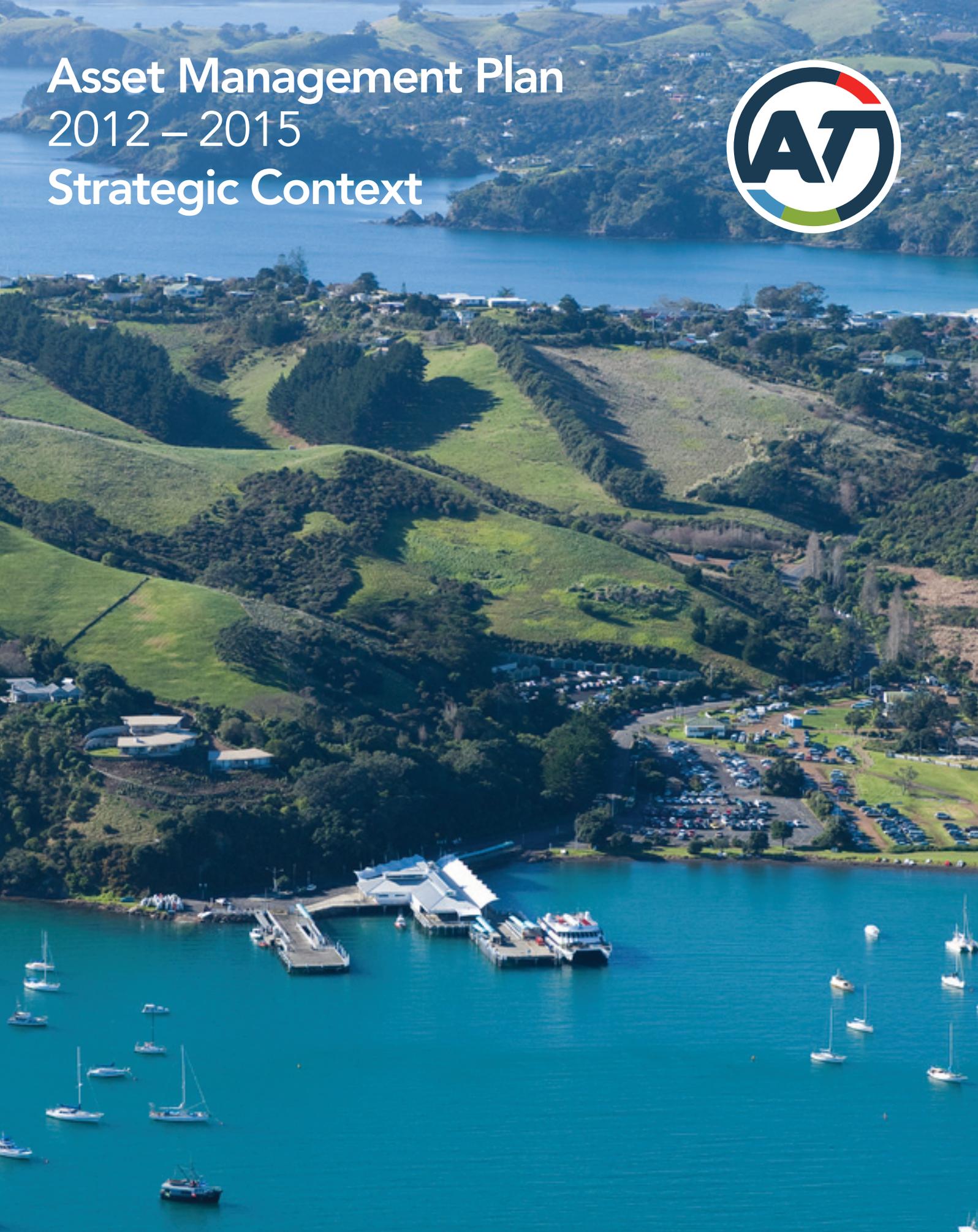


Asset Management Plan 2012 – 2015 Strategic Context



Asset Management Plan

2012 – 2015

Strategic Context

Quality Record Sheet

REPORT STATUS – FINAL	
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Asset Management Plan	Publishing date
Initial draft for discussion	June 2011
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Final Version 1 (this plan)	June 2012

AMP Document Set	
Briefing paper	
Asset Management Plan – Strategic Context	(this document)
Asset Management Plan – Overview	
Asset Management Plan – Road Network	
Asset Management Plan – Public Transport Network	
Appendix document	

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Introduction

STRATEGIC CONTEXT

Background

Auckland's transport system is one of the largest in the country and consists of a range of diverse assets including motorways, roads, footpaths, cycleways, parking facilities, public transport and freight transport infrastructure. Auckland Transport is now responsible – in conjunction with the New Zealand Transport Agency and KiwiRail – for planning and operating this transport system (see Figure 1).

The transport system is tightly constrained and has to be managed in a way that balances the level of transport service provided against the liveability and environmental sustainability of the locations which the system serves. This \$9.2 billion asset system requires an Asset Management Plan (AMP) which identifies the investment that will be needed to maintain, renew, operate and develop the assets within the transport networks, and ensure that any future decisions align with the Auckland Plan and the Integrated Transport Plan.

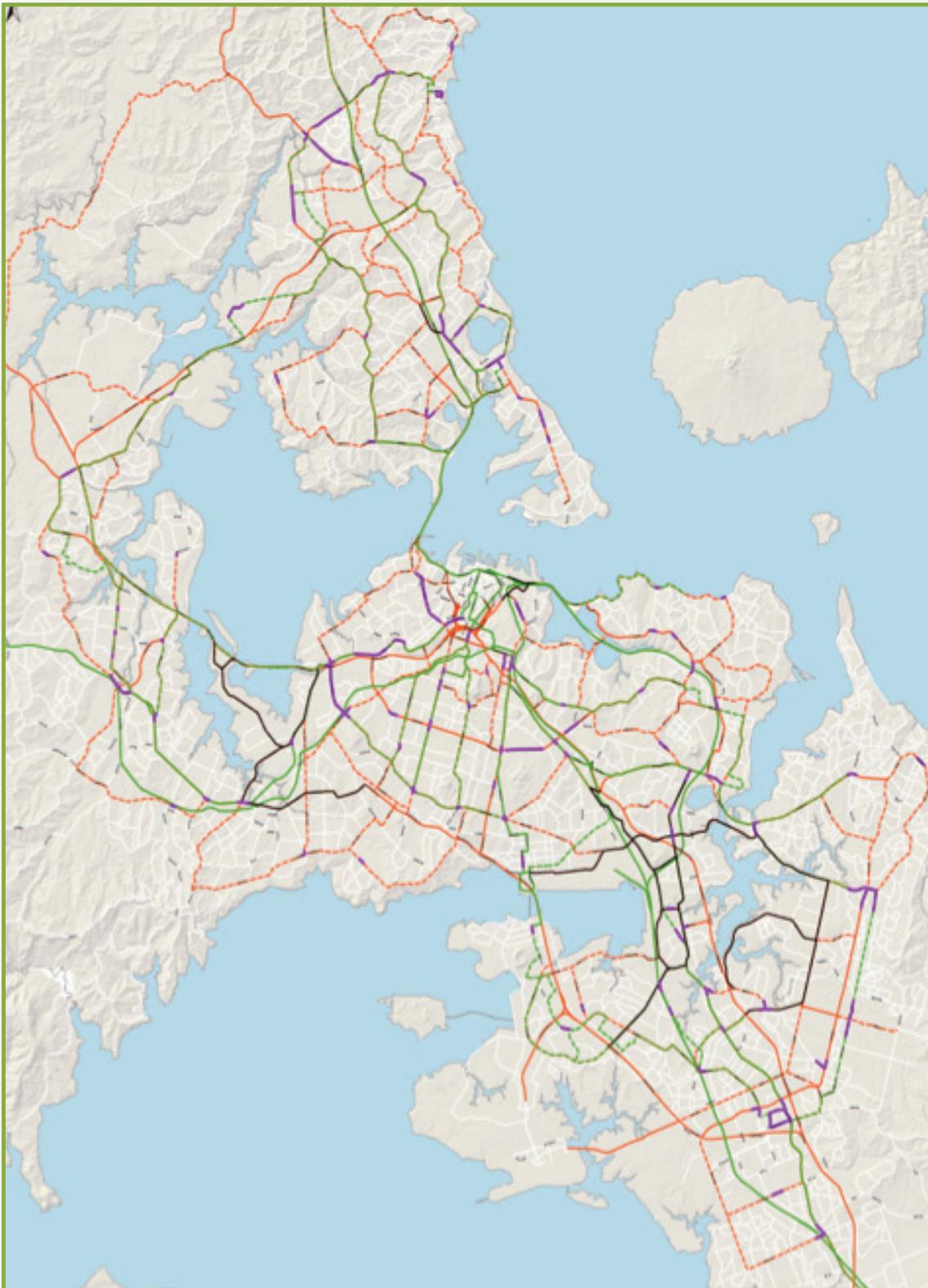
Being the first Transport AMP since Auckland Transport was established as a council-controlled organisation (CCO), it is a living document that can be developed and changed when required.

Purpose of this document

This document describes at a strategic level:

- The purpose of asset management planning, and the principles and practices Auckland Transport has used to develop the Asset Management Plan
- How the Asset Management Plan will be used to help Auckland Transport deliver the vision and outcomes of the Auckland Plan in an efficient and effective manner
- How the Asset Management Plan has been developed and how it will be improved over the next three years
- The publication arrangement for the Asset Management Plan.

Figure 1 Auckland Transport System



Legend

- Place Emphasis
- Public Transport Emphasis**
 - Main
 - - - Secondary
- General Traffic Emphasis**
 - Main
 - - - Secondary
- Freight Emphasis**
 - Main
 - - - Secondary

Purpose of Asset Management Plan

Purpose

The purpose of Auckland Transport's Asset Management Plan (AMP) is to manage the asset portfolio in the most cost-effective and sustainable manner to meet the levels of service required from the networks. To achieve this, the AMP provides the maintenance, renewal and replacement needs of the network assets for inclusion in the Long Term Plan (LTP) and the Regional Land Transport Programme (RLTP).

The AMP focuses on the next 10 years, providing detailed guidance to Auckland Transport to ensure it delivers the right activities in the right way to give effect to the Auckland Plan and the Integrated Transport Plan efficiently and effectively.

The AMP also provides a formal performance monitoring and reporting framework to demonstrate Auckland Transport is meeting its statutory obligations under the Local Government Act 2002.

Definition

The goal of asset management is to meet a required level of service, while considering risk, in the most cost effective manner, through the effective management of assets for the present and the future.

Asset management planning is the means of planning and understanding the assets:

- What they are
- Where they are
- What condition they are in
- How much they are worth
- What level of service is expected of them and at what cost
- How they are performing
- What are the risks of failure
- What extra capacity (if any) they have
- What capacity is required in the future
- When they need to be replaced/upgraded
- What the cost will be to replace/upgrade them
- What the non-asset solutions are
- What options are available
- What further works are required to meet future demand
- What improvements are programmed.

Principles and practices

Auckland Transport uses advanced asset management principles and practices to achieve these tasks. The key features of infrastructure asset management are:

- A whole-of-life asset management approach
- Planning for a defined level of service
- 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.

Asset management planning will inform Auckland Transport's capital investment decisions for new assets as well as expenditure for the operation, maintenance and renewal/rehabilitation of existing assets.

Benefits

Auckland Transport recognises the following benefits are gained through the effective implementation of asset management principles:

- 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 services
- Good knowledge of the risks associated with assets
- Good management of asset knowledge
- Good knowledge of what is required to provide services sustainably.

The application of asset management principles encourages a holistic, integrated approach to guide where and how finances and resources are allocated.

Current status

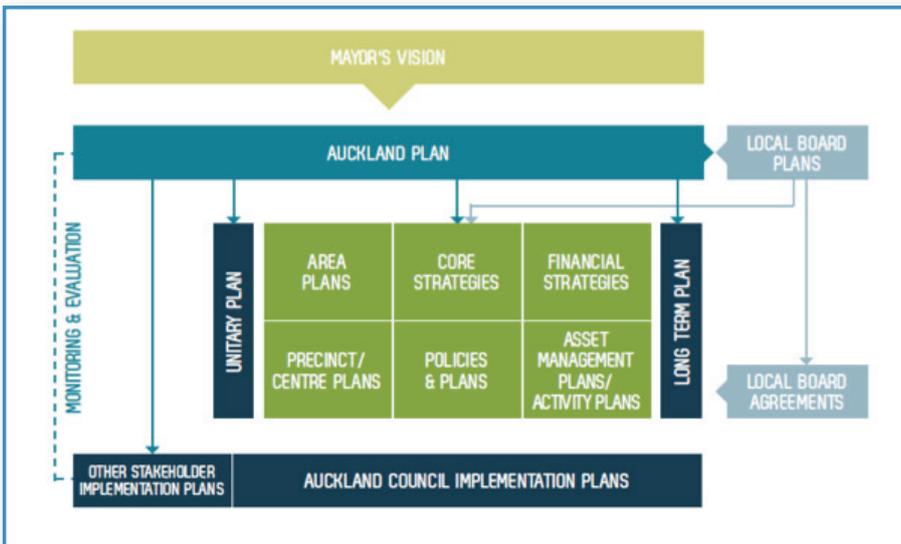
The Transport AMP 2012 is the first asset management plan since the amalgamation of the eight councils in the Auckland region in November 2010. To date, Auckland Transport has focussed efforts on bringing systems, data and knowledge into a common framework. The challenge over the next few years is to improve asset management decision-making through optimisation of networks, levels of service analysis, risk management and lifecycle costing.

How the Asset Management Plan will be used

Relationship with other planning functions

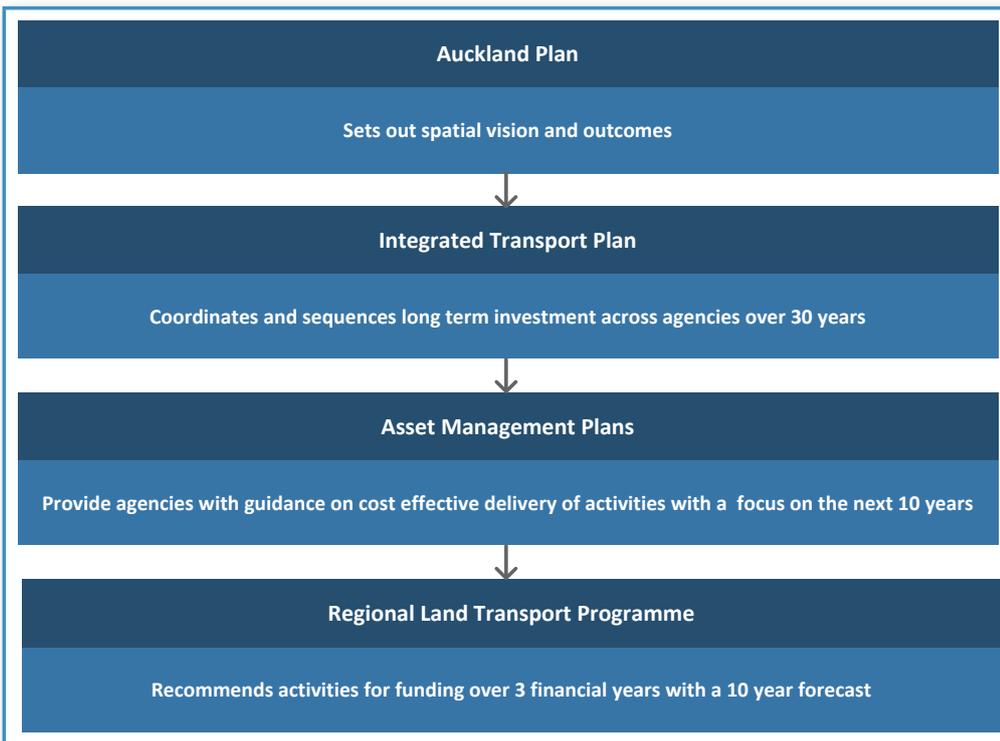
Auckland has a number of plans that guide and inform all operations, maintenance and capital expenditure. The broad strategic framework for the planning undertaken by Auckland Council is outlined in Figure 2, taken from the Auckland Plan.

Figure 2 Auckland Council's strategic framework



This framework guides Auckland Transport to plan in alignment with the wider Auckland vision and outcomes. The relationship between Auckland Council plans and Auckland Transport plans is highlighted in Figure 3.

Figure 3 Plan linkages



Auckland Plan

At the top of the Plan hierarchy sits the Auckland Plan (published by Auckland Council in May 2012). This plan sets out the spatial vision and outcomes which drive the strategic direction of the activities that Auckland Transport undertakes.

The Plan sets seven aspirational outcomes to describe what it will be like to live in metropolitan and rural Auckland in 2040 if the vision is achieved. Of these outcomes, five are of particular relevance to operating, planning and developing the transport system. This planning framework is summarised in Figure 4.

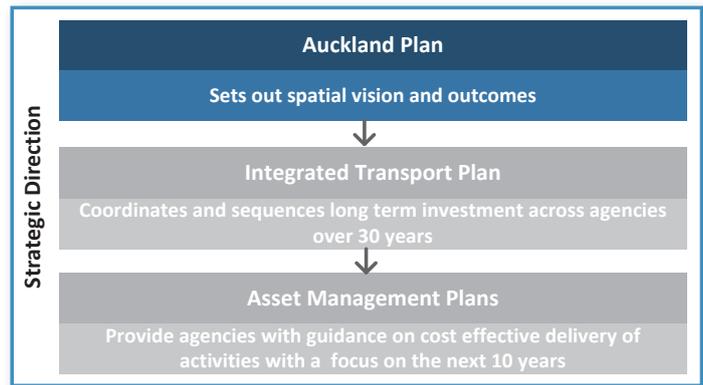
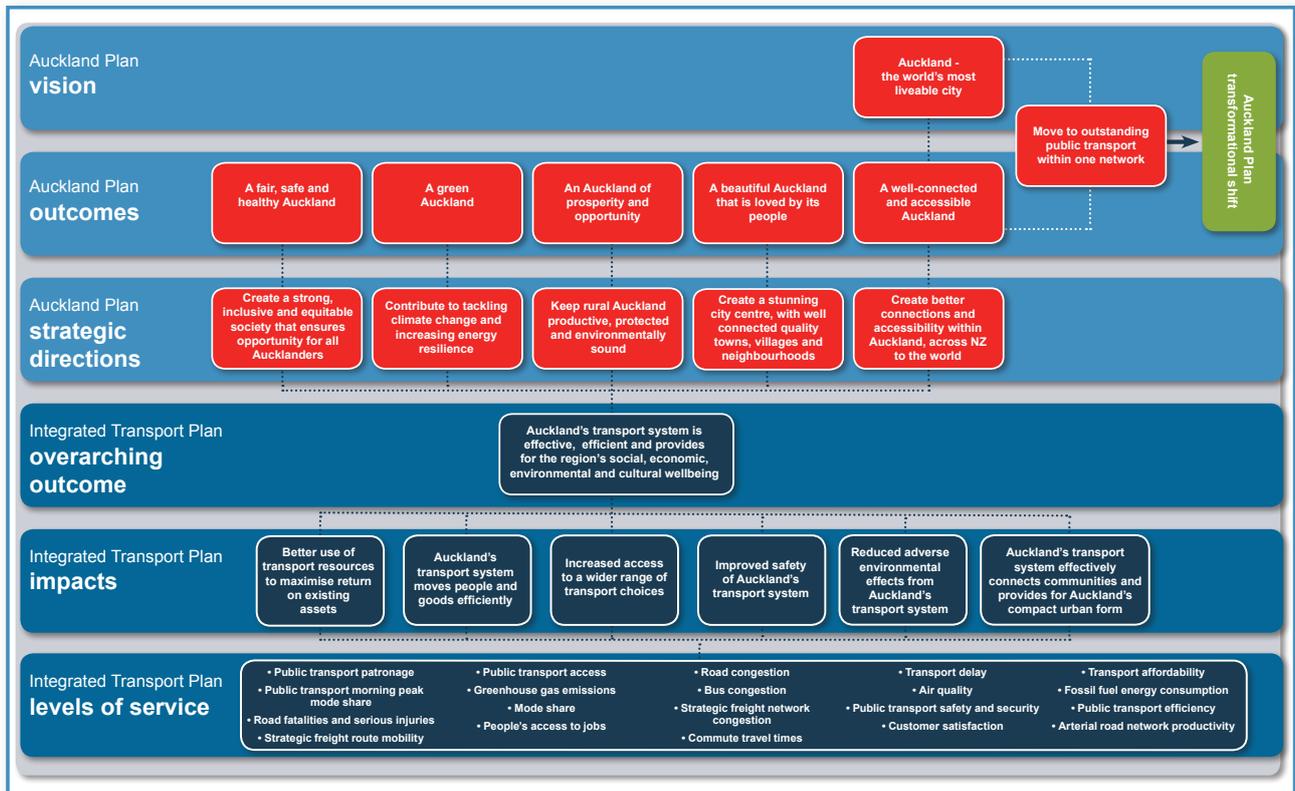


Figure 4 Planning framework

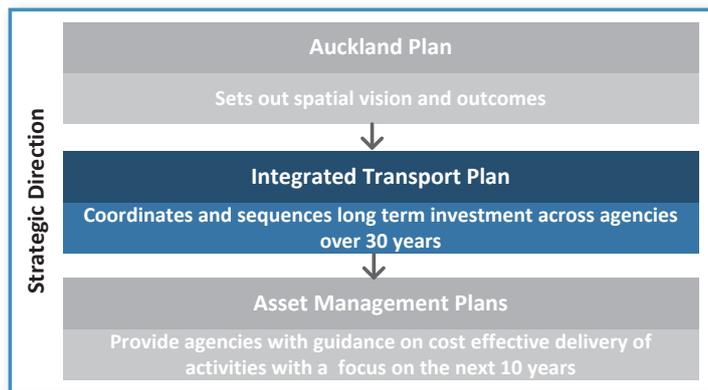


Integrated Transport Plan

Following the Auckland Plan, the Integrated Transport Plan provides an integrated view of the investment programme across the transport networks over the next 30 years, including state highways, arterial and local roads, public transport, cycling and walking facilities, and parking.

The ITP has been produced by Auckland Transport and the New Zealand Transport Agency with input and support from Auckland Council. It responds to the strategic vision, outcomes and targets of the Auckland Plan and to the government's wider transport policies.

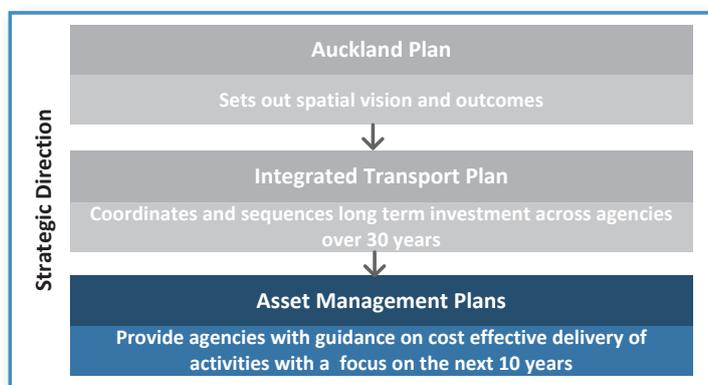
The purpose of the ITP is to coordinate the investment and other activities of Auckland's transport network providers (Auckland Transport, the New Zealand Transport Agency, KiwiRail) to ensure these contribute effectively and efficiently to meeting the growth and development needs of Auckland and its adjacent regions over the next 30 years.



Asset Management Plans

The Asset Management Plans of Auckland Transport and the other transport agencies support the preparation of the Regional Land Transport Programme (RLTP). In particular:

- The Asset Management Plan provides the maintenance, renewal and replacement needs of the transport networks that are necessary to deliver agreed levels of service
- In fulfilling this purpose, the AMP defines the levels of service, identifies risks and mitigating measures, develops lifecycle strategies and identifies the long-term financial needs of the network
- The AMP is being used as the main source of information for justification of programmes included in both the Long Term Plan and the RLTP, as supported by the requirements of the Local Government Act 2002.



Asset management challenges

Given the size and complexity of Auckland's transport system and the major investments that are being made in it, asset management planning is a challenging task. The key strategic issues and the implications for asset management planning are outlined in Table 1 below.

Table 1 Issues and implications of asset management planning

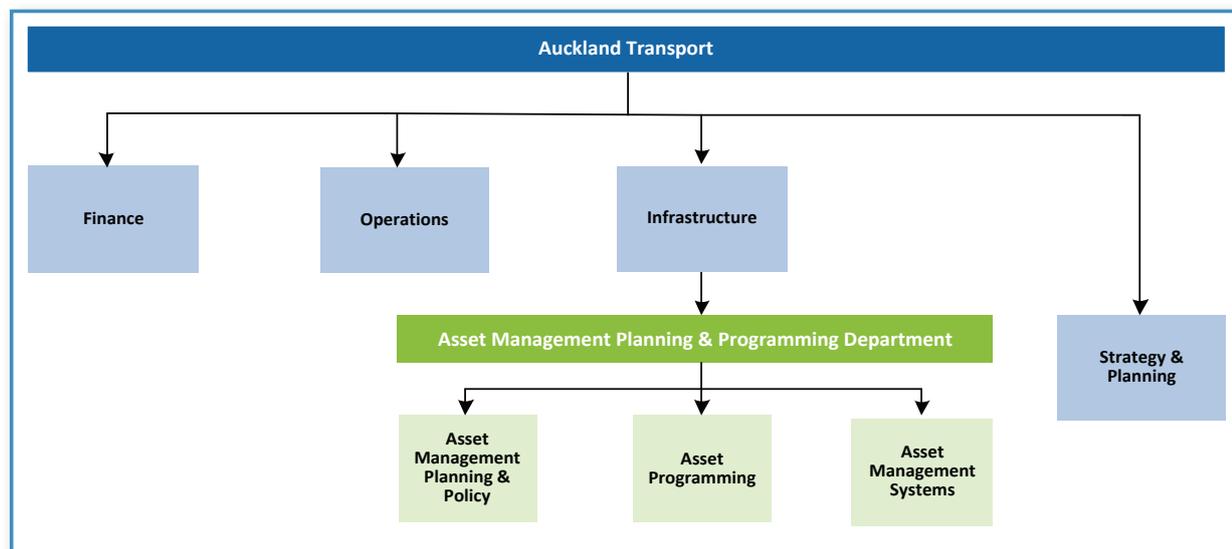
Strategic Issues		Asset Management Implications
Complexity of the system	<ul style="list-style-type: none"> Auckland's transport assets are extensive in scale and complexity, and they have been inherited from authorities with varying asset management practices, following the amalgamation of the legacy councils in November 2010 	<ul style="list-style-type: none"> Achieving levels of service through cost effective maintenance and renewal requires consolidation and optimisation of management practices across all asset classes Considerable progress has been made since November 2010 in developing this first Asset Management Plan. However, further optimisation will continue over the next three years to achieve the highest levels of asset management maturity
Significant growth	<ul style="list-style-type: none"> The transport system will need to cater for significant growth in transport demand in the years ahead. Auckland's population growth to 2040 will be about 70 per cent of New Zealand's population growth during that period Auckland lies at the apex of the country's fastest growing area at the top of the North Island, and it is home to the country's major international airport and one of its leading sea ports – all major generators of transport demand In addition, if the Auckland Plan is successful in creating a competitive world city, increased business activity and associated freight and vehicle movements can be expected 	<ul style="list-style-type: none"> The Asset Management Plan incorporates the expenditure consequences of the rapidly growing demand for transport services to, from and within Auckland, as well as rising expectations for the levels of service provided In estimating costs, the Asset Management Plan factors in the whole-of-life cost implications of the chosen investment scenario. This is because large scale investment in sophisticated assets, such as tunnels, will have major implications for maintenance, operational and renewal expenditure, as well as for capital expenditure
Level of service	<p>In order to support the Auckland Plan's vision and outcomes, the transport system will also need to deliver significant improvements in levels of service. The Auckland Plan sets the following specific targets:</p> <ul style="list-style-type: none"> Double public transport – from 70 million trips in 2012 to 140 million trips by 2022 (subject to additional funding) Increase the proportion of trips made by public transport into the city centre during the morning peak – from 47 per cent of all vehicular trips in 2011 to 70 per cent in 2040 Reduce car crash fatalities and serious injuries – from 506 in 2010 to no more than 410 in 2020 Reduce congestion levels for vehicles on the strategic freight network – to at or below the average of 2006-2009 levels by 2021 Increase proportion of people living within walking distance of frequent public transport stops – from 14 per cent (2011) to 32 per cent by 2040 	<ul style="list-style-type: none"> A specific role of the Asset Management Plan is to separately identify investment expenditure related to growth and investment expenditure related to level of service improvements
One System approach	<ul style="list-style-type: none"> The Auckland Plan principles will require a step change in the degree of integration between the different elements of the transport system. A step change is also needed in the interaction of the transport system with the urban form. For example, the principles will require: <ul style="list-style-type: none"> A "One System" coordinated planning and operational approach across the transport agencies A careful balance to be drawn between movement and place Transport investment aligned with the growth patterns envisioned in the plan 	<ul style="list-style-type: none"> While the Asset Management Plan covers only assets directly managed by Auckland Transport, the Plan's assumptions about long-term investment in developing the transport system have been guided by the Integrated Transport Plan, which covers the networks of NZTA, KiwiRail and Auckland Transport The three transport agencies have a work programme underway to align their asset management policies and practices. The results of this work will be incorporated in Auckland Transport's next Asset Management Plan in 2015
Funding constraints	<ul style="list-style-type: none"> There are major funding and other constraints that will make it harder for the transport system to deliver the desired impacts than it was in the past For example, there will be higher unit costs in operating the transport networks (both CAPEX and OPEX) than in the past, due to rising energy prices and the need for better quality options for public transport and improved safety and urban design Environmental constraints will also impose increased costs due to the need to mitigate the adverse effects of transport network development Finding solutions that minimise impacts on the built and natural environments will be more difficult than in the past. This has major financial implications. For example, in the past a solution might have involved adding an additional lane on the motorway, whereas in the future it may involve building and operating a tunnel 	<p>The Asset Management Plan has a key role to play in enabling Auckland Transport to address these funding constraints:</p> <ul style="list-style-type: none"> First, in forecasting the long-term lifecycle costs of the investment needed to deliver the strategic objectives Secondly, by providing Auckland Transport and its funders with costed choices, so they can determine the levels of service they want and the price they are willing to pay for this Thirdly, by optimising the balance of expenditure between maintenance and renewal, driving long-term value for money in managing existing assets, and so releasing funds for developing and improving network assets

Asset management development

Role of Asset Management and Programming Department

Within Auckland Transport, the Infrastructure group oversees asset management planning (see Figure 5).

Figure 5 Asset management responsibilities



The three units within the Asset Management Planning and Programming department (see Figure 5) work closely with departments and divisions across the organisation with a focus on the following issues:

- **Alignment and strategic planning** – liaising with and supporting the Strategy and Planning team to ensure the Asset Management Plan is aligned with the Integrated Transport Plan
- **Consistency and commitment** – ensuring organisational consistency and commitment to “advanced” levels of asset management practice (as defined by the International Infrastructure Management Manual) with respect to:
 - Description of assets
 - Setting levels of service
 - Managing growth and demand
 - Risk management
 - Lifecycle decision making
 - Financial forecasting
 - Planning assumptions and confidence limits
 - Improvement programme
- **Cost allocation** – allocating capital expenditure between renewals, growth and level of service elements
- **Performance monitoring** – developing an organisation-wide performance monitoring framework at strategic, tactical and operational levels
- **Reporting** – reporting against statutory requirements in the Local Government Act 2002, Schedule 10.

Process for the development of the Asset Management Plan

The Asset Management Plan (AMP) brings together management, financial, engineering and technical practices with the goal of delivering the desired levels of service in the most cost-effective manner; and helps to structure forward planning so that well-considered decisions can be made from complex information and competing priorities.

Development of the AMP involves:

- Examination of legislative, regulatory and strategic requirements
- Determination and agreement of levels of service
- Analysis of growth and demand projections and capacity constraints
- Lifecycle analysis
- Asset condition analysis
- Asset performance analysis
- Operational strategies
- Maintenance strategies
- Identification of projects
- Risk management assessments on activity, critical assets, programmes and projects
- Financial analysis
- Identification of Improvements.

AMP development and improvement cycle

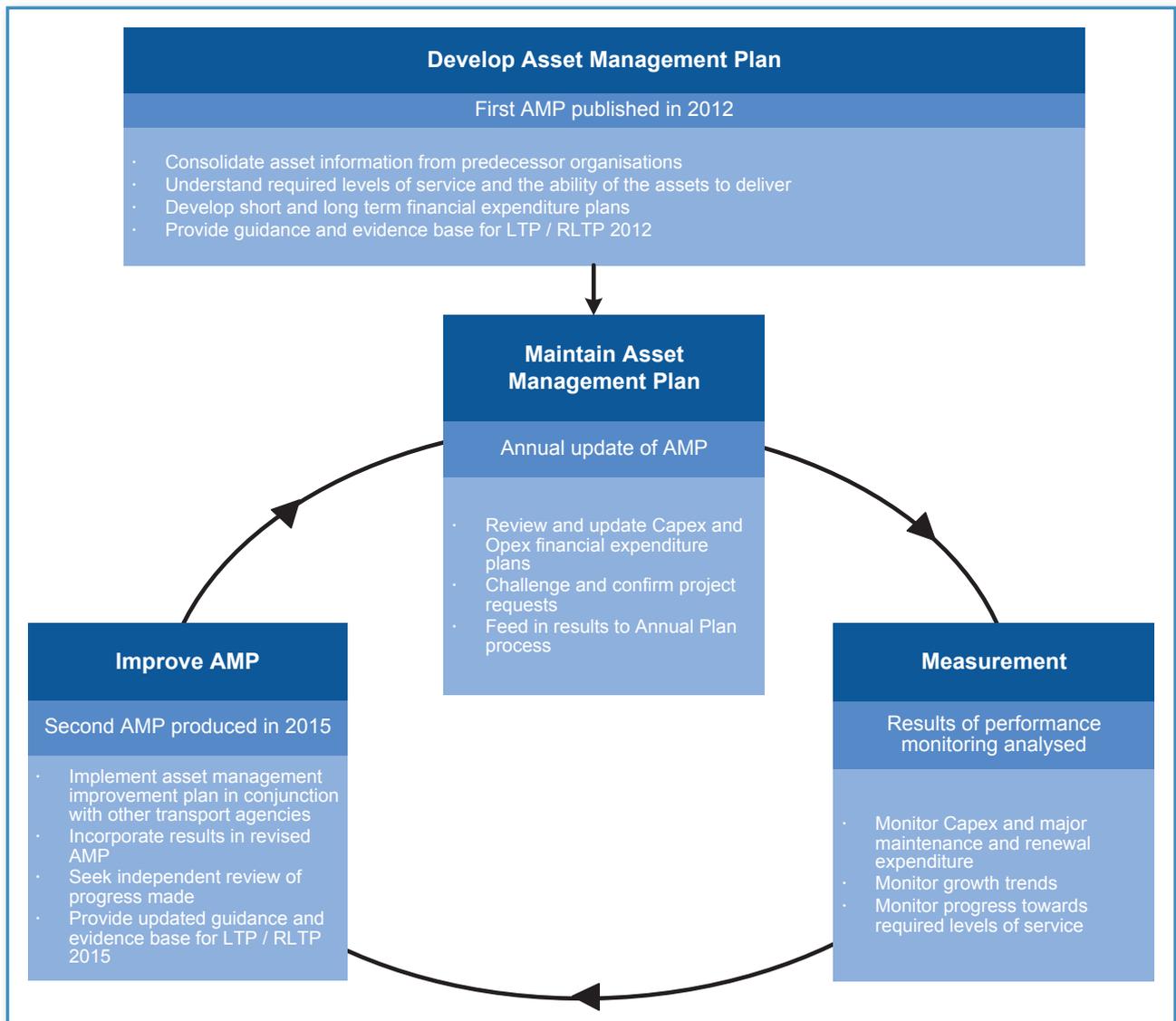
The AMP is a “living” document. It has a formal cycle for its development, review, improvement and update, as shown in Figure 6.

The AMP, prior to being submitted every three years, is reviewed internally and externally. The reviews carried out prior to submitting the first AMP have included:

- Audit NZ review of the first Draft Asset Management Plans
- A strategic review of the Draft Activity Management Plan by GHD
- Technical reviews of the first Draft Road AMP and the Draft Public Transport AMP by Beca
- Internal review of the first Draft AMP by Auckland Council.

Where possible the results of the reviews have been taken on board in the final version of the AMP. However, a number of areas with gaps in knowledge have been identified, and these are priorities for asset management improvement work over the next three years. This improvement programme is described in the detailed asset management plans for road transport and public transport.

Figure 6 Plan development process



Asset Management documents

Publication arrangements

The Asset Management Plan will be made available to Auckland Transport's internal business units, with copies provided to key stakeholders including Auckland Council and the New Zealand Transport Agency. It will also be available to download from the Auckland Transport website, with hard copies provided to the public on request.

Given the range of users of the Asset Management Plan, the plan has been structured into a series of documents designed to meet the needs of different user groups. Table 2 details the proposed structure of the Asset Management Plan, along with the target group for the various components.

Table 2 Asset Management Plan documents and their target audiences

Document title	Description	Comments
Briefing Paper	<ul style="list-style-type: none"> Includes key messages only To be used as a communication and marketing pamphlet 	<ul style="list-style-type: none"> One page in size Target audience – general public; Local Boards
Asset Management Plan 2012 – 2015 Strategic Context (this document)	<ul style="list-style-type: none"> Describes, at a strategic level, the purpose of asset management planning, and explains how it links to the strategic direction of the Auckland Plan Establishes the relationship of asset management planning with other planning functions of Auckland Transport and Auckland Council 	<ul style="list-style-type: none"> A small document of 12 pages Target audience – Auckland Transport Board and corporate management; Auckland Council; NZTA
Asset Management Plan 2012 – 2015 Overview	<ul style="list-style-type: none"> Provides key messages Highlights significant issues in the asset management plans 	<ul style="list-style-type: none"> A relatively small size document of 60 pages Target audience – Auckland Transport Board, corporate and middle management; Auckland Council; Local Boards; NZTA
Asset Management Plan 2012 – 2015 Road Network	<ul style="list-style-type: none"> Detailed plans developed in accordance with the current best practice endorsed by Audit NZ Provide details of asset condition, levels of service, lifecycle requirements, risks and future funding needs of the road network Also stipulates improvement needs to address the gaps in asset management knowledge 	<ul style="list-style-type: none"> Large documents of 260-460 pages each Target audience – Auckland Transport middle management; Audit NZ; NZTA; Auckland Council; all levels of internal Auckland Transport stakeholders
Asset Management Plan 2012 – 2015 Public Transport Network		
Appendix Document	<ul style="list-style-type: none"> Includes all technical analysis, reports and other supporting documents 	<ul style="list-style-type: none"> A large document of 100-200 pages. Target audience – Auckland Transport asset management staff; Audit NZ

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