISO 21504, 2017 (first edition),	Guidance on portfolio management	IDMS Portfolio management processes
Programme Management		
Division of Revenue Act (DORA) (Annual)	an Infrastructure Programme Management Plan (IPMP), including at least an infrastructure procurement strategy	Infrastructure Delivery Management Plan
Division of Revenue Act (DORA) Standard for Infrastructure Procurement and Delivery Management SANS 10845-1	An Infrastructure Procurement Strategy documents the Programme Manager's decisions related to the Contracting Arrangements and Procurement Arrangements	Infrastructure Procurement Strategy
Division of Revenue Act (DORA)	Assessment of performance of the organisation against its annual objectives and goals, and the completeness of delivery of the IPMP,	End of the Year Evaluation Report

Act / Regulations / Standard	Requirement	IDMS Impact / Implication
	Delivery Management Strategy and an Infrastructure Procurement Strategy	
Programme Management Standard (PMI), 2017 (4th Edition) SANS/ISO 21503, 2017 (first edition)	Guidance on programme management	IDMS alignment with best Practice
Operations and Maintenance Management		
National Infrastructure Maintenance Strategy	prioritise maintenance of existing infrastructure assets over development of new infrastructure	Operations and Maintenance Management Plans
Municipal Finance Management Act, No. 56 of 2003, (MFMA), Clause 63 Public Finance Management Act (PFMA), clause 38	Require the Accounting Officer of an organisation to manage infrastructure and facility assets that are used by the organisation to deliver services	Operations and Maintenance Management Plans
clause 11(2) of the Construction Regulations, 7 February 2014, Government Gazette No. 37305	assets must be inspected regularly to ensure that the assets are 'safe for continued use'. Inspections must be carried out annually or, if the asset is less than two years old, every six months.	Operations and Maintenance Management Plans Maintenance Management Review Reports
Asset Management Framework (National Treasury, April 2004) NIAMM Standard (2017)	describes an infrastructure asset register structure and the links between the asset information and financial reporting.	Updated Asset Register

Act / Regulations / Standard	Requirement	IDMS Impact / Implication
CIDB: National Immovable Asset Management Standard (2017)	Establishes a system of principles and practice specifications for the management and care of immovable assets, after initial construction or acquisitiion.	Operations and Maintenance Management Plans
The NIAMM Standard, Section 4.4	Each entity shall establish, maintain and update asset registers supportive of asset care planning,	
NIAMM Standard	Observations, conclusions, and recommendations for further action must be documented in an O&M Management Review Report	Maintenance Management Review Report
NIAMM Standard, Section 4.1.3(d)	a Maintenance Management Plan shall be developed and included in the lifecycle plan section of the asset management plan,	Maintenance Management Plan
NIAMM Standard	The OMP must contain the Operations Work Schedules with the organizational structure and institutional arrangements for the planning, implementation, monitoring and controlling of all operational activities	Operations Management Plan
Project Management		
Standard for Infrastructure Procurement and Delivery Management	Requires compliance to the Control framework for infrastructure delivery management	IDMS Control stages and gates

Act / Regulations / Standard	Requirement	IDMS Impact / Implication
Project Management Body of Knowledge (PMBOK) (PMI), 2017, (6th Edition)	Provides Guidance on project management	IDMS alignment with best practice standards
SANS/ISO 21500, 2015,	Provides Guidance on project management	IDMS alignment with best practice standards
Occupational Health and Safety Act (No. 85 of 1993) Construction Regulations, issued in terms of the Occupational Health and Safety Act	Include a health and safety plan, which is a requirement of the	Implementation of infrastructure projects
Performance and Risk Management		
Public Finance Management Act -sections 38(1)(a)(i) and 51(1)(a)(i) Municipal Finance Management Act - sections 62(1)(c)(i) and 95(c)(i) Public Sector Risk Management Framework	The Accounting Officers/Authorities to ensure that their Institutions have and maintain effective, efficient and transparent systems of risk management	Link IDMS to the organisation's risk Management system
Municipal Finance Management Act Municipal Systems Act	Establish a Performance Management System that is in line with the priorities, objectives, indicators and targets contained in the IDP	Performance of infrastructure programmes
SANS/ISO 31000, 2009, Risk Management	Provides principles and guidelines	Input to IDMS risk Management
IDMS Institutional System		

Act / Regulations / Standard	Requirement	IDMS Impact / Implication
Inter-Governmental Relations Framework Act, No 13 of 2005	provide a framework for the national, provincial and local government, and all organs of state to facilitate co-ordination in the implementation of policy and legislation	Provincial Protocols for Implementing the IDMS
Infrastructure Development Act, No 23 of 2014	provides for the facilitation and co-ordination of public infrastructure development and ensure that infrastructure planning, approval and implementation are prioritised	Links IDMS Government's infrastructure development objectives
National Infrastructure Plan	identifies 18 Strategic Integrated Projects (SIPs), which constitute related projects required to achieve core outcomes	Align SIPs with the IDMS Methodology
DORA	a document that outlines how the IDMS will be implemented in the province. This should be approved by the Executive Council of the province annually	Provincial Protocols for Implementing the IDMS
MFMA, No. 56 of 2003, Sections 63, 77 and 78	effectively allocate collective responsibility for integrity and maintenance of good corporate governance to all public servants, regarding SCM matters.	IDMS Institutionalisation
SANS/ISO 21505, 2017	Guidance on governance;	IDMS Institutionalisation

Section 5: Infrastructure delivery

The processes for planning and delivering infrastructure

Section 5: Infrastructure delivery management processes

Portfolio Management Processes

A portfolio, in the words of SANS 21500, is a "collection of portfolio components (programmes, projects or other related work) grouped together to facilitate their management to meet, in whole or in part, an organisation's strategic objectives".

The portfolio components, i.e. the programmes, projects or other related work, are linked to a defined portfolio of infrastructure assets.

The term '**portfolio'** is used in the asset management context, when reference is made to all assets owned or used by an organisation, e.g. an '**asset portfolio'** or **portfolio of assets.** Assessment of an organisation's portfolio of infrastructure assets leads to the identification of a '**portfolio of work', i.e. the portfolio of infrastructure programmes** to be carried out to ensure that the infrastructure assets provide the required level of service, in the *most cost-effective manner*. The 'cost effectiveness' of the infrastructure delivery process is directly linked to the organisation's ability to:

- Select programmes, projects and operational work that is best aligned with the organisation's strategy (i.e. the 'right' programmes, projects and operational work);
- Prioritise and 'balance' the composition of the 'portfolio of work', and the corresponding budget allocations, in terms of the organisation's strategic priorities (e.g. increased budget allocation for 'renewals' to reduce breakdowns and improve the availability of infrastructure assets);
- Maximise the socio-economic benefits and contribution to transformation objectives.

The '**portfolio of work'** is divided, for management purposes, into **five 'infrastructure' programmes** to differentiate from all other programmes in public service, each with distinct objectives in terms of the asset lifecycle management requirements.
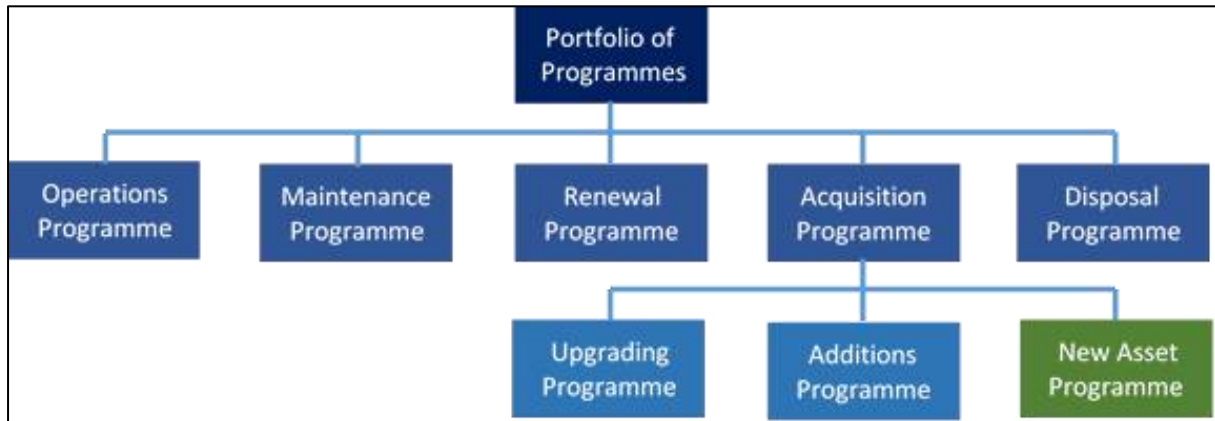
Figure 14: Portfolio of Programmes

Strategic Planning

The objectives of the Strategic Planning Process are to measure the functional performance of the existing Infrastructure Assets (IAs) against the Infrastructure Asset Management (IAM) objectives and future service delivery requirements and to document the strategic approach in the SIAMP.

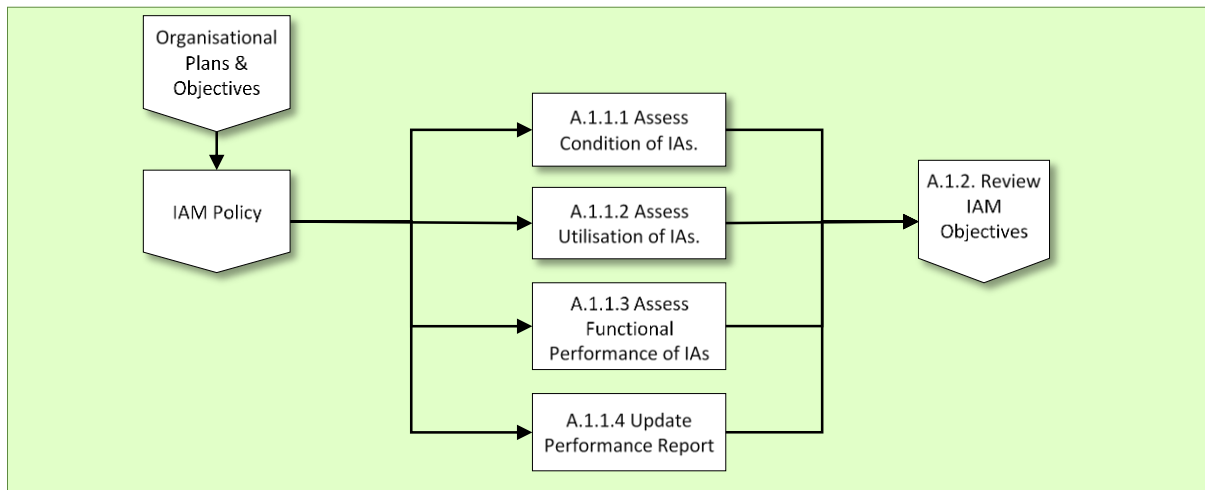An overview the **Analyse IAM Portfolio** process is outlined in the process map shown in the figure below.
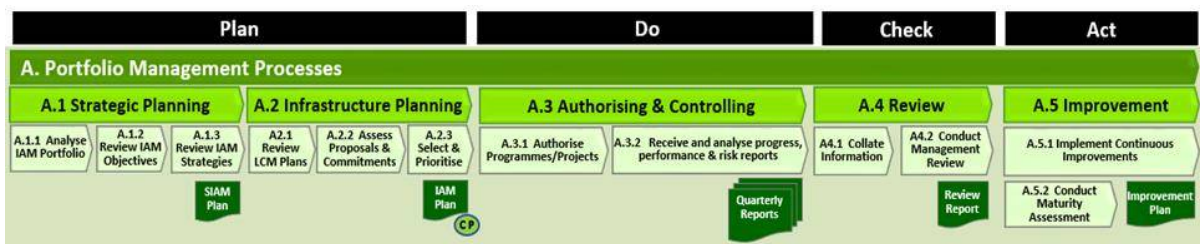
Figure 10: Process Mapping – A.1.1 Analyse IAM Portfolio

An overview the **Review IAM Objectives** is outlined in the process map shown in the figure below.
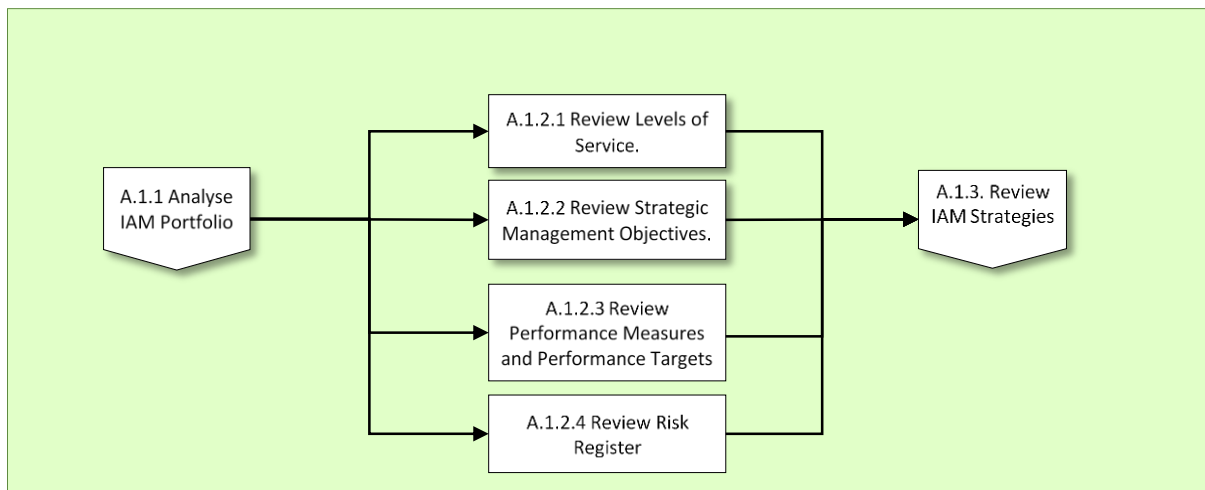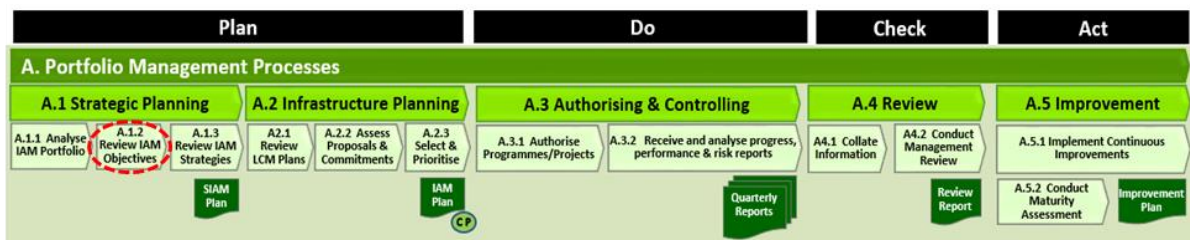
Figure 15: Process Mapping – A.1.2 Review IAM Objectives

An overview the **Review IAM Objectives** are outlined in the process map shown in the figure below.
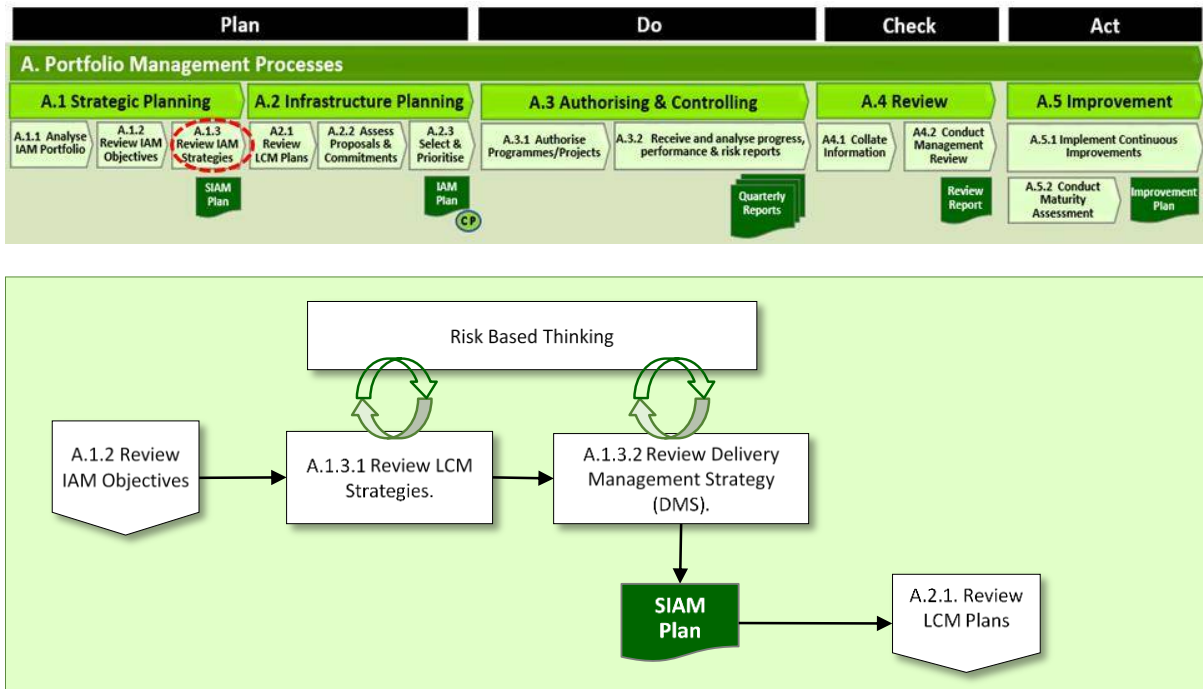
Figure 16: Process Mapping – A.1.3 Review IAM Strategies

Tip
The SIAMP is aimed at describing the organisation's long-term approach to managing its infrastructure assets, that will enable the portfolio of assets to provide the desired levels of service in a sustainable way, while managing risk, at the lowest life cycle cost.

Strategic Planning is the process of establishing and documenting the future direction of your organisation. The strategic plan should set a clear direction for all the organisation's activities.
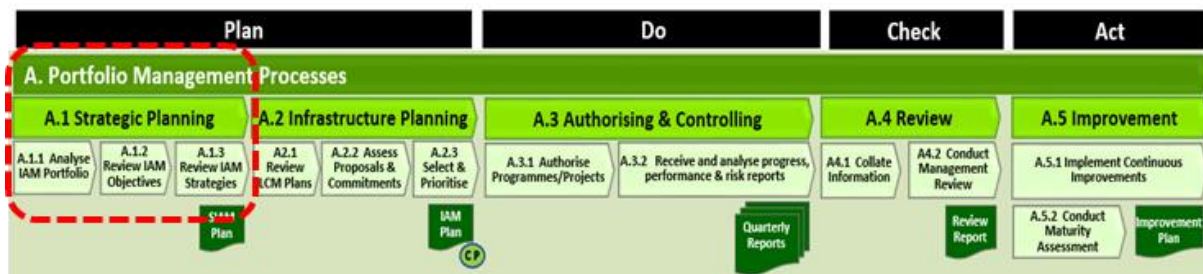
Infrastructure Planning

The objective of the **Infrastructure Planning Process** is to develop lifecycle management (LCM) plans and IAM Plans for the work required at each Facility or Network of Infrastructure Asset, and to provide a summary at the portfolio level.

An overview of the **Review LCM Plans** process is outlined in the process map shown in the figure below.
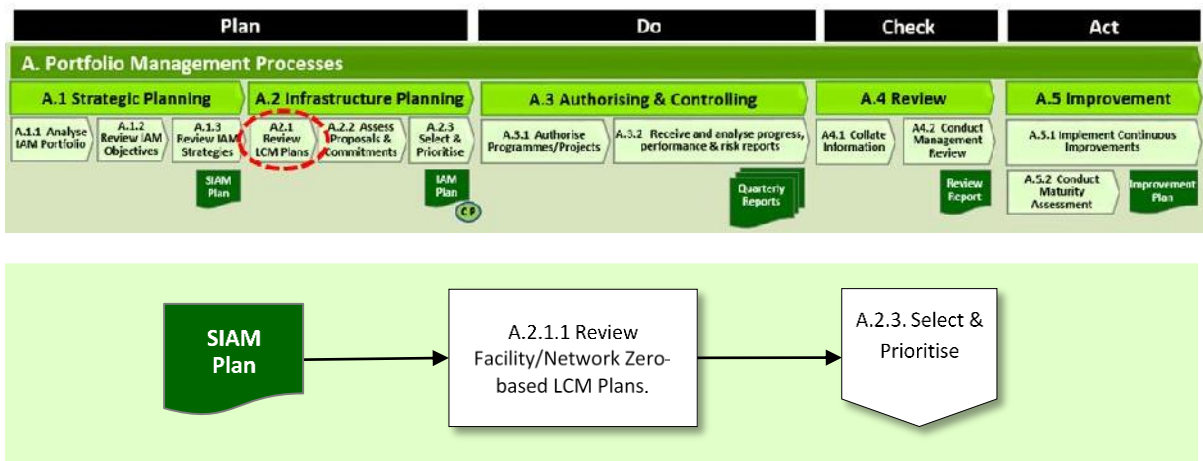

Figure 17: Process Mapping – A.2.1 Review LCM Plans

An overview of the **Assess Proposals and Commitments** process are outlined in the process map shown in the figure below.
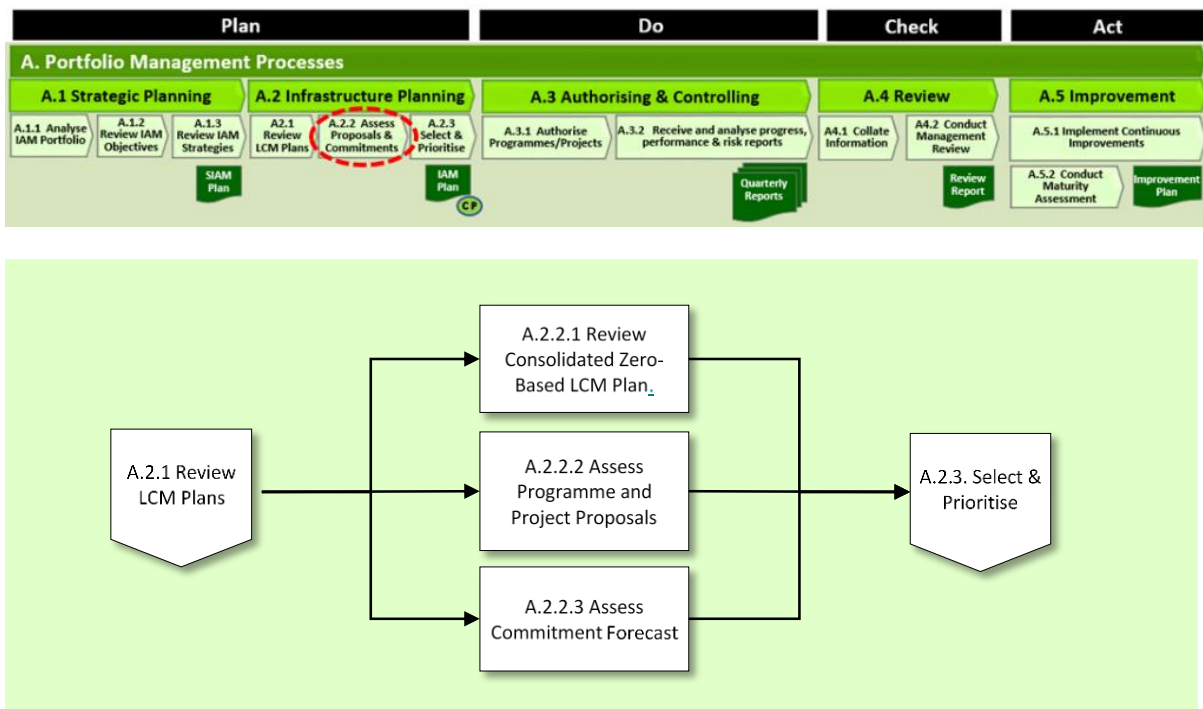
Figure 18: Process Mapping – A.2.2 Assess Proposals and Commitments

An overview of the **Select and Prioritise** process are outlined in the process map shown in the figure below.
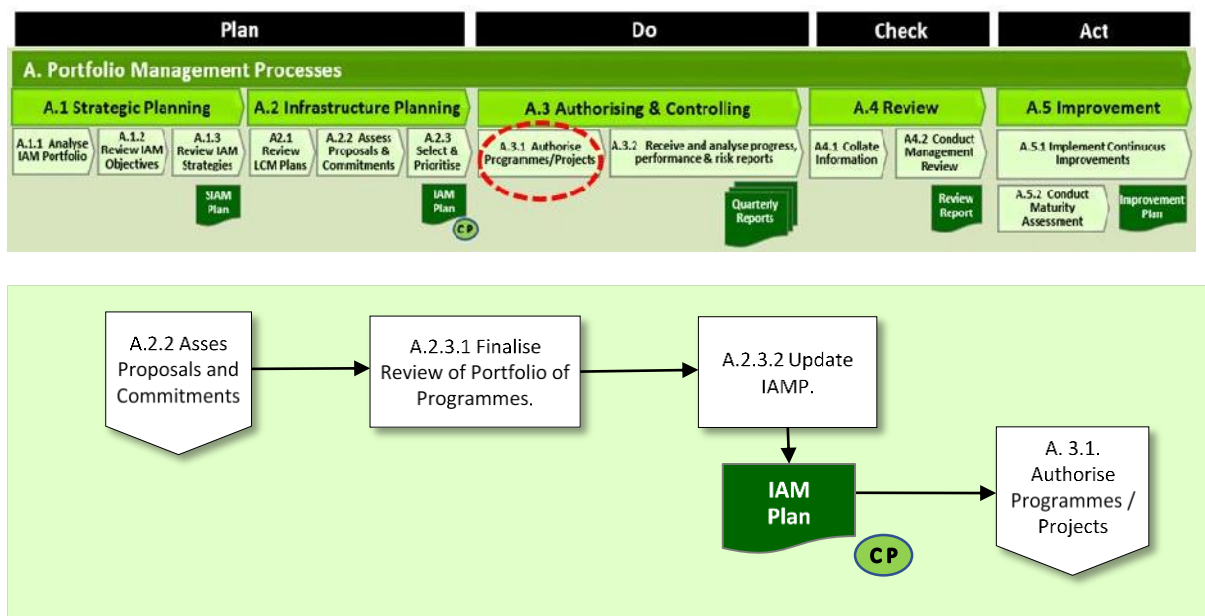

Figure 19: Process Mapping – A.2.3 Select and Prioritise

The IAM Plan is defined as a **prioritised list of programmes and projects** to be implemented against a forecasted infrastructure budget over the **prescribed planning period**. It is recommended that the infrastructure planning process be approached as a multi-day planning workshop, or a series of planning meetings, chaired by the Portfolio Manager and/or Programme Managers, to review the organisation's IAMP and IPMP.

Checklist
Minimum contents of an Infrastructure Asset Management Plan (IAMP) include:
1. Executive Summary
2. Introduction
3. Levels of Service
4. Future Demand
5. Lifecycle Management Plan
6. Management Risks
7. Financial Summary
8. Plan Improvement and Monitoring
9. Resourcing Strategy
10. Appendices

An overview of the **Authorise Programmes/ Projects** process are outlined in the process map shown in the figure below.
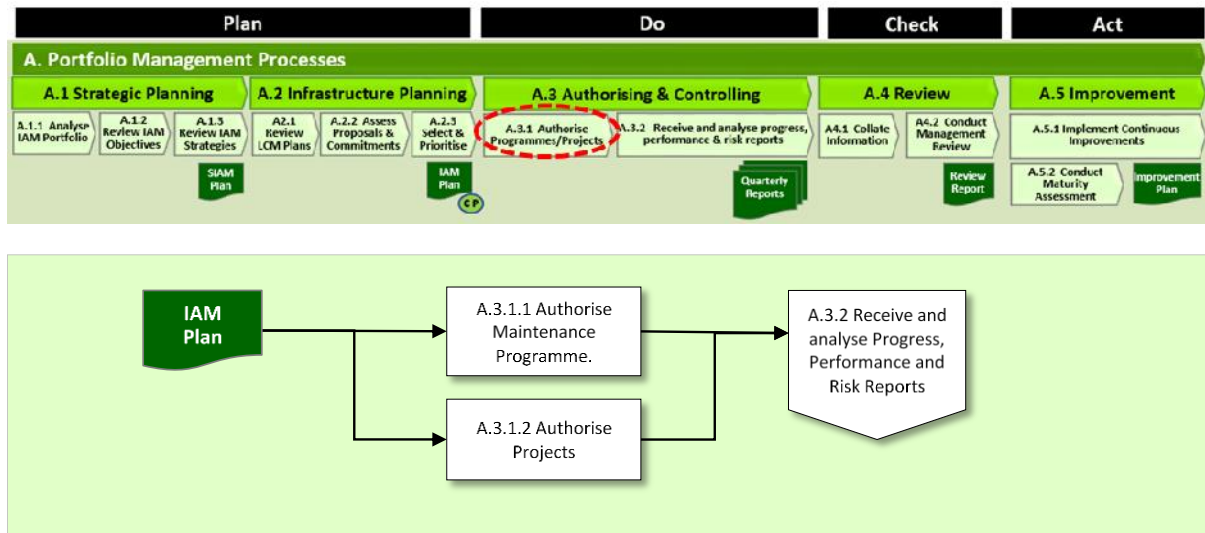
Figure 20: Process Mapping – A.3.1 Authorise Programmes / Projects

An overview of the **Receive and analyse Progress, Performance and Risk Reports** process are outlined in the process map shown in the figure below.
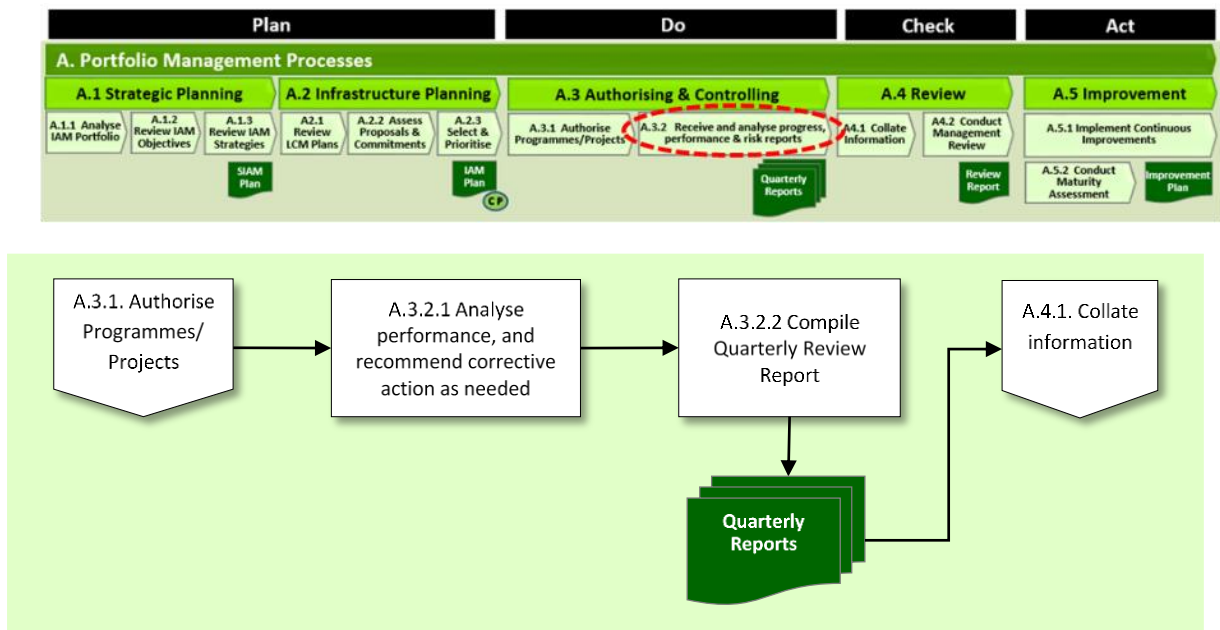

Figure 21: Process Mapping – A.3.2 Receive and Analyse Progress, Performance and Risk Reports

The approval of the Infrastructure Budget (in the MTEC process) is a pre-requisite for the authorisation of projects, but should not be an 'automatic' authorisation. Proper project governance requires that projects included in the approved MTEF Budget proposal, should be assessed in terms of their applicable 'Readiness Requirements' before they may be authorised for implementation.

The purpose of the authorisation process is to formally allocate financial and human resources required to either develop business cases, or execute selected programmes and projects

An overview of the **Collate Information** process are outlined in the process map shown in the figure below.
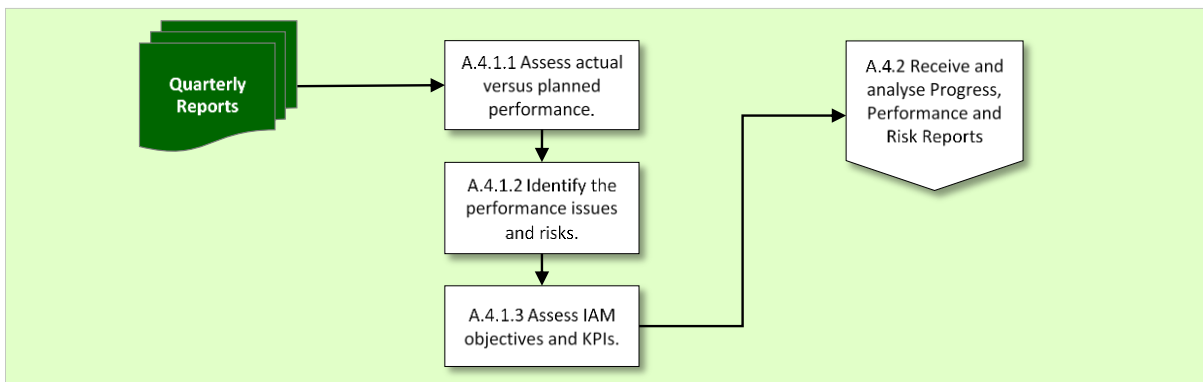

Figure 22: Process Mapping – A.4.1 Collate information

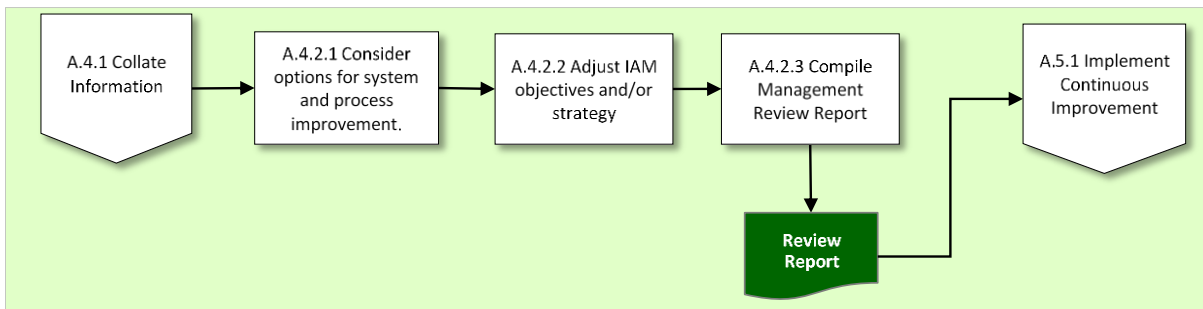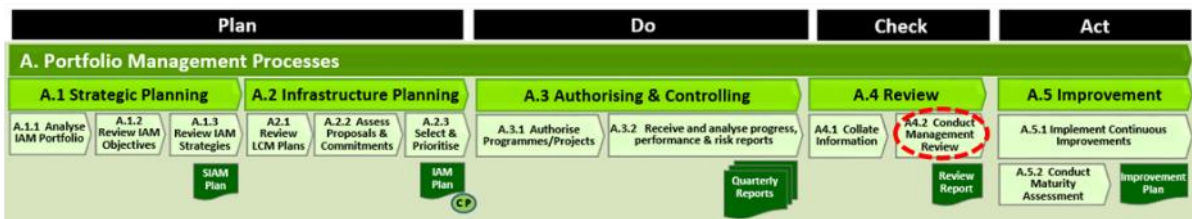An overview of the **Conduct Management Review** process are outlined in the process map shown in the figure below.

Figure 23: Process Mapping – A.4.2 Conduct Management Review

Top management should review the organisation's assets, asset management system and asset management activity, as well as the operation of its policy, objectives and plans, at planned intervals, to ensure their suitability, adequacy and effectiveness.

An overview of the **Implement Continuous Improvement** process is outlined in the process map shown in the figure below.
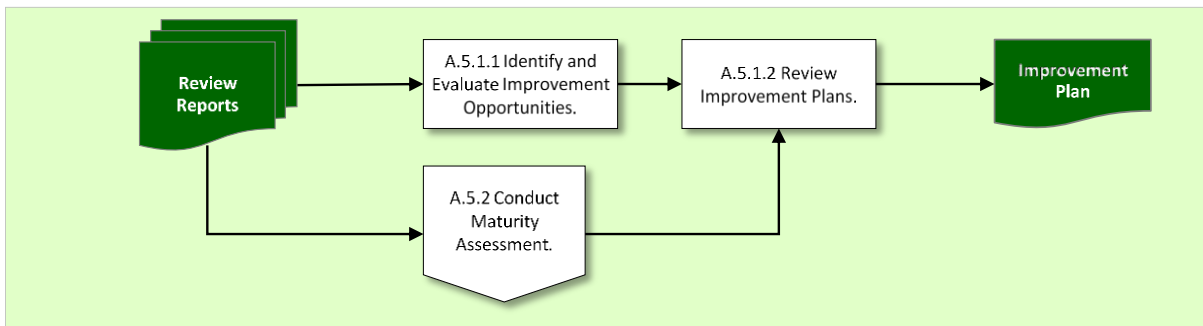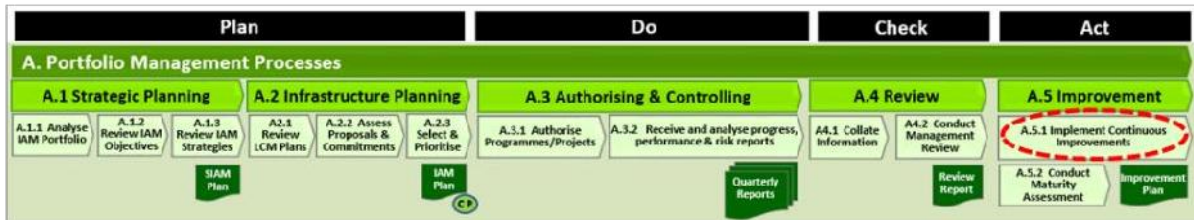

Figure 24: Process Mapping – A.5.1 Implement Continuous Improvement

An overview of the **Conduct Maturity Assessment** process are outlined in the process map shown in the figure below.
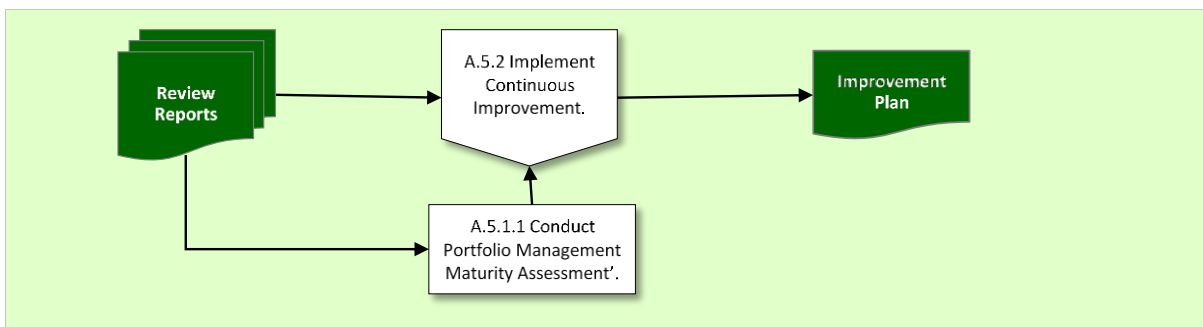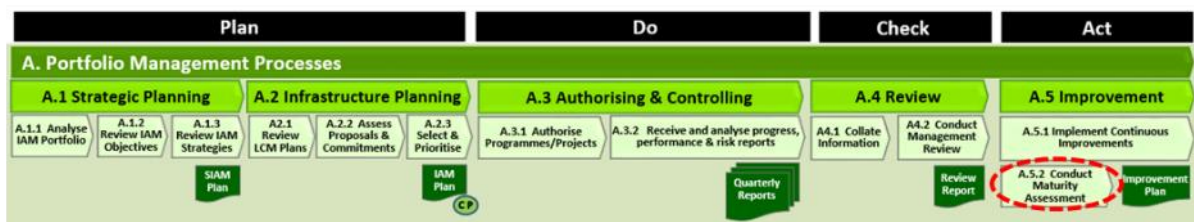
Figure 25: Process Mapping – A.5.2 Conduct Maturity Assessment

The concept of Continuous Improvement, and its relationship with performance measures and targets, is clearly explained in the Plan-Do-Check-Act Cycle, as shown in Figure 38. Performance measures and targets are established ('Plan'), the plans are executed ('Do'), the actual performance is compared to the target ('Check') and, if the objectives are not achieved/targets are reached, then action is taken ('Act') to improve performance

Programme Management Processes

A programme is defined as a "temporary structure of interrelated programme components managed together, that provides advantages, contributes to the achievement of strategic and operational objectives, and realizes benefits".

Programme Management is defined as the "coordinated activities to direct the interrelated programme components, to achieve objectives and to realize benefits".

The approved IAM Plan represents the organisations long-term plans (usually 20 years or more for infrastructure assets) that outline the asset activities for each facility or asset network, and the resources to provide a defined level of service in the most cost- effective way.

The "Initiating process" requires the scrutinizing of the contents of the IAM Plan, so as to understand the strategic objectives of the organization and which programmes and projects have been authorized for implementation

The typical contents of the IAM Plan form an integral input into the programme management processes.

The objective of the Initiating process is the review of the IAMP and the Strategic Programme Briefs (for New and Existing Programme(s)) to develop and approve a Project Charter for programmes and projects to be delivered in the MTEF period.

An overview of the **Review IAMP & Strategic Programme Briefs** processes are outlined in the process map shown in figure below.
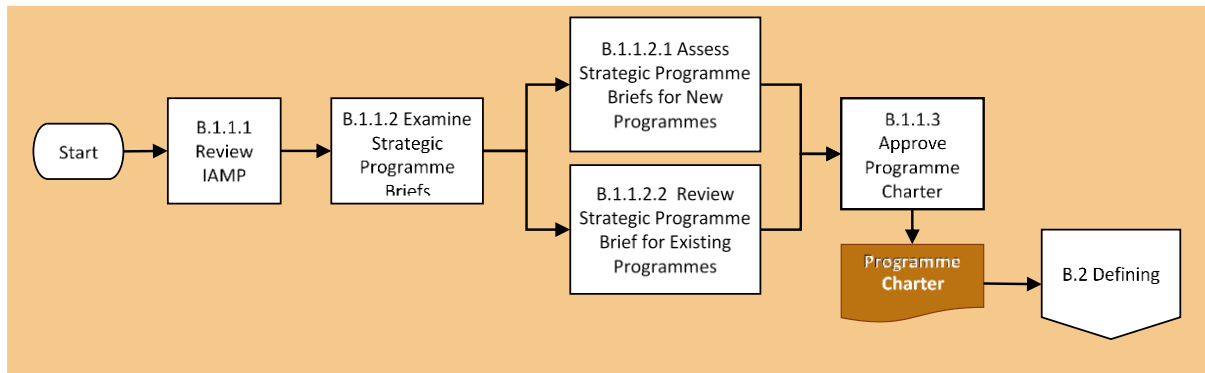
Figure 26: Process Mapping – B.1.1 Review IAMP & Strategic Programme Briefs

The 'Defining' process is where the Programme Manager refines the detailed elements of the Strategic Programme Briefs, for new and existing infrastructure programmes.

The Infrastructure Programme Management Plan (IPMP) is then developed to explain what the infrastructure programmes are going to do and how they are going to do it, who is involved, how it will be controlled, and the justification for going forward.

The programme governance framework is also developed during this process, by defining the strategies for quality, stakeholder engagement, risks and issues, benefits, resources, planning and control and information management. The plans/schedules are also developed to provide information on the resources, dependencies and timescales for delivery of the benefits.

An overview of the primary steps for the **Infrastructure Programme Planning** Process are outlined in the process map shown in the figure below.
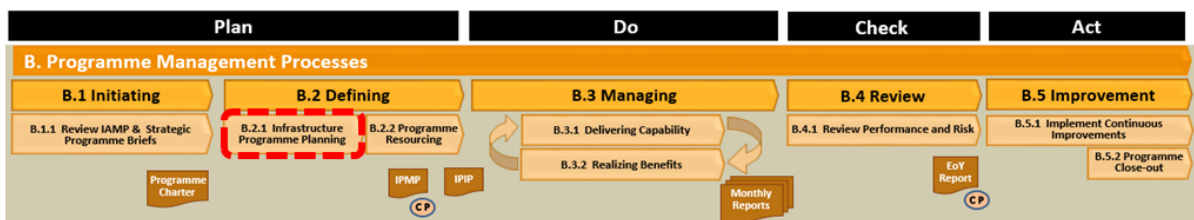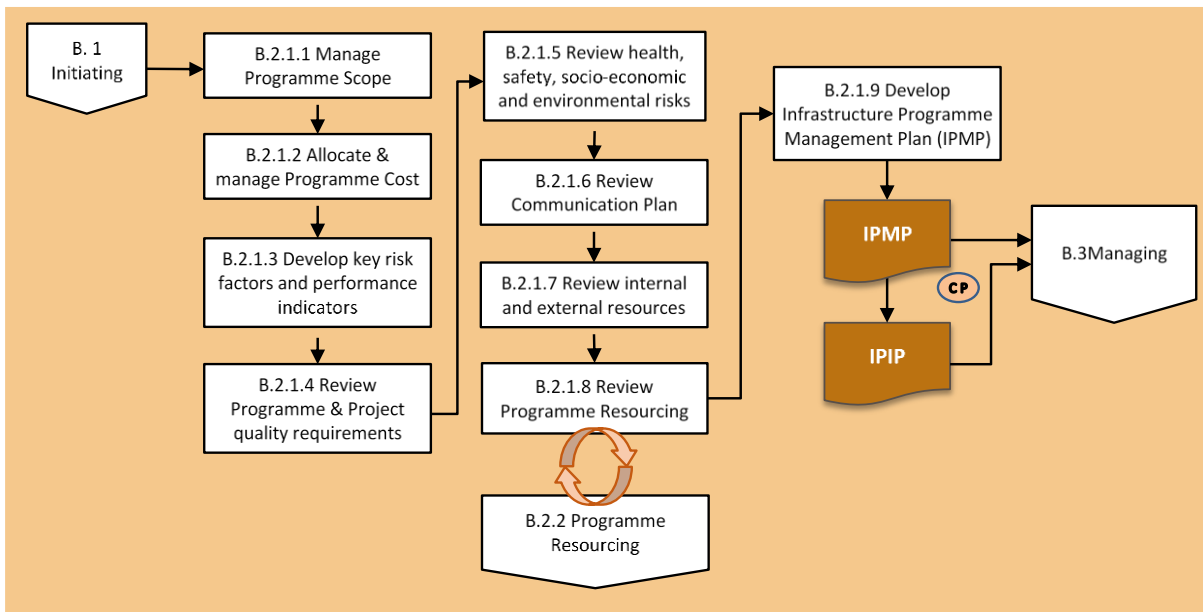
Figure 27: Process Mapping – B.2.1 Infrastructure Programme Planning

Programme Managers are required for the planning, monitoring and control of infrastructure programmes. The Programme Manager should timeously verify input information and provide consistent, timeous and accurate output data, for each infrastructure programme, which will assist the organisation to make sound decisions to achieve the available benefits

An overview of the primary steps for the **Programme Resourcing Process** are outlined in the process map shown in the figure below.
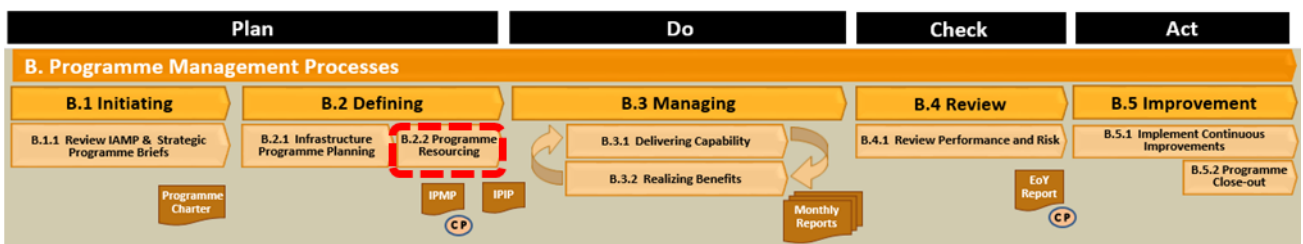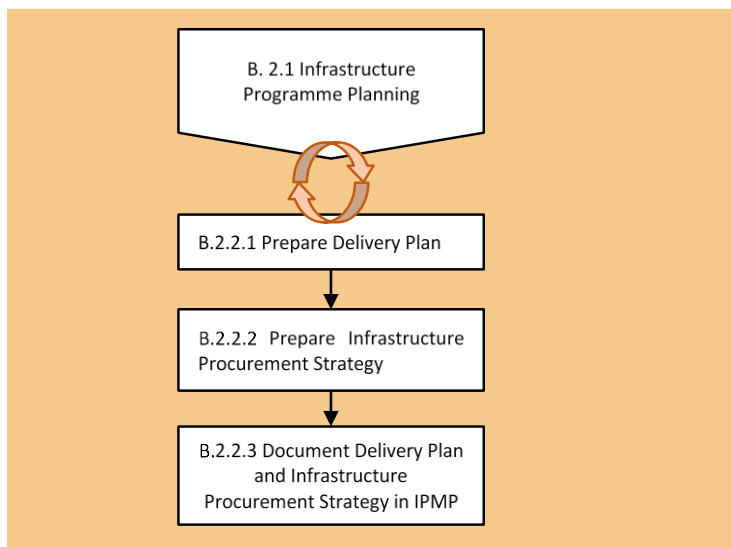
Figure 28: Process Mapping – B.2.2 Programme Resourcing

Programme Managers are required to undertake the process of Programme Resourcing, which involves the review and identification of current and future resource needs, for the organisation to achieve its infrastructure programme goals. The output of the Programme Resourcing process is a Delivery Plan and an Infrastructure Procurement Strategy, which are documented as components of the IPMP.

An overview of the primary steps for developing the Managing Infrastructure Programmes are outlined in the process map shown in the figure below.

The 'Managing' process is achieved by:

• Delivering the Capability is the process by which the Implementer initiates projects to create outputs and new capability.

• Realising the Benefits is used to ensure that the project outputs are properly embedded into 'business as usual', the required changes in operational practices and culture are achieved, and, as a result, benefits are realised and measured.

The Managing of the IPMP and IPIPs should lead to better and quicker responses to operations, maintenance and project issues, queries, approvals, etc. These benefits will contribute greatly to the efficiency of the management processes and to improved coordination and control of the projects in the infrastructure programme.
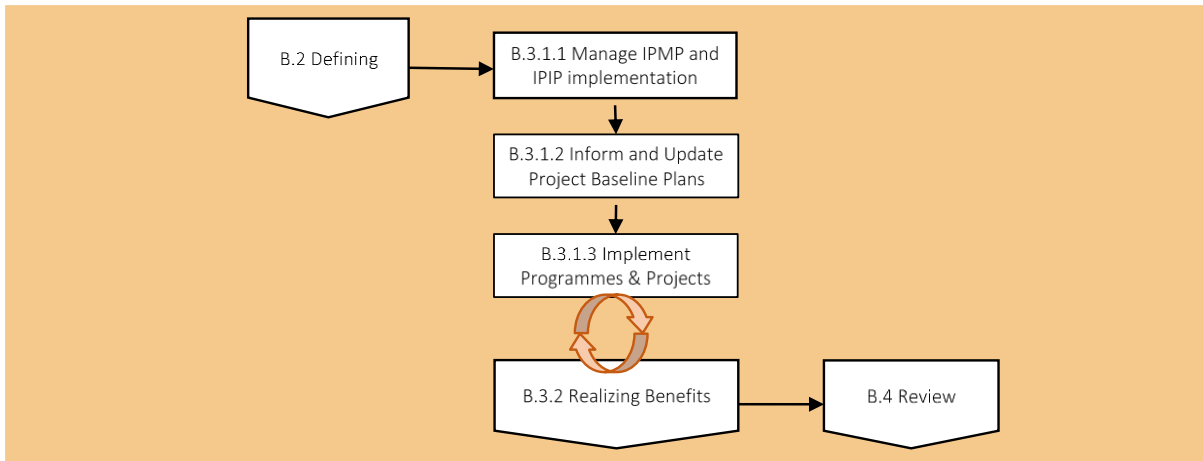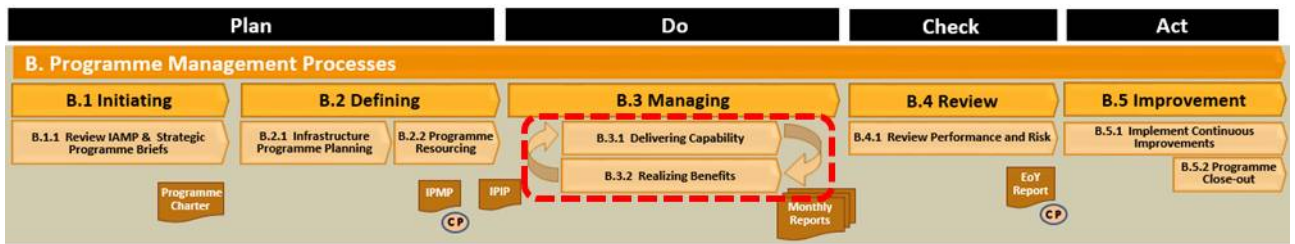
Figure 29: Process Mapping – B.3.1 Delivering Capability

Delivering capability aims to balance the programme implementation primary and secondary objectives, with the sustainable use of current capabilities, and the development of future capabilities.

An overview of the primary steps for **Realizing Benefits** are outlined in the process map shown in the figure below.
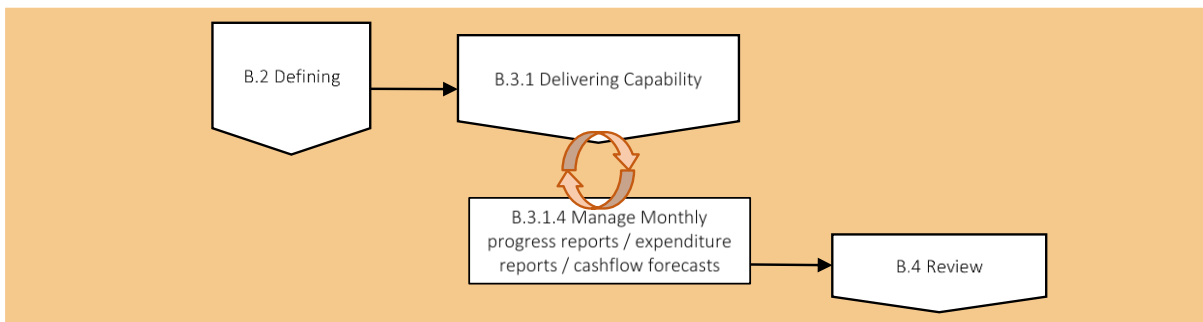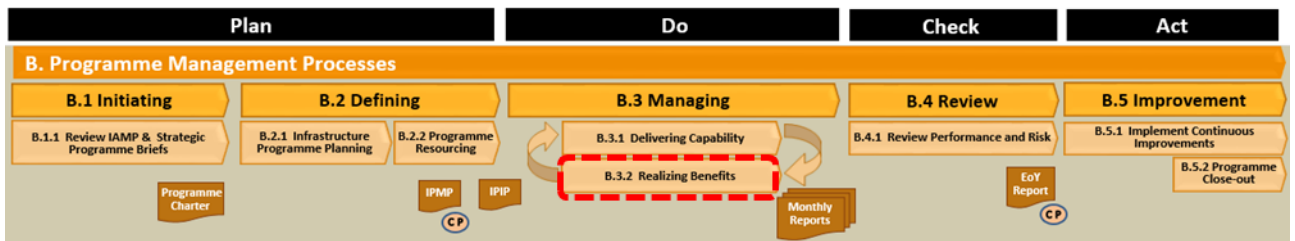
Figure 30: Process Mapping – B.3.2 Realizing Benefits

Benefits realisation is the process for the identification, definition, tracking, realisation and optimisation of benefits ensuring that potential benefits arising from a programme of change are realised. Measurable improvement resulting from an outcome which is perceived as an advantage by a stakeholder (Managing Successful Programmes (MSP)).

An overview of the primary steps for conducting the Review are outlined in the process map shown in the figure below.
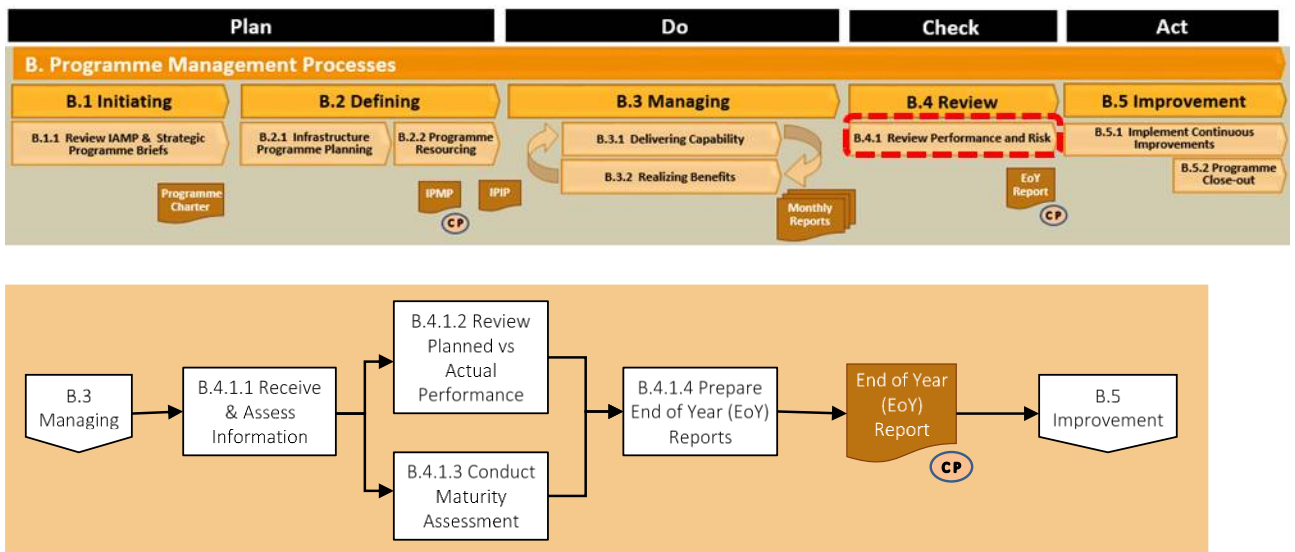
Figure 31: Review Performance and Risk

The IAMP and IPMP should provide a description of each programmes key risk factors and Key Performance Indicators (KPIs). These factors and indicators should be both programme and project specific, and should be reported against throughout the infrastructure delivery programme and reviewed.

The review of the risks and performance indicators are important information to be fed through to the whole system to ensure continuous improvement.

An overview of the primary steps for developing the **Improvement Process** are outlined in the process map shown in the figure below.
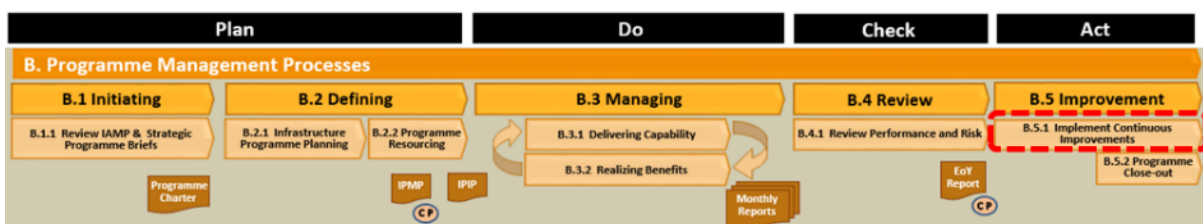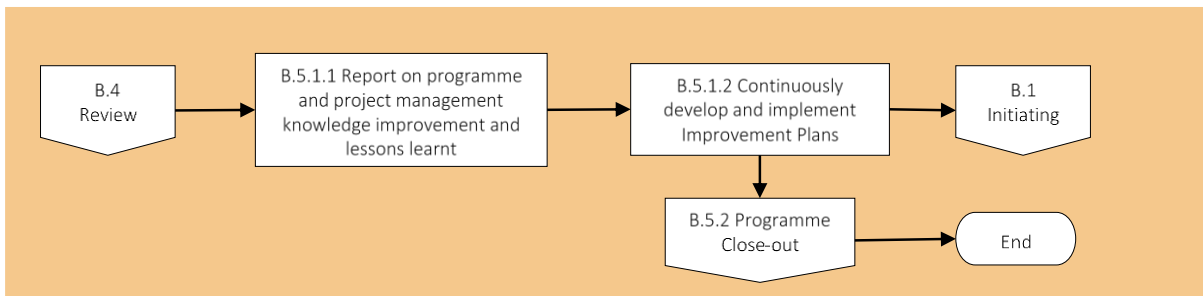
Figure 32: Process Mapping – B.5.1 Implement Continuous Improvement

The 'Improvement' process is focused on variations to the achievement of deliverables of time, cost, quality and communications, understanding why and how these variations occurred, and then planning to take advantage of these variations, or recover from the variations; and serves to inform other and future programme planning.

Improvement is also used to also identify gaps in performance, what caused them, what are the impacts, and then recommend appropriate action

Programme Management involves a continual review, assessment and improvement process, whereby the outcomes of the infrastructure programmes are evaluated and reviewed against the strategic programme objectives and deliverables. The objective is to recommend programme improvements back into the full IDM System.

An overview of the primary steps for developing the **programme Close-out** are outlined in the process map shown in the figure below.
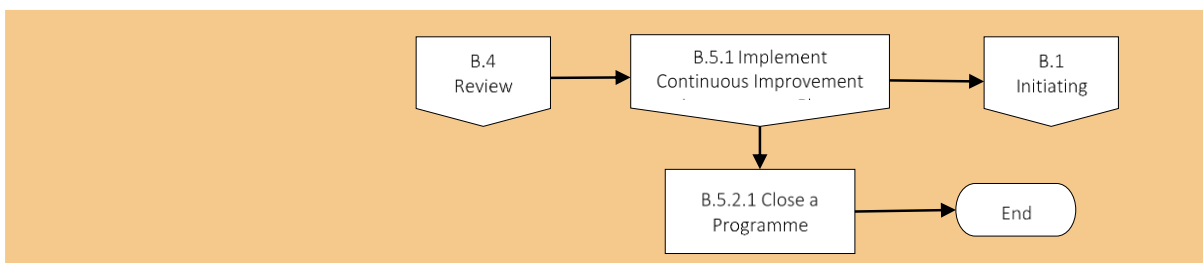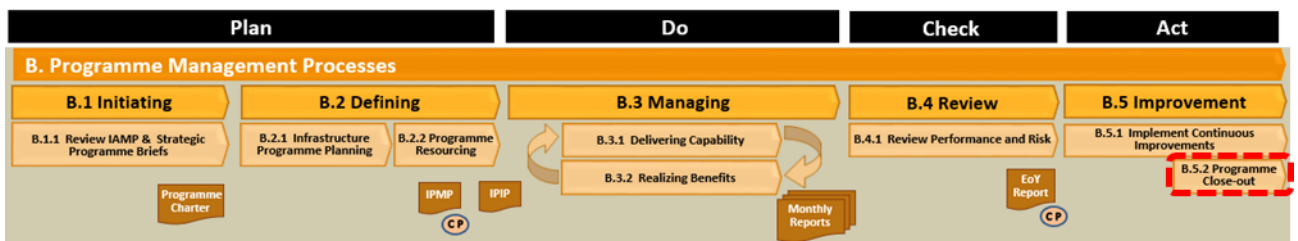

Figure 33: Process Mapping – B.5.2 Programme Close-out

The objective of the Programme Close-out is to Close-Out is document the processes carried out during the programme life-cycle.

The **'Closing the Programme'** process is implicit in the 'Improvement' process, and is usually initiated when programmes have been delivered, and benefits have materialized to a sufficient degree to satisfy the programme's objectives. However, benefits realisation and measurement activities, as well as documenting of lessons learnt for application in future programmes, continue after the programme has closed.

Operations and Maintenance Management Processes

The International Infrastructure Management Manual (IIMM) defines Operations as

- "The active process of utilising an asset which will consume resources such as manpower, energy, chemicals and materials".

The National Immovable Asset Maintenance Management (NIAMM) Standard defines Maintenance as

- "All actions intended to ensure that an asset performs a required function to a specific performance standard(s) over its expected useful life by keeping it in as near as practicable to its original condition, including regular recurring activities to keep the asset operating, but specifically excluding renewal".

The planning process requires the performance and condition of an immovable asset to be assessed. Performance relates to the ability of the immovable asset to meet target levels of service, while the condition of the immovable asset reflects the physical condition of the asset.

Key to this planning process is information on financial, technical and operational performance of the immovable asset over time. Such information must be supplemented with physical condition assessments.

The Operations Management Plan and the Maintenance Management Plan (of a Facility/IA Network), are core components of a Lifecycle Plan, and focus on how the facility/IA Network level activities will be implemented or operationalised.

The Operations Management Plan and the Maintenance Management Plan should include specific numbers, deadlines, staffing decisions, and other information that details who, what, when, where, and how, the Operations Management Plan and the Maintenance Management Plan will be operationalised, to achieve the infrastructure asset management objectives.

Both the Operational Plan and the Maintenance Management Plan should therefore be continuously updated

The objective of the Planning Process is to review the Operations Management Plan and the Maintenance Management Plan based on verified changes to an updated Facility/Network Asset Register and updated IAM strategy/objectives.
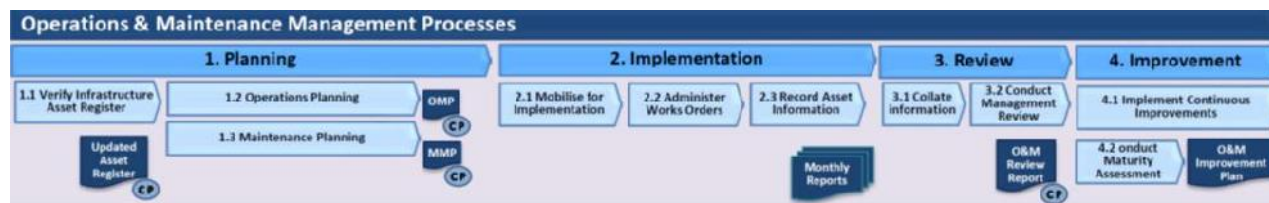
Table 6: O&M Planning Processes

No.	Process	Definition	Description	Inputs	Outputs
C.1.1	Verify Infrastructure Asset Register	The purpose of the Infrastructure Asset Verification process is to ensure that changes to the infrastructure asset configuration (components) have been recorded in the Infrastructure Asset Register.	**Step 1:** Review current IA Register. **Step 2:** Verify that recent renewals, replacement, extensions and additions have been recorder on the IA Register. **Step 3:** Note components to be added to the maintenance schedule.	• Existing Facility/Network Infrastructure Asset Register. • Existing List of Components per Facility/Network.	• Updated Facility/Network Infrastructure Asset Register. • Updated List of Components per Facility/Network.
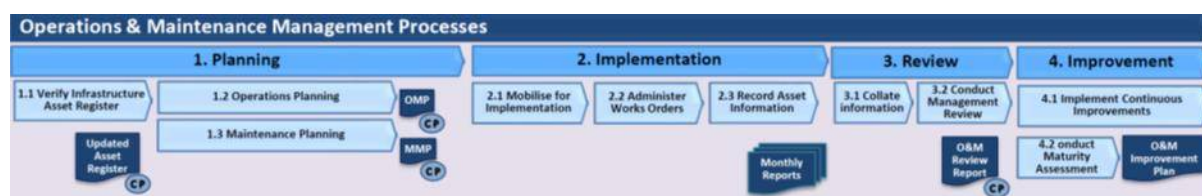
The objective of Implementation Process is to implement the Operations and Maintenance Management Plans for a Facility or Network of Infrastructure Assets.

The implementation of the Operational Plan and the Maintenance Management Plan, requires the assignment of O&M jobs to specific individuals or contractors, and the corresponding allocation of materials required for the O&M jobs.
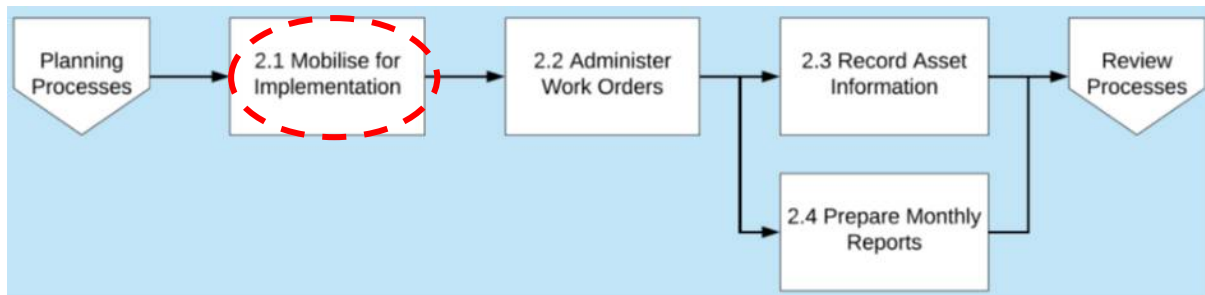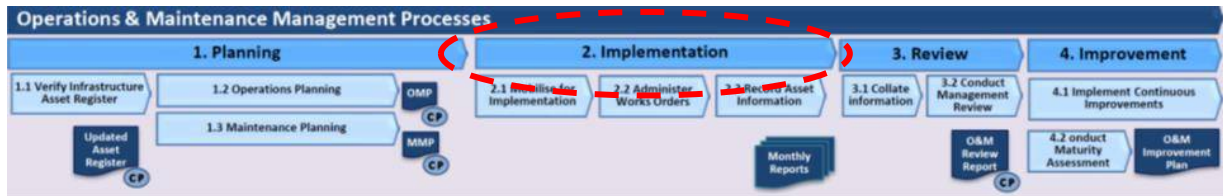
Figure 34: O&M Implementation Processes

The objective of Mobilisation Process is to prepare for the implementation of the Operations and Maintenance Management Plans for a Facility or Network of Infrastructure Assets.
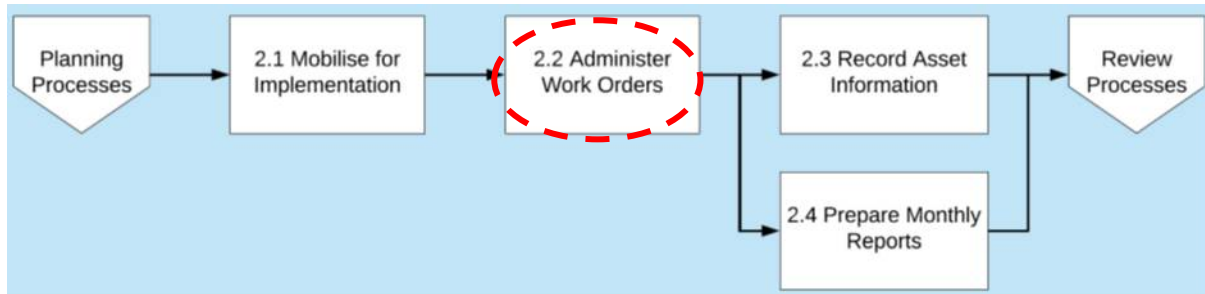
The objective of Work Order Administration Process is to issue and monitor execution of Works Orders for Operations, Preventative, Corrective and Emergency Maintenance as and when required.
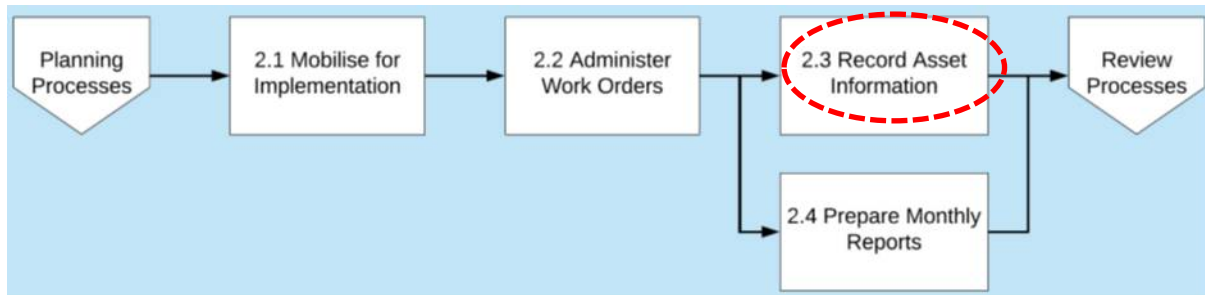
The objective of the Record Asset Information Process is to record scope, time and cost information on the IA Register
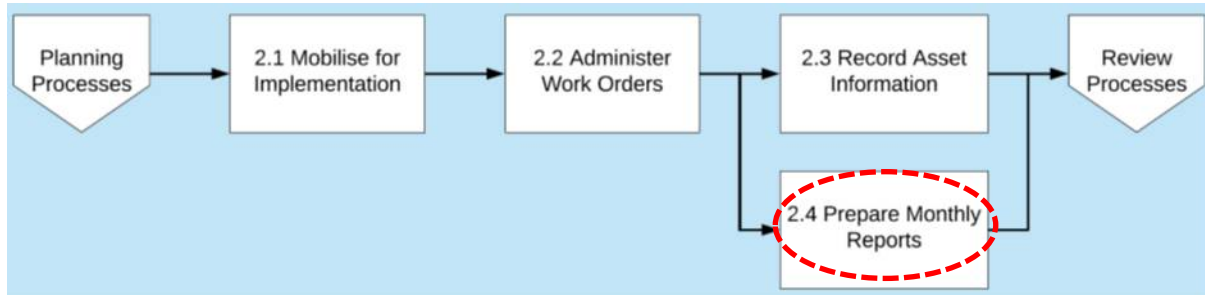
The objective of the Monthly Progress and Expenditure Reports and Cashflow Forecasts Preparation Process is - for Facility/Network Managers - to report - to the Operations and Maintenance Programme Managers respectively - on the actual progress and expenditure against the scheduled O&M activities.
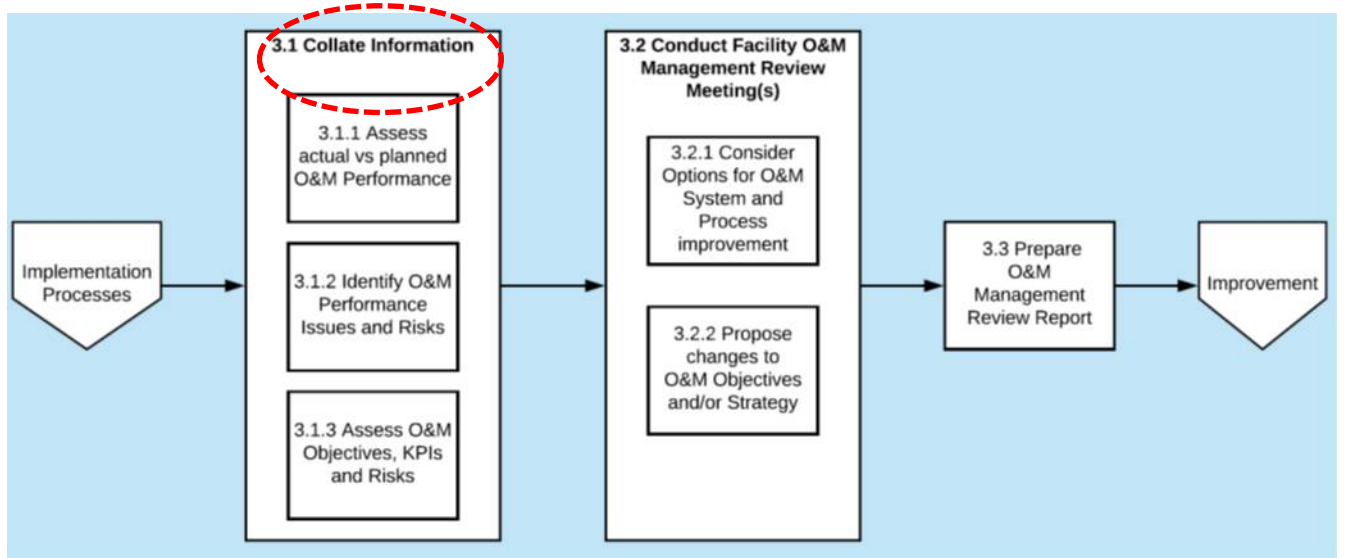
Figure 35 : Review Processes

The objective of the Collate Performance and Risk Information Process is to collate and analyse the documented O&M performance and risk information for consideration in the Management Review Meeting(s).
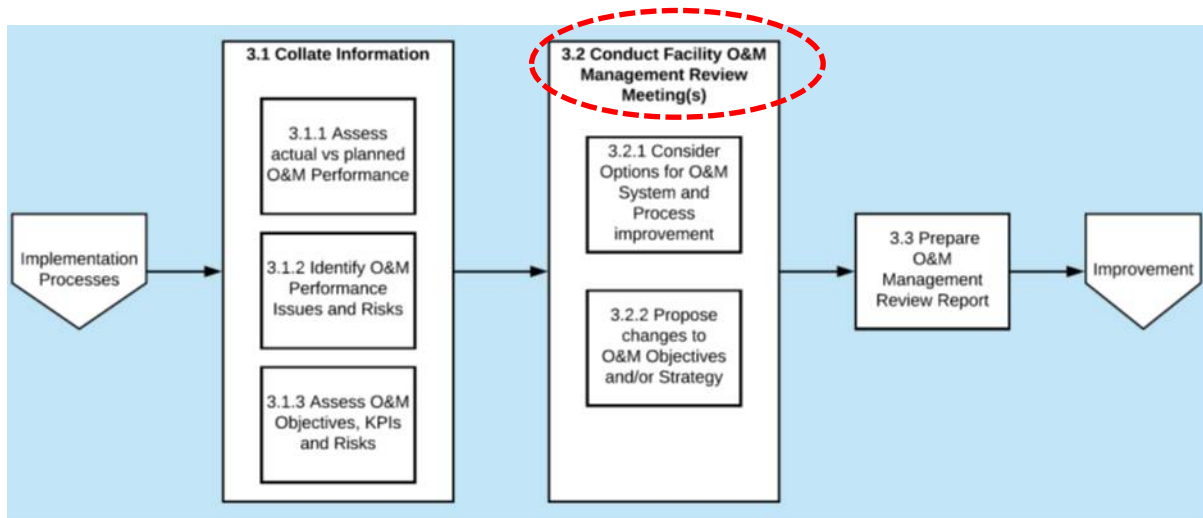
The objective of the Management Review Meeting Process is for management to review, at planned intervals, the O&M of the facility or IA network of assets, the O&M management system and O&M activities, as well as the operation of its O&M policy, objectives and plans, to ensure their suitability, adequacy and effectiveness.
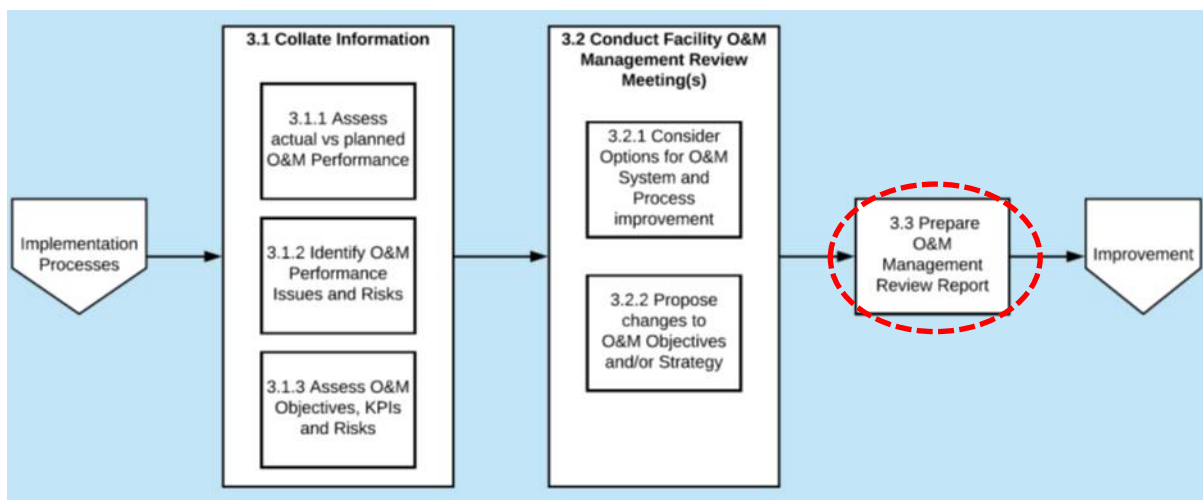
The objective of the Compile O&M Management Review Report process is to document the findings of the O&M management review. It includes reporting on the reviewed O&M objectives and/or KPIs, reviewed O&M Risk Register as well as proposed adjustments to the OMP and MMP.

The objective of the Improvement Process is to identify, assess and implement opportunities for improving the management of operations and maintenance of infrastructure assets at facility or network level.
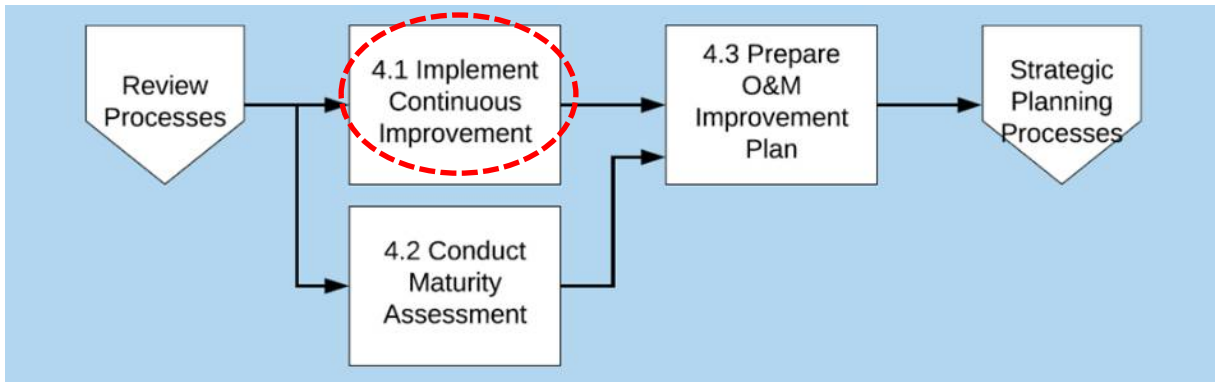
Figure 36: Improvement Processes

The 'Identify Continuous Improvement opportunities' process is aimed at the continuous and incremental improvement of the O&M management system and processes at facility/network level.
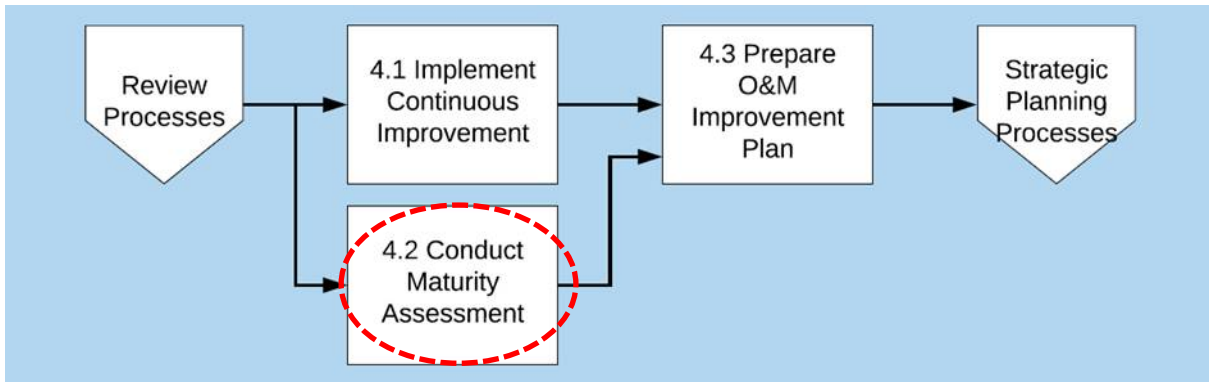
The 'Conduct Facility/Network O&M Management Maturity Assessment' process is aimed at the periodic maturity assessment of the O&M management processes at Facility/Network level against an agreed Maturity Index to identify opportunities for improvement of the O&M management system and/or processes.
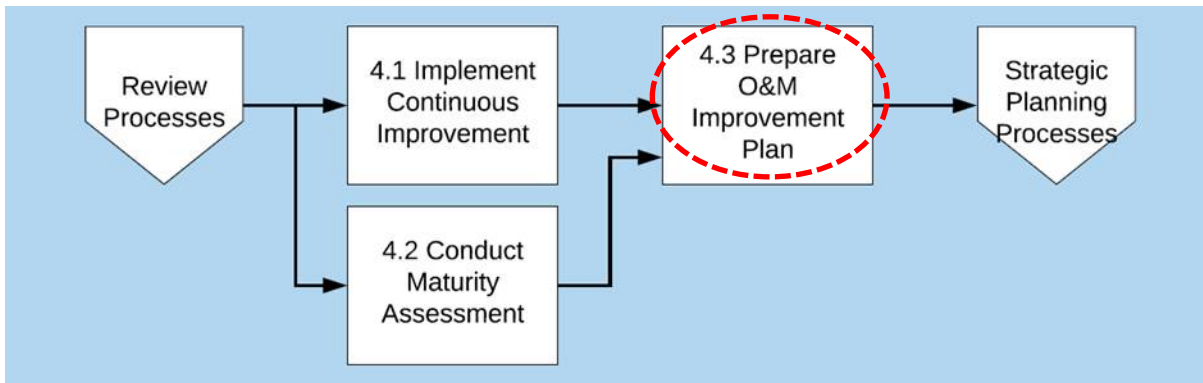
Continuous and maturity-based improvement processes should result in the updating of Improvement Plans. Improvement Plans should serve as an input document for the review of the O&M strategies and objectives.

Project Management Processes

A project is defined as "a unique set of processes, consisting of coordinated and controlled activities with start and end dates, performed to achieve the project objective. Achievement of the project objectives requires the provision of deliverables conforming to specific requirements".

Project management is defined as "the application of methods, tools, techniques and competencies to a project".

An overview of the primary steps for the Initiation Stage is outlined in the process maps shown in the figure below.
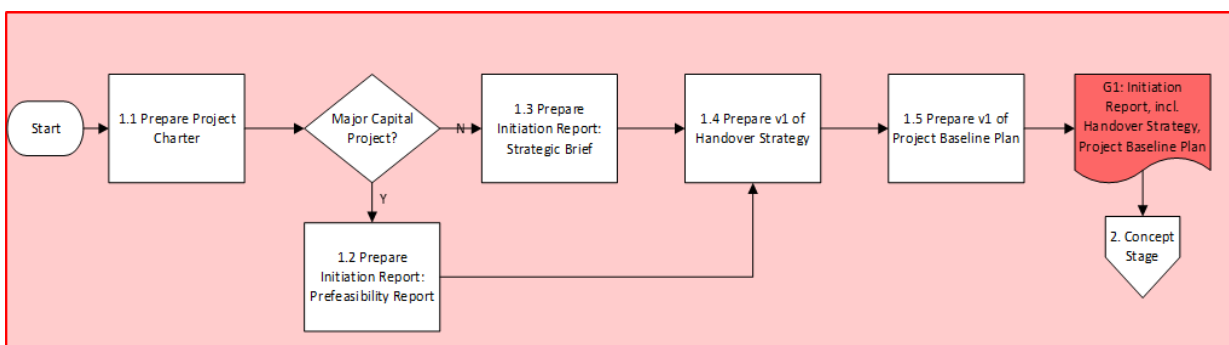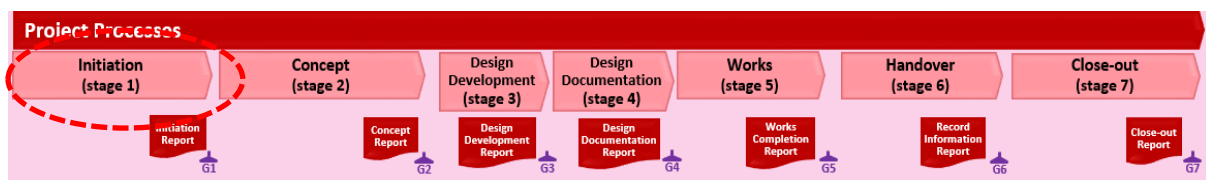
Figure 37: Process Map – Initiation (Stage 1)

The objective of the Initiation Stage is to develop, and obtain approval of, the Initiation Report. It should be noted, however, that this Initiation Report is different to the Project Proposals, that are developed as part of the Asset Portfolio Analysis in the Portfolio Management Processes. At that point, the project is not yet approved as a project – it needs to still go through an analysis and approval process, and thereafter, if approved, put into a programme as a project for Implementation in specifically designated years.

An overview of the primary steps for the Concept Stage are outlined in the process maps shown in the figure below.
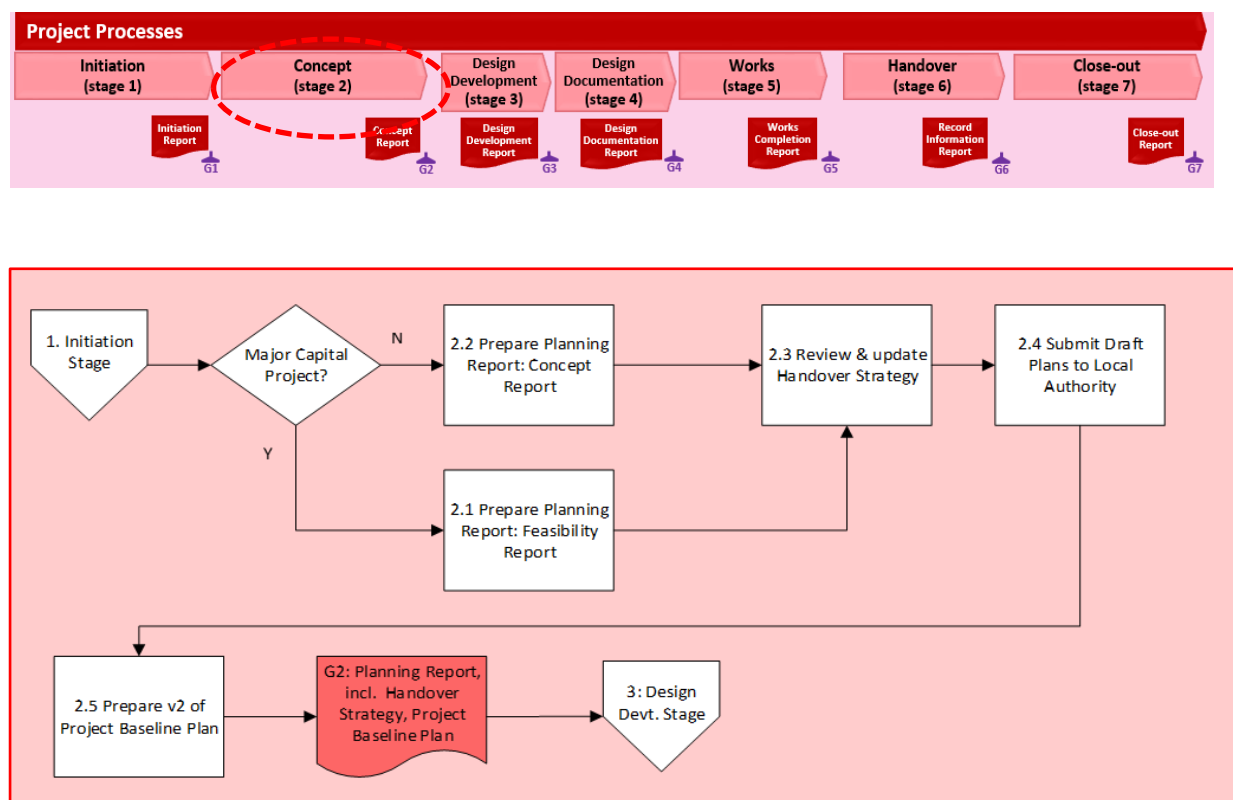
Figure 38: Process Map – Concept (Stage 2)

The Concept Stage Process represents an opportunity for the development of different design concepts, to enable the client to establish the feasibility of satisfying the project requirements, as developed during Stage 1. It also presents, through the testing of alternative approaches, an opportunity for the Client to select a particular conceptual approach. The ultimate objective of this stage is to **determine whether the project is viable to proceed,** with respect to available budget, technical solutions, time-frame etc. This is documented in the Stage 2 deliverable, namely the **Concept Report,** or in the case of a major capital project, the **Feasibility Report.** The development of the Stage 2 deliverable is the

responsibility of the Implementer and is normally carried out by the contractor or PSP (depending upon chosen contracting strategy), appointed on the behalf of the implementer.

An overview of the primary steps for the **Design Development Stage** are outlined in the process maps shown in the table below.
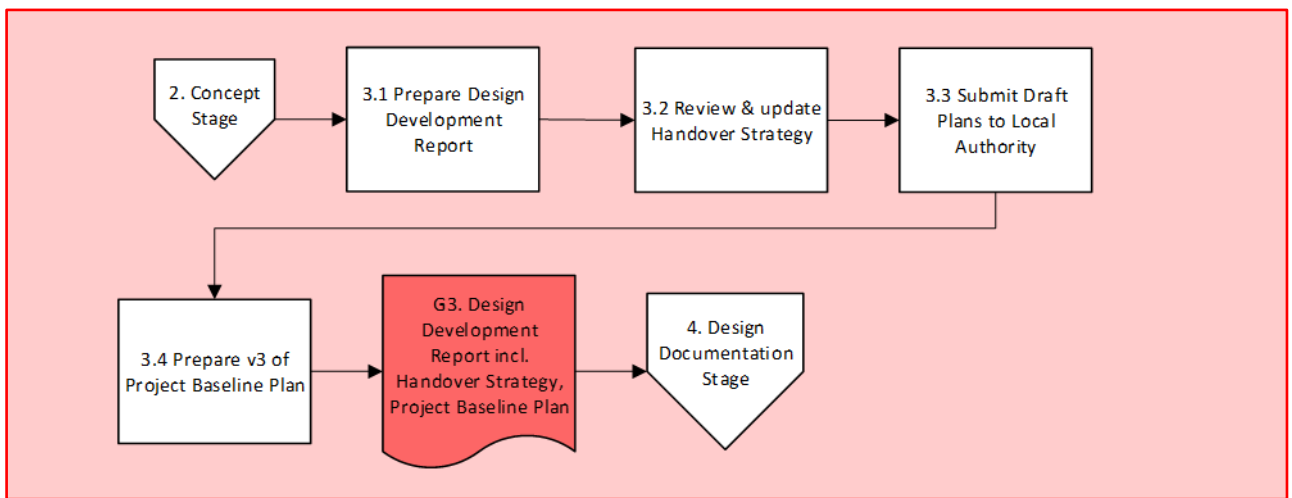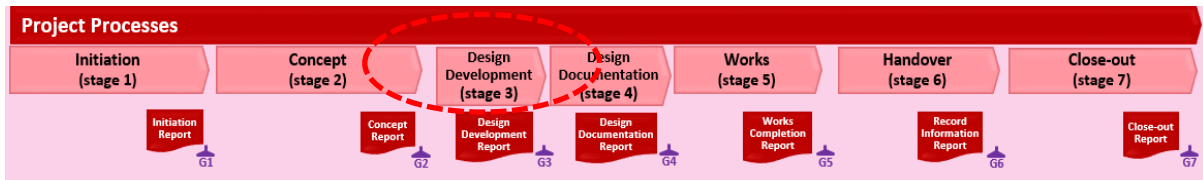
Figure 39: Process Map – Design Development (Stage 3)

The objective of the Design Development stage is to develop, in detail, the approved concept, to finalise the design and definition criteria, to set out the integrated developed design, the cost plan, and the schedule for the project; and ultimately, to obtain approval of the **Design Development Report** (including the updated Handover Strategy and Project Baseline Plan). Stage 3 is the responsibility of the Implementer, and is normally carried out by the contractor or PSP (depending upon chosen contracting strategy), appointed on its behalf.

An overview of the primary steps for the **Design Documentation Stage** are outlined in the process maps shown in the figure below.
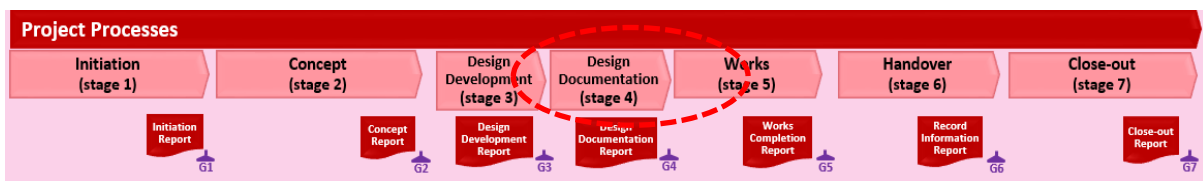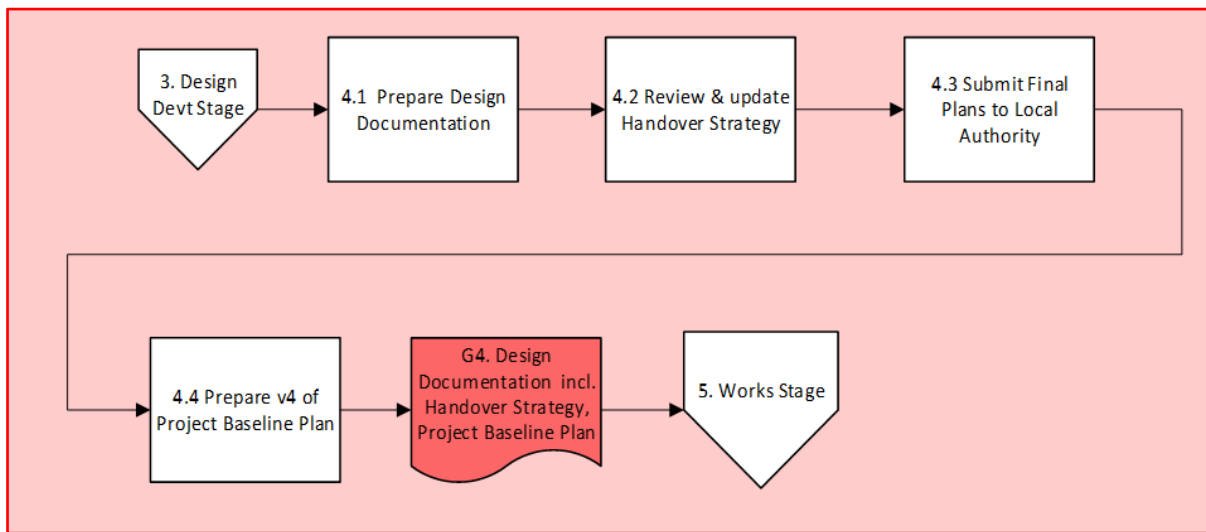
Figure 40: Process Map – Design Documentation (Stage 4)

The objective of Stage 4 is to provide the detailing, performance definition, specification, sizing and positioning of all systems and components that would enable construction, except, in certain instances, the Manufacture, Fabrication and Construction Information for specific components of the work that the contractor might only need to provide once construction has begun. This stage is the responsibility of the Implementer, and is normally carried out by the contractor or PSP (depending upon chosen contracting strategy), appointed on its behalf.

An overview of the primary steps for the Works Stage are outlined in the process maps shown in the figure below.
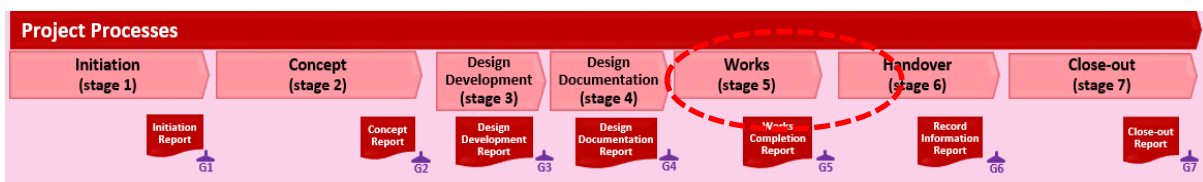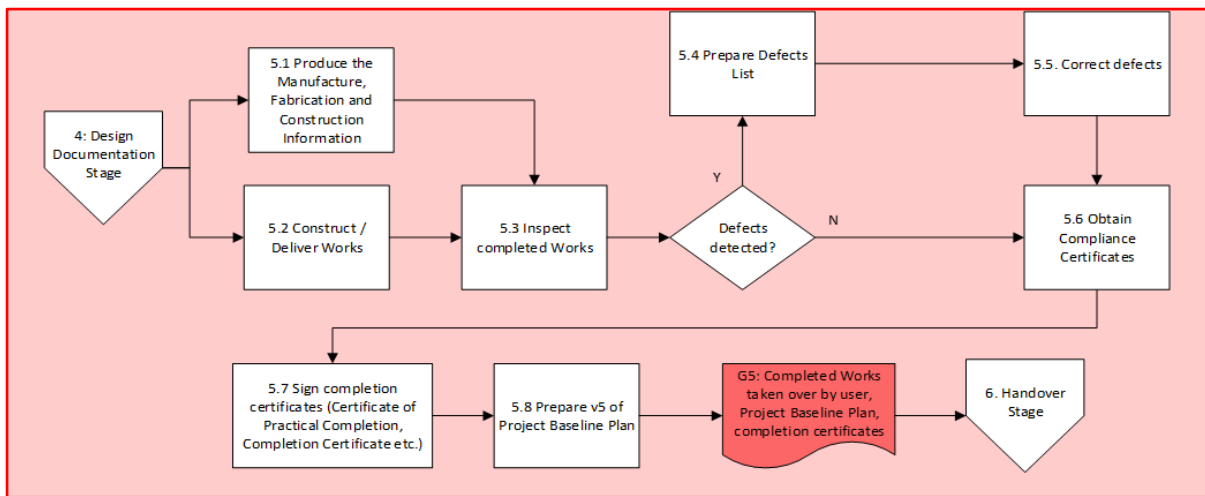
Figure 41: Process Map – Works (Stage 5)

The objective of the Works Stage is to construct or deliver the works according to the working drawings and specifications.

The Works Stage can only begin once the Design Documentation Stage has been completed, or in the case of those projects where Stages 5 and 6 have been skipped, once the Concept Report has been approved and the relevant contract signed.

An overview of the primary steps for the Handover Stage are outlined in the process maps shown in the figure below.
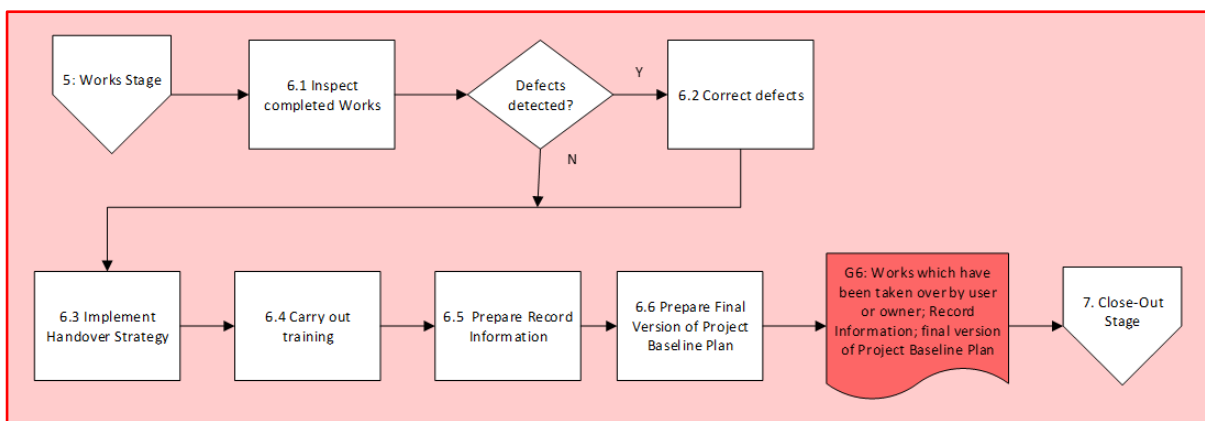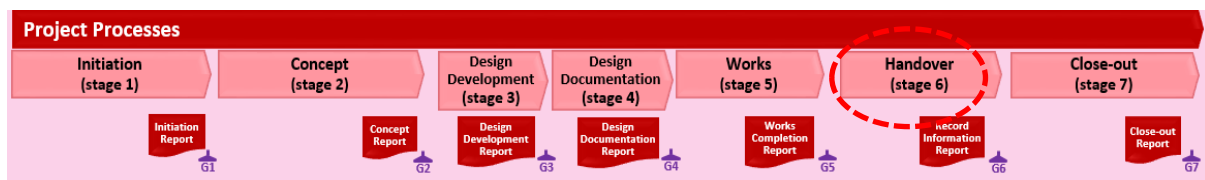
*Figure 42: Process Map – Handover (Stage 6)*

The Handover Stage commences with the issuing of the contract-specific Completion Certificate and its accompanying Works Completion List / Defects List, and is concluded once the works included on the list has been completed, and the works have been handed over to the end-user, who then accepts liability for the works going forward**;** such acceptance is **accompanied by the Record Information** (including compliance certification)**.**

An overview of the primary steps for the Close-Out Stage are outlined in the process maps shown in the figure below.
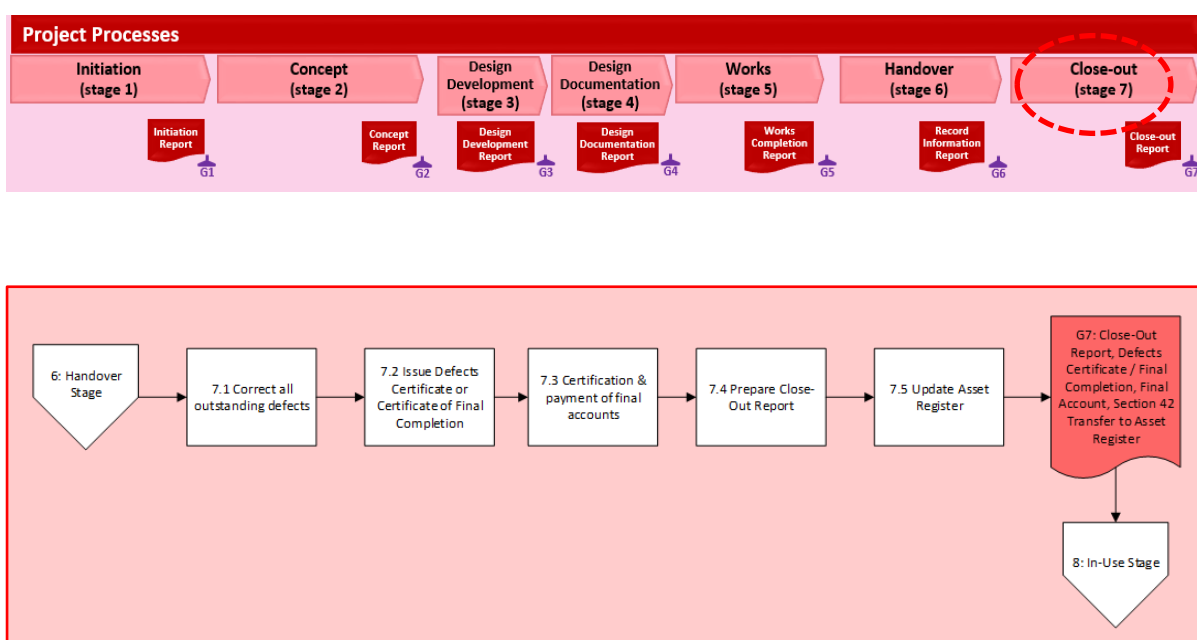
Figure 43: Process Map – Close-Out (Stage 7)

The objective of the Close-Out Stage is to formalise Final Completion of the works, in accordance with the contract.

SCM Value Chain through the Delivery Management Process's

SCM during Portfolio Management
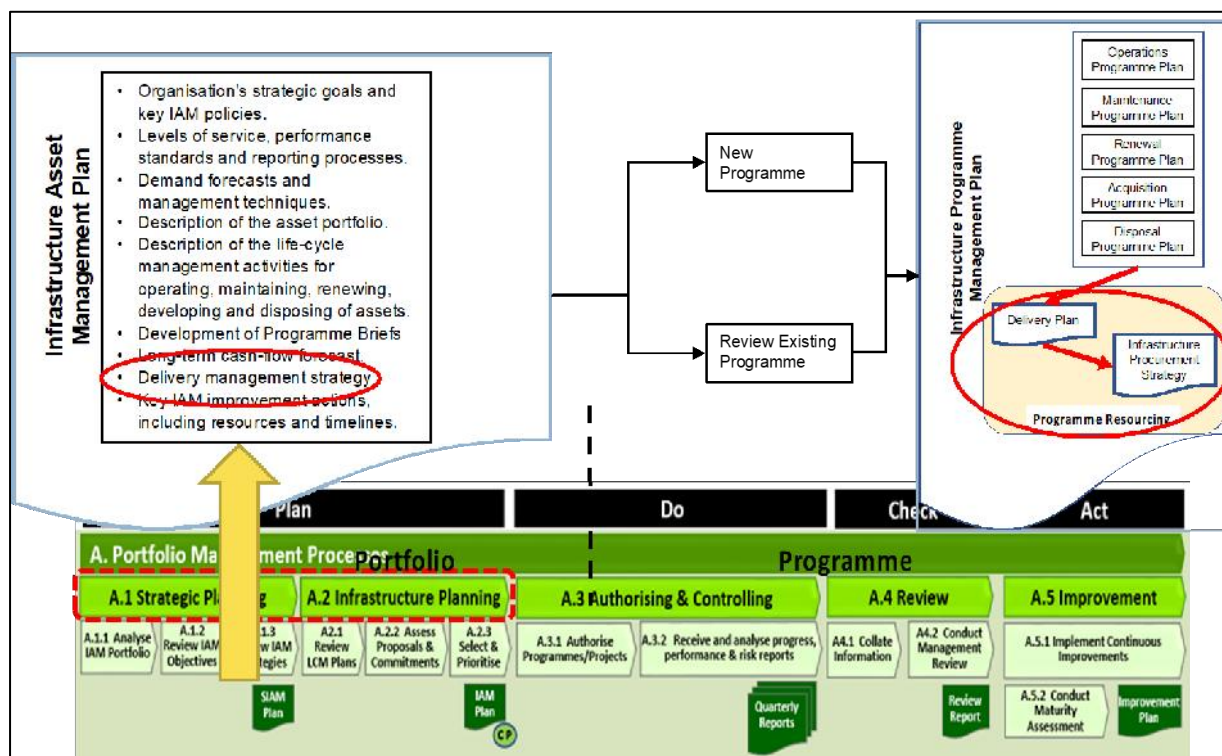
Figure 44: SCM during portfolio management

Developing a Delivery Management Strategy

Key Portfolio Level inputs:

- IAM Plan developed at portfolio management level contains:
- Review of the Resourcing Strategy
- Review of Procurement policy (see SANS 10845-1)
- Programme Brief and Prioritised project list linking needs to a forecasted budget over the MTEF
- Lifecycle management strategies for infrastructure: Operations, Maintenance, Renewals, Acquisitions, Disposals

Output:

A Delivery Management Strategy indicates how these needs are to be met for each category of expenditure and lifecycle management strategies (in form of infrastructure programmes).

Delivery Management Strategy

The Delivery Management Strategies (DMS) are aimed at:

- Providing guidance on the management of the demand for infrastructure assets
- Providing guidance on the management of strategic infrastructure risks
- Ensuring the availability of funds for infrastructure delivery
- Ensuring the timeous identification of suitably capacitated human resources for the design, construction and management of the infrastructure asset related projects and operational works

The DMS is an important input into delivery planning at programme management level.

SCM during Programme Management
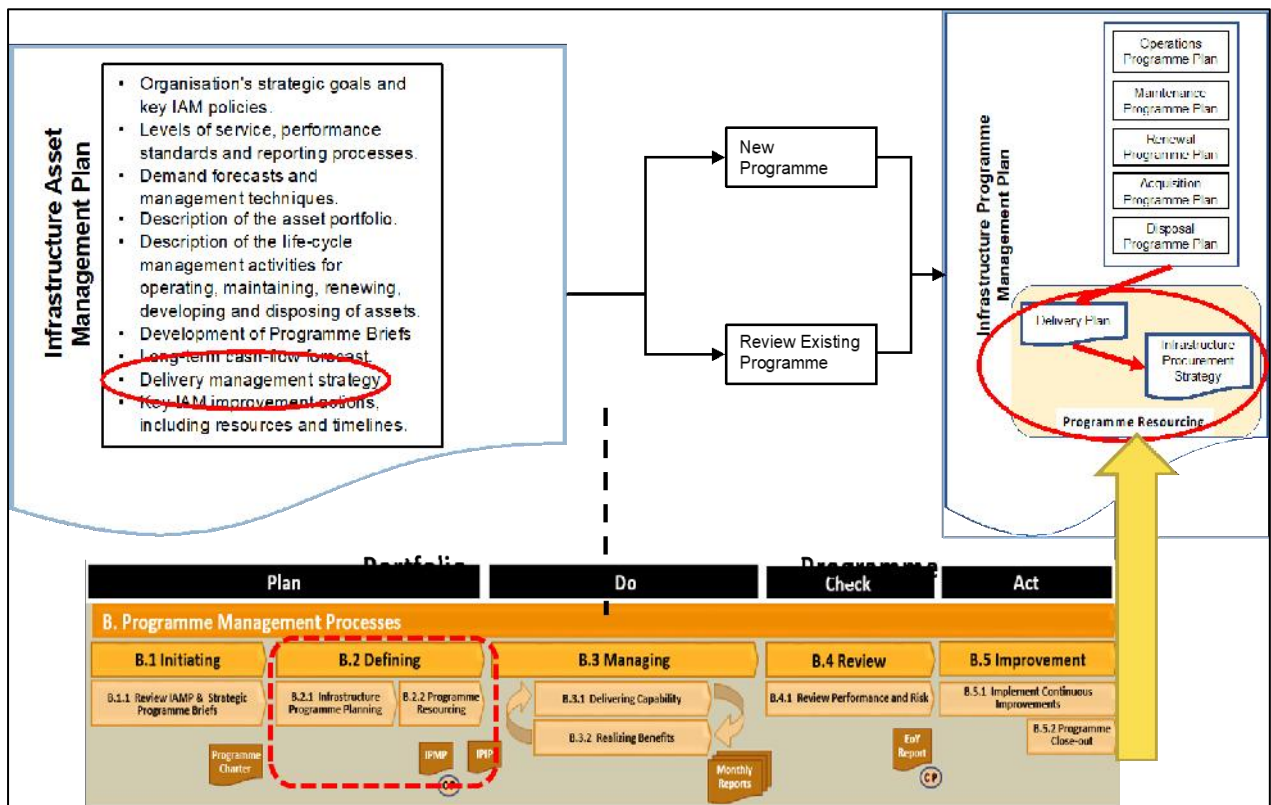
Figure 45: SCM during Programme Management
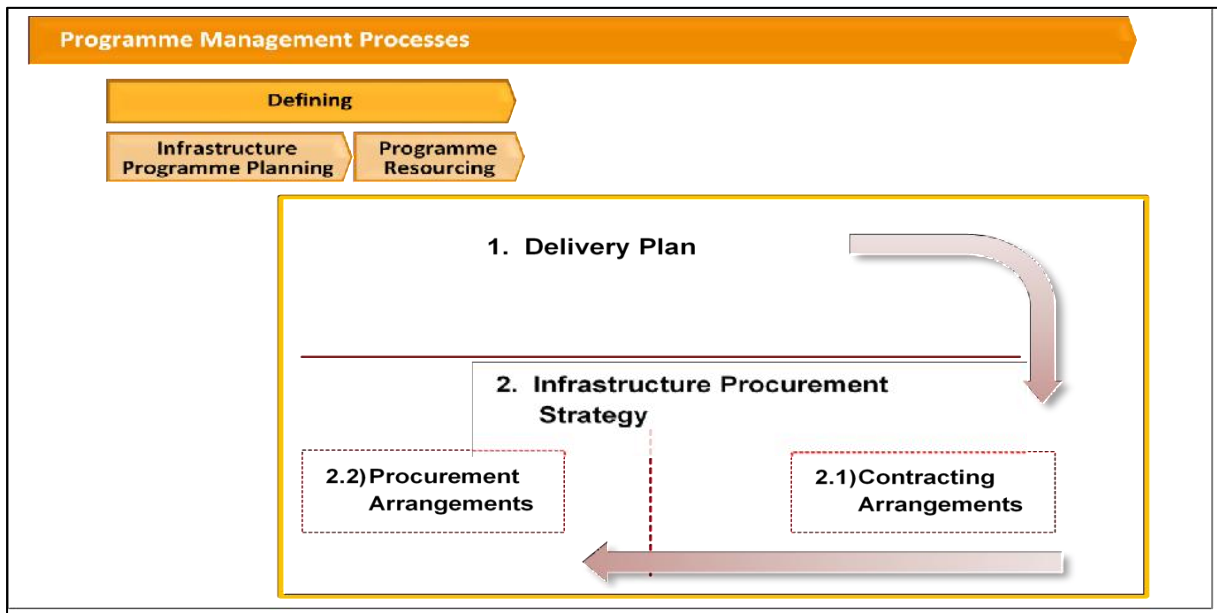
Figure 46: SCM during Programme Management
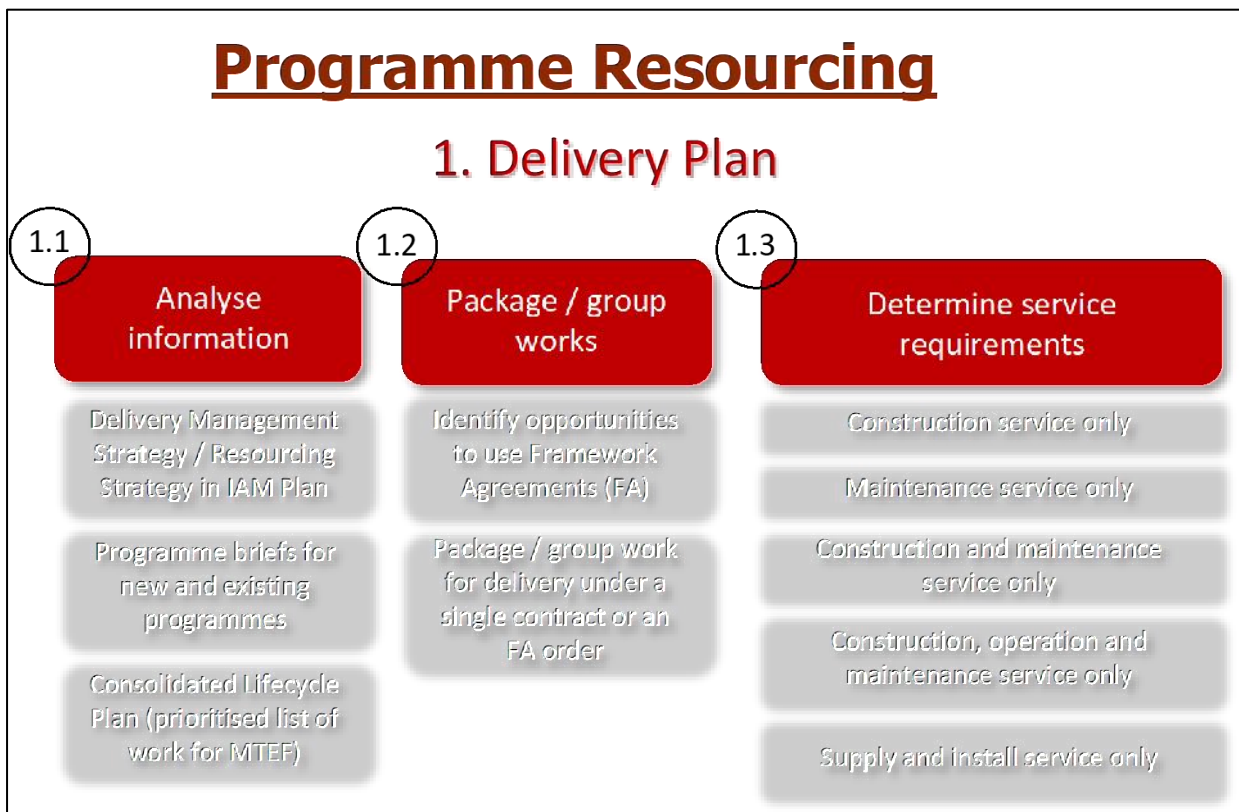
Figure 47: Programme resourcing - 1. Delivery plan

Programme Management Processes

Defining

Infrastructure Programme Planning

Programme Resourcing

1. **Delivery Plan**

2. **Infrastructure Procurement Strategy**

2.2) Procurement Arrangements

2.1) Contracting Arrangements

2.3. Procurement Arrangements for works contractor and professional services

2.3.1 Decide on quality strategy

2.3.2 Decide on procurement procedure

2.3.3 Decide on targeted procurement procedure

2.3.4 Decide on tender evaluation method

Quality strategy options*:*
- Quality criteria – select appropriate quality criteria for inclusion in procurement documentation
*CIDB's SFU 2015. sub-section 4.3: Functionality

Procurement procedure options*:*
- Negotiation procedure
- Competitive selection procedure
- Competitive negotiation procedure
*CIDB's SFU 2015, Table 1

Targeted procurement procedure options*:*
- Targeted procurement procedures – select from list of permitted targeted procurement procedures
*SIPDM 2015, sub-section 14.6.2

Tender evaluation methods*:*
- Method 1: Price and preference;
- Method 2: Functionality, price and preference
*CIDB's SFU 2015, Table 2

Strategy	Strategic brief (Stage 1)	Concept report (Stage 2)	Design development report (Stage 3)	Production information (Stage 4)
Management contractor	Employer	Contractor		
Design and construct		Employer (consultant)	Contractor	
Develop and construct		Employer (consultant)		Contractor
Design by employer		Employer (consultant)		

Figure 48: Responsibilities for stage deliverables

Procuring Contracting Strategies
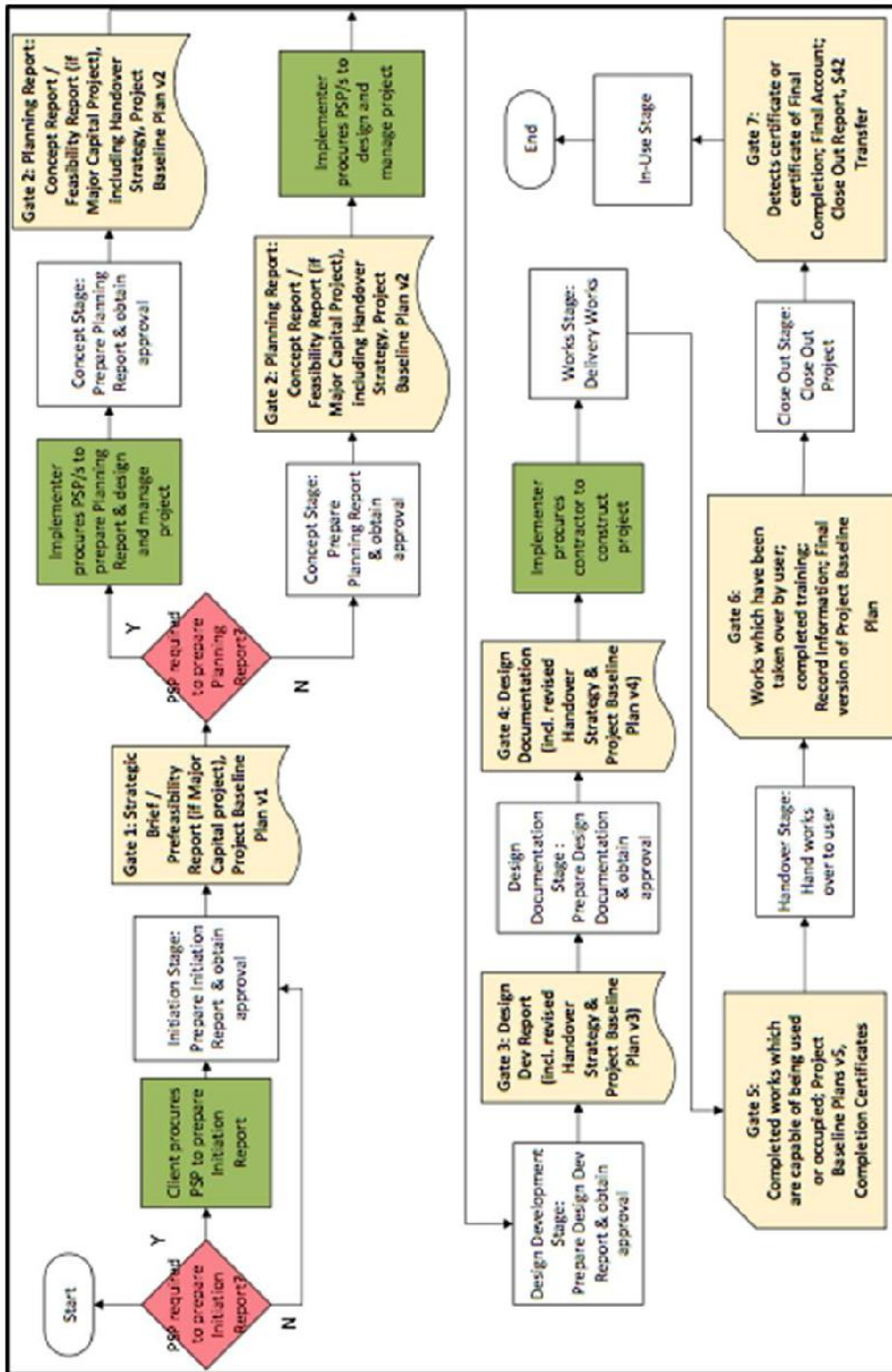
Contracting Strategy: Design by Employer
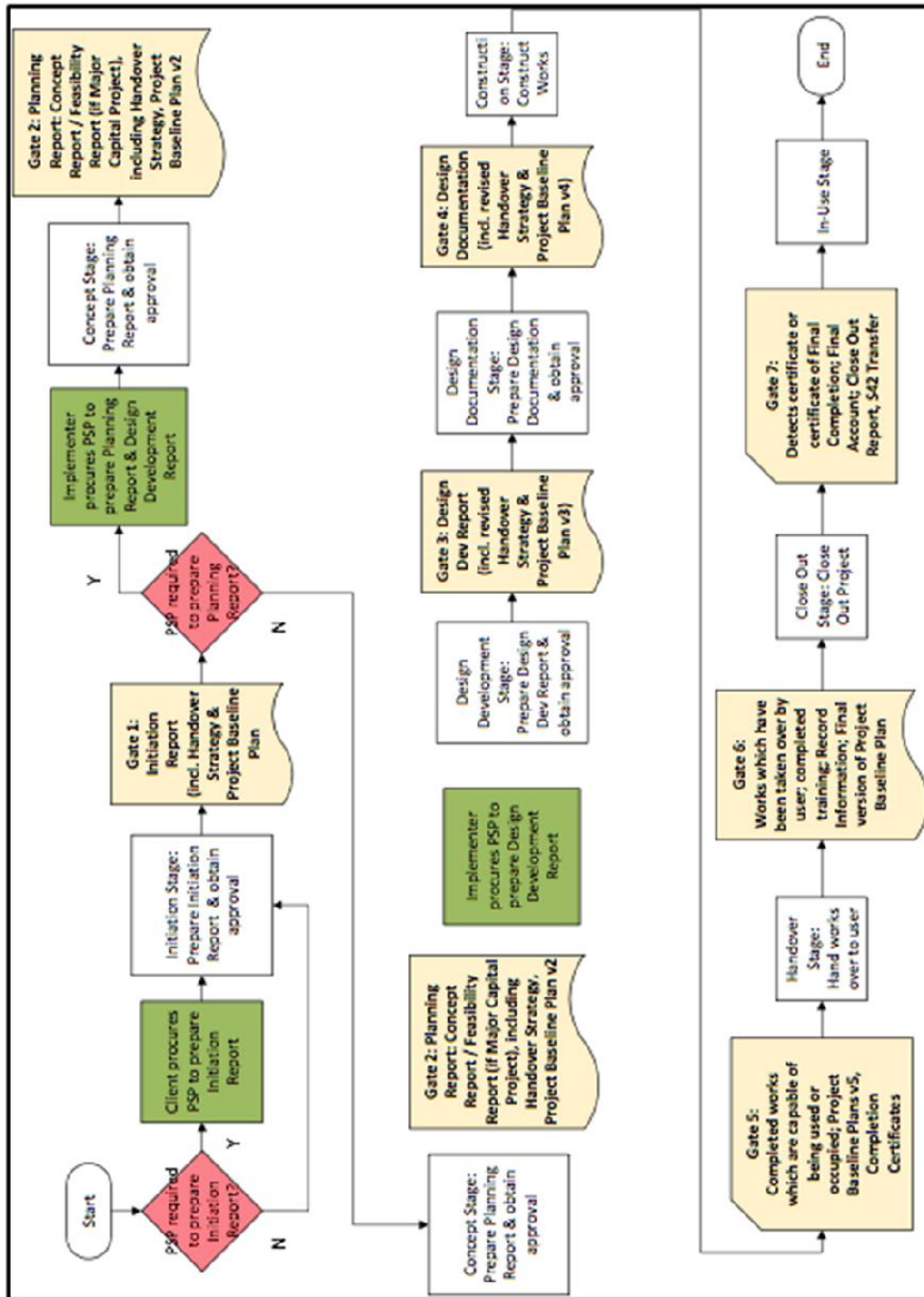
Contracting Strategy: Develop & Construct
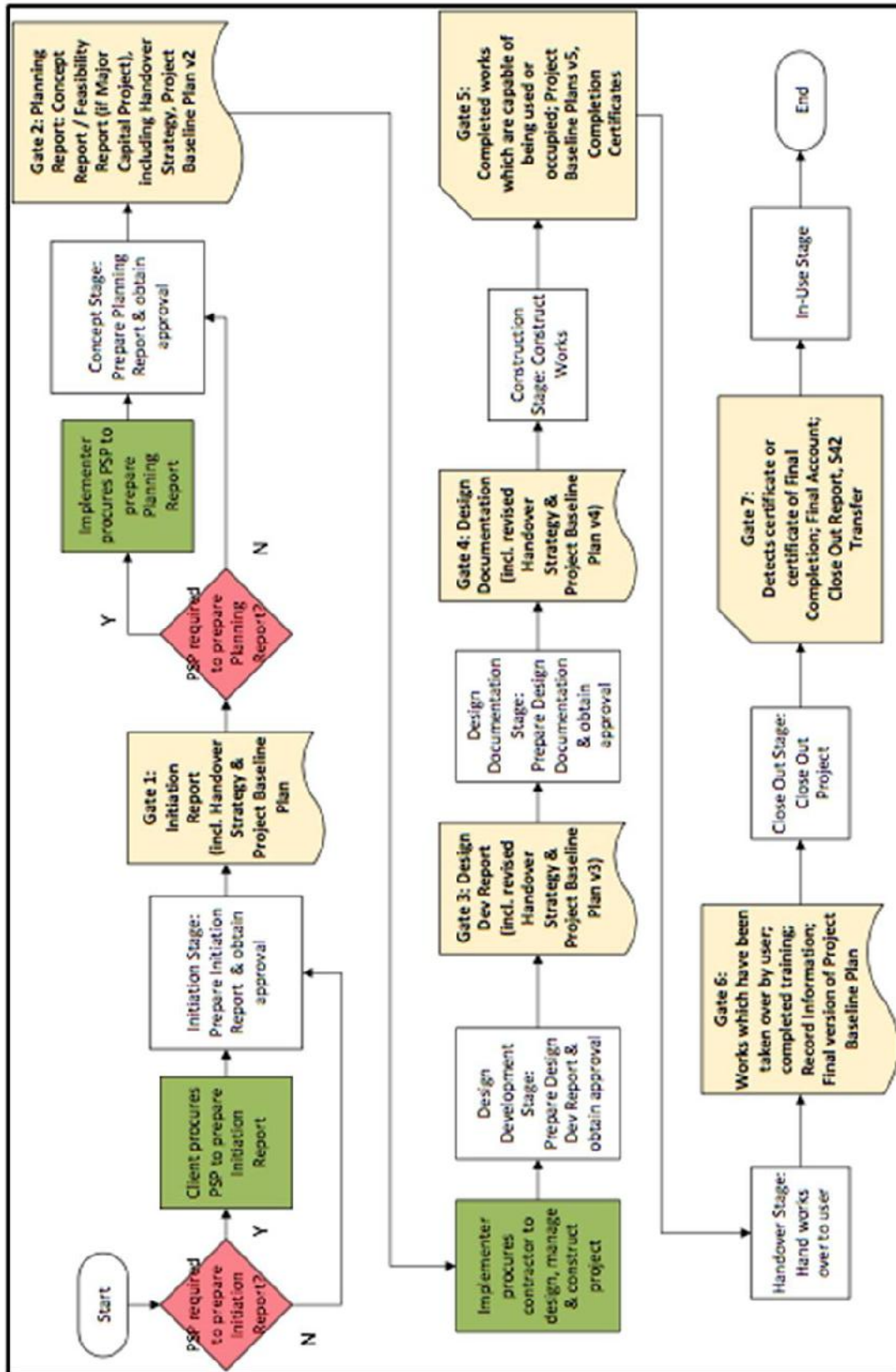
Contracting Strategy: Design & Construct
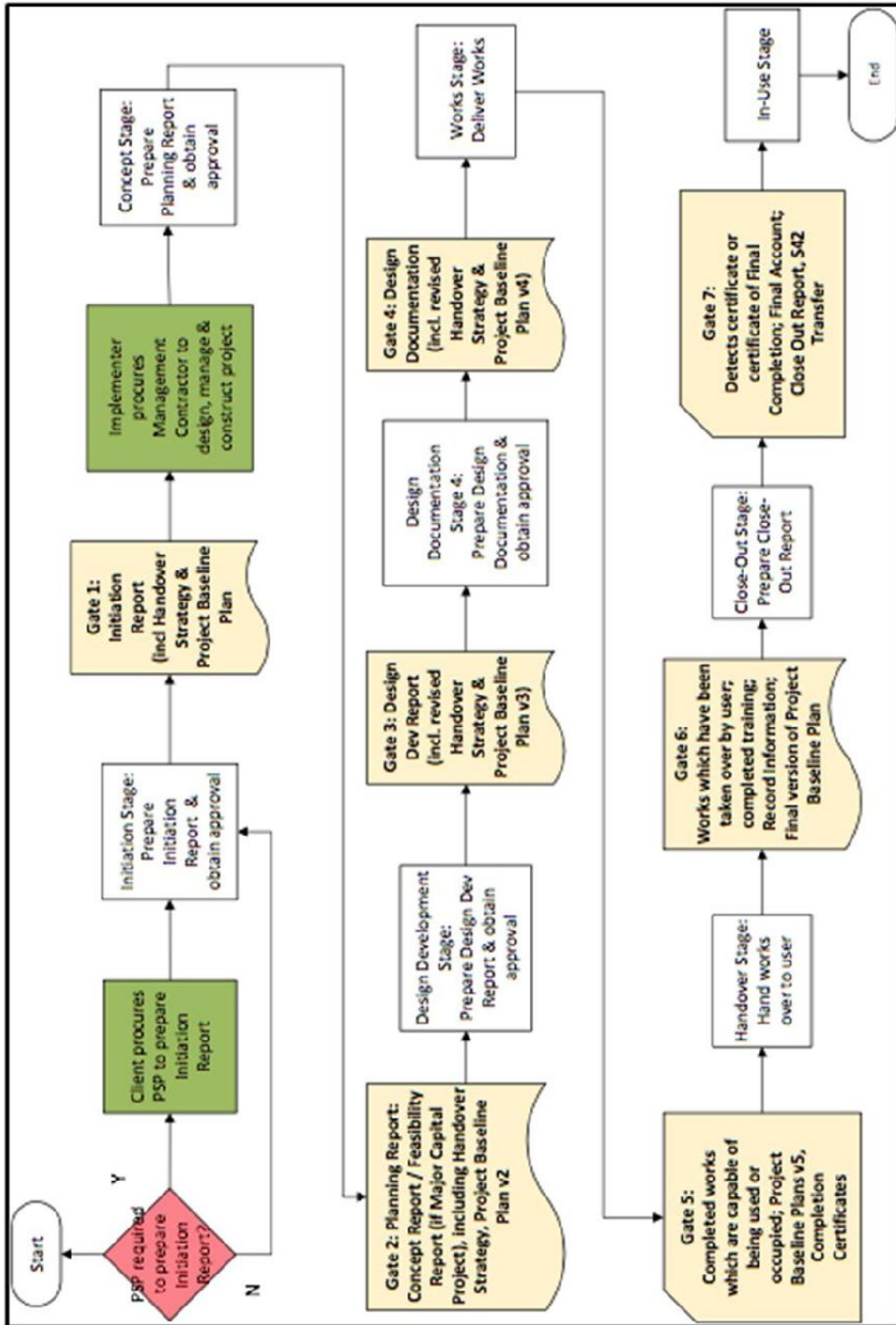
Contracting Strategy: Management Contract

MISA
Municipal Infrastructure Support Agent
REPUBLIC OF SOUTH AFRICA

Control framework for infrastructure procurement
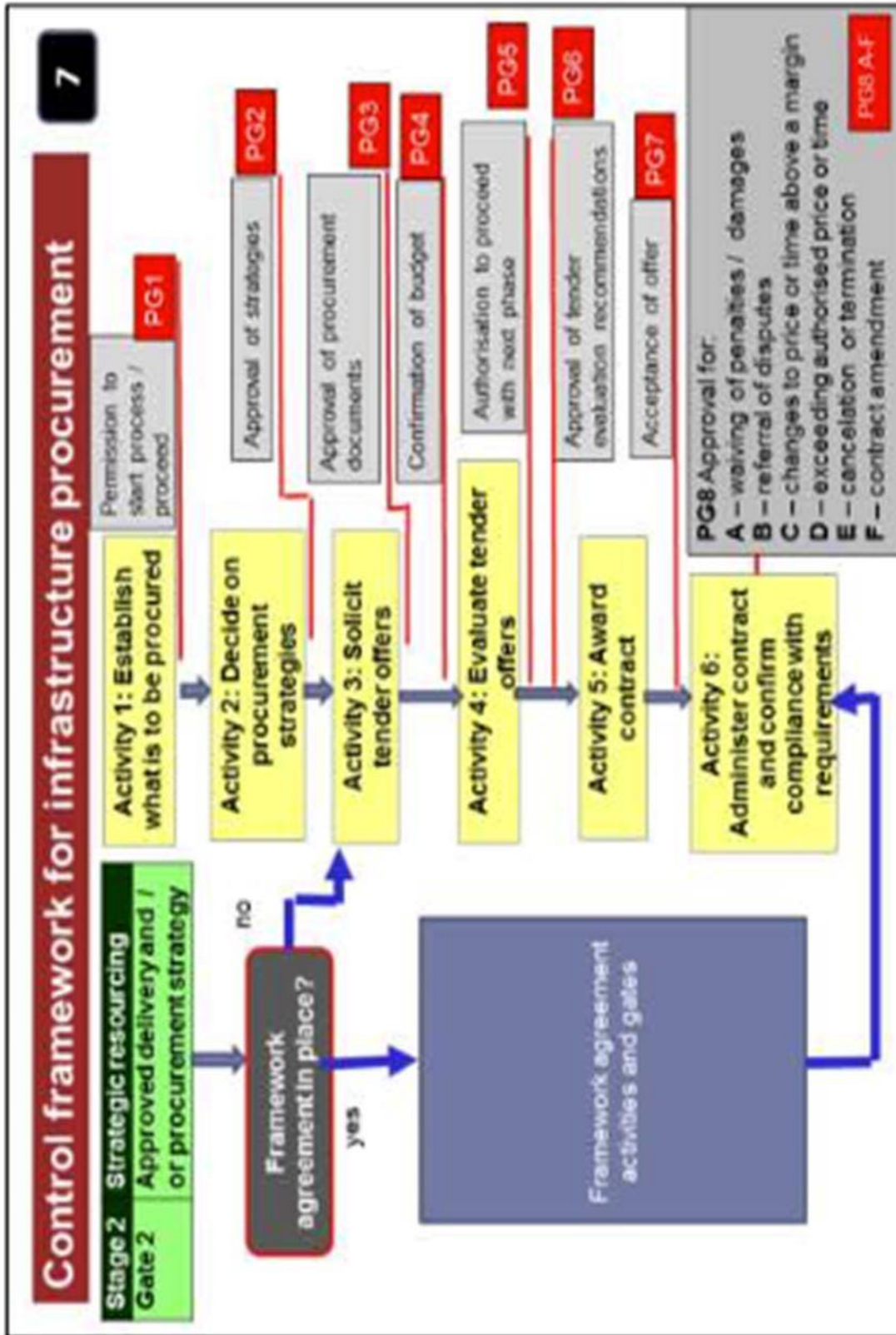
Alignment Model and Integrated Planning

The Alignment Model

To improve planning and efficiency in the delivery of infrastructure, the Alignment Model was developed, which called for the amendment of the timeframes of the Infrastructure Delivery Cycle to include appropriate due processes in the cycle, as well as to create the critical linkages that are necessary between the Infrastructure Delivery Cycle and the MTEF Budget Cycle.

The Budget Cycle and the Infrastructure Delivery Cycle are multi-year cycles, with a new cycle started each financial year. Consequently, the cycles overlap each other, and in any one-year, officials are busy with activities relating to a number of different infrastructure delivery cycles, each of which is in a different phase of delivery.
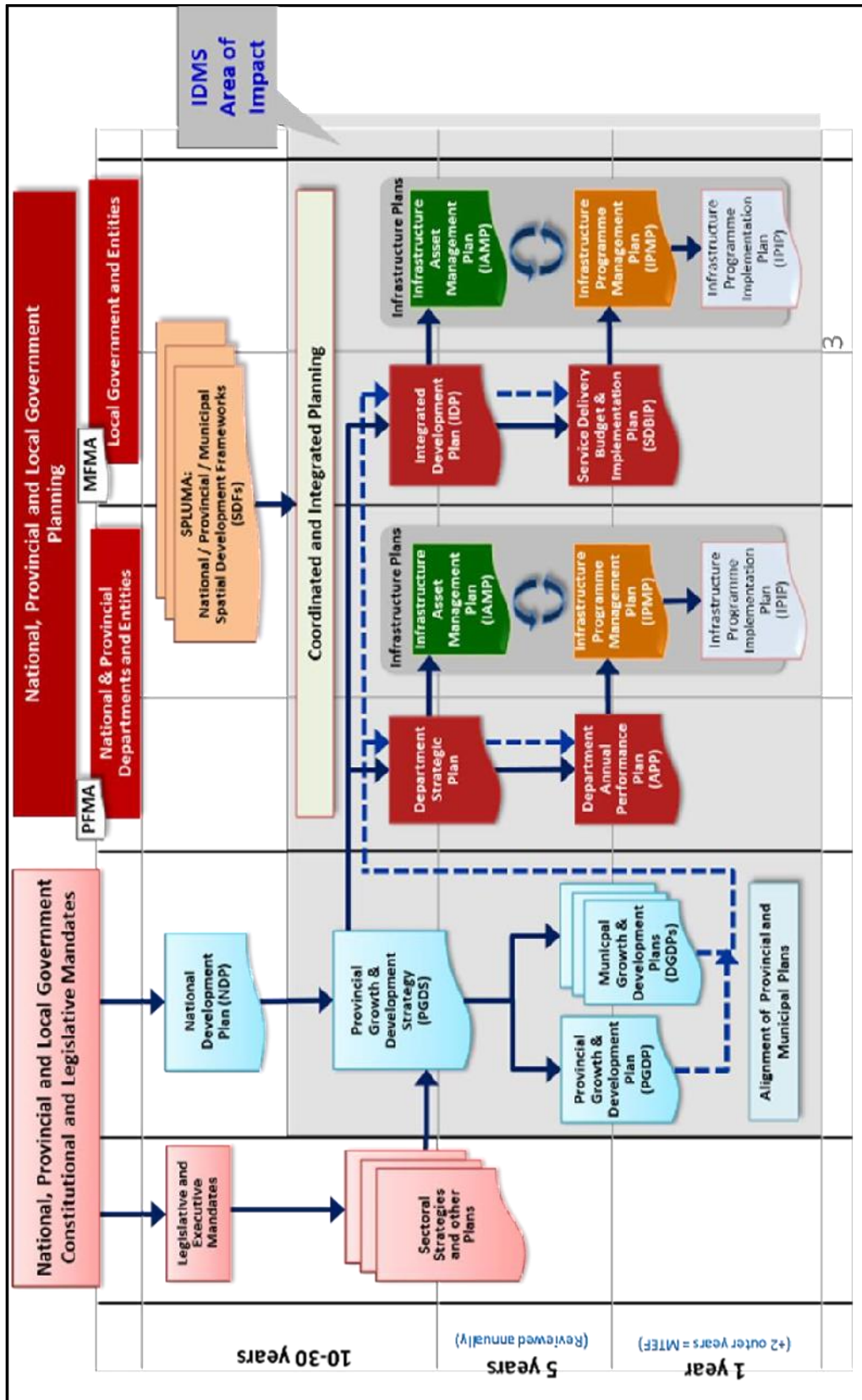
Figure 49: Integration of planning
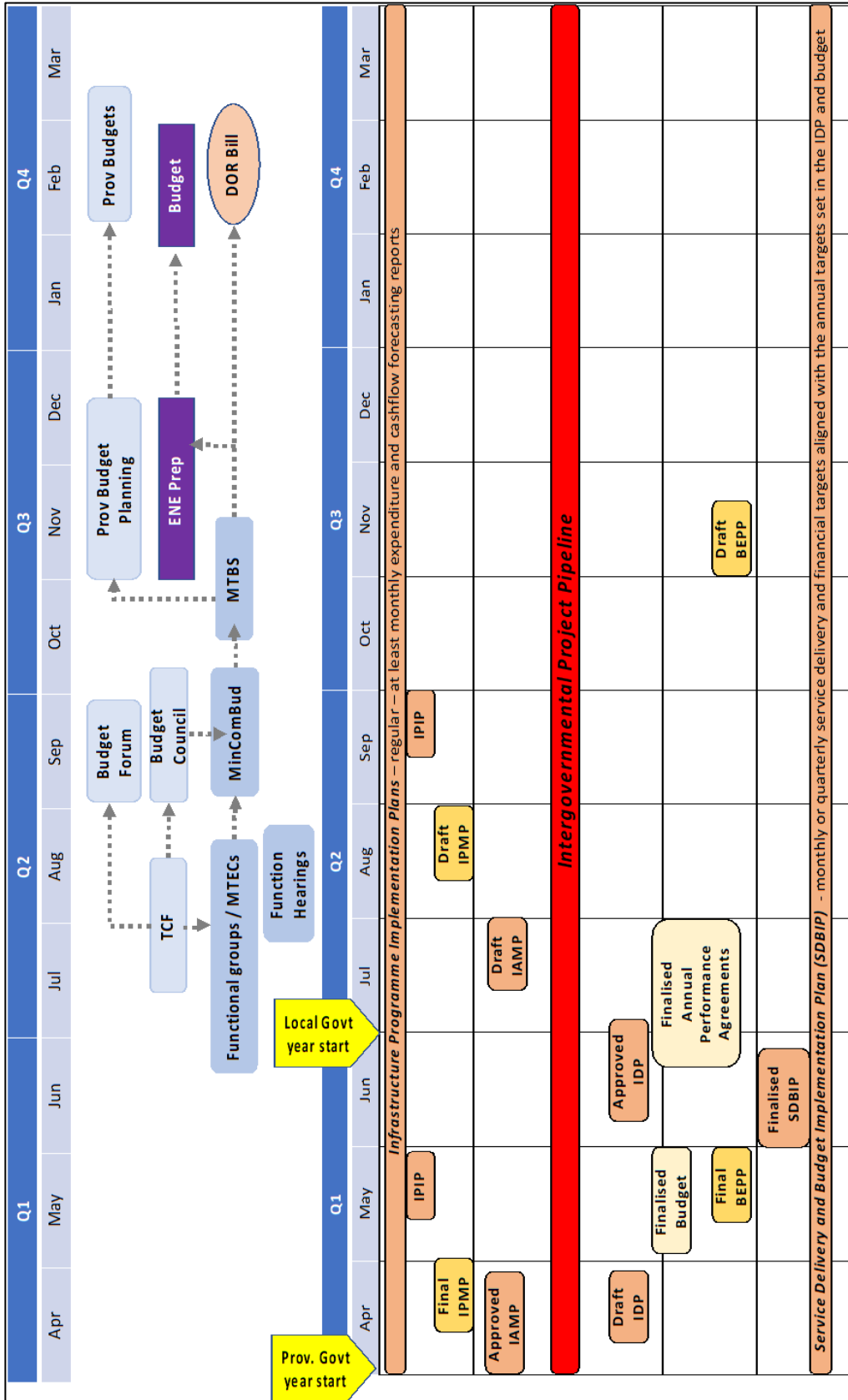
Figure 50: The Alignment Model - 1
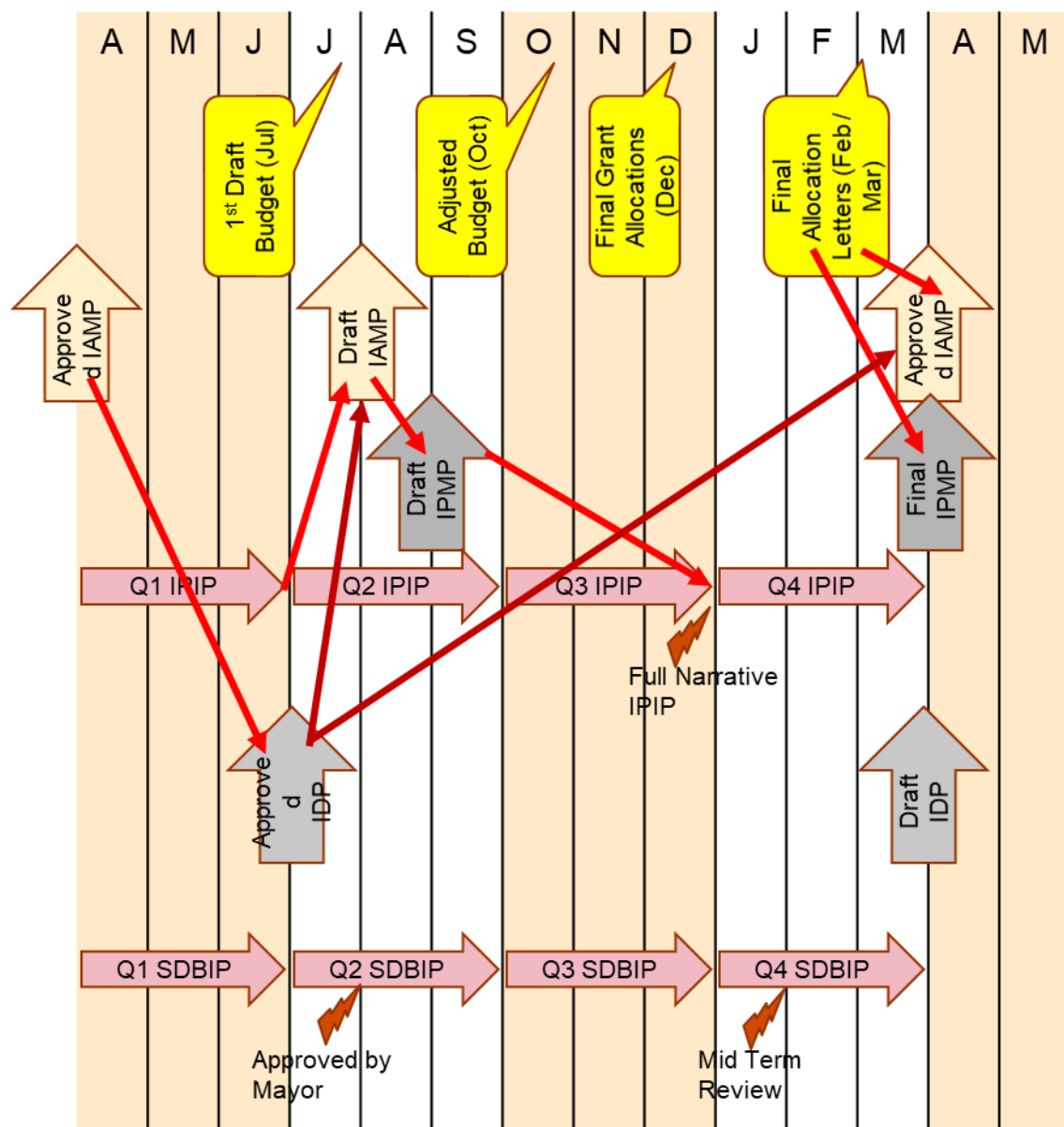
Figure 51: The Alignment Model – 2

Integrated Planning

Cooperative governance is important to ensure that government delivers on its mandate to provide services for its people, addresses challenges such as poverty and unemployment, and, promotes investment, development and growth. It is necessary that all three spheres of government ensure that their policies, strategies and programmes are aligned, working together in a spirit of mutual cooperation and support.

Inter-governmental relations is the organisation of the relationships between the three spheres of government. The Constitution states that "the three spheres of government are distinctive,

interdependent and interrelated". Although the three spheres of government are autonomous, they exist in a unitary South Africa, meaning that they must work together on decision-making, co-ordinate budgets, policies and activities, particularly for those functions that cut across the spheres.

Intergovernmental Relations Framework Act (IGFRA) – No.13 of 2005 - provides a framework for the establishment of intergovernmental forums and mechanisms to facilitate the settlement of intergovernmental disputes.

The object of this Act is to provide, within the principle of co-operative government set out in Chapter 3 of the Constitution, a framework for the national government, provincial governments and local governments, and all organs of state within those governments, to facilitate co-ordination in the implementation of policy and legislation, including:

1. Coherent government;
2. Effective provision of services;
3. Monitoring implementation of policy and legislation;
4. Realisation of national priorities.

Spatial Planning and Land Use Management Act (SPLUMA) No.16 of 2013 - Provides for a uniform, effective and comprehensive system of spatial planning and land use management, to

- Ensure promotion of socio-economic growth and inclusion;
- Provide for development of principles and norms and standards;
- Promote cooperative government and intergovernmental relations;
- Redress past spatial and regulatory imbalances to ensure equity in the application of the spatial development and land use management systems.

The Act requires the development of National, Provincial and Municipal Spatial Development Frameworks by the Minister, Premier and Executive Authority respectively. The Act is applicable to all spheres of government, and is legislated in terms of the Constitution, in so far as it regulates municipal and provincial planning.

Exercise 2: Walk-through of a project

We have learnt the theory. Now let's apply it to a typical project in a practical environment and let's walk through the steps.

Step 1   Select a project

Let's choose a typical project:

Project name:

The Flagstaff Water Supply under Ingquza Hill LM is currently under construction to serve 30 407 households in the rural villages of Flagstaff and the Flagstaff town. R325 million is approved for this project.

Scope of work

- The scope of works includes, the construction of an off channel dam, water treatment plant as well as village reticulation.

- The first two phases of this project are nearing completion and were focused on source development, construction of a water treatment works and bulk infrastructure.

- Phase 3 of the project with a project value of R83 million is for village reticulation and ensuring that the households do receive sustainable water services.

- Three (3) contracts were awarded for the completion of Flagstaff regional phase 3, these contracts are under Construction, and will be completed in June 2017.

- The Major Problem in the Flagstaff Region, is the Eskom connection, of which the Eskom connection has been applied and paid for in 2014, and Eskom has not connected the power to date.

Step 2   Review the project on whether all the "Portfolio Management Processes" were applied

Check the comprehensiveness and success on whether the following "high level" activities were performed:-

a) CMIP – 10 – 20yrs

b) Life-cycle plans (Operations / Maintenance / Renewal / Acquisition and Disposal)

c) IDP (if it is the IAMP)

- Summary of the organisation's strategic goals and key IAM policies;
- Levels of service, performance standards and reporting processes;
- Demand forecasts and management techniques;
- Description of the asset portfolio;
- Description of the Iife-cycle management activities for operating, maintaining, renewing, developing and disposing of assets. These must be consolidated into programme level lifecycle infrastructure plans, with Strategic Programme Briefs for each new and existing programme / sub-programme;
- Delivery Management Strategy;
- Consolidated Lifecycle Plan (includes the prioritized list of work in MTEF);
- Long-term cash-flow forecast;
- Key IAM improvement actions, including resources and timelines.

d) The Delivery Management Strategy is an important input into delivery planning (specifically Programme Resourcing) at programme management level and includes a:

Demand management strategy;

Risk management strategy;

Funding strategy;

Resourcing strategy.

e) Programme Brief

Your notes:

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Step 3   Review the project on whether all the "Programme Management Processes" were applied

Check the comprehensiveness and success on whether the following "high level" activities were performed:-

a) Infrastructure Programme Planning (IPMP)

- explain what the infrastructure programmes are going to do and how they are going to do it, who is involved, how it will be controlled, and the justification for going forward.

b) Programme Resourcing

- Delivery Plan
- Infrastructure Procurement Strategy

c) Programme Brief

Your notes:

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Step 4   Review the project on whether all the "Operations and Maintenance Management Processes" were applied

Check the comprehensiveness and success on whether the following "high level" activities were performed:-

a)   Operations Management Plan

b)   Maintenance Management Plan

c)   Updated Asset Register

Your notes:

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Step 5   Review the project on whether all the "Project Management Processes" were applied

Check the comprehensiveness and success on whether the following "high level" activities were performed:-

a)   Planning Stage

b)   Design Stage

c)   Works Stage

d)   Closure

e)   Post Project

Your notes:

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Step 6   Review the project on whether all the "SCM Value Chain" were applied

Check the comprehensiveness and success on whether the following "high level" activities were performed:-

a)   Steps 3 b) "delivery management strategy" and 4 c) "programme resourcing"

b)   6 Activities (gates) auditable
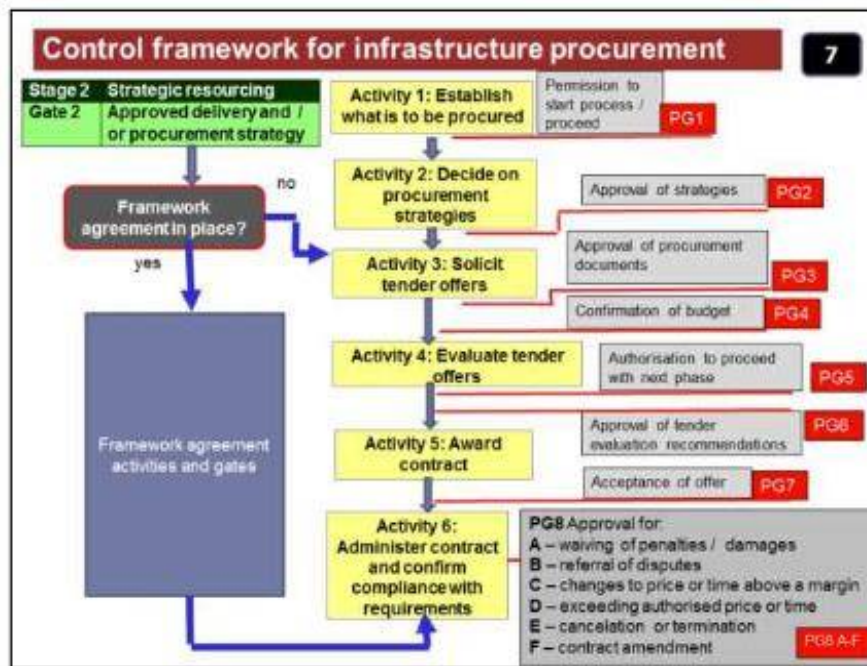
Your notes:

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Section 6:

Institutionalisation of the IDMS

Governance, organisational design and architecture, human resources management and development

Section 6: Institutionalisation of the IDMS

The IDMS Institutional System provides the '**glue**' which not only attaches the IDMS processes to each other, but also to the broader governance system in which the IDMS must function. The IDMS governance system is broader than only government institutions and includes the interactions between government and the society it governs, as well as the private sector. It is also embedded in the public sector, the Government's Batho Pele Principles and the public sector service delivery policies, strategies, systems and methodologies.

Checklist
In creating infrastructure delivery capacity and capability within an institution, Leadership must align to:
- The Municipal Competency Framework that has been issued in terms of the MFMA;
- The National Treasury Competency Regulations covering the major occupational groups in the field of public financial management;
- The DPSA Competency Framework for Senior Management Services

The interrelated and interacting IDMS elements form part of the wider system of government and the country. The IDMS and the supportive IDM Toolkit provides the systemic tools to deliver and manage infrastructure assets. The IDMS Institutional System consists of three interrelated components as depicted as follows:

Figure 52: The three core interrelated components of the IDMS Institutional System

The above figure illustrates that the IDMS Institutional System does not have rigid outer and inner boundaries, demonstrating engagement with the IDMS processes and the linking of the IDMS processes with the broader governance system and requirements. The IDMS Institutional System ensures that infrastructure planning and delivery is viewed as an integral part of the broader planning, service delivery, and monitoring, reporting and evaluation systems of government.

The open system boundary of the IDMS is directed and guided by inputs to produce the desired outputs, outcomes and impacts as shown in the figure below.
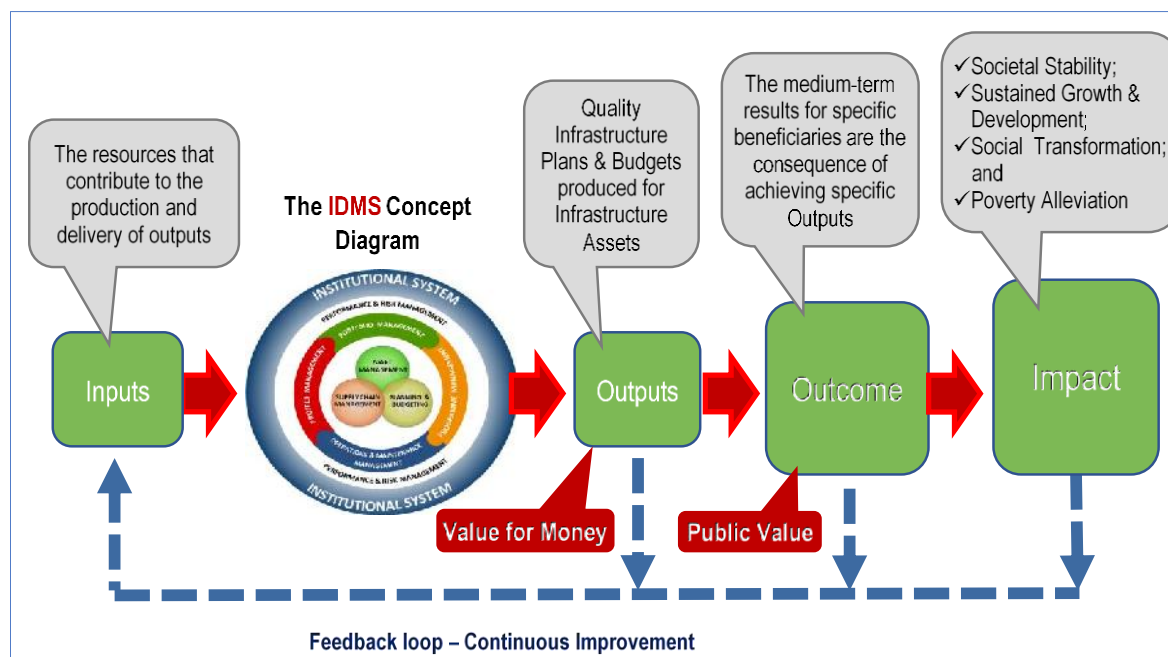
Figure 53: Converting Inputs to Outputs, Outcomes and Impacts

IDMS capacity is seen as the institutional functional ability to implement and sustain the IDMS. It refers to the availability and access to tangible resources including human, financial, material, technological, logistical and information. Capacity to implement and sustain the IDMS also includes the intangible requirements of leadership commitment, change management, organisational values and culture, as well as other intangible attributes needed to translate the IDMS theory into practice.

The three components of the IDMS Institutional System each consist of sub-components as shown in the figure below:

Figure 54: The components and sub-components of the IDMS Institutional System

The IDMS control system entails procedures designed and established to check, record, regulate, supervise, authenticate and, if necessary, restrict, the access to an asset, resource, or system. This requires the ID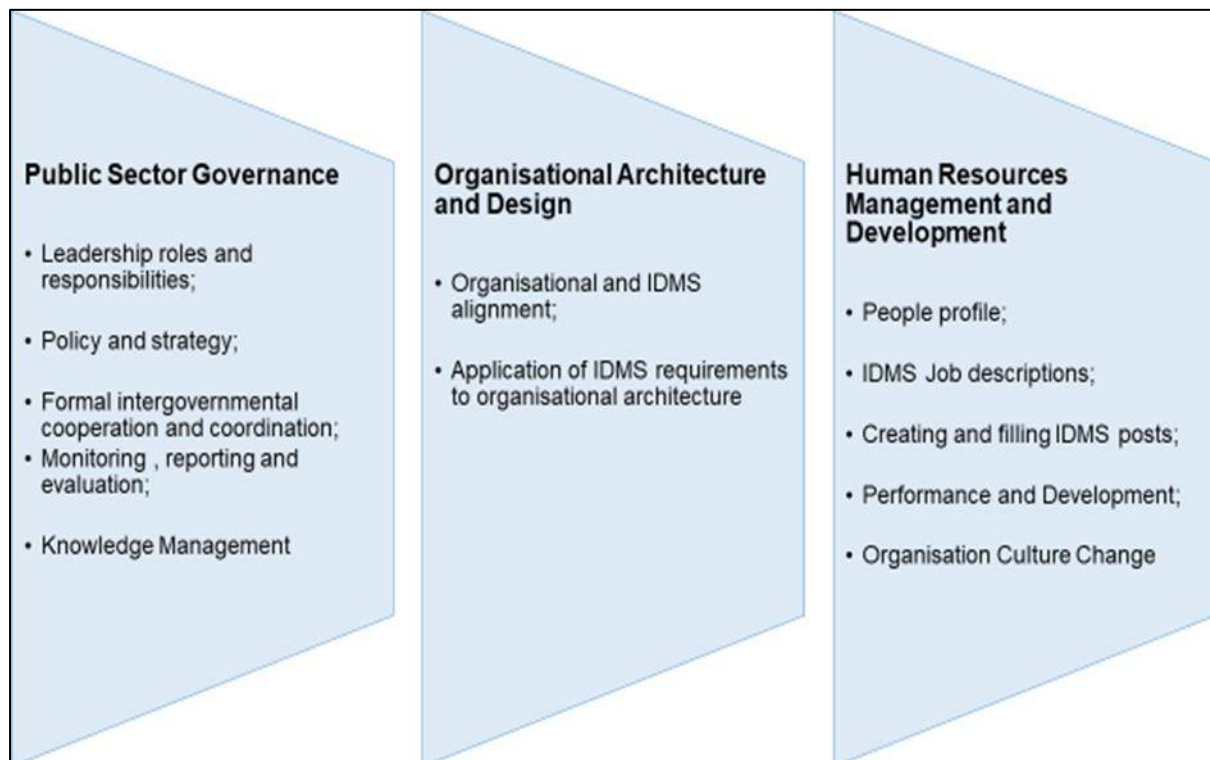MS leaders to compare actual performance with planned performance, to analyse the variance, assess trends to effect process improvement, evaluate possible alternatives and recommend appropriate corrective action, as needed. It is therefore important that leaders and decision makers, as well as the roles, authority and responsibilities that they are expected to exercise, be identified and those delegations of authority be formalised throughout the IDMS.

Checklist
A formal IDMS structure must be established by an institution to report on progress relating to the implementation of the IDMS

Organisational design processes must be utilised to align the organisational structure with the roles, functions and activities that emanate from the IDMS. It is only when this alignment has been completed, that the IDMS will be able to achieve its outputs, outcome and impact

Typical IDMS RASCI matrix for local government

Table 7: typical IDMS RASCI matrix for local government

IDMS function	Responsible	Accountability	Support	Consult	Inform
Core legislative requirements					
Asset Management	CFO Head of IT	Accounting Officer	SCM Head	Strategic Manager Portfolio Manager	
Planning and Budgeting	Portfolio Manager	Accounting Officer	CFO SCM	Programme managers	
Supply Chain Management	Head of SCM	Accounting Officer	Portfolio, programme and project managers		
Infrastructure delivery management					
Portfolio Management	Portfolio managers	Accounting Officer	Programme Managers		
Programme Management	Programme Managers	Head Of Infrastructure	Portfolio managers and project managers		
Operations and Maintenance	Operations Manager Maintenance Manager	Head of Operations and Maintenance	Programme and project managers		Strategic planner/manager

IDMS function	Responsible	Accountability	Support	Consult	Inform
Project Management	Project Managers Professional service providers Contractors	Accounting Officer		Operations and Maintenance managers	Asset Register Custodianship
IDMS enablers					
Performance Management	Programme and Project Managers Performance Manager	Accounting Officer	Portfolio, Programme and project managers	HRD Manager	
Risk Management	Programme and Project Managers	Accounting Officer	Risk Manager		
Institutional System	Head of HRD and Organisational Design	Accounting Officer	Head of Infrastructure Unit	Competency Frameworks custodians Performance Manager	

Annexures
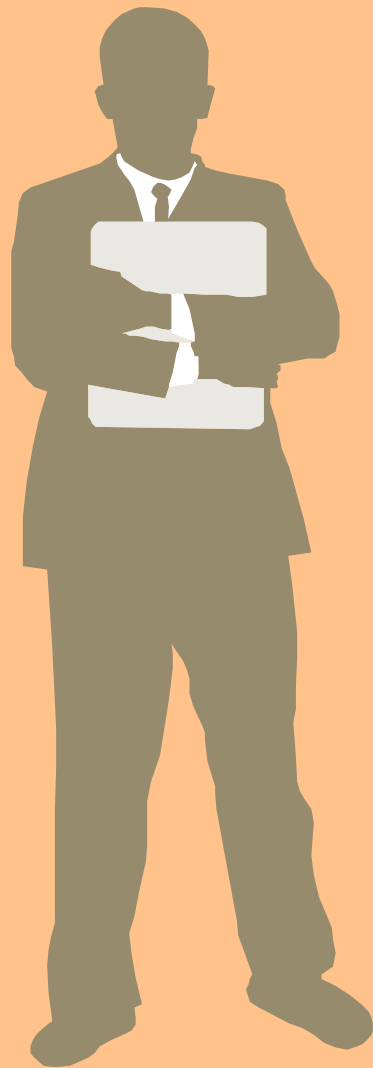
Annexure A: Frequently asked questions

No.	Question	Answer
1	What is the IDMS?	The Government endorsed management system that guides, directs and enables infrastructure delivery and management in the public sector
2	What are the key pieces of legislation that underpin the IDMS	Public Finance Management Act (PFMA) Municipal Finance Management Act (MFMA) Government Immovable Asset Management Act (GIAMA) Division of Revenue Act (DORA) Inter-Governmental Relations Framework Act (IGRFA) Construction Industry Development Board (CIDB) Act
3	What are some of the best practices and standards that the IDMS is based on?	PMBOK Standards International Infrastructure Management Manual South African National Standards (SANS) 55000/1/2: Asset Management CIDB Prescripts National Infrastructure Immovable Asset Maintenance Management Standard
4	Why is the IDMS referred to as a system?	One of the key concepts of the IDMS is the "Systems Thinking Approach which emphasises the interconnectedness and interdependencies of the various elements of the IDMS.

No.	Question	Answer
5	Who is the custodian of the IDMS?	National Treasury is the custodian of the IDMS supported by provincial treasuries who play a coordinating role at a provincial implementation level
6	Which spheres of government does the IDMS apply to?	All spheres of government
7	What is the relationship between the IDMS and the SIPDM?	The SIPDM was developed to support and enforce the IDMS implementation by specifying minimum control points to be complied with to improve the governance of the IDMS in all spheres of government. (Note: The SIPDM is currently being reviewed to align adequately with the 2018 IDMS.
8	What is the relationship between the IDMS, the IDM Toolkit and the IDMSBOK?	The IDM Toolkit is structured hierarchically to provide generic guidelines for application in all spheres and sectors of Government and specific guidelines, that support compliance and process requirements of specific spheres and sectors of government. The IDMSBOK supports effective and efficient infrastructure delivery, within all three spheres of Government, by integrating quality assured tacit and explicit knowledge onto an interactive dynamic ICT platform. Both the IDM Toolkit and the IDMSBOK are intended to support the implementation of the IDMS Methodology.
9	What are some of the critical success factors for the implementation of IDMS?	Leadership and technical buy-in Right people in right positions linked to performance management system Clear roles and responsibilities of infrastructure delivery stakeholders

No.	Question	Answer
		Credible monitoring, evaluation and reporting systems
10	What is the IDM Control System?	A specific governance control of the IDMS that is aligned to the IDM Processes Placemat and is enforced through the Control Framework for Infrastructure Delivery and Procurement Management (CFIDPM)
11	Who are the key IDMS stakeholders within an institution?	Accounting Officer, Strategic and policy officials, Technical infrastructure managers responsible for infrastructure delivery, Human Resources and development practitioners, Supply Chain Management Practitioners, Monitoring and Evaluation, Chief Financial Officer, Economic Development Managers, Operations and Maintenance Work Inspectors and artisans
12	What is Infrastructure Delivery Management (IDM)?	The application of the infrastructure delivery management processes of portfolio, programme, operations, maintenance and project management, to plan and implement the work required to sustain the performance of infrastructure assets for public service delivery.
13	Why does the Operations and Maintenance delivery process precede the project management delivery process as depicted on the IDM Processes Placemat	Other than the capital new capital projects, projects are initiated as an outcome of well-planned and delivered operations and maintenance processes such as refurbishment and upgrading projects.
14	What is the link between the IDMS and the City IDMS?	The IDMS provides generic guidelines on infrastructure delivery management and is applicable to all spheres of government. The City

| No.	Question	Answer
		IDMS provides a holistic system for the management of infrastructure based on the requirements of SANS 55001:Asset Management. Management systems tailored specifically for application in the Metropolitans. The CIDMS sits within the specific guidelines in the IDM Toolkit.
15	Do the Infrastructure Asset Management Policy, Strategic Asset Management Plan and the Infrastructure Asset Management Plan (IAMP) be developed as stand-alone deliverables?	All three deliverables may be developed as one document or as stand-alone documents depending on the level of maturity of an institution, size and complexity.

Annexure B: Abbreviations

Abbreviation	Meaning
AMMP	Annual Maintenance Management Plan
C-AMP	Custodian Asset Management Plan
CD's	Chief Directors
CFO	Chief Financial Officer
CP	Control Points
DD	Deputy Directors
DM	District Municipality
DoRA	Division of Revenue Act
EoY	End of Year Report
GIAMA	Government Immovable Asset Management Act
GIAMP	Government-wide Immovable Asset Management Policy
GRAP	Generally Recognised Accounting Practice
HoD	Heads of Department
IAMP	Infrastructure Asset Management Plan
IDM	Infrastructure Delivery Management
IDMS	Infrastructure Delivery Management System
IDMSBOK	Infrastructure Delivery Management System Body of Knowledge
IGRFA	Inter-Governmental Relations Framework Act
IPMP	Infrastructure Programme Management Plan
MFMA	Municipal Financial Management Act

Abbreviation	Meaning
MISA	Municipal Infrastructure Support Agent
MM	Municipal Managers
MMP	Maintenance Management Plan
MMRR	Maintenance Management Review Report
MTEF	Medium-Term Expenditure Framework
NDP	National Development Plan
NIAMM	National Immovable Asset Maintenance Management
O&M	Operations and Maintenance
OHS	Occupational Health and Safety
OMP	Operations Management Plan
PDCA	Plan, Do, Check, Act
PFMA	Public Finance Management Act
PICC	Presidential Infrastructure Coordination Committee
RAMP	Roads Asset Management Plan
RASCI	A responsibility matrix that assigns responsibilities as follows: Responsible, Accountable, Support, Communicate and Inform
RMSC	Regional Management Support Contract programme
SCM	Supply Chain Management
SIPDM	Standard on Infrastructure Procurement and Delivery Management
SPLUMA	Spatial Planning and Land Use Management Act; No. 16 of 2013
UAMP	User Asset Management Plan
CIDB	Construction Industry Development Board
IDP	Integrated Development Plan

Abbreviation	Meaning
MSCOA	Municipal Standard Chart of Accounts
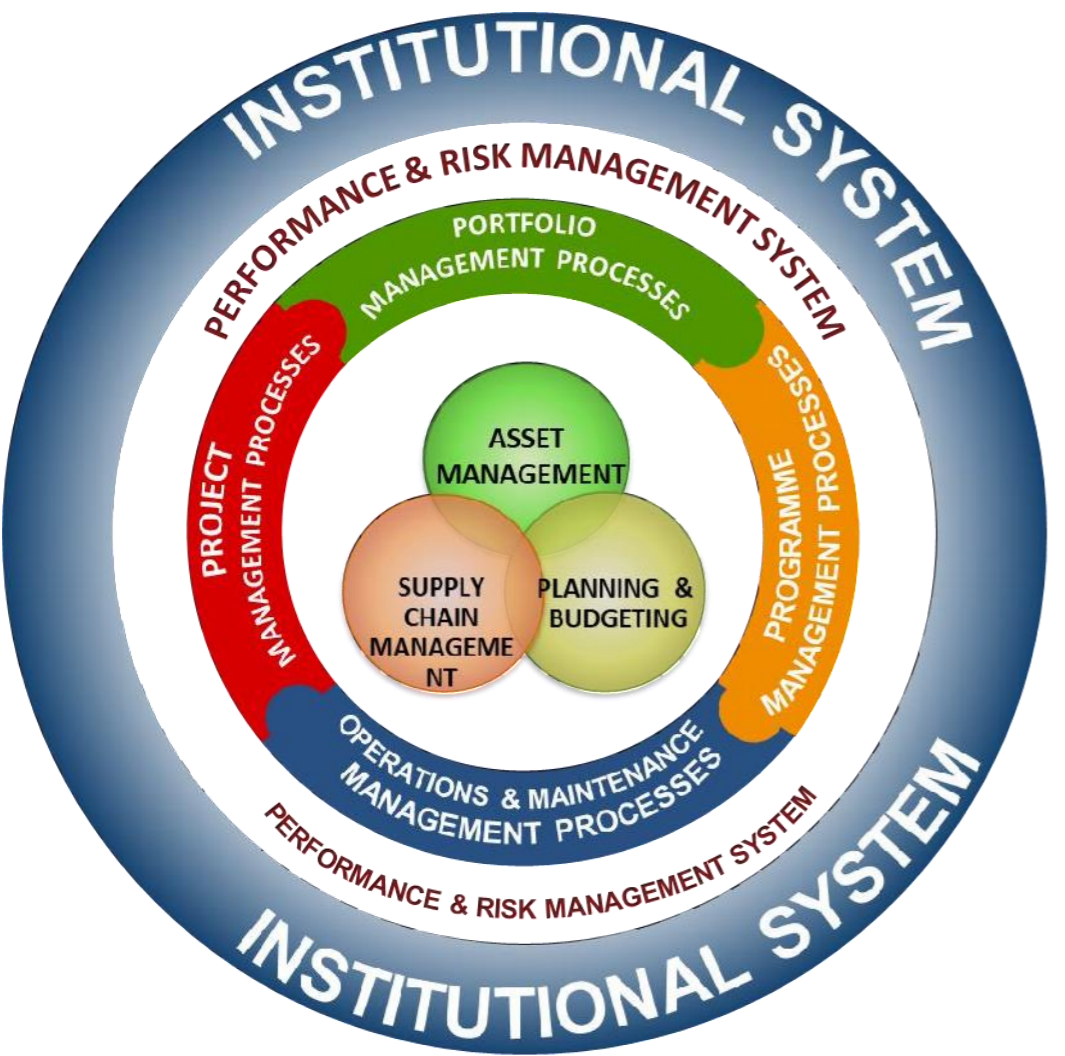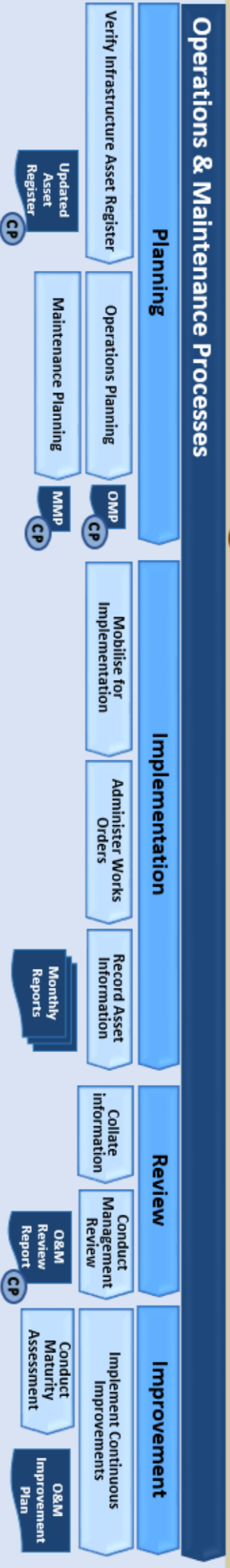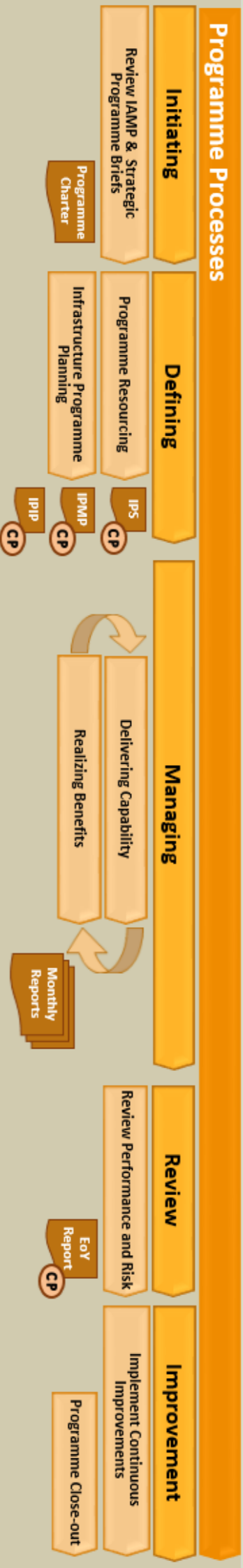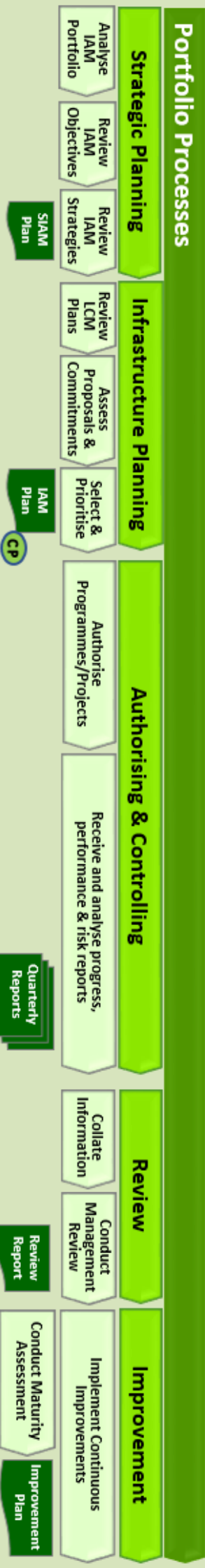
Annexure C:

IDMS concept diagram and placement