

TOOLKIT EDITION 1 2018

CITIES' INFRASTRUCTURE
DELIVERY AND
MANAGEMENT SYSTEM

CIDMS



MODULE 7

Asset management plans



national treasury

Department:
National Treasury
REPUBLIC OF SOUTH AFRICA

cltIEs SUPPORT
PROGRAMME



IUDF

INTEGRATED URBAN DEVELOPMENT FRAMEWORK



MODULE PURPOSE

This module describes how the life-cycle plans prepared in Module 6 inform the preparation of asset management plans (AMPs) per sector and how these inform the preparation of the Strategic Asset Management Plan (SAMP) for the city.

KEY ELEMENTS OF THE MODULE ARE:

1. The provision of a standard chapter structure and scope of content of the AMPs (to be tailored to the respective sectors) aligned with the salient aspects to be considered and documented in the process;
2. The concept of draft AMPs and a SAMP that inform the annual Lekgotlas and the statutory process of consultation and preparation of the Integrated Development Plan (IDP) for the city;
3. Documentation of the asset management implications of the outcomes of the IDP process each year in the form of a final SAMP for the city and an AMP per sector confirming the final budget application and performance plan.

WHY

Improved asset management documentation fosters better communication, which in turn:

1. Improves understanding by internal and external stakeholders of the strategic issues relating to infrastructure management;
2. Fosters more effective decision-making;
3. Strengthens alignment of planning and implementation; and
4. Demonstrates and supports effective governance.

OUTPUTS OF MODULE 7:

1. Sector AMPs prepared covering all immovable asset portfolios in the scope of its asset management system with a level of sophistication appropriate to the nature and scale of these portfolios, and in accordance with a standard template for the preparation and updating of sector AMPs that:
 - Achieves consistency in approach between sectors;
 - Ensures that standardised outputs feed into the SAMP;
 - Ensures that standardised outputs feed into budget and performance management processes; and that
 - Can draw comparisons between sectors and over time.
2. A SAMP (in line with the structure and content indicated in Module 2) that:
 - Defines the:
 - Scope of asset portfolios/services included in the AM system; and
 - Scope of the AM system, and linkages with other systems.
 - Includes a service delivery strategy that:
 - Profiles customers by type and spatially;
 - Offers a corporate customer growth forecast for the next 30 years, including the spatial apportionment of growth;
 - Profiles the state of the city's assets;
 - Presents a report on the state of the city's services;
 - States target LOS for all services, customer types and areas; and
 - Provides directives to sector planners in undertaking AM planning.
 - Includes a strategy for its AM system that:
 - States the respective AM objectives;
 - Profiles the current state of practice and performance of its AM system; and
 - Presents an AM system improvement strategy.



- Includes an infrastructure investment strategy that:
 - Establishes investment and financial performance targets/objectives;
 - Sets decision-making criteria;
 - Presents long-term revenue and expenditure forecasts (30 years);
 - Prioritises investment;
 - Matches and smooths cash-flows; and
 - Determines funding strategies.
- Includes a change management strategy that:
 - States the conditions for a value-centric AM organisation (the state to which the organisation wishes to change to);
 - Identification of internal and external stakeholders, and the desired behaviours of such stakeholders; and
 - A stakeholder management plan, indicating how behaviours are to be affected.

KEY RELEVANT REGULATION:

1. Municipal Finance Management Act No. 56 of 2003
2. Municipal Systems Act No. 32 of 2000
3. SABS: South African National Standard 55001: Asset Management – Management Systems – Requirements
4. Generally Recognised Accounting Practice
5. Spatial Planning and Land Use Management Act
6. Municipal Standard Chart of Accounts

CONTENTS

Module 7 Asset management plans



7.1	INTRODUCTION TO ASSET MANAGEMENT PLANS	7.1
7.2	SECTOR ASSET MANAGEMENT PLANS	7.3
7.2.1	Why prepare sector asset management plans?	7.3
7.2.2	Assimilation of the draft AM plans per sector	7.3
7.2.3	Finalising the sector asset management plans	7.11
7.3	DRAFT CITY LIFE-CYCLE PLAN	7.13
7.3.1	Why develop a city infrastructure life-cycle plan?	7.13
7.3.2	Establishing the draft city infrastructure life-cycle plan	7.13
7.3.3	Draft city infrastructure programme delivery plan	7.14
7.4	STRATEGIC ASSET MANAGEMENT PLAN (SAMP)	7.15
7.4.1	Why document the SAMP?	7.15
7.4.2	Preparation of the draft SAMP document	7.15
7.4.3	Preparation of the final SAMP	7.16
7.5	SUMMARY	7.17

LIST OF

Figures that appear in this toolkit

FIGURE 7.1:	Overview of process steps in preparing the asset management plans	7.2
FIGURE 7.2:	Overview of sector AM plan preparation process	7.12
FIGURE 7.3:	Overview of SAMP development process	7.16

Tables that appear in this toolkit

TABLE 7.1:	Overview of typical data and information sources	7.4
TABLE 7.2:	Sector AM Plan chapter structure and overview of content	7.7
TABLE 7.3:	Illustration of monthly tasks for SAMP and AMP preparation	7.10



7.1 INTRODUCTION TO ASSET MANAGEMENT PLANS

This module indicates the processes and techniques to be adopted in preparing the asset management (AM) plans per infrastructure sector, the draft strategic asset management plan (SAMP) which presents strategic options as an input to the integrated development planning (IDP) process, and culminates in the finalisation of the SAMP and establishment of a city infrastructure programme delivery plan (CIPDP).

The programme-level life-cycle plans prepared in terms of **Module 6** provide inputs to prepare the preliminary AM plans per sector. A draft SAMP is also compiled drawing on the same data, portraying the integrated view of the sector life-cycle plans across the city. Technical, spatial and timing dependencies, opportunities and alignment needs identified in drawing up the draft life-cycle plans are noted and subjected to a final review. This also applies to cross-cutting initiatives at portfolio and programme level, delivery risks, and packaging. The SAMP also presents alternative courses of action where appropriate – at strategic and tactical levels – motivated using the appraisal techniques indicated in Module 8. The IDP process ends with decisions on the adoption of certain options, and this informs the preparation of the final sector AM plans and SAMP.

The SAMP and sector AM plans document the rationale for the programmes being implemented in the short, medium and long term. This is intended primarily for internal stakeholders but also as a technical reference for external stakeholders.



THE DEFINITION OF AN ASSET MANAGEMENT (AM) PLAN

Documented information that specifies the activities, resources and timescales required for an individual asset, or a grouping of assets, to achieve the organisation’s asset management objectives (from SANS 55000)



The City Infrastructure Programme Delivery Plan (CIPDP) is a schedule of projects over a period of 5 years, supported by mSCOA programme segment references as well as an annual cash-flow and prioritisation rating. The CIPDP features as an annexure to the SAMP (as the first 5 years of the detailed life-cycle plan – which extends, albeit at a lower level of detail, upto 30 years). Each of the sector AMPs also have a Sector Infrastructure Programme Delivery Plan (SIPDP) which is a schedule in the same format relating to a given sector only (featuring as an annexure in the respective sector AMPs).

The City Infrastructure Performance Plan (CIPP) is a parallel document to the CIPDP focusing on the performance targets (quarterly for the first year and annually thereafter for a total period of 5 years) – in line with the city’s AM objectives. It also appears as an annexure to the SAMP. Each of the sector AMPs also have a Sector Infrastructure Performance Plan (SIPP) which is a schedule in the same format relating to a given sector only, and features as an annexure in the respective sector AMPs.



THE DEFINITION OF A STRATEGIC ASSET MANAGEMENT PLAN (SAMP):

Documented information that specifies how organisational objectives are to be converted into asset management objectives, the approach for developing asset management plans, and the role of the asset management system in supporting the achievement of the asset management objectives (from SANS 55000).

A summary of the process flow for the main activities in this module is provided in Figure 7.1.

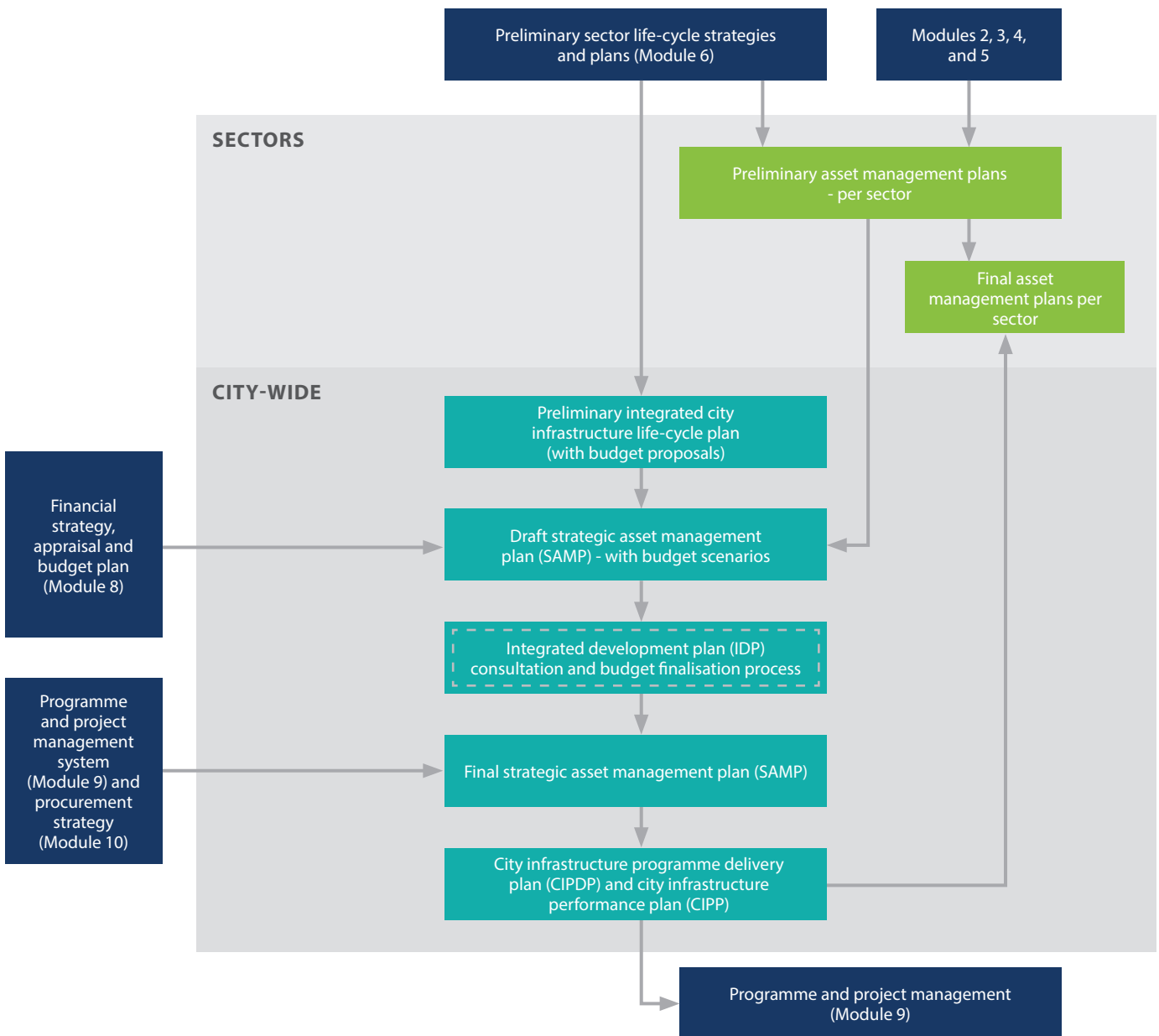


FIGURE 7.1: Overview of process steps in preparing the asset management plans

7.2 SECTOR ASSET MANAGEMENT PLANS

7.2.1 *Why prepare sector asset management plans?*

The sector infrastructure life-cycle plans indicate what programmes need to be pursued over the short, medium and long term. They are an essential building block in positioning the long term strategic direction of the sector in line with the city's organisational and asset management objectives, and in determining the most appropriate short- and medium-term implementation actions to give effect to those objectives. In documenting these in the sector AMPs, an important role is performed in providing effective communication with stakeholders, and in demonstrating effective custodianship over the city's infrastructure. The rationale of pursuing certain strategies, tactics and programmes are provided, and demonstrate vertical alignment with the city's corporate objectives, AM policy and objectives, and the adopted IDP and SDBIP. In doing so, the city is able to demonstrate competent and effective governance within the sector (and through the SAMP considered later in this module, effective alignment across the sectors within the city).

7.2.2 *Assimilation of the draft AM plans per sector*

In local government the infrastructure user departments are often also the asset custodians responsible for implementing projects and programmes – consequently the determination of sector needs and the responsibility for implementing suitable life-cycle responses generally reside in the same department. However, community facilities and municipal buildings are often structured with a user department that is responsible for strategic planning, ongoing operations, monitoring performance and identifying life-cycle planning needs. These departments may be supported by a separate building services (or facilities management) function that provides maintenance support. Nevertheless, in both instances, a combined asset management plan document is prepared, documenting both the life-cycle needs, as well as the proposed responses. This approach is in line with SANS 55001 which indicates the requirements for an asset management system.

Whilst a draft sector life-cycle plan will have been prepared as indicated in Module 6, a wealth of additional data and information is required to ensure that the sector AMPs are prepared in terms of a clear developmental context and thorough understanding of the infrastructure and service delivery status. **Table 7.1** provides an overview of typical sources of data and information that can inform the preparation of the AMPs (as applicable to the respective sectors).



**TABLE 7.1:** Overview of typical data and information sources

CATEGORY	DATA AND INFORMATION REFERENCES	
External	<ul style="list-style-type: none"> • National development plan • Demarcation board – mandated services • GIS data from Department of Environmental Affairs; Rural Development and Land Reform; and Agriculture • Census and other socioeconomic survey information • National regulator performance requirements (e.g. DWS, NERSA, as applicable to the sector) 	<ul style="list-style-type: none"> • Relevant financial circulars, mSCOA directives • Provincial development plan • Provincial spatial development framework • Demographic data (1996, 2001, 2007, 2011 and 2016 Census years) and economic data (GVA, Employment etc.)
City level	<p>AM DOCUMENTATION</p> <ul style="list-style-type: none"> • AM policy (financial and or infrastructure/building assets, as applicable) • AM strategy • Organisational roles and responsibilities relating to asset management (internal and external) • Relevant asset management systems or policies • Asset register, with hierarchy and asset systems breakdown structure • Risk management system: policy/strategy/plan/register – corporate and assets • Latest city-level life-cycle plan • Backlog reports – and any related sector directives/ response targets • Previous strategic asset management plans (SAMPs) and infrastructure strategy documents • Previous year’s city infrastructure programme delivery plan (CIPDP) • Previous year’s city infrastructure performance plan (CIPP) – or projected SDBIP data <p>FINANCIAL DOCUMENTATION</p> <ul style="list-style-type: none"> • Investment policy • Municipal financial statements (last 3 years) and any applicable audit findings (last year) • MTREF (CAPEX and OPEX forecasted budgets) • Financial policy/strategy (existing and any planned adjustments) – revenue and expenditure • Funding sources and current exposure • Funding strategy (existing and any planned adjustments) • Historic (last 3 years) overall budgets and expenditure per sector (CAPEX and OPEX) • Municipal billing system data (consumer file, meter file, 12 month transaction file) <p>HUMAN RESOURCES DOCUMENTATION</p> <ul style="list-style-type: none"> • Organisational structure • Operational regions – depots etc. – and AM staff responsibilities • Human resource development strategies and plans (ongoing, proposed) • Personnel management performance system (relating to AM roles), senior management performance criteria • Staff remuneration structure/scales 	<p>PERFORMANCE DATA</p> <ul style="list-style-type: none"> • SDBIP • Key performance areas and indicators and balanced score card • Annual reports on performance (last 3 years) • Overview of service delivery protests/engagements (last 3 years) <p>PROJECT DELIVERY, PLANNING, IMPLEMENTATION AND PROCUREMENT INFORMATION</p> <ul style="list-style-type: none"> • Stores arrangements and supply contracts • Latest city strategy for delivery and tactical review reports • Project packaging practice and any scheduling rules (e.g. to allow for EIAs, procurement period etc.) • Project and programme management system overview • Process, criteria and timelines for funding approval • Process and criteria for prioritising projects and programmes • Prefeasibility and feasibility studies for any proposed strategic projects • Latest approved IDP • Built environment performance plan <p>SPATIAL PLANNING DOCUMENTATION</p> <ul style="list-style-type: none"> • Municipal Spatial Development Framework • Long term growth and development plan or strategy • Cadastral data from municipal GIS • Municipal land use scheme information • Municipal valuation roll • Land use and development applications • Building plan submissions/approvals history • Environmental management plan • Climate change strategy and, or plan <p>HOUSING DEVELOPMENT</p> <ul style="list-style-type: none"> • Housing plan • Reports/data on private housing projects: planned, historic and predicted future trends • Reports/data on RDP housing projects: planned, historic and predicted future trends <p>EXTERNAL CONTRACTS</p> <ul style="list-style-type: none"> • Agreements with bulk suppliers/ operators and the extent of their responsibilities

CATEGORY	DATA AND INFORMATION REFERENCES	
Sector level	<p>LEGAL DOCUMENTATION</p> <ul style="list-style-type: none"> • Applicable external statutory directives relating to the sector • Recent or proposed legal/ statutory changes in the sector • Relevant municipal by laws <p>FINANCIAL DOCUMENTATION</p> <ul style="list-style-type: none"> • Billing and revenue management practices and performance of the sector • Tariff policy and structure • Credit control policies, structure and process • Reports on existing or proposed revenue enhancement initiatives • Financial indicators, targets and historic performance (3 years) • Non-revenue levels, trends and targets <p>HUMAN RESOURCES DOCUMENTATION</p> <ul style="list-style-type: none"> • Organisation chart and vacancies • Staff competency assessments/reports - sector • HR performance management framework and agreements - sector • Staff training received/planned 	<p>STRATEGIC AM DOCUMENTATION</p> <ul style="list-style-type: none"> • Demand management reports (nature and/or performance of existing or planned interventions) • Loss levels and targets • Maintenance strategies/plans • Asset performance reports (e.g. breakdowns, failures, down-time etc.) • Sector risk analysis and register • Existing/ planned institutional change plans • Technical reports or master plans indicating upgrade/ extension needs or other life cycle needs • Targeted work studies and reviews on strategic initiatives • Levels and standards of service strategies and customer service charters • Information on recent construction costs (e.g. completion reports or bills of quantities) • New/emerging technology and obsolete technology relevant to sector <p>OPERATIONAL AM DOCUMENTATION</p> <ul style="list-style-type: none"> • Previous year's approved sector asset management plans • Operational resources and costs (including improvement/change plans and results in achieving plan) • Maintenance resources and costs (including improvement/change plans and results in achieving plan) • Maintenance management system description • Breakdown of sectors current capital project programs, capital plan and results in achieving plan • Previous asset management practice maturity assessment results

The structure and purpose of the chapters of the sector asset management plans are provided in Table 7.2. An indication of the content of each chapter is also indicated, though this will need to be adapted as applicable to each respective sector.

The level of confidence in the data and models used to draw conclusions in the AM plan is stated explicitly at the end of each chapter – this is an essential part of the process to highlight where AM practice (including data accuracy and process maturity in particular) need to be improved to provide the necessary confidence in the planning outputs. This would include the following decisions:





The general application of public funds on behalf of the community



Application on large projects and programmes where the financial and service delivery risks are high



Application to programmes comprising high volumes of small or routine activities (such as repairs of pipe bursts or replacement of water meters) need to be based on well-structured and documented life-cycle models.



The requirements for data confidence and process maturity in the compilation of the sector AM plans need to be documented in the AM strategy as part of the SAMP.

TABLE 7.2: Sector AM plan chapter structure and overview of content (as applicable per sector)

DOCUMENT STRUCTURE		DESCRIPTION OF PURPOSE AND SCOPE OF CONTENTS
Cover	<ul style="list-style-type: none"> • Document title • Name of city and logo • Sector 	<ul style="list-style-type: none"> • Date • Planning period start and end dates • Version number
Approval and change history	<ul style="list-style-type: none"> • Document version number • Change history details • Approval date and reference 	
Glossary of terms, acronyms and index	<ul style="list-style-type: none"> • Glossary of terms consistent with CIDMS definitions • Acronyms • Index of contents, tables and figures 	
Executive summary	Purpose	Provides a brief summary of the main aspects of the plan: scope and objectives, strategic context and status, key challenges, risks and opportunities; and proposed short, medium and long term tactical responses
	Scope of contents	<ul style="list-style-type: none"> • Overview of the purpose of the AMP, its position in the AMP maturity framework, and its focus • Overview of the city's growth and development framework, and infrastructure AM objectives and the role and responsibilities of the sector. • Overview of the stakeholders • Overview of the strategic status, constraints, risks and opportunities relating to each of the chapters of the document • An overview of key modelling and data assumptions and confidence in the AMP outputs • An overview of the proposed strategic and tactical responses to management of the sector infrastructure and AM system over the short, medium and long term • An overview of the multi-year capital and operational expenditure associated with the proposed implementation programmes and the implied risk exposure and performance of the sector • A summary of the AMP review and updating process, including specific improvement areas for subsequent versions of the AMP
Introduction	Purpose	Indicates the purpose and scope of the plan, identified stakeholders, notes relevant internal and external context, provides an overview of the asset and asset management system status, and the approach to reporting the level of confidence in the planning outputs
	Scope of contents	<ul style="list-style-type: none"> • Objectives of the plan and who is it intended to inform • Overview of the developmental context of the city (social, political, economic, technical, financial, legal/statutory compliance, institutional, sector operations and construction procurement strategy), its mandate and its strategic objectives • Asset management objectives (city and sector) – relating to infrastructure and the AM system • Stakeholder analysis • Key city and developmental themes, spatial vision and structure, and ongoing/planned initiatives • Overview of the context of the sector in the city (including roles and responsibilities) • Overview of key external supplier roles and responsibilities • Overview of the scope, nature, extent, portfolio health, replacement and book value and spatial distribution of the infrastructure portfolio at asset group level, noting critical assets • Overview of the level of performance of the sector infrastructure and the system (including criteria, targets and actual), key strategic risks, existing controls and risk exposure • Overview of the position of this plan in the maturity framework and high-level summary of relevant outputs, outcomes and maturity of previous sector AM plans • Overview of the document layout and approach adopted • Overview of the availability and quality of key data and information, model adopted throughout the AMP, and key assumptions used in this chapter of the AMP • Chapter summary providing a brief overview of the sector context, stakeholders and status quo, as well as the associated constraints, risks and opportunities



DOCUMENT STRUCTURE		DESCRIPTION OF PURPOSE AND SCOPE OF CONTENTS
Levels of service	Purpose	Assesses the prevailing levels and standards of service; determines current backlogs, assesses historic and existing initiatives, and identifies needs and associated strategic risks, opportunities and priorities
	Scope of contents	<ul style="list-style-type: none"> • Presents a spatially-based, nuanced customer profile in line with the customer categories presented in Module 4, interpreted for this sector • Overview of the existing levels and standards of service linked to the current customer profile • Overview and analysis of historic trends and ongoing initiatives • Overview of any directives from the city (e.g. priorities, areas, targets) • Overview of how LOS/SOS criteria and measures were determined • Overview of process adopted in setting targets, including stakeholder consultation • Lifecycle cost implications of the LOS/SOSs and discussion of implications • Overview of the status of service-delivery backlogs in the sector comprising the provision of infrastructure (levels of service) and the standards of service (the manner in which it is provided) – including spatial distribution and benchmarking • Analysis of criteria, targets and backlog reduction tactics (existing and/or proposed) informed by affordability and the recommended approach in the short, medium and long term (what, why, where, when, how) • Assessment of the maturity of the measures, the certainty of the data, key assumptions, the level of confidence in the analysis and conclusions, and recommendations on the need for improvement on the data and/or models in this chapter • Chapter summary providing a brief overview of LOS/SOS challenges, risks, opportunities, priorities, and proposed responses
Future demand	Purpose	Indicates customer growth trends; assesses future demand and demand management techniques; and identifies associated infrastructure challenges, risks and opportunities, and proposed responses
	Scope of contents	<ul style="list-style-type: none"> • Strategic overview and analysis of historic growth trends, drivers and demand management actions • Strategic overview of directives from the city (future customer demand data with spatial distribution per customer group, and any city demand management initiatives and/or targets) • Future demand drivers (anticipated changes in customer expectations and behaviour, technology, and economic) • Sector demand forecasts – interpretation of customer forecast (including prevailing demand management initiatives) on sector demand per supply area and overall (including key modelling approach and assumptions) • Impact of changes in demand on infrastructure including bulk and system upgrading, extension and reconfiguration needs • Analysis of tactics (existing and/or proposed and asset/non asset solutions including demand management) and recommended approach in the short, medium and long term (what, where, when, how) • Assessment of the certainty of the forecast data, the level of confidence in the analysis and conclusions, and recommendations on the need for any improvement on the data and/or models • Chapter summary providing a brief overview of the future demand challenges, risks, opportunities, priorities and proposed responses
Life-cycle plan	Purpose	Provides an overview of the infrastructure life-cycle needs, affordability constraints, delivery tactics, risks and opportunities, and proposed short, medium and long term responses and expenditure cash-flow
	Scope of contents	<ul style="list-style-type: none"> • Risk analysis – assessment of physical failure, operational and delivery risks at asset group type level, and specifically of critical infrastructure, identification of appropriate responses and allocation of responsibility • Strategic overview and analysis of ongoing capital programmes and commitments – progress, viability, deferred programmes, value management, financial implications, sector coordination • Overview of operations management strategy, programmes and commitments – trends, effectiveness and efficiency improvement needs and priorities, financial implications • Overview of maintenance strategy, programmes and commitments – trends, backlogs, effectiveness and efficiency improvement needs, financial implications, sector coordination • Strategic approach to packaging and scheduling of capital and operational activities, projects and programmes

DOCUMENT STRUCTURE		DESCRIPTION OF PURPOSE AND SCOPE OF CONTENTS
Life-cycle plan	Scope of contents	<ul style="list-style-type: none"> • Strategic overview and analysis of life-cycle cash flow needs, linked to affordability, priorities and coordination requirements as identified in previous chapters (including any related city-level directives), and linked to proposed programmes and cash-flows (mSCOA-format) in the Annexure, as follows: <ul style="list-style-type: none"> • Capital – upgrading and new assets • Capital – renewal (rehabilitation and replacement) • Capital or OPEX - De-commissioning, restoration and disposal (forecast of income/expenses) • OPEX – operations • OPEX - project pipeline, studies • OPEX – maintenance • Assessment of the certainty of the forecast data, the level of confidence in the analysis and conclusions, and proposed improvement of the data and/or models • Chapter summary providing a brief overview of the proposed life-cycle plan, and the associated risks, opportunities and priorities
Asset management practices	Purpose	Indicates prevailing asset management practice, identifies and prioritises improvement needs and proposes a response plan
	Scope of contents	<ul style="list-style-type: none"> • Organisational context, roles and responsibilities relating to the pursuit of the sector’s AM objectives • Overview of asset management system performance • Assessment of current AM practice (data, systems, planning, decision making, implementation, people issues) • Assessment of staff capacity and competence • Review of ongoing improvement activities, projects, programmes, and targets • Identification of priority improvement needs, priorities and development of a change management programme • Level of confidence in the improvement plan • Chapter summary providing a brief overview highlighting strategic challenges, risks, opportunities, and priorities relating to AM practices in the sector and the proposed responses
Risk management plan	Purpose	Identifies the sector’s risk management objectives, and summarises the key risks identified throughout the plan and the proposed mitigation and control measures
	Scope of contents	<ul style="list-style-type: none"> • Overview of the sector’s risk management objectives, practices and risk threshold (with city context) • Overview and assessment of historic risk management performance • Overview of key risks and current level of exposure from preceding chapters • Overview of risk mitigation tactics (proposed in preceding chapters), financial implications, residual risk, and contingency or continuity plans • Responsibility for risk control • Chapter summary providing a brief overview of the current AM risk exposure, proposed responses and outlook
Performance plan	Purpose	Identifies the sector’s asset management performance objectives and provides a performance forecast
	Scope of contents	<ul style="list-style-type: none"> • Overview and analysis of asset management (infrastructure, and AM system) performance objectives, measures and targets – including the performance of this AMP (with city context) • Strategic overview and analysis of historic performance • Assessment of the certainty of the forecast and proposed improvement of the data and/or models • Chapter summary providing a brief overview of forecasted sector performance based on the response plans in the preceding chapters
Annexures	Purpose	Provides detail to support the plan including a breakdown of forecasted expenditure and performance
	Scope of contents	<ul style="list-style-type: none"> • 30 year budget (breakdown of projection over 30 years – including detailed SIPDP in mSCOA format for 5 years) • Supporting summarised technical information (where necessary) • SIPP - comprising the asset management (infrastructure and system) performance forecast for the sector in line with the city’s SDBIP)



Figure 7.2 provides an overview of the nature and sequence of activities required to prepare the sector AMPs which, as suggested in Module 6, may take a period of 4 to 6 months (and probably longer in the first few iterations). The process includes periodic workshops at the end of each of the various stages of work activities with internal stakeholders (from the respective sector, as well as corporate planners and asset managers) to confirm that all salient aspects have been included in the assessment and secure agreement with the outputs and proposed responses.

The activities are presented on the assumption that a person in each sector is allocated the specific responsibility for the preparation of the sector AM Plans with the support of team members, and receiving inputs from across the sector management including those responsible for project and programme planning and implementation, operations, ICT and finance, performance and risk management. Tasks can be allocated in line with the illustrated activities (interpreted for the respective sectors and applicable operational environment) and monthly timelines indicated in Table 7.3.



YR	MONTH	SAMP TASKS		AMP TASKS	
1	October			Review O&M plans (Yr 2)	Align with/review O&M strategy
	November				Prepare draft operations and maintenance plans
	December	Initial SAMP for Yr3	Prepare portfolio life-cycle plan		Workshop and finalise
	January		Prepare brief for sector AMPs	Receive strategic brief	
	February			Prepare draft sector AMPs (Year 3)	Review data availability and confirm AM model
	March				Establish context and status quo
					Assess the levels and standards of service
	April	Final SAMP for Yr2	Review based on IDP outputs		Workshop and document
May				Forecast future demand and assess implications	
					Workshop and document
June				Finalise budgets and plans	Determine proposed response to lifecycle needs
2	July	Prepare draft SAMP for Yr3	Integrate & develop strategies	Review affordability and financial sustainability	
	August		Options analysis & change plan	Assess sector AM competency and capacity	
	September		Workshop and finalise	Consolidate the risk management plan	
				Consolidate the performance forecast	
				Workshop and document	
				Finalise the plan, distribute, workshop	
				Finalise the document	

TABLE 7.3: Illustration of monthly tasks for SAMP and AMP preparation

7.2.3 Finalising the sector asset management plans

As indicated in **Figure 7.1** the sector AM plans are finalised once there has been a review at the city level (in preparing the draft SAMP). An important element of this review is to check that there is sufficient confidence in the data and processes used to define the need and shape the nature, timing and priority of the planned responses (as required in terms of the asset management strategy). The directives that emanate from the city's IDP process (in which the sectors participate) are reflected in an updated and final AM plan document for each of the sectors. These final sector AM plans are then communicated to the stakeholders within the department, relevant stakeholders in the city and other stakeholders in terms of the communications approach indicated in the city's AM strategy.



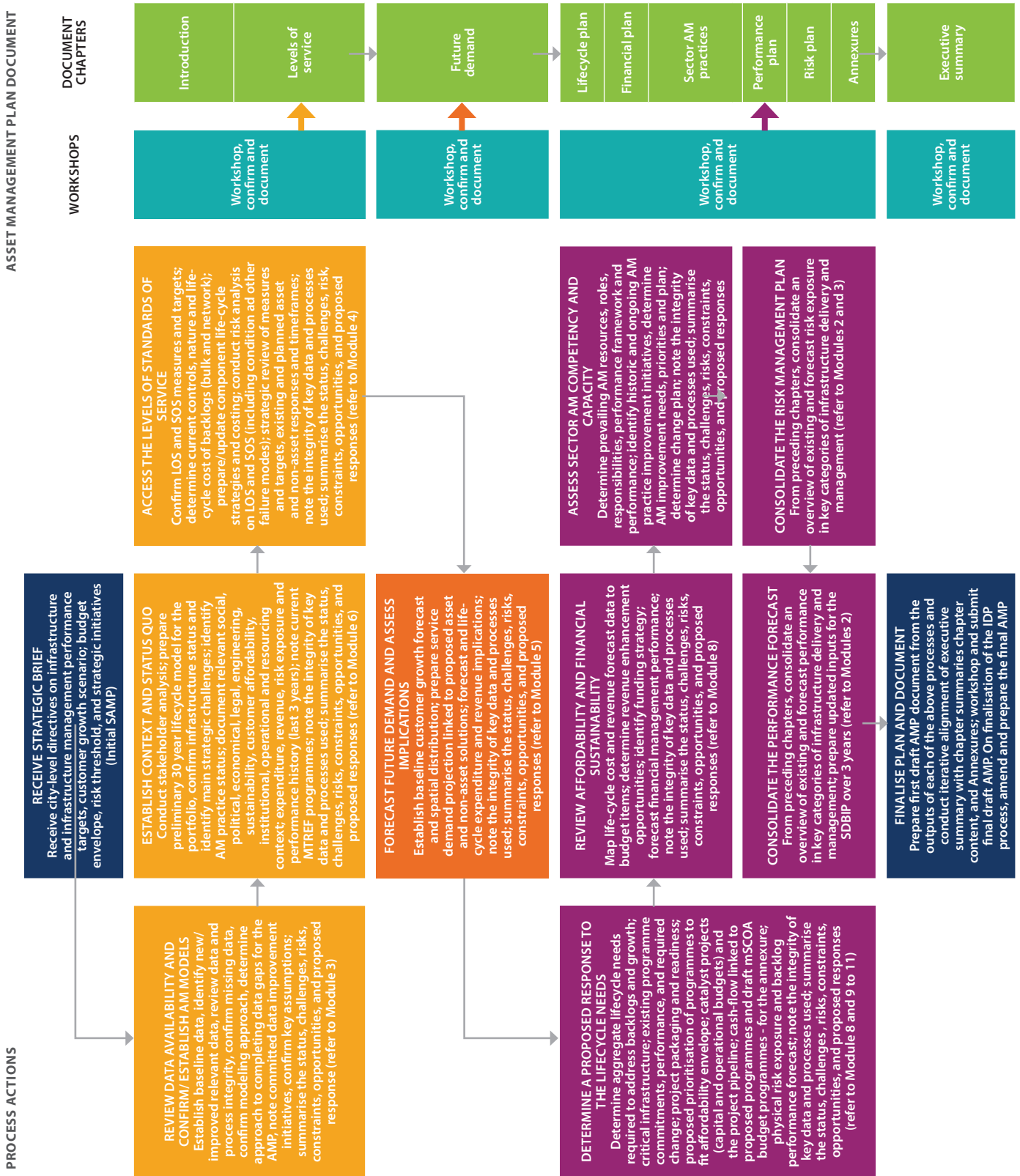


FIGURE 7.2: Overview of sector AM plan preparation process

7.3 DRAFT CITY LIFE-CYCLE PLAN

7.3.1 Why develop a city infrastructure life-cycle plan?

In the previous module, the approach to prepare a high-level city infrastructure life-cycle strategy was described (in **Section 6.2**). It provided directives to develop draft life-cycle plans for each of the sectors. This was to promote horizontal alignment across sectors and to align vertically to ensure that projects and programmes, and indeed the long-term strategic direction of the city, are in line with the city's AM objectives (which, in turn, support the city's strategic objectives).

In this section, the draft sector infrastructure life-cycle plans are aggregated to:

- Check horizontal and vertical alignment
- Review and confirm that strategic opportunities are being optimally leveraged
- Ensure that risk management is seamless and the responses consistent
- Review the balance of the allocation of resources over space, time, and sectors
- Review priorities and identify integrated strategic budget scenarios.



7.3.2 Establishing the draft city infrastructure life-cycle plan

The life-cycle plans submitted by the sectors are aggregated into two sets of schedules – the proposed application of (1) capital and (2) operational funds:

- per sector, for the different life-cycle programme types, and, as applicable, relating to each of the respective planning areas
- over the three planning horizons (1 to 5, 6 to 15, and 16 to 30 years).



This facilitates a macro-review of the extent to which there is balance in the proposed application of the city's resources, macro-affordability and alignment with strategic priorities. It also facilitates reflection on the extent to which the underlying (zero-based) needs can be addressed given the affordability envelope, and provides a framework to review and determine strategic revenue and organisational efficiency targets for the city. Once the appropriate balance is achieved, the respective OPEX and CAPEX schedules are drilled down to the programme level, and limited to the 15-year planning horizon.



Each of the programmes are annotated with:

- A programme name and reference code
- The sector (or sectors where applicable)
- The position in the asset hierarchy
- The project segment (life-cycle stage)
- The viability (reflecting the benefit-cost ratio)
- The cost elements (contractor, labour, plant and materials)
- The latest total cost estimate split into CAPEX and OPEX
- The cash flow of annual costs and revenues
- The proposed funding source or sources
- The prioritisation index (reflecting the QBL established in line with the models indicated in Module 8) and flag the sensitivity range
- The location of the project, and the area that will benefit
- The commitment status (funds spent)
- Dependencies
- The delivery risk (reflecting any uncertainty of the ability to implement timeously)
- The priority ranking

In some cases, funds are targeted to specific applications (for example technical scope, social classifications, or geographic areas). They may also be associated with other specific terms or requirements that may affect the manner in which programmes are selected for funding and consequently for implementation.

The programmes are reviewed for alignment with the infrastructure performance targets set in terms of **Module 2**, including a performance risk review. This will inform the preparation of the city infrastructure performance plan (CIPP), which will be a subset of the city's SDBIP relating to infrastructure management and delivery performance. A review of performance risk will be made and mitigation steps identified as necessary. Based on these schedules of updated and adjusted data, programmes that have been previously prioritised are reviewed and are either confirmed, relegated, or discarded, and new ones added where appropriate. It is on this basis that draft five-year budgets are established.



7.3.3 Draft city infrastructure programme delivery plan

The next level of drill down is to review the activities and projects within the programmes over each of the next five years to develop the draft city infrastructure programme delivery plan (CIPDP). The process includes checks to confirm the following:

- The packaging and logic flow from activities including dependencies within and external to the programme
- The duration and timing of the activities in line with the envisaged procurement and delivery strategy
- The allocation of programme and project roles and responsibilities
- The project cash flow
- The project funding
- An analysis of project and programme risks and appropriate mitigation

The aggregated programme budgets are aligned to the draft five-year budgets per sector.



7.4 STRATEGIC ASSET MANAGEMENT PLAN (SAMP)

7.4.1 Why document the SAMP?

As noted above in **Section 7.3.1**, the finalisation of the city’s draft integrated infrastructure life-cycle plan establishes the platform for delivery. However, as with the sectors, it is important to document at city level in the SAMP at a more strategic level:

 <p>The data and processes that informed the establishment of the needs</p>	 <p>How the programmes were determined</p>	 <p>The vertical alignment with the city’s corporate objectives, AM objectives, policy, IDP and SDBIP</p>
--	---	--



This demonstrates that the project and programme activities maximise the achievement of the city’s strategic objectives in terms of a coherent and long-term framework, established in line with recognised best practice. It also shows there is effective alignment across the sectors within the city and a considered balance in the treatment of the various life-cycle needs, as well as over the different areas of the city. As a draft, this document provides inputs to the IDP process relating to infrastructure-based services. It is also used by the city as a reference by internal stakeholders and, in terms of the city’s communication strategy, for external stakeholders. The document is finalised by confirming the strategic direction of the city and the prioritisation of its projects and programmes through the IDP process.

7.4.2 Preparation of the draft SAMP document

An overview of the layout and content of the final SAMP document is provided in Module 2.

The document is compiled by the Head of Corporate Asset Management in consultation with the sector departments responsible for the preparation of the sector AM Plans. Initial baseline data and assimilation of current commitments, strategic challenges, risks, opportunities, constraints and alignment needs are determined from the sector AMPs and are reviewed and confirmed in a workshop with representatives from all sector departments, finance, risk and performance management. Strategic scenarios are then identified, analysed and documented in the draft SAMP which is again workshopped to ensure it is complete and robust. This is then presented to

council to inform its consultation with stakeholders at the Lekgotlas and the IDP process, and, ultimately, decision-making on the application of the budgets to programmes and commitment to performance targets.

The main tasks in the preparation of the draft SAMP document are indicated in the second stage of the SAMP development process illustrated in Figure 7.3.

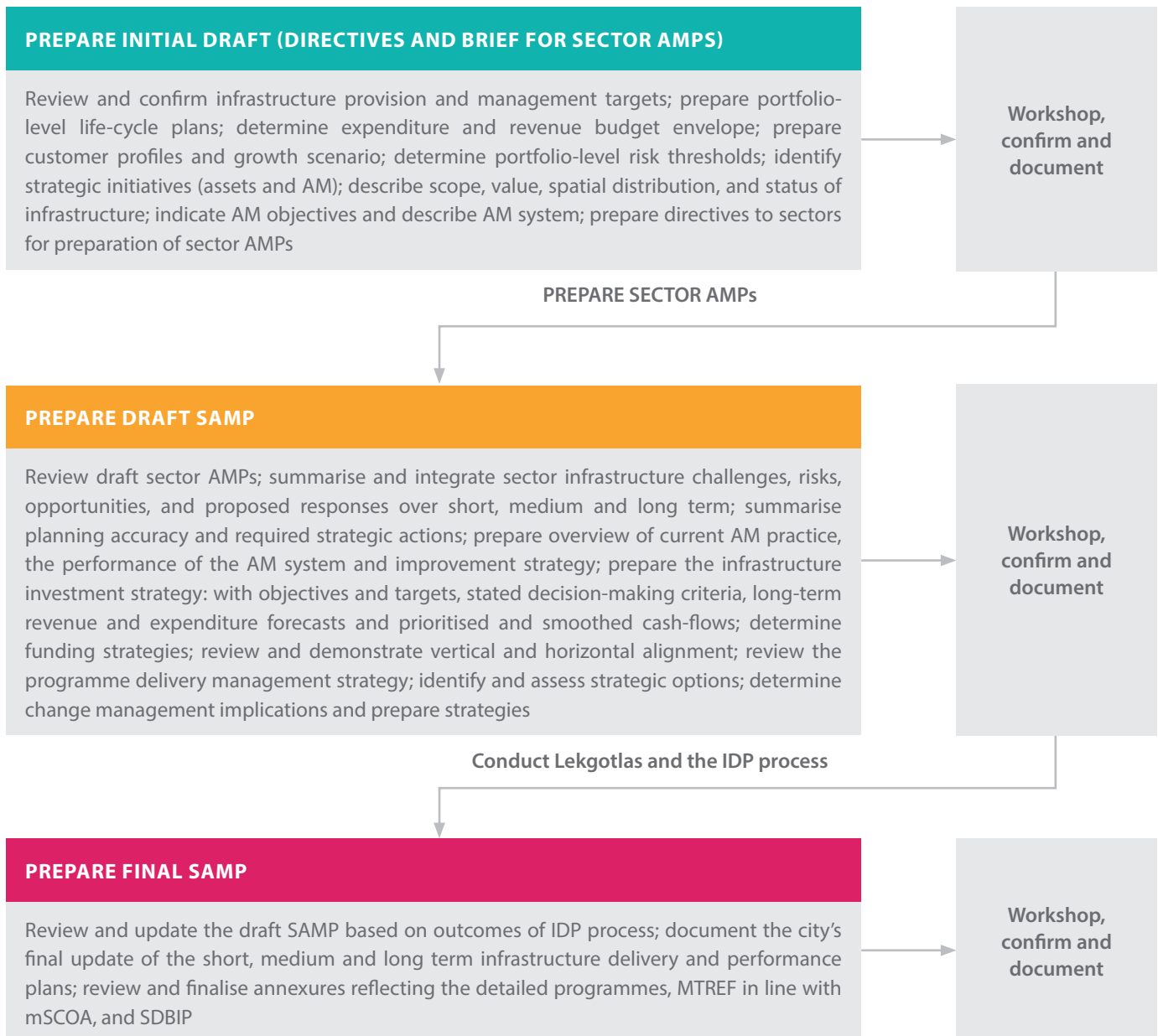


FIGURE 7.3: Overview of the SAMP development process

7.4.3 Preparation of the final SAMP

The final SAMP is prepared based on the feedback from the IDP consultative process and aligning with the final CIPDMP, MTREF and SDBIP. The document is submitted for formal adoption by council.

7.5 SUMMARY

A city has one budget which needs to address a wide range of competing needs. The objective of the SAMP is to communicate to decision makers all relevant information relating to infrastructure in one brief document. It is based on an aggregation of the holistic and long-term needs of each sector, as identified in the AM plans, as well as an analysis of common themes, issues of alignment and priority. On adoption it also confirms the CIPDP and CIPP that set the brief for project and programme implementation, the processes for which are considered in **Modules 9 to 11** of this toolkit.



CITIES' **INFRASTRUCTURE**
DELIVERY AND
MANAGEMENT SYSTEM **CIDMS**

