AUCKLAND TRANSPORT

ASSET MANAGEMENT FRAMEWORK

April 2011

Contents

1 Introduction

Infrastructure Asset Management

The application of management, financial, economic and engineering principles to infrastructure assets in order to provide an agreed level of service in the most cost-effective manner.

The purpose of the Asset Management framework

Auckland Transport (AT) is the Council Controlled Organisation (CCO) that has transport asset stewardship and service delivery responsibilities on behalf of Auckland Council. It is responsible for the day to day activities of the Auckland transport networks. These include the planning and funding of transport activities, promoting alternative ways to get around the city and operating the local roading network.

The AM framework integrates planning processes, decision-making and information across all transport assets and activities. It provides a management structure within which stakeholder needs, levels of service, asset information, finance, risk and resources are brought together to enable balanced, consistent and high-quality AM decision-making. Through this, it enables the delivery of agreed service levels to our customers in the most cost-effective manner and provides proper stewardship of transport assets.

The framework enables consistent asset management practice by linking the AM responsibilities of key AT stakeholders. High quality AM outcomes are highly dependent upon the consistent use of the framework by stakeholders, planners and decision-makers.

Overview of the asset management activity

The asset management activity is primarily designed to support the delivery of an organizational strategic plan in order to meet the expectations of a variety of stakeholders. The strategic plan is the starting point for development of the asset management policy, strategy, objectives and plans. This process is illustrated in Figure 1 below.

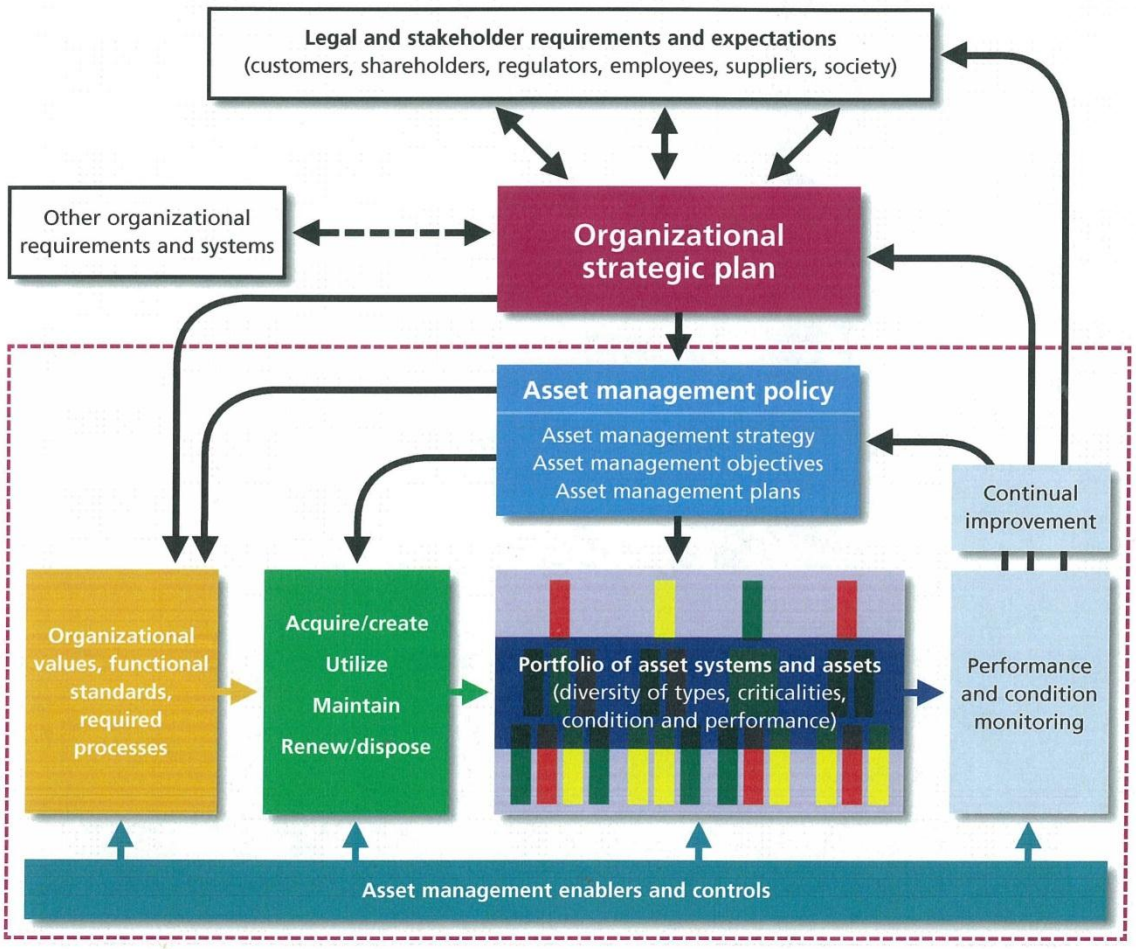

Figure 1 - The total asset management process[1]

[1] PAS 55-1:2008 Figure 4

The alignment and link between organizational strategic direction and the operational activities of managing assets are vital components of the whole asset management process. This ensures the alignment of “top down” aspirations of the organization with the “bottom up” realities and opportunities of the assets. Figure 2 shows the important planning and implementation elements of the asset management process that ensure such alignment.

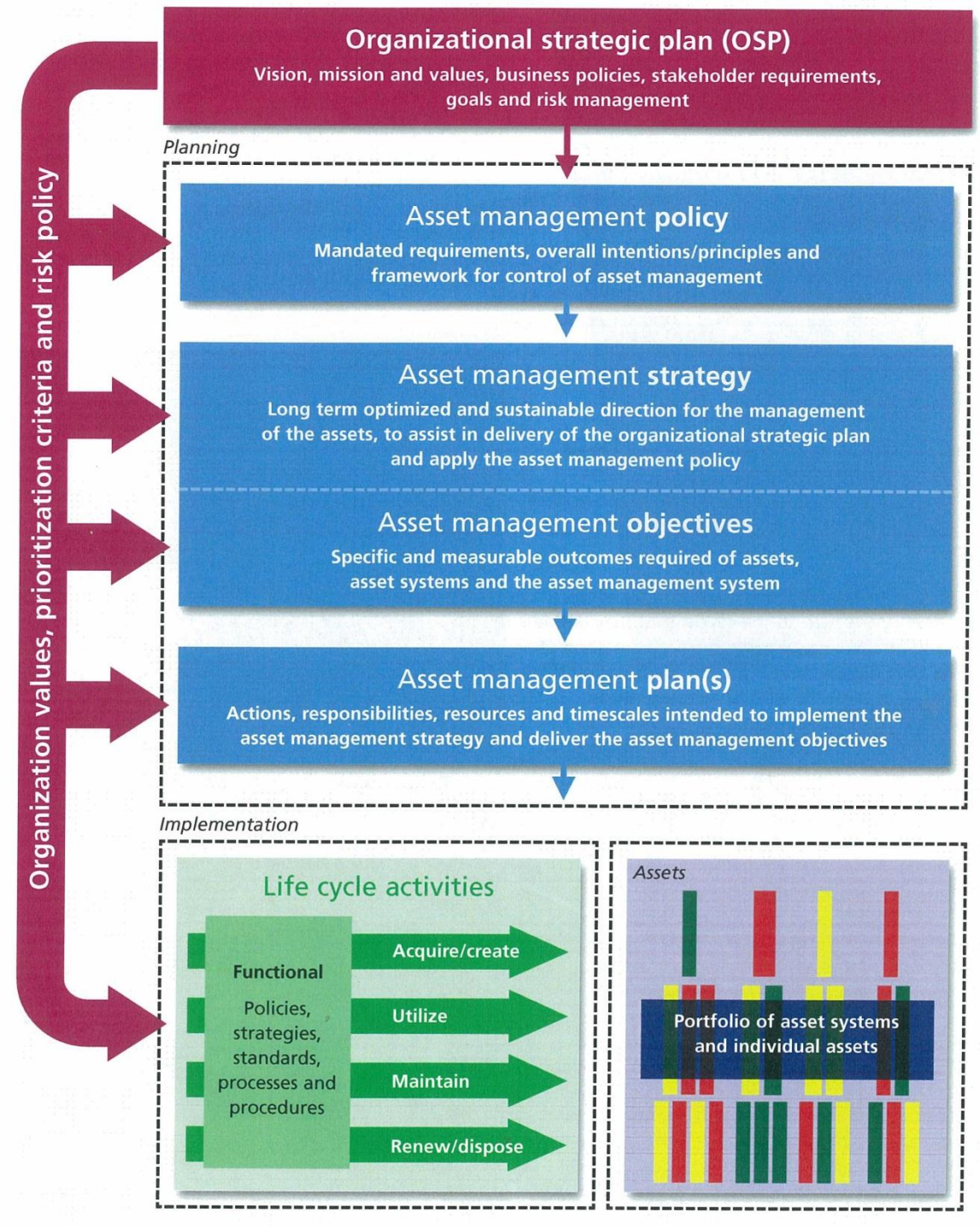

Figure 2 - Planning and Implementation Elements[2]

[2] PAS 55-1:2008 Figure 5

2 Auckland Transport asset management practice

Auckland Transport asset management practice has been developed in keeping with the National Asset Management Steering Group (NAMS) practice as presented in the suite of INGENIUM NAMS asset management publications.

The goal of infrastructure asset management is to identify the levels of service required by stakeholders and then manage the asset portfolio to provide those service levels at the least lifecycle cost and in a sustainable manner. Good asset management practices means that the right work is done at the right time for the right cost.

The key features of Auckland Transport infrastructure asset management are:

- A whole-of-life AM approach
- Planning for a defined level of service
- Long-term strategies for cost-effective asset management
- Performance monitoring
- Meeting the impact of growth through demand management and infrastructure investment
- Managing risks associated with asset and service failures
- Sustainable use of physical resources
- Continuous improvement in asset management practices

The Asset management role of Auckland Transport

Prior to amalgamation, the transport network and its services were managed by seven local councils and a regional public transport authority. The single Auckland Council structure allows a more holistic and coordinated approach to regional transport through the Auckland Transport CCO. It provides an opportunity for a more effective and efficient governance and use of asset management to help deliver service and value to the stakeholders in the region.

Auckland Transport (AT) is responsible for managing transport infrastructure assets and activities across the Auckland region. Its main tasks are to:

- Work closely with Auckland Council to give effect to the transport component of council's strategic direction and Long-Term Plan
- Prepare the Regional Land Transport Programme (RLTP)
- Design, build and maintain Auckland's roads, footpaths, ferry wharves, cycleways, walkways and public transport assets.
- Co-ordinate road safety, community transport and school travel initiatives;
- Plan and fund bus, train and ferry services across Auckland

Auckland Transport uses advanced asset management principles and practices to achieve these tasks. Specifically, Auckland Transport must deliver effective, efficient, safe and sustainable services through good governance, management, planning and delivery. Through advanced asset management, AT demonstrates:

- Good governance and asset stewardship
- Good knowledge of customer and stakeholder requirements now and going forward.
- Legislative compliance
- Good asset knowledge including the condition and performance required to deliver service
- Good knowledge of the risks associated with our assets;
- Good understanding of the long-term works and costs associated with the assets
- Good management of asset knowledge
- Good understanding of what is required to provide services sustainably

Asset life cycle planning skills, processes, practices, data and systems are applied within Auckland Transport in an integrated manner to produce robust forward works programmes and prudent financial management.

Infrastructure asset management is the tactical decision-making that links strategic objectives with the operational delivery of physical works. Asset management planning is the organizational activity used to produce the operational forward works plans that deliver the strategic objectives. Figure 3 emphasizes the importance of asset management and the AMP as a cornerstone of our business.

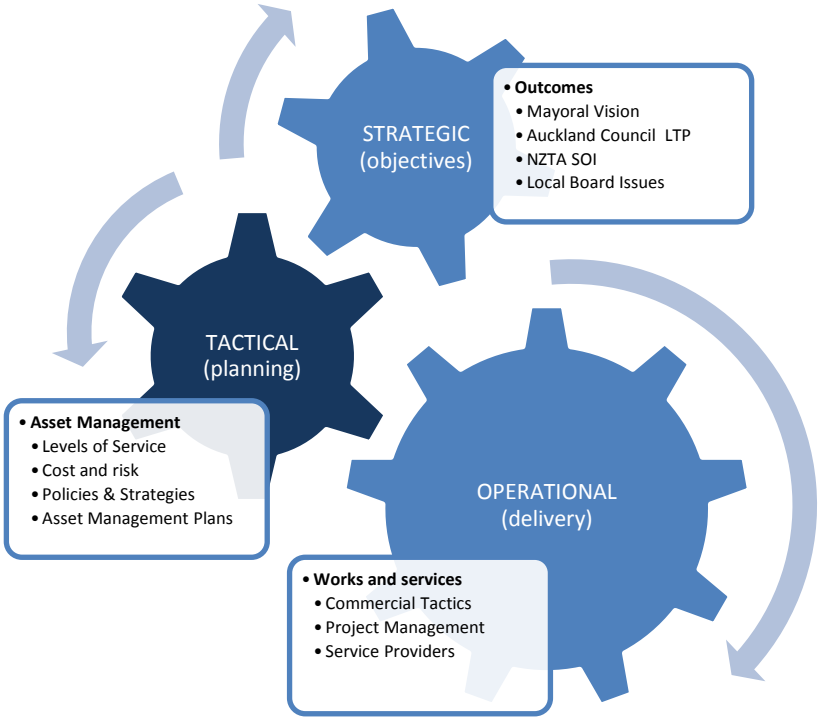

Figure 3 - The link role of tactical asset Management

The central elements of asset management processes and service delivery are shown in Figure 4 below. This illustrates the decision-making processes that use inputs such as stakeholder requirements, asset information and funding, to ensure that planning and subsequent delivery provides the agreed levels of service, cost and risk outcomes.

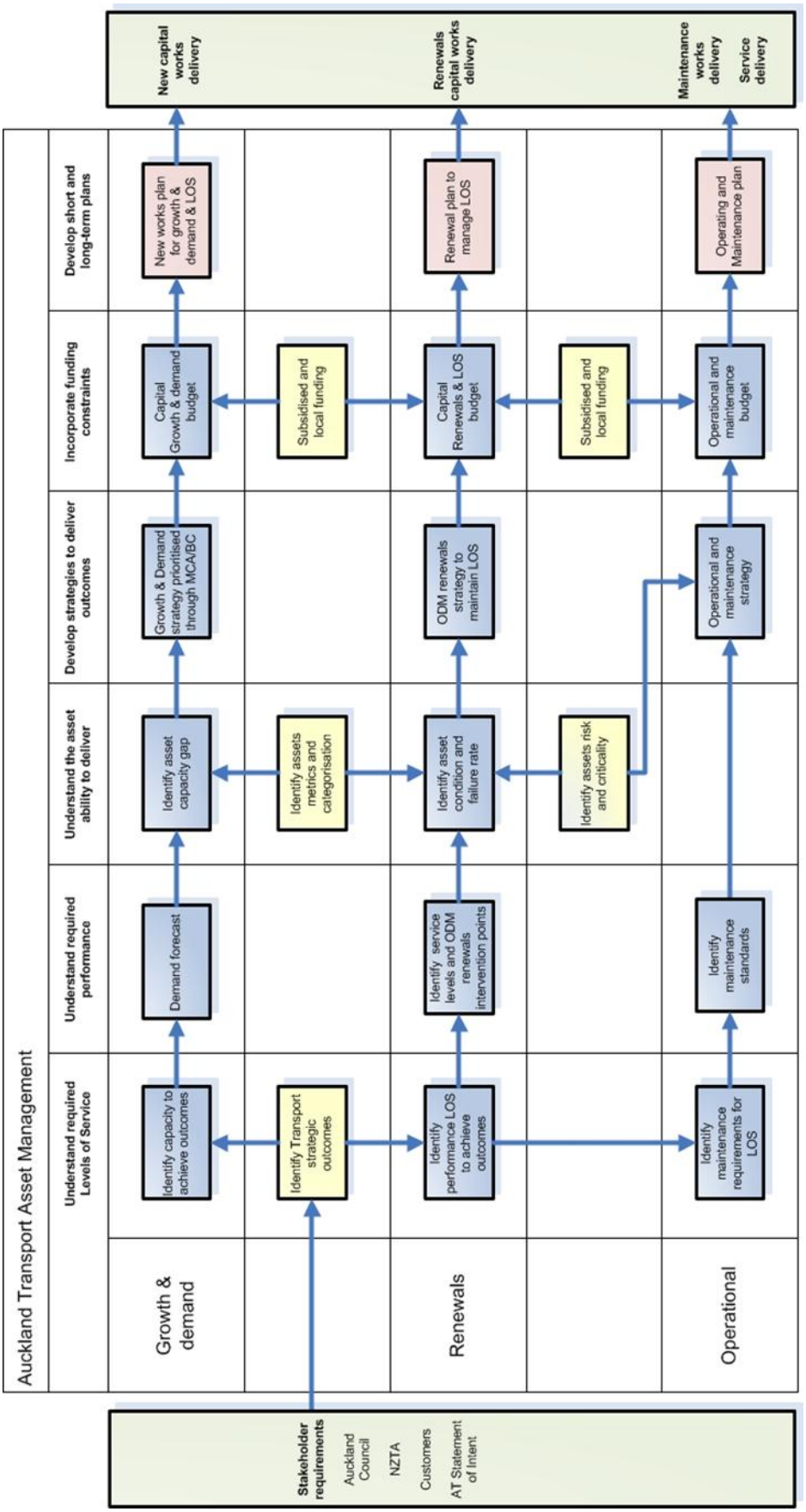

Figure 4 - AT asset management processes

Asset management roles and responsibilities

People, processes and practices all combine to contribute to Auckland Transport achieving effective asset management. The main business divisions of Auckland Transport are Operations, Infrastructure and Finance. The organisation is structured beneath the chief executive as tier 2 divisions, tier 3 departments and tier 4 management units.

The Asset Management & Programming Department within the Infrastructure Division, leads asset management (AM) planning and programming across the organization.

The Asset Management & Programming Department has three management units which work closely together; AM Planning & Policy, Asset Programming and AM Systems. These units are tasked with providing the strategic and tactical asset management for the division.

These three AM units work closely across other departments and divisions each with strategic and tactical asset management roles in the AM process as described in Table 1 below.

AM Process	Process Leader	Process Contributor
AMP development AM framework LOS framework	AM & Policy	AM Systems Asset Programming Road Corridor Maintenance Road Corridor Operations Road Corridor Access PT Operations Infrastructure Development Investigation & Design Property Strategy & Planning PMO
Identify stakeholder outcomes	AM & Policy	Communications Stakeholder Liaison Road Corridor Maintenance Road Corridor Operations Road Corridor Access PT Operations Auckland Council NZTA
Develop levels of service, monitor performance and report	AM & Policy	AM Systems Asset Programming Road Corridor Maintenance Road Corridor Operations Road Corridor Access PT Operations Infrastructure Development Property Communications

AM Process	Process Leader	Process Contributor
Develop growth and demand	Strategy and Planning	AM & Policy AM Systems Asset Programming Infrastructure Development Investigation & Design PMO
Asset information and systems	AM Systems	AM & Policy Asset Programming Road Corridor Maintenance Road Corridor Operations Road Corridor Access PT Operations Property
Risk management	AM & Policy	Risk and Audit Road Corridor Maintenance Road Corridor Operations Road Corridor Access PT Operations AM Systems Asset Programming
AM policies, standards and strategies	AM & Policy	AM Systems Asset Programming Road Corridor Maintenance Road Corridor Operations Road Corridor Access PT Operations Infrastructure Development Investigation & Design Property Strategy & Planning PMO
Financial Plans Funding policies Asset Valuations	AM & Policy	AM Systems Asset Programming Road Corridor Maintenance Road Corridor Operations Road Corridor Access PT Operations Infrastructure Development Investigation & Design Property Strategy & Planning PMO Finance

AM Process	Process Leader	Process Contributor
10 year Forward Works Programme (Opex & Capex)	AM & Policy	AM Systems Asset Programming Road Corridor Maintenance Road Corridor Operations Road Corridor Access PT Operations Infrastructure Development Investigation & Design Property Strategy & Planning PMO Finance
3 year Forward Works Programme (WP Opex & Capex)	Asset Programming	AM & Policy AM Systems Road Corridor Maintenance Road Corridor Operations Road Corridor Access PT Operations Infrastructure Development Investigation & Design Property Strategy & Planning PMO Finance
AM Improvement Plan	AM & Policy	AM Systems Asset Programming

Table 1–Key AM process roles

3 The asset management plan

The Purpose of the Asset Management Plan

The Asset Management Plan (AMP) is an umbrella document that gives effect to a range of other strategic and tactical planning documents. It achieves this through the planning, delivery and maintenance that it describes for Auckland's roads, footpaths, ferry wharves, cycleways, walkways and public transport assets and services. The AMP gives effect to documents such as:

- Auckland council's strategic direction and Long-Term Plan (LTP)
- The Regional Land Transport Programme (RLTP)
- Road safety, community transport and school travel plans
- Public transport plans covering bus, train and ferry services

Figure 5 below shows the role of the AMP within the wider strategic planning context.

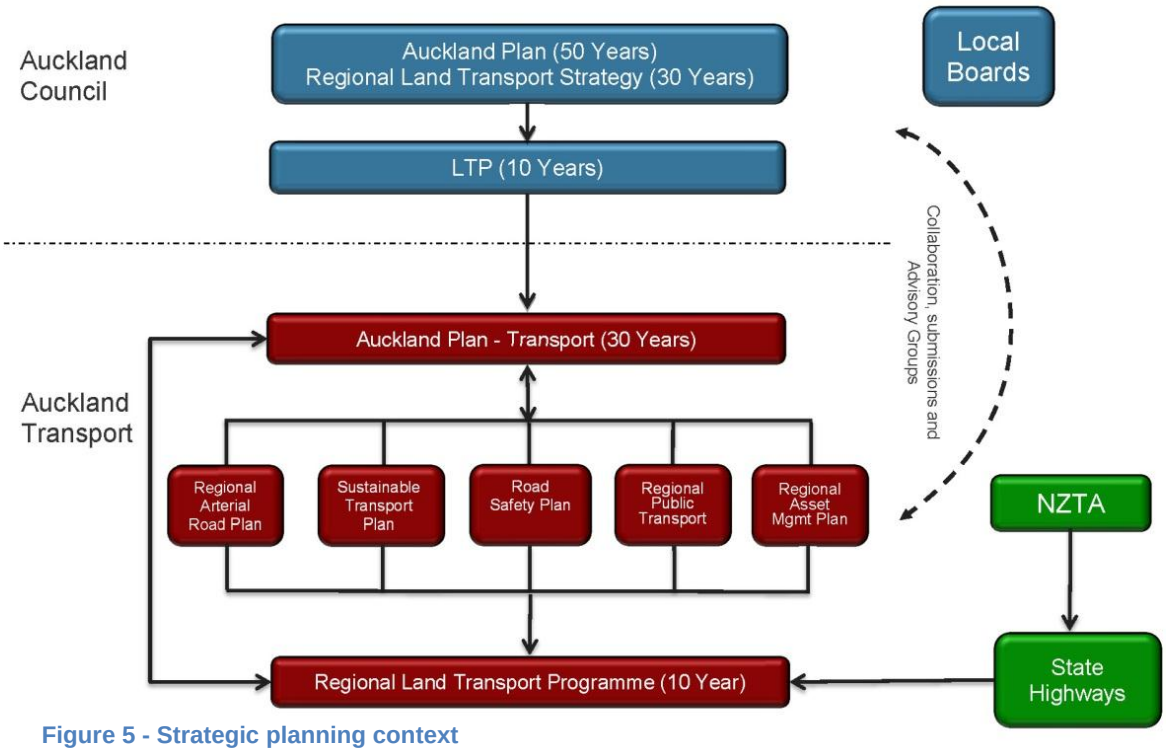

Figure 5 - Strategic planning context

The AMP develops and documents the levels of service to be provided and identifies the development, maintenance and renewal work programmes required to maintain those levels of service at the least-cost over the life cycle period of the assets.

Asset Management employs predictive modelling, risk management and optimised decision-making techniques to identify those long term work programmes and funding requirements.

Auckland Transport manages the scope, specification and performance of all transport assets and services through the Auckland Transport AMP. It describes the levels of service required to deliver regional and local outcomes through assets and services that are effective, efficient, safe and sustainable.

Strategic and Tactical AMPs

Auckland Transport produces an overarching Transport Strategic Asset Management Plan (AMP) for public disclosure that demonstrates its asset management processes, practices and resulting strategies and tactical plans. It shows the current performance and service outcomes. This Strategic AMP covers all transport modes, including roads and public transport by bus, rail, ferry and airfields.

Behind this Strategic AMP are two Tactical AMPs; one for road-based activities including footpaths and cycleways and the other for public transport activities covering bus, rail, ferry and airfields. The Tactical AMPs provide comprehensive source information for producing the Strategic AMP. These relationships are shown in Figure 6 below.

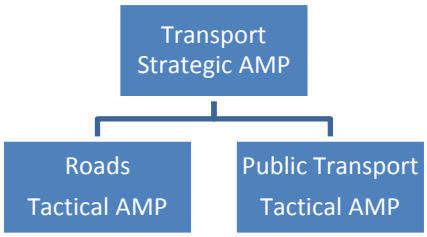

Figure 6 - The AT AMP hierarchy

Auckland Transport Strategic AMP contains summarized and key information that will be made available for public information and consultation and which will support Council's Long Term Plan (previously known as the Long Term Council Community Plan, LTCCP).The contents of the strategic AMP are shown in Table 2.

TRANSPORT STRATEGIC AMP CONTENTS	
Executive summary	Summary of core components of all of the sections below, suitable for separate stand-alone publication for the Region's transport activities.
Introduction	Overview of the region and the activity at a glance including the networks and their assets and services. Asset management planning overview including the scope of the plan, vision, goals, objectives, relevant legislation, policies, strategies, plans and key stakeholders
Levels of service	What the community expects from the transport network and how community outcomes are delivered by linking them to core values and levels of service. Current and future levels of service are identified.
Risk	Describes the risks related to the management of the transport network how those risks are managed and mitigated
Sustainability	Describes the sustainable practices used in the development, maintenance and operations of the transport network and the initiatives being implemented to meet the council's sustainability goals.
Assumptions	Key assumptions and limitations relating to the base data, metrics and inputs used to determine the forward works programme, physical works projects and financial forecasts
Financial summary	Identifies 10 year financial forecasts, funding policies and physical works projects

Table 2 - Strategic AMP contents

Auckland Transport adopts the framework shown in Table 3 for its Tactical AMPs for roads and public transport. It uses the basic model and principles of the NAMS *International Infrastructure Management Manual*.

TRANSPORT TACTICAL AMPS CONTENTS	
Executive summary	Summary of core components of all of the sections below, suitable for separate stand-alone publication for the Region's transport activities.
Introduction	Overview of the region and the activity at a glance including the networks and their assets and services. Asset management planning overview including the scope of the plan, vision, goals, objectives, relevant legislation, policies, strategies, plans and key stakeholders
Levels of service	What the community expects from the transport network and how community outcomes are delivered by linking them to core values and levels of service. Current and future levels of service are identified
Growth and demand	Identifies the key drivers influencing demand and identifies the management and investment options to address the impacts of growth.
Risk	Describes the risks related to the management of the transport network how those risks are managed and mitigated.
Asset lifecycle management plans	Describes how the transport assets are maintained, renewed and managed to provide the required service level at least cost over the asset lifecycle.
Sustainability	Describes the sustainable practices used in the development, maintenance and operations of the transport network and the initiatives being implemented to meet the council's sustainability goals
Financial summary	Describes the financial forecasts including detailed analysis of the cost of developing, maintaining and operating the transport network for the next 10 years. Includes key assumptions, funding policies and physical works projects
Asset management practices	Describes the processes used to manage the transport network and the systems used to manage AM information. Identifies requirements for asset knowledge and data. Includes frameworks linking strategies, information, decisions, plans, and governance approvals.
Improvement plan and monitoring	Improvement programme for the AMP and AM practice. Incorporates recommendations from gap and audit reviews as prioritized improvement projects. Projects include tasks, responsibilities, milestone dates, resources, costs, benefits, monitoring and progress reporting.
Appendices	Maps, inventories, lists, various supporting documents as required

Table 3 - Tactical AMP contents

Frequency and timing of AMPs

The two Tactical AMPs will be updated every year and a comprehensive revision, including an update of the Strategic AMP, will be undertaken every 3 years in time to be linked to the cyclic production of the Long Term Plan (LTP).

4 Stakeholders

Asset management exists to optimise stakeholder outcomes. Good knowledge of stakeholder values and drivers is essential for an effective, efficient, safe and sustainable regional transport activity. Table 4 shows Auckland Transport stakeholders and their areas of interest in the transport activity.

Stakeholders	Transport Area of Interest	Consultation Method	Relationship
Transport network users	Network performance and safety Service charges	Surveys	External
Auckland ratepayers	Rates impact	Surveys	External
Auckland Council	Strategic outcomes Rates impact	Formal liaison	External
Local boards	Levels of service Rates impact	Formal liaison	External
NZTA	Network performance and safety outcomes Network standards Subsidy funding levels	Direct liaison	External
Service providers	Network performance Scheduling, ticketing and information systems Service subsidies	Direct and industry group liaison	External
Utilities e.g. Watercare, Telecom, Vector	Corridor access Programming	Direct and industry group liaison	External
Adjoining Road Corridor Authorities	Network services alignment Standards and protocols	Direct liaison	External
Freight operators	Network efficacy and reliability Access to properties	Liaison with industry group	External
Business and commerce	Network efficiency and reliability Access to properties	Liaison with industry group	External
AT Road Corridor Operations	Long and short-term work plans Network performance and safety	Direct liaison	Internal
AT PT Operations	Long and short-term work plans Network performance and safety	Direct liaison	Internal
AT Road Corridor Maintenance	Long and short-term work plans Network performance and safety	Direct liaison	Internal
AT Road Corridor Access	Long and short-term work plans Network performance	Direct liaison	Internal
AT Infrastructure Development	Strategic outcomes Network capacity	Direct liaison	Internal

Table 4 - Stakeholders

Delivery of services to the standard agreed with stakeholders is achieved through the internal Auckland Transport management units such as operations, development, liaison and call centre customer response, who together manage the delivery of physical works and activities in and on the network.

5 Asset Management Compliance

LGA 2002 Schedule10

Auckland Transport's Strategic AMP and Tactical AMPs will be assessed for demonstrating compliance with the requirements of the Local Government Act 2002 and in particular Schedule 10.

OAG Asset Management Criteria

Auckland Transport's Strategic AMP and Tactical AMPs will be assessed for demonstrating compliance with the key criteria from the Office of the Auditor General (OAG).

The OAG criteria provide for a clear understanding of the status of the AMP and AM planning practice. Auckland Transport uses these criteria to identify improvement tasks required to achieve advanced asset management practice.

Statutory compliance

Auckland Transport complies with and is committed to compliance with all relevant legislation with regard to managing the transport network..

Government and NZTA policies and standards

Auckland Transport's processes and practices will be assessed for compliance with Government policies and strategies and strategic plans, including the following:

- Government Policy Statement(GPS)
- Land Transport Plan
- Regional Land Transport Plan
- Regional Growth Strategy

Furthermore, Auckland Transport's procedural and technical processes and practices will be assessed for compliance with national policies and standards by the external procedural and technical audits by the Government's New Zealand Transport Agency (NZTA).

Auckland Council requirements

Auckland Transport's processes and practices will be assessed for compliance with the policies and strategies and Auckland Council strategic plans including the following:

- Council's Long Term Plan
- Auckland Spatial Plan