

Auckland Transport

Asset Management Plan 2025 Summary

Contents

The purpose of this plan	2
The status of our assets	4
Levels of service	10
Customer surveys and feedback	11
Strategic and corporate goals	12
Auckland Councils infrastructure investment direction	16
Strategic alignment of this document with Auckland Council direction	18
Legislative requirements	22
Customer values	23
Customer levels of service	24
Technical levels of service	25
Future demand	28
Managing the risks	33
Asset lifecycle investment needs	34
Modelling data confidence	37
Financial plan	38
Funding consequences	42
2024 AMMAT results	44





The purpose of this plan

This Asset Management Plan (AMP) supports Auckland Transport's goal of meeting the service levels agreed with ratepayers and asset-users by managing transport networks, transport structures and public transport (aka Metro) infrastructure assets cost-effectively for current and future customers.

By detailing Auckland Transport's infrastructure assets and outlining necessary actions, this document aims to support Auckland Transport's goal of providing agreed service levels in a cost-effective manner, while addressing known issues and future risks.

This document aligns to the Summary AMP, which in turn inputs to Auckland Transport's Regional Land Transport Plan (RLTP) – Auckland Transport's 10-year investment programme which aims to respond to the challenge of a growing population as well as Auckland Council and Central Government transport policy outcomes of being: productive, safe, sustainable, fast and connected, and resilient.



Safe

investments that support a network that gets everyone home safely

Productive

projects that support regional growth and productivity



Sustainable

investments that help us reduce our transport emissions

Fast and connected

improvements that make public transport faster, more accessible and more reliable



Resilience

investments that ensure our network is ready for challenges





The status of our assets

This plan covers the infrastructure assets which support the provision of AT's transport-related services, comprising the following asset portfolios.

Collectively, these assets have a replacement value estimated at \$26 billion. The following graphics provide a breakdown of the asset classes in Auckland Transport's transport structures and public transport asset portfolios.

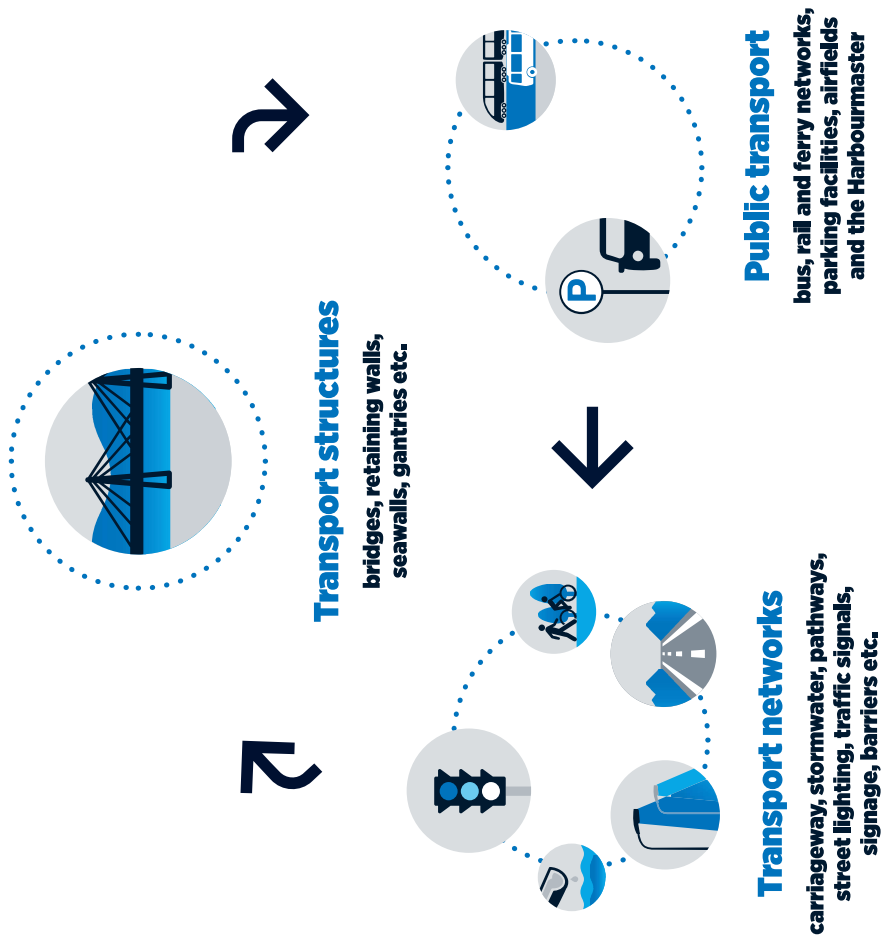


Figure 1: Snapshot of Auckland Transport's asset portfolios



Asset inventory as at 30 June 2023.
Total asset value of \$26 billion includes land, corporate and IT assets.

The following figures provide a snapshot the current **condition and age profiles** of the above asset portfolios

Figure 2: Transport network assets condition profile

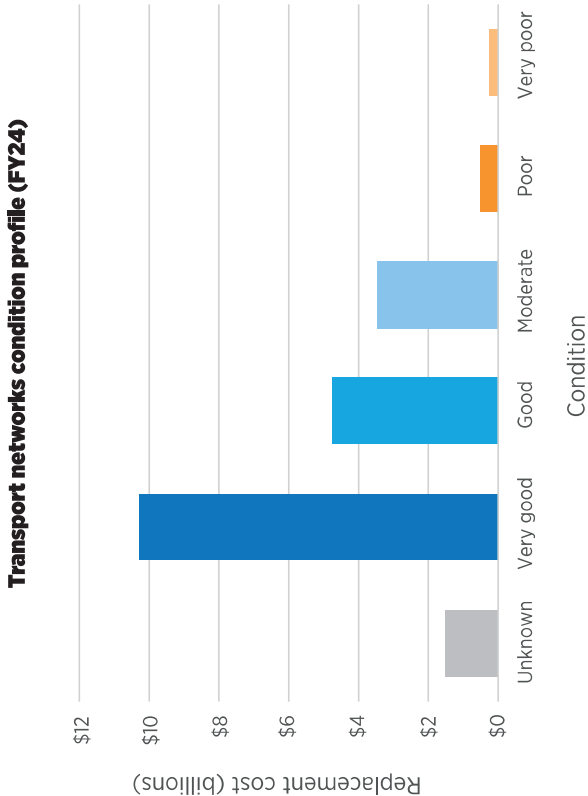


Figure 3: Transport network assets age profile

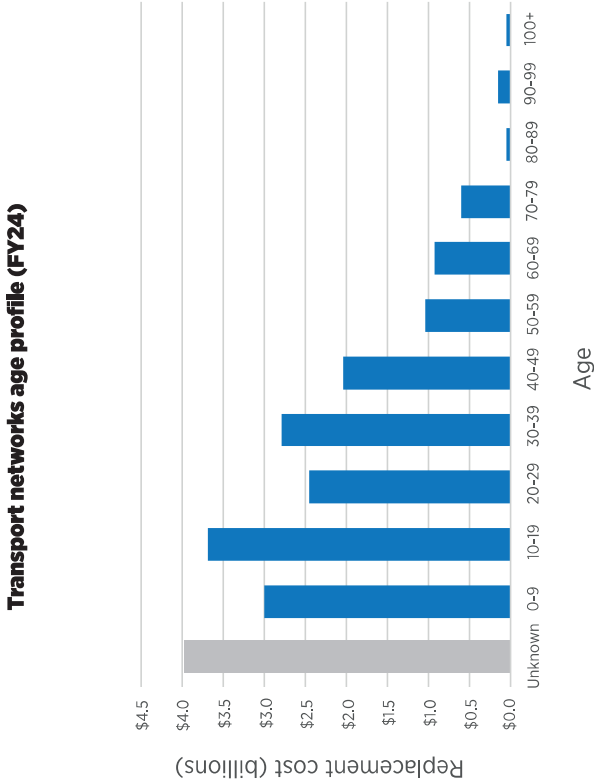


Figure 4: Transport network assets condition profile

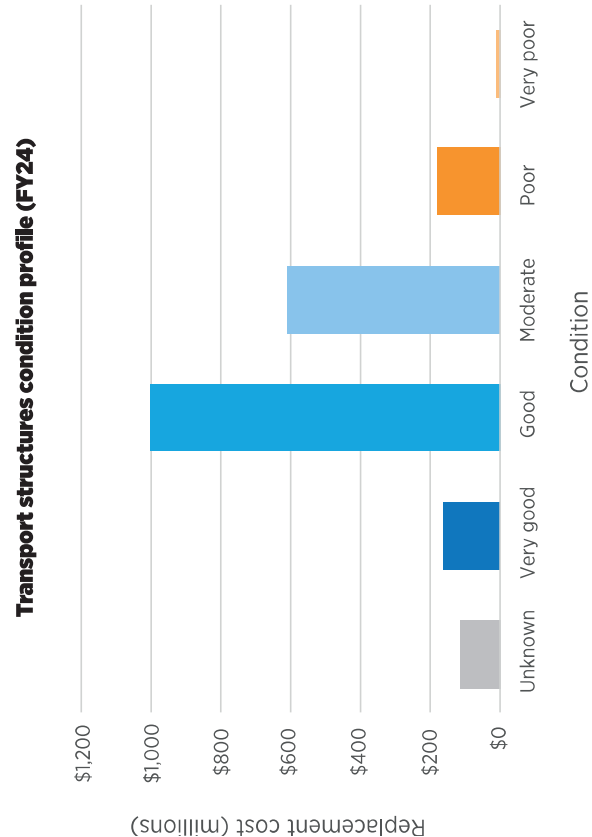


Figure 5: Transport network assets age profile

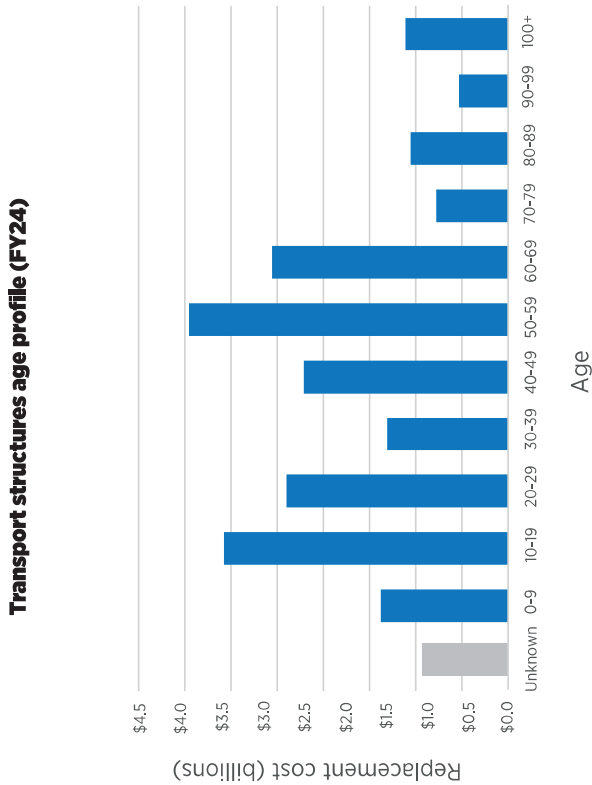


Figure 6: Transport network assets condition profile

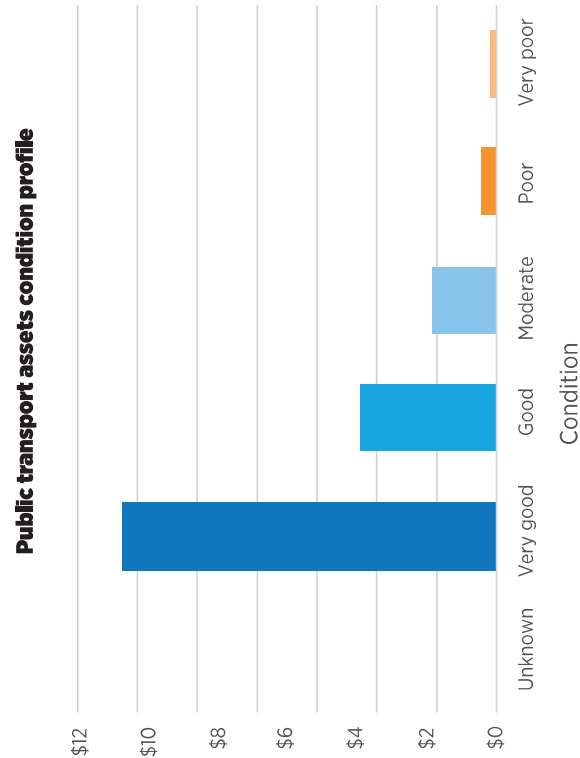
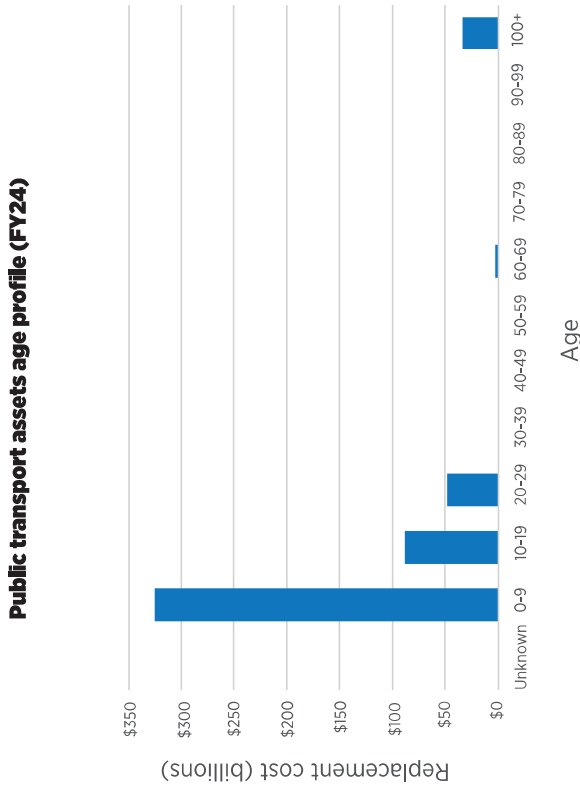


Figure 7: Transport network assets age profile





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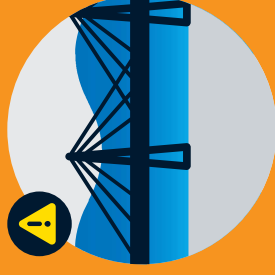
Levels of service

The condition of Auckland Transport's infrastructure directly impacts the service levels experienced by Aucklanders. When infrastructure is taken out of service, for whatever reason, disruptions to daily routines occur, creating frustration and dissatisfaction for those relying on that infrastructure. Service levels that may have once been a point of pride for Auckland Transport now reflect the struggle to maintain aging and deteriorating infrastructure due to insufficient funding.

The likely service-level consequences of planned budget are:



Continued degradation of road network assets



Bridges and structures becoming more susceptible to sudden failures causing public safety concerns and travel disruptions due to detours



Inconsistent rail, bus and ferry services disrupting daily public transport travel routines

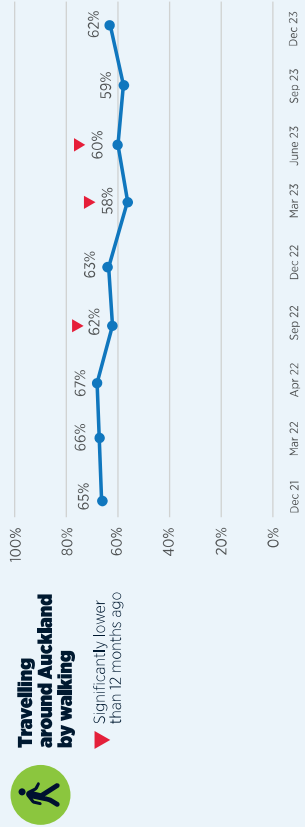
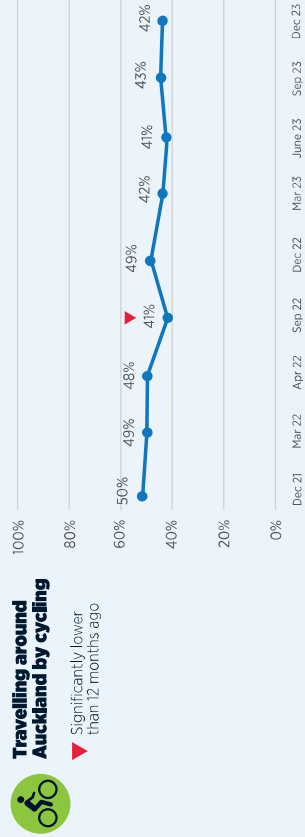
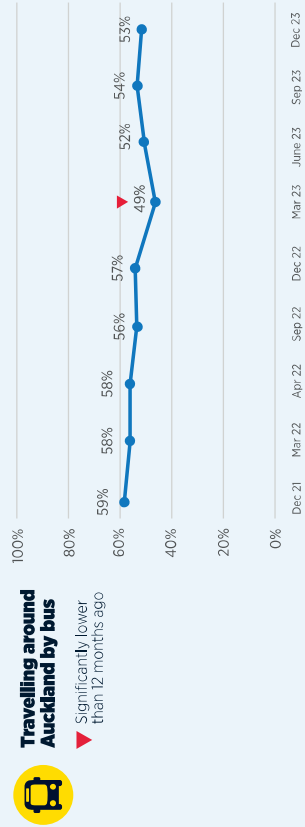
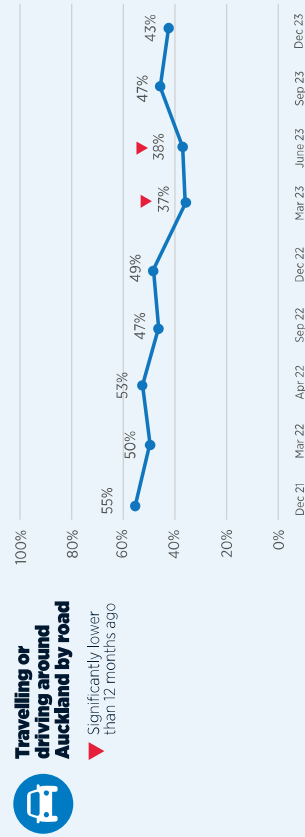
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Customer surveys and feedback

Auckland Transport gathers customer feedback quarterly, on both its road network and public transport services. The following presents a high-level snapshot of results from the most recent surveys.

Satisfaction with the overall experience of travelling around Auckland by...(QTR among all Auckland residents)

Table 1: Current customer feedback on roading services



Strategic and corporate goals

This plan is prepared under the direction of Auckland Transport current purpose, vision, and mission, as follows:

Our long-term target

People can travel 10km anywhere in Auckland in under 20 mins

10-year focus

Our areas of focus for the next three years

- Improving network productivity
- Taking PT from good to great
- Every interaction counts
- Grow external revenues
- Effective governance & advocacy for transport outcomes

3-year focus

Our purpose

Our 10-year objective

10-year focus

What we aspire to

- Great public transport
- Efficient and resilient transport network
- Safe and seamless journeys for everyone

Building trust and confidence

What we want to achieve

- Enterprise-wide targets
- Statement of Intent targets

1 to 3-year focus

Our accelerators

Who we are

- Auaahatanga**
Better, bolder, together
- Manaakitanga**
We care...full stop
- Tiakitanga**
Safe with us
- Whanaungatanga**
We connect



AT 25
AMP 25



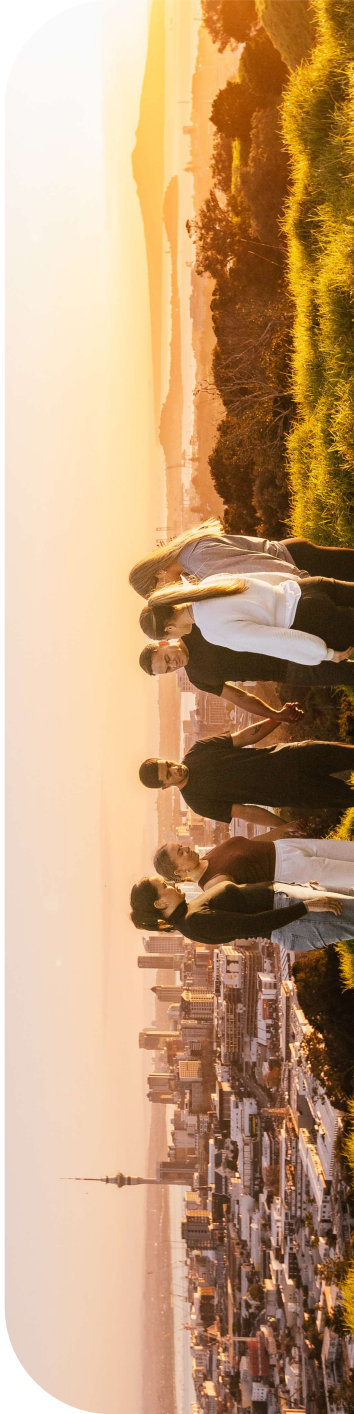
The relevant goals and objectives and how these are addressed in this plan are summarised below. This document is one of a set of documents that guides how Auckland Transport’s assets will be managed, including:

Government Policy Statement on Land Transport
Transport Outcomes Framework , developed by the Ministry of Transport
Auckland Plan 2050 , developed by Auckland Council
Arataki , Waka Kotahi’s long-term strategic plan for the land transport system.
One Network Framework (ONF) , a tool developed by Te Ringa Maimoa that is used to classify transport networks in terms of movement and place function.
Two key funding documents that have a direct impact on this document are: Waka Kotahi NZTA’s 10-year National Land Transport Plan (NLTP) Auckland Transport’s 10-year Regional Land Transport Plan (RLTP).

Auckland Transport has developed a set of objectives, with input from **Auckland Council, Waka Kotahi, the Ministry of Transport and KiwiRail**, to summarise the agreed strategic direction for Auckland's transport networks over the coming years. These objectives, as detailed below, guide Auckland Transport's Regional Land Transport Plan and companion documents.

Regional Land Transport Plan objectives		How asset management supports this
Safety: Make the transport system safe by eliminating harm to people.		By ensuring assets are kept in good condition through lifecycle maintenance and renewal of assets
Travel choices: Accelerate better travel choices for Aucklanders.		Through programmed and coordinated changes in the form and utilisation of assets
Access and connectivity: Better connecting people, places, goods, and services		Through programmed and coordinated changes in the form and utilisation of assets
Growth: Enabling Auckland's growth through a focus on intensification in brownfield areas, with some managed expansion into emerging greenfield areas.		By ensuring: - Existing assets are kept in good condition through lifecycle maintenance and renewal of assets - New assets can be maintained and renewed when they become operational
Climate change and the environment: Improving the resilience and sustainability of the transport system, and significantly reducing the greenhouse emissions it generates.		Through programmed and coordinated uplift in existing asset resilience. Also, by assessing and reporting the amount of embodied carbon in the programme, we can include emissions as part of our evaluation
Value for money: Ensuring value for money across Auckland's transport system through well-targeted investment choices.		Through best-practice asset management. The lifecycle maintenance, operation, and renewal of existing assets will support ensuring value for money for Auckland Transport's rate payers and customers

Table 2: Regional Land Transport Plan objectives





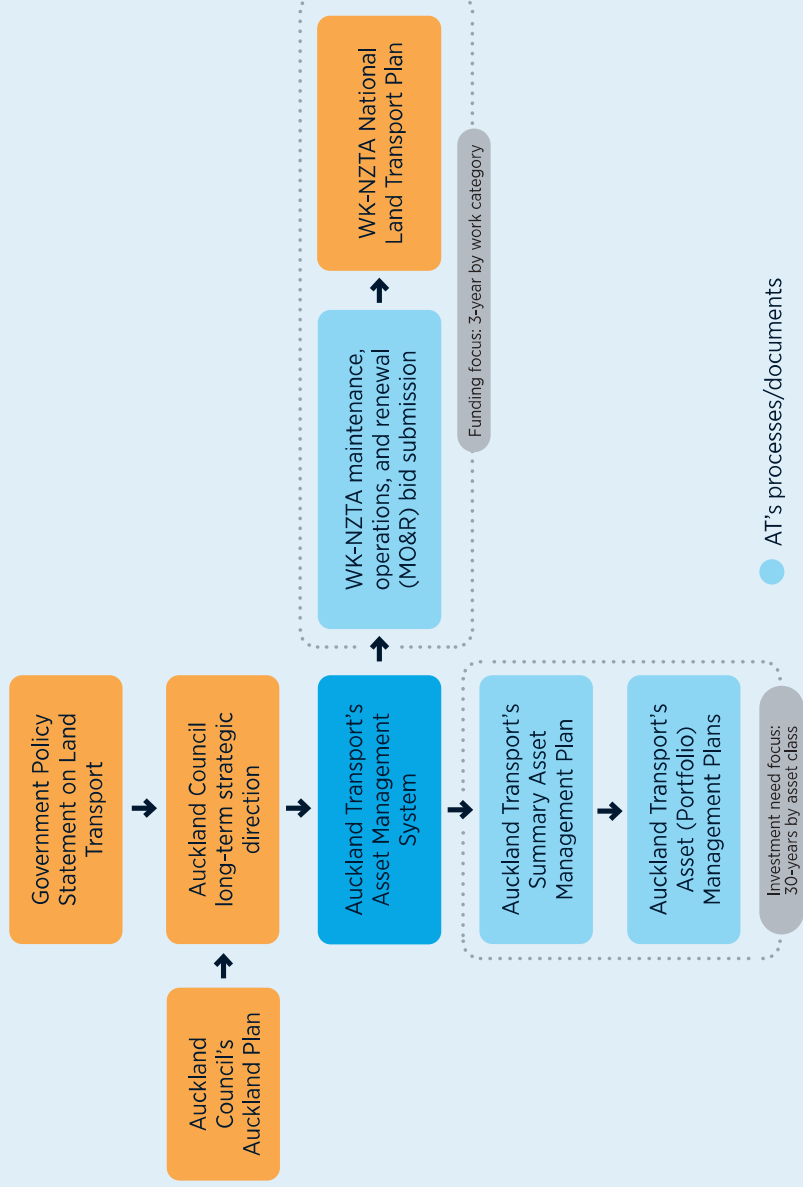
Auckland Council's infrastructure investment direction

The Council Group Asset Management Policy and ISO55001 require that asset management plans are aligned to and consistent with organisational objectives.

The Local Government Act 2002 also requires that local government decision making considers the long-term, taking account of current and future communities. Strategic alignment of asset management plans is essential as these plans provide the evidence basis for Auckland Council's investment plans and demonstrate how the council's long-term assets will deliver long-term outcomes for Tāmaki Makaurau.

¹ Local Government Act 2002, sections 10 and 14

Table 3: Strategic alignment





Strategic direction for asset management comes from Auckland Council, central government and legislation. This note relates to the council direction provided through the Auckland Plan and other Auckland Council strategy.

The Auckland Plan provides the long-term strategic direction, and basis for alignment for Council's key strategies and policies. Region-wide strategies articulate the Auckland Plan's strategic intent and outline priorities for implementation. Region-wide strategies include Te Tāruke ā Tāwhiri: Auckland's Climate Plan, The Water Strategy, Ngā Hapori Momoho: Thriving Communities Strategy, The Transport Emission Reduction Plan, and Tāmaki – Whenua Taurikura: Auckland Future Development Strategy 2023-2053.

Auckland Council Group's Strategic Investment Framework for Infrastructure provides the framework for demonstrating alignment of infrastructure investment with Council's long-term regional strategic direction. In accordance with this framework, below provides a summary of how the investment programme set out in this Asset Management Plan is aligned to Auckland Council direction.





Strategic alignment of this document with Auckland Council direction

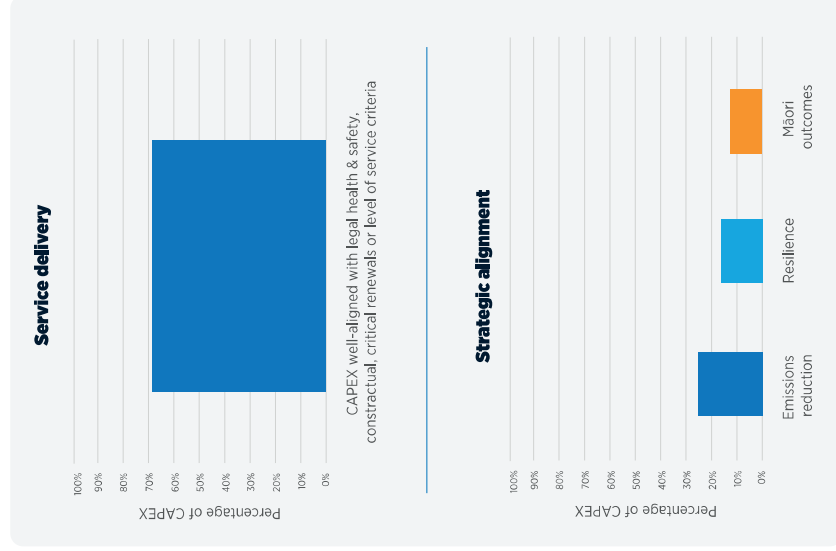
Figure 8, right, presents the alignment of this 30-year Asset Management Plan and reports on the investment programme with the council's strategic direction. When considering current alignment, Auckland Council recognises that Auckland Transport's asset management systems and tools are on a journey of increasing maturity. It is anticipated that Auckland Transport's ability to demonstrate alignment will grow as asset management maturity improves Council-wide, thereby uplifting long-term planning and reporting capacity.

The proportion of aligned investment identified in the table on page 20 (column 4) draws on the Investment Impact Assessment (IIA) carried out by Auckland Council for the 2024 Long-term Plan (LTP). The IIA framework provides Auckland Council with a consistent assessment of planned investments against a set of criteria, including criteria that reflect council's strategic direction. Capital expenditure

(CAPEX) over the 10 years of the LTP is included in the table on page 20 and is assessed at the level of major programmes and projects. Each line item was scored against the criteria by representatives of the portfolio including asset managers. Following the completion of the assessment, moderation of the data was completed centrally by Auckland Council staff, together with asset managers for each criterion on each project or programme to ensure consistency in assessment across the group.

This is the first time Auckland Council's IIA has been presented in asset management plans and so it should be read as a baseline, indicator, or current state, rather than a detailed assessment of Asset Management Plan alignment. Operational expenditure (OPEX) was also included in the 2024 IIA, but has not been included in the table below reporting as OPEX data does not yet have sufficient detail for this purpose.

Figure 8: Key areas of alignment demonstrated through Auckland Council's LTP 2024 Investment Impact Assessment (provided by Auckland Council)



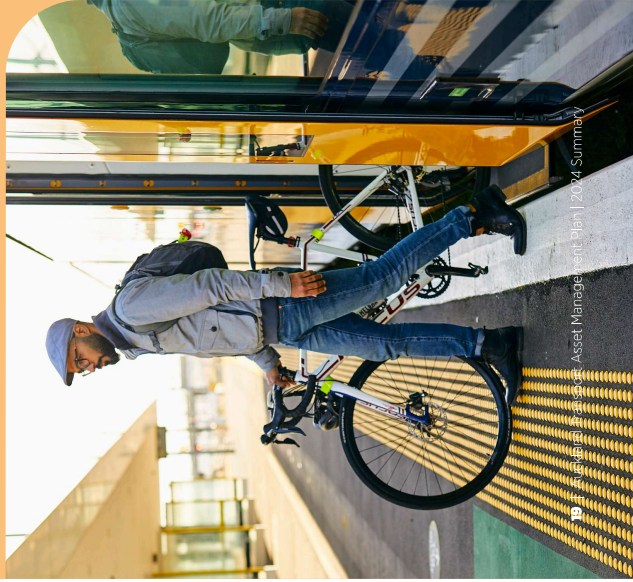
Auckland Council's Investment Impact Assessment demonstrates that there is significant alignment of the investment programme with 'non-strategic' service delivery criteria.



This is a key driver for **69%** of the AT portfolio, with of capital expenditure either well, or extremely well aligned with one or more of the service delivery criteria.



The high level of service-delivery driven investment in this portfolio, presents an opportunity for greater levels of strategic alignment in the future. Service delivery-driven investment may be refocused to also deliver strategic outcomes.



19 Auckland Council Asset Management Plan | 2024 Summary

Key areas of strategic alignment within the 10-year investment plan are:



emissions reduction



resilience



Māori outcomes

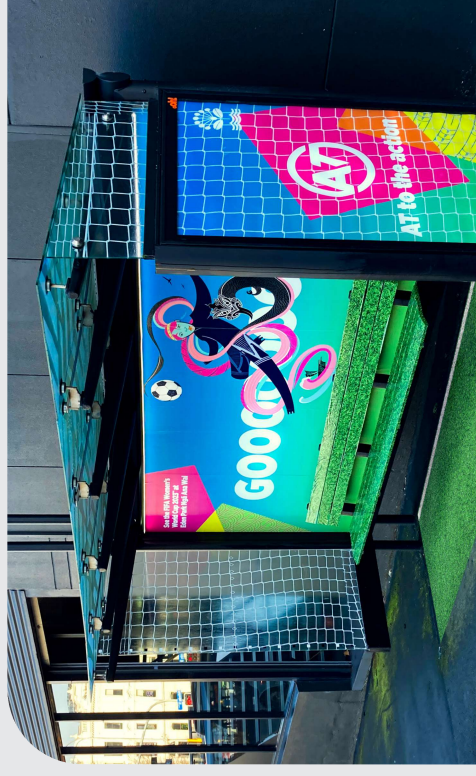


Table 4: Alignment to Auckland Council's strategic direction

AC strategic direction	Reporting requirement	Alignment of 30-year investment needs	Proportion of 10-year investment aligned with direction
Māori outcomes	Identify investment that has been developed in partnership with Māori, or Māori participation and delivers on outcomes described in Kia Ora Tāmaki Makaurau.	Indirectly supported by this Asset Management Plan by keeping asset in good condition through regular renewal (CAPEX) and maintenance (OPEX).	10-19% of capital expenditure (CAPEX) is well-aligned and delivering towards Māori outcomes.
Emissions – reduction targets	Identify projects and programmes that are in line with the emissions reduction commitments under Te Tāruke-ā-Tāwhiri Auckland's Climate Plan, and avoiding or minimising embodied and operational emissions as much as practicable.	Refer this Levels of Service section – Public Transport related emissions customer values.	20-29 % of CAPEX is well-aligned and delivering towards reducing emissions.
Resilience – deliver flexible, adaptable, infrastructure	Identify projects and programmes that increase the resilience of the surrounding existing community and/or ecosystems to natural hazards and climate change in the long-term (30+ years).	Refer this Levels of Service section – Structures related resilience customer values.	10-19% of CAPEX is well-aligned and delivering towards climate adaptation and resilience.
Equity – focus on communities of greatest need	Identify projects and programmes are targeted to address disparities and serve the wellbeing of communities of greatest need.	Indirectly supported by this Asset Management Plan by keeping asset in good condition through regular renewal (CAPEX) and maintenance (OPEX).	10-19% of CAPEX is well-aligned and delivering towards equity.
Equity – community-led	Identify projects and programmes and where communities (whānau, hapū, iwi, people) are involved and enabled to lead and/or respond to the investment.	Indirectly supported by this Asset Management Plan by keeping asset in good condition through regular renewal (CAPEX) and maintenance (OPEX).	
Environment – regenerate natural systems, and Te Mauri o te Wai – regenerative and mauri enhancing infrastructure	Identify projects and programmes that are investments in green infrastructure.	Indirectly supported by this Asset Management Plan by keeping asset in good condition through regular renewal (CAPEX) and maintenance (OPEX).	20-29% of CAPEX programmes include projects identified as nature-based solutions or urban green space.
Environment – reduce waste	Once established, report waste baselines and propose 2030 targets.	Indirectly supported by this Asset Management Plan by keeping asset in good condition through regular renewal (CAPEX) and maintenance (OPEX).	Unknown at time of writing.
Te Mauri o Te Wai: The life-sustaining capacity of water is protected and enhanced	Identify investment that recognises the impact on Mauri (through working with Mana Whenua) and delivers improvements to Te Mauri o Te Wai.	Indirectly supported by this Asset Management Plan by keeping asset in good condition through regular renewal (CAPEX) and maintenance (OPEX).	0% of CAPEX towards Water Strategy Outcomes.

² Measured using the Investment Impact Assessment undertaken to inform the 2024-33 LTP. For more information on the criteria and methodology see Attachment C here: [Staff Advice to support the Mayoral Proposal \(aucklandcouncil.govt.nz\)](#).

³ Note that we have committed to raising most of our debt through sustainable finance mechanisms (Auckland Council's Sustainable Finance Framework). A pipeline of green infrastructure is increasingly important to access capital as financial markets become more restrictive and expensive.

AC Strategic Direction	Reporting requirement	Alignment of 50-year investment needs	Proportion of 10-year investment aligned with direction
Impactful procurement: success is dependent on how well Auckland's prosper	Deliver Auckland Council, or your organisation's Sustainable Procurement objectives.	Auckland Transport plans to support this through sustainable procurement.	Unknown at time of writing.
Growth – growth assumptions	Adoption of growth approach and assumptions as basis for AMPs. Identify growth-driven projects/programmes spatially with a catchment of benefit.	Ensuring consequential renewal (CAPEX) and maintenance (OPEX) is available to manage newly vested assets from within Auckland's areas of growth and change.	0-9% of CAPEX is aligned spatially to the spatial priority areas (in the Future Development Strategy).
Growth – quality compact growth	Identify projects and programmes providing infrastructure that supports development planned in Spatial Priority Areas in the next 10 years or is of regional benefit (servicing live-zoned land).	Ensuring consequential renewal (CAPEX) and maintenance (OPEX) is available to manage newly vested assets from within Auckland's areas of growth and change.	
Community – delivery of multiple outcomes/ well-beings	Identify projects and programmes that support community wellbeing: - community connection and resilience - physical and mental health - affordability of access to services for all Aucklanders - skills for the future (workforce transition) - business transformation for resilience and growth - nature in the city (e.g. urban forest, parks that are locally accessible to communities).	Indirectly supported by this Asset Management Plan by keeping asset in good condition through regular renewal (CAPEX) and maintenance (OPEX).	0-9% of CAPEX is well-aligned and delivering for community wellbeing.
Consider non-built solutions first (investment hierarchy)	Preference (in order) for investment in: - effective planning - managing demand - best use of existing system - careful new investment	Under development.	70-79 % of CAPEX delivers on the first three levels of the investment hierarchy (effective planning, managing demand, and best use of existing system).

Legislative requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of road network and public transport services are outlined in the following table.

Table 5: Legislative requirements

Legislation	Requirement
Local Government (Auckland Council) Act 2009	- Governance and accountability: Auckland Transport must operate in accordance with the governance, accountability, and transparency requirements for CCOs outlined in Part 5 of the Local Government Act 2002, as applied by the Local Government (Auckland Council) Act 2009. This includes requirements around the appointment of directors, meetings, consultation, and reporting obligations to Auckland Council. - Decision-making processes: Auckland Transport must establish processes to enable Māori to contribute to its decision-making, as required under sections 76-83A, 87 and 89 of the Local Government Act 2002. It must follow principles of consultation and consider views of affected parties when making decisions, as per the Local Government Act 2002 provisions applied by the 2009 Act. - Functions and powers: The 2009 Act sets out Auckland Transport's core functions and powers related to managing Auckland's transport system under sections 46 and 47. This includes acting as a local authority or statutory body for transport purposes, and exercising requiring authority powers under the Resource Management Act. - Directions from Auckland Council: Auckland Council can lawfully direct Auckland Transport to perform or delegate additional transport functions to it under section 46(1)(d) and (e) of the 2009 Act. - Restrictions: Auckland Transport cannot pay dividends and must have regard for public safety, as stipulated in section 50 of the 2009 Act.
Local Government Act 2002	- Section 59 sets out the principal objectives for Council Controlled Organisations like Auckland Transport, including operating efficiently with a view to making a profit, being a good employer, and exhibiting social and environmental responsibility. - Part 5 of the Act applies to Auckland Transport with some modifications, setting out requirements around governance, accountability, and transparency. - Sections 76-83A, 87 and 89 specifically apply to Auckland Transport, covering matters like the appointment of directors, meetings, consultation requirements, and reporting obligations. - Auckland Transport must have regard for public safety in relation to its structures and operations. - Auckland Transport is exempt from the requirement under section 68(b) to pay dividends to Auckland Council.
Land Transport Act 1998	- Enforcing road user rules and regulations: Auckland Transport has the authority to issue infringement notices for offences related to road user behaviour, such as speeding, failing to stop at red lights, illegal parking, and other traffic violations, as outlined in the Act and associated regulations. - Licensing transport service operators: The Act requires operators of certain transport services, like passenger services and goods services, to hold the appropriate licenses. Auckland Transport is responsible for ensuring compliance with these licensing requirements within Auckland. - Promoting road safety: A key purpose of the Act is to promote safe road user behaviour and vehicle safety. Auckland Transport undertakes various initiatives, campaigns, and infrastructure improvements to enhance road safety in line with this objective. - Implementing traffic management measures: The Act empowers road controlling authorities like Auckland Transport to install and maintain traffic control devices, establish special vehicle lanes, and implement other traffic management measures to ensure the safe and efficient movement of traffic. - Enforcing vehicle standards: Auckland Transport has the authority to inspect vehicles and issue notices for non-compliance with vehicle standards and requirements set out in the Act and associated regulations, such as those related to vehicle dimensions, weights, and equipment.

Customer values

Service levels are defined in three ways – customer values, customer levels of service and technical levels of service. Auckland Transport’s customer values indicate what is considered important to its customers, the following being of key importance.

Table 6: Customer values

Customer values	Customer satisfaction measure	Current achievement	Anticipated trend based on planned budget
Road network			
Safety	Reduce deaths and serious injuries on the road network.	In the last 12 months, there were 38 deaths and 583 serious injuries on Auckland's roads, a 6% decrease from the previous year.	CAPEX budgets (service level improvements) are anticipated to be maintained.
Customer response	Responding to customer complaints and feedback.	Current achieving the target of 85% within the agreed timeframes.	Maintenance (OPEX) budgets are anticipated to increase.
Structures (bridges, retaining walls etc.)			
Resilience	Ensure structures can withstand extreme weather events and natural disasters.	A new measure, on the back of the extreme weather events suffered by Auckland February 2023.	CAPEX budgets (service level improvements) are anticipated to increase.
Public transport			
Reliability	Ensure public transport services run according to published timetables.	94.7% of public transport services ran according to published timetables, narrowly missing the 95% target.	Budgets are anticipated to increase.
Punctuality	Ensure public transport services start and end on time.	84.1% of public transport services started and ended on time, below the 87% target.	Budgets are anticipated to be maintained.
Accessibility	Increase public transport passenger boardings.	86.6 million total public transport boardings are forecast for FY24, exceeding the 83.4 million target.	Budgets are anticipated to be maintained.
Emission reduction	Reduce greenhouse gas emissions from public transport operations.	Public transport emissions are on track for a 5% reduction from the 2020/21 baseline.	Budgets are anticipated to be maintained.

Customer levels of service

The Customer Levels of Service, related to assets, are considered in terms of the following service measures:

- **Asset condition** Does the asset support the provision of a valued customer service? What is the condition or quality of the asset?
- **Function** Is it suitable for its intended purpose? Is it the right service?
- **Capacity/use** Is the asset over or under used? Do we need more or less of these assets?

Table 7 summarises the current performance, and the expected performance based on the current budget allocation, for each of the above customer service measures.

Customer service measures are linked to AT's service delivery outcomes. These measures aim to balance operational performance (objective) with customer perception of AT's performance (subjective). Examples include the number of instances where the service is unavailable and the proportion of AT's asset base in acceptable condition.

Condition assessments and surveys are carried out in accordance with our professional services contracts and maintenance contracts, which set out the agreed customer response times for emergency, reactive and programmed maintenance works. The relevant specifications are listed:

- **Road corridor maintenance**
Volume 5 technical specification
- **Transport networks** Asset Management contract and specification
- **Transport structures** Asset Management contract and specification
- **Public transport** Asset Management contract and specification

Table 7: Customer level of service measures

Type of measure	Level of service	Performance measure	Current performance	Anticipated trend based on planned budget
Asset condition confidence level: High	Assets are kept in acceptable condition	Asset condition assessments	\$977 million of assets are currently in unacceptable condition*	Renewal (CAPEX) and maintenance (OPEX) budgets are anticipated to increase
Function confidence level: Medium	Assets are fit for purpose	Customer feedback on current services	A decreasing trend in customer satisfaction since 2021	CAPEX budgets (service level improvements) are anticipated to increase
Capacity/use confidence level: Medium	The quantum of assets is appropriate	Customer feedback on current services	Current capacity is on target	CAPEX budgets (new works growth) are anticipated to be maintained

*Unacceptable condition = assets in poor and very poor condition.

The confidence levels for each measure are defined as follows:



Technical levels of service

To deliver to customer values and achieve customer levels of service, more operationally-focused technical measures (technical levels of service) are required. These technical measures relate to the activities and allocation of resources (budgets and staff) to best achieve the desired customer outcomes and demonstrate effective performance.



Acquisition

Service level improvements (CAPEX) – To upgrade or enhance existing infrastructure assets to improve level of service provided to the community, in line with statutory obligations and community consultation requirements.

Acquisition

New works growth (CAPEX) – To provide new infrastructure assets or increase the capacity of existing assets to cater for growth in demand for services from a growing population or economic development.

Renewal (CAPEX)

To replace existing infrastructure assets that have reached the end of their useful life with new assets of the same service potential, to maintain the ability to deliver the required level of service.

Maintenance (OPEX)

To undertake regular servicing, repairs, and preventative maintenance activities on existing infrastructure assets to ensure they remain operational and able to deliver the required level of service over their expected useful life.

Operations (OPEX)

To manage and operate the infrastructure assets on a day-to-day basis, including activities like monitoring, inspections, and managing service requests, to ensure the continued delivery of the required level of service.

Service and Asset Managers plan, implement and manage these technical service levels to enable Auckland Transport's service delivery outcomes. The following table summarises the asset-related activities anticipated under current proposed budget allocations, along with the forecasted activity investment needs being recommended.

Table 8: Technical levels of service

Lifecycle activity	Activity measure	Recommended performance (investment needs)*	Planned performance (RLTP budget)**
Acquisition: New works growth (CAPEX)	Capacity increases.	As defined in the RLTP.	As defined and agreed by Auckland Transport's strategy and RLTP teams.
Acquisition: Service level improvement (CAPEX)	Improvements in services.	As defined in the RLTP.	As defined and agreed by Auckland Transport's strategy and RLTP teams.
10-year forecasts			\$7.7 billion
Renewal (CAPEX)	Proactive renewals.	Proactive renewals is occurring (funded by depreciation).	Some proactive renewals.
10-year forecasts		\$9.55 billion	\$5.58 billion
OPEX – maintenance and operations	Proactive maintenance. Proactive asset inspections. Proactive asset condition assessments.	Proactive maintenance, for both existing and new assets coming on-stream, is funded. Proactive asset inspections are funded. Proactive asset condition assessments are funded.	Mostly focused on proactive maintenance. Some reactive maintenance will likely be required. Most asset inspections and condition assessment can occur.
10-year forecasts		\$8.35 billion	\$5.75 billion

* Expected performance related to forecasted investment needs lifecycle costs.
 ** Likely expected activities related to current RLTP budgets.

It is important to regularly monitor service levels as circumstances change. Understandably, the current performance is based on current resource provision (financial and personnel), work efficiencies, and deliverability. And it should be acknowledged that changing circumstances, such as technology improvements, will change customer priorities over time.



Ōtāhuhu Station

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AMP 25



Future demand

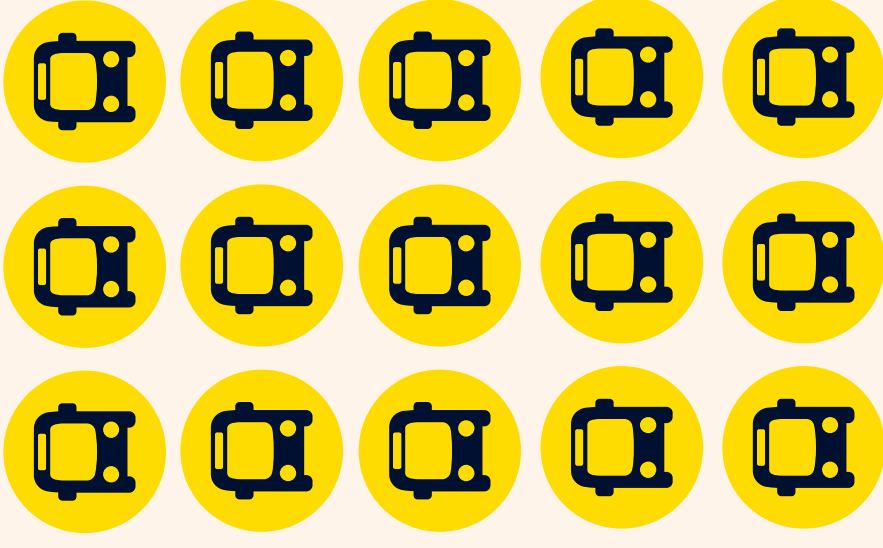
As Auckland's population continues to grow so does the demand for new and improved transport services. This demand places additional strain on Auckland Transport's existing infrastructure and financial resources.

Urban brownfield developments like Kainga Ora housing intensification programmes and greenfield housing developments such as those in Ramarama (Auckland south) and Kumeu (north Auckland) expect new and improved services to be provided by Auckland Transport.

Understandably, any new infrastructure will require the funding of downstream operational, maintenance and renewal activities to ensure that new infrastructure is kept in serviceable condition.

As more people and vehicles use Auckland Transport's asset infrastructure, the resilience of existing infrastructure will be tested. To meet these growth and demand challenges, funding permitting Auckland Transport aims to utilise a combination of approaches, including:

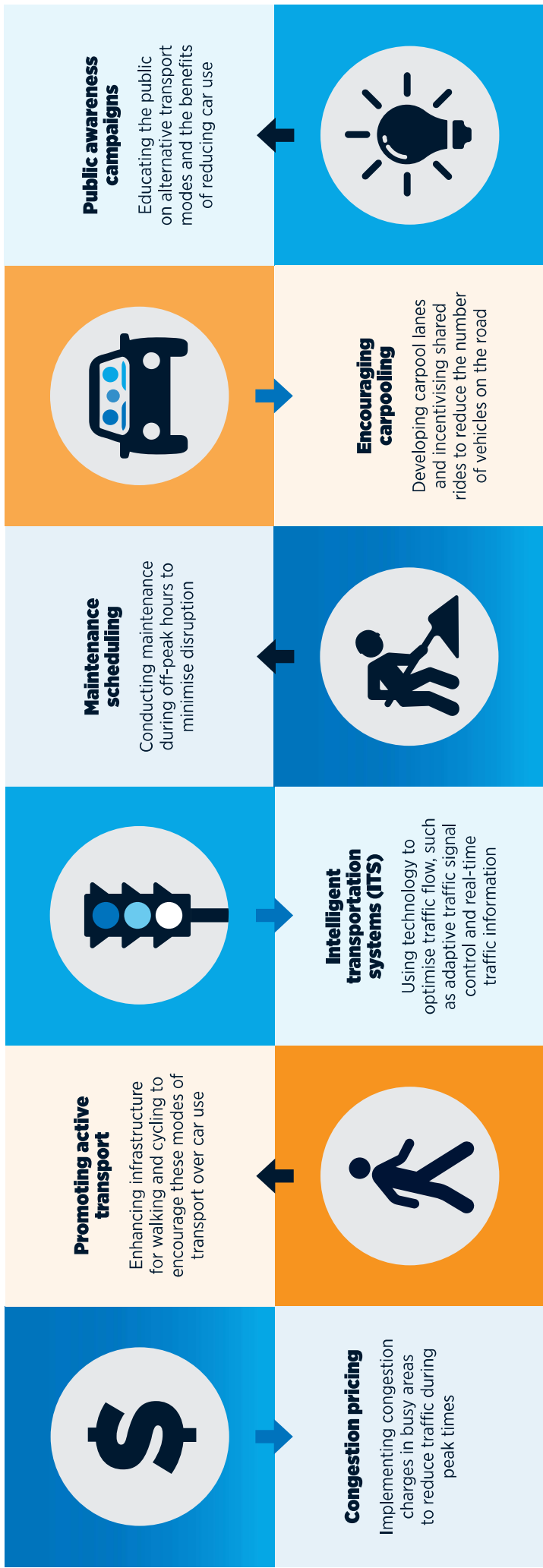
- additional Renewal activities (CAPEX – Renewal);
- uplifting Maintenance activities (OPEX);
- upgrading existing infrastructure (CAPEX – Service Level Improvement); and
- the provision of new infrastructure (CAPEX – New Works Growth).



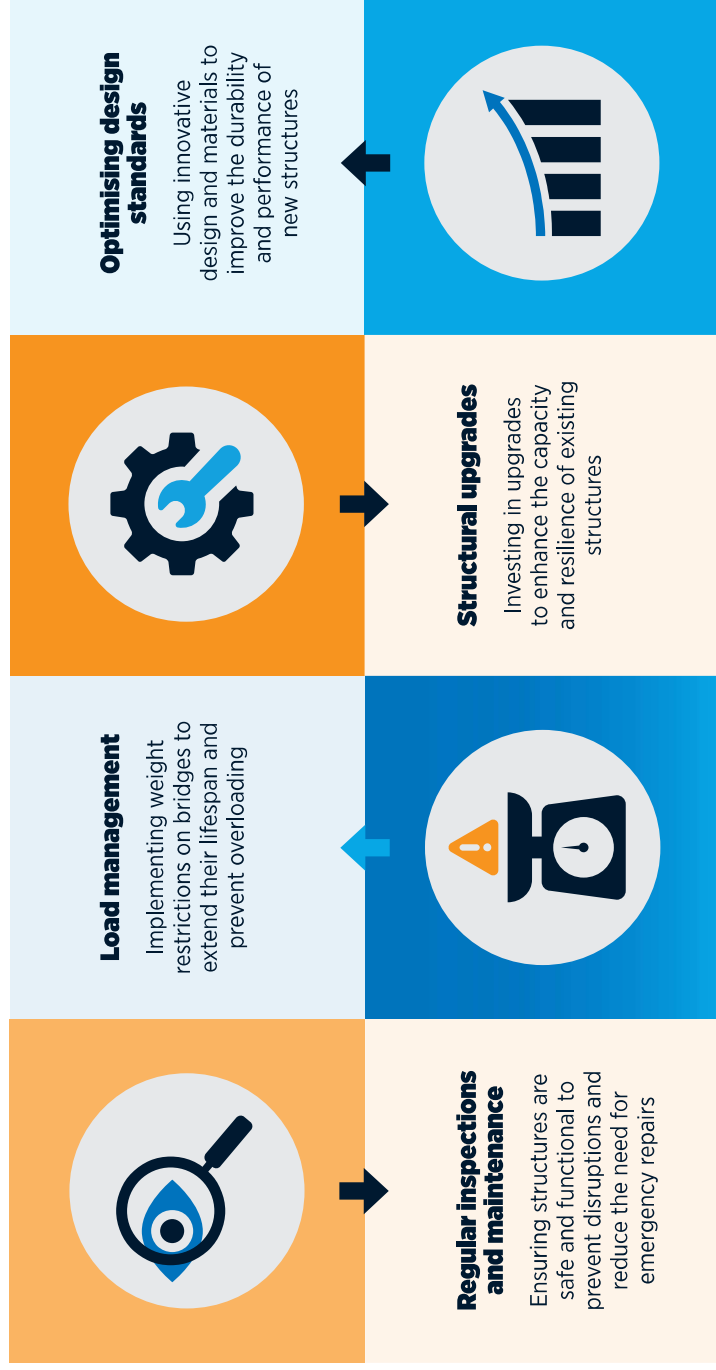
Any demand-management strategies are best focused on optimising the use of existing assets, reducing pressure on infrastructure, and promoting sustainable usage patterns.

The following are examples of strategies Auckland Transport might consider employing, noting that this is not an exhaustive list of strategies.

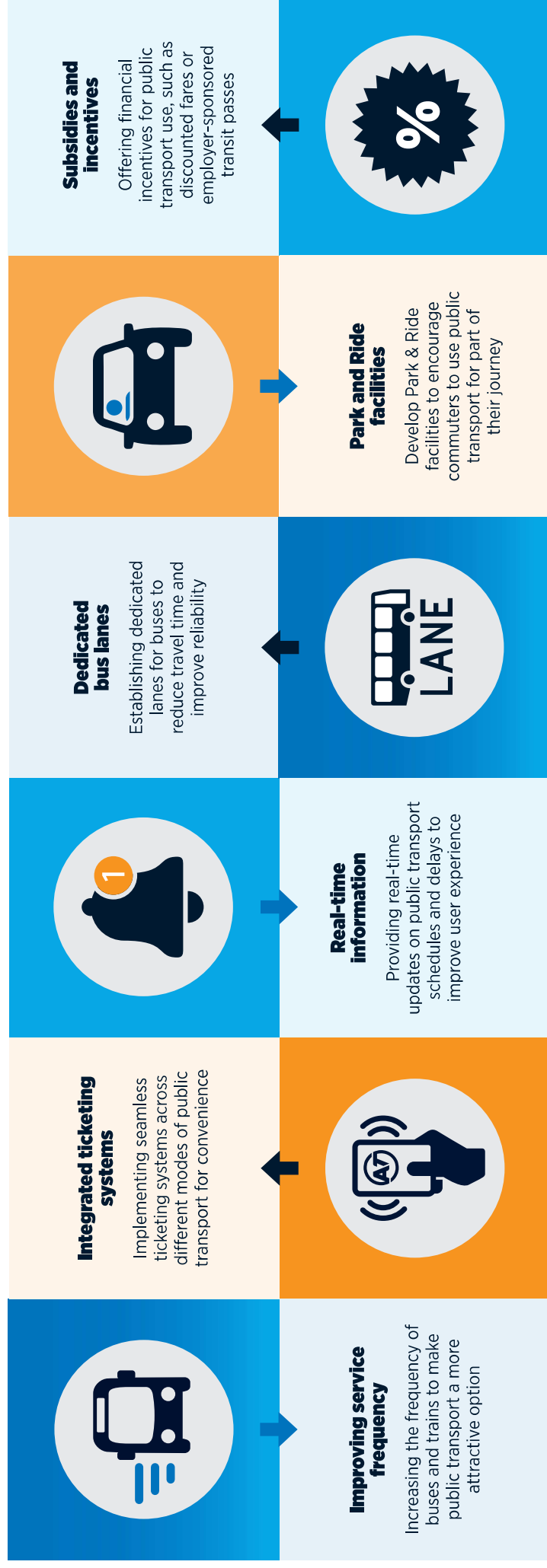
↪ Transport network



Transport structures ↗



Public transport ↩





AT 25
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Managing the risks

Adding to the complexities around service delivery, meeting demand and building a resilient network of infrastructural assets, Auckland Transport also face further challenges likely to come from the impact of climate change. Extreme weather events and patterns, such as the Auckland Anniversary floods and Cyclone Gabrielle of 2023, will create public safety concerns and cause service disruptions, as happened during those events. This will put further pressure on Auckland Transport's resources – funding and manpower.

To alleviate future risks, it is imperative to improve Auckland Transport's infrastructure resilience. This not only means uplifting the maintenance and renewals of existing assets, but also fortifying those assets against emerging threats.

Incorporating resilience into Auckland Transport's asset management requires forward-thinking, planning and investment. Roads, bridges and other transport infrastructure may need upgrading to handle increased loads and potential seismic activity. Public Transport networks will need modernising to be more efficient, environmentally friendly, and resistant to extreme weather events. These activities require additional funding and a commitment to long-term asset management planning.

The potential future risk consequences being as follows:

- **Increased vulnerability to climate change and extreme weather events.**
 - Road networks: Without adequate funding, roads may deteriorate faster, becoming more susceptible to damage from extreme weather events such as heavy rainfall, flooding, and heatwaves. This can lead to higher maintenance costs and more frequent disruptions.
 - Transport structures: Bridges and retaining walls that are not properly maintained can fail under stress from extreme weather, posing safety risks and requiring costly emergency repairs.
 - Public transport: Insufficient funding can result in outdated and unreliable public transport infrastructure, which may struggle to cope with the demands placed on it by extreme weather events, leading to service interruptions and decreased public confidence.

• Accelerating the deterioration of aging infrastructure

- Road networks: Aging roads require more frequent maintenance to remain safe and functional. Without best practice asset management, the rate of deterioration will outpace repairs, leading to hazardous conditions, increased vehicle damage, and higher long-term costs.
- Structures: Older bridges and retaining walls need regular inspections and timely interventions. Neglecting these can result in structural failures, endangering lives and disrupting transport networks.
- Public transport: As infrastructure ages, it becomes less reliable and more expensive to maintain. Failure to invest in modernization can lead to system breakdowns and increased operational costs.

• Increased risk to natural hazards

- Road networks: Poorly maintained roads are less resilient to natural hazards such as earthquakes, landslides, and coastal erosion. This can lead to prolonged outages and higher reconstruction costs.
- Transport structures: Bridges and retaining walls must be designed and maintained to withstand natural hazards. Underfunding these structures increases the risk of collapse during events such as earthquakes or heavy storms, posing severe safety risks and necessitating expensive rebuilds.
- Public transport: Effective asset management ensures public transport systems are resilient to natural hazards. Inadequate funding can result in prolonged service disruptions during and after such events, hampering emergency response efforts and recovery operations.

- **Higher long-term financial costs:** Delaying investment in asset management often leads to higher repair and replacement costs in the future. Reactive maintenance is typically more expensive than proactive strategies, leading to inefficient use of public funds.

- **Economic impact:** Poor infrastructure management can hinder economic growth by disrupting transport and logistics, increasing travel times, and reducing productivity.

- **Decreased public safety and well-being:** Unsafe roads and structures increase the risk of accidents and injuries. Reliable public transport is essential for ensuring equitable access to jobs, education, and healthcare. Neglecting asset management can disproportionately affect vulnerable populations who rely more on public infrastructure.

- **Environmental impact:** Poorly maintained infrastructure can lead to environmental degradation. For example, damaged roads can contribute to increased emissions from vehicles stuck in traffic, and deteriorating public transport infrastructure can discourage its use, leading to higher carbon footprints.

- **Loss of public trust:** Consistent failures and disruptions in infrastructure services can erode public trust in local government. Effective asset management is crucial for demonstrating accountability and stewardship of public resources.

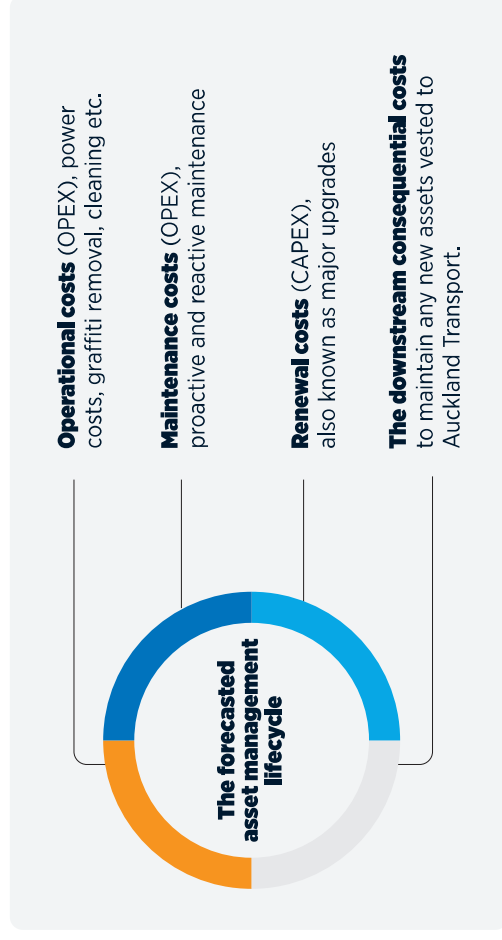
To mitigate these risks, it's imperative to invest in best practice asset management strategies that include regular maintenance, timely upgrades, and resilience planning. This proactive approach not only enhances the longevity and reliability of infrastructure but also ensures that local governments can better serve their communities and adapt to future challenges.

Auckland Transport will of course endeavour to manage these risks, within available RLTP budget envelopes. The following actions aim to mitigate, transfer, or accept risks, enhancing the resilience and sustainability of infrastructure assets.



Asset lifecycle investment needs

The forecasted asset management lifecycle investment needed (investment needs) to provide the transport structures and public transport services covered by this plan includes:



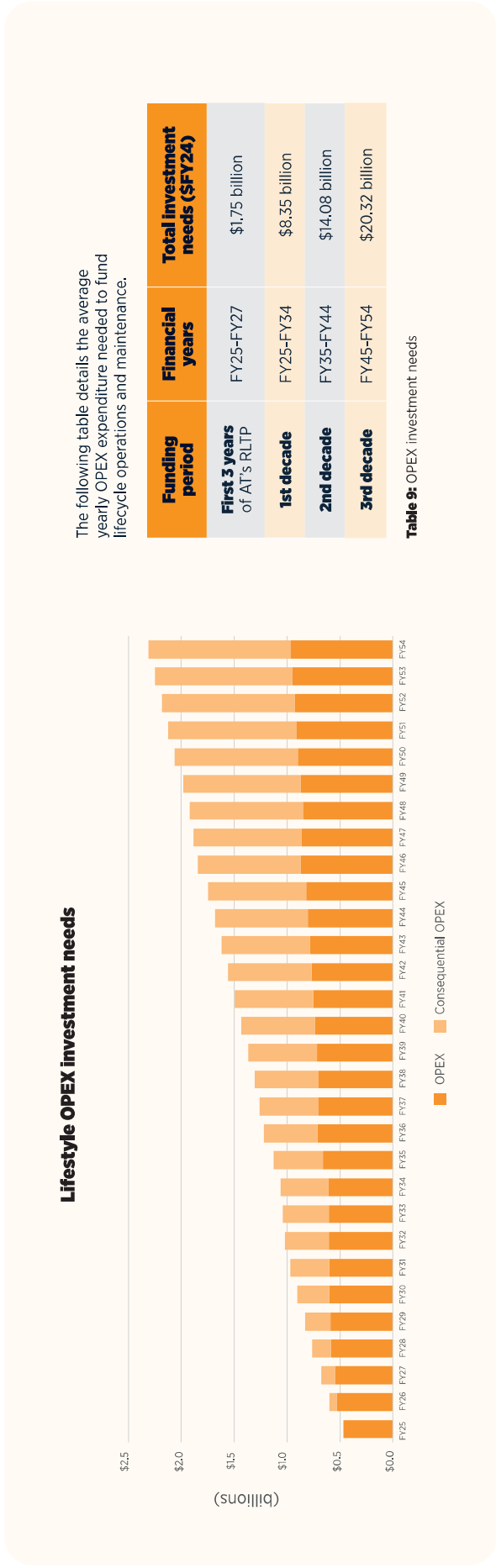
The forecasting of New Works Growth (CAPEX) and Service Level Improvements (CAPEX) is determined by Auckland Transport's Strategy, RLTP and Corporate Finance teams, where:

- **New Works Growth** capital works encapsulates the programmes and projects that add new assets, in delivering potentially new services, to Auckland Transport's fixed asset register. Examples include new bus interchanges and bus lanes, new ferry terminals, new bridges or structures etc.
- **Service Level Improvement** capital works are focused on uplifting the quality and performance of current service levels being provided by Auckland Transport. Examples include uplifting the resilience of Auckland Transport's infrastructure to cope with climate change impacts.

Lifecycle maintenance and operations (OPEX) investment needs

Based on Auckland Transport’s historical OPEX costs, the following graph presents current financial modelling and forecasting of lifecycle maintenance and operational costs for the transport networks, transport structures and public transport asset portfolios.

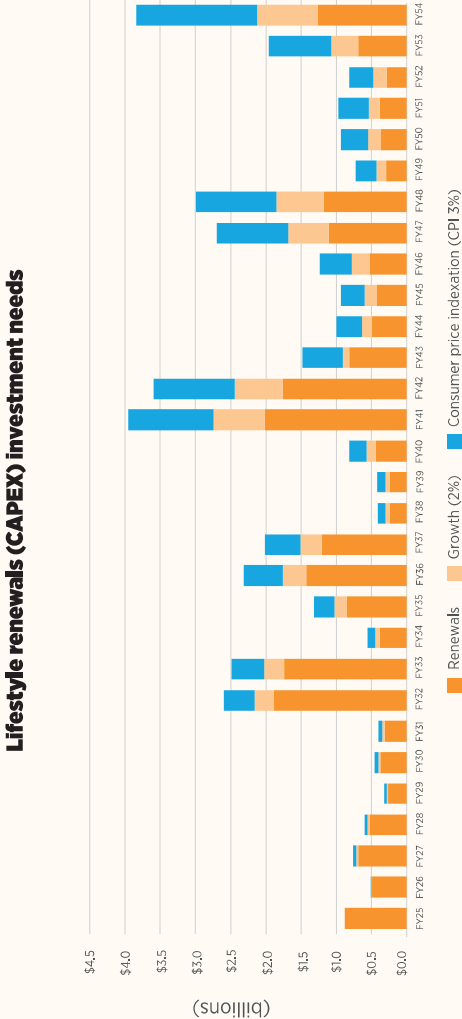
Figure 9: Lifecycle OPEX investment needs



Lifecycle renewal (CAPEX) investment needs

Based on current asset condition and age data, the following graph presents the current financial modelling and forecasting of lifecycle renewals for the transport networks, transport structures and public transport asset portfolios.

Figure 10: Lifecycle renewal (CAPEX) investment needs



The following table details the average yearly CAPEX expenditure needed to fund lifecycle renewals and major maintenance

Funding period	Financial years	Total investment needs (\$FY24)
First 3 years of AT's RLTP	FY25-FY27	\$2.15 billion
1st decade	FY25-FY34	\$9.55 billion
2nd decade	FY35-FY44	\$17.31 billion
3rd decade	FY45-FY54	\$17.09 billion

Table 10: Renewal (CAPEX) investment needs

Modelling data confidence

The following reflects the data confidence, on a five-point scale – **1 = Very High** to **5 = Very Low** confidence – held regarding the data and analytics presented above. This assessment is qualitative, based on professional judgement, as detailed below.

The following table details the average yearly CAPEX expenditure needed to fund lifecycle renewals and major maintenance works.

Data set	Founding data source	Comments	Confidence level
Valuation	SAP – Fixed asset register	SAP is Auckland Transport's corporate financial system.	●
Depreciation modelling	Corporate finance depreciation modelling	SAP is Auckland Transport's corporate financial system.	
Historical, actual expenditure	SAP	SAP is Auckland Transport's corporate financial system.	●
Asset condition data	RAMM	Transport networks and structures data only.	●
Asset condition data	SPM	Public transport data only.	●
Asset age data	RAMM	Transport networks and structures data only.	
Asset age data	SPM	Public transport data only.	●
Investment needs modelling/forecasting	RAMM	Simple age and condition-based modelling are best appropriate practice.	●
Investment needs modelling/forecasting	SPM	Public transport only. SPM modelling is based on best practice.	●

Table 11: Investment needs data confidence

Each of the data sources have been qualitative rated as follows:

Very high
qualitatively assessed as >80% data confidence

● **High**
qualitatively assessed as between 60-80% data confidence

● **Moderate**
qualitatively assessed as between 40-60% data confidence

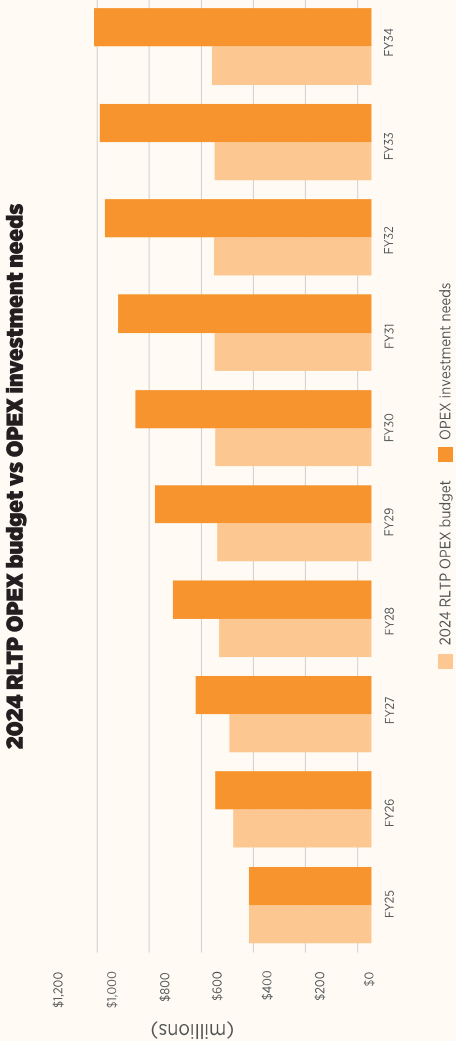
Low data
qualitatively assessed as between 20-40% confidence

● **Very low**
qualitatively assessed as <20% data confidence

Financial plan

Requested 2024 RLTP funding.
The following graph presents the approved RLTP OPEX budget vs OPEX investment needs.

Figure 11: 2024 RLTP OPEX budget vs OPEX investment needs



The financial impact of this level of OPEX funding is presented in the following table.

2024 RLTP budget	3-year period (FY25–FY27)	10-year period (FY25–FY34)
Investment needs	\$1.55 billion	\$5.75 billion
Funding consequence	\$1.75 billion	\$8.35 billion
	-\$196.20 million (shortfall)	-\$2.60 billion (shortfall)

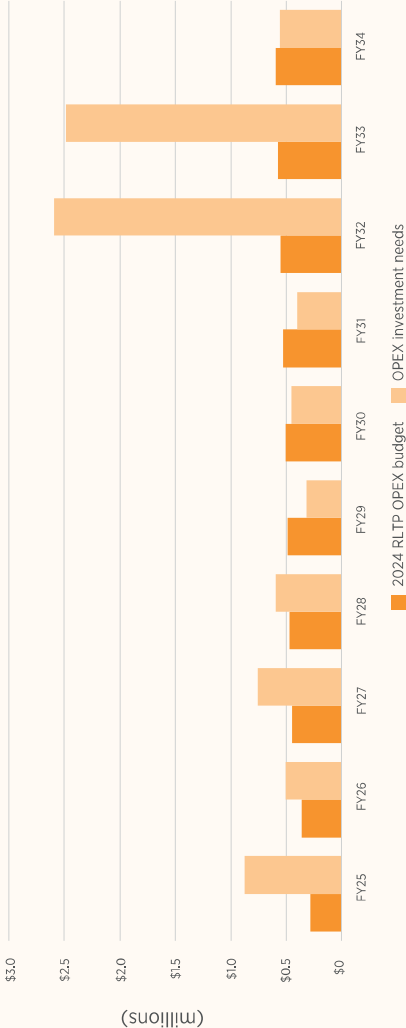
Table 12: Requested 2024 RLTP OPEX funding vs. OPEX investment

Financial plan

Requested 2024 RLTP funding.
Regarding renewals (CAPEX), following graph presents the approved 2024 RLTP renewal funding.

Figure 12: 2024 RLTP renewal (CAPEX) budget vs renewal investment needs

2024 RLTP renewals budget vs renewal investment needs



The following table shows the financial impact of this level of renewals funding.

2024 RLTP budget	3-year period (FY25–FY27)	10-year period (FY25–FY34)
Investment needs	\$1.30 billion	\$5.58 billion
Funding consequence	\$2.15 billion	\$9.55 billion
	-\$851.35 million (shortfall)	-\$3.97 billion (shortfall)

Table 13: Requested 2024 RLTP OPEX funding vs. OPEX investment needs

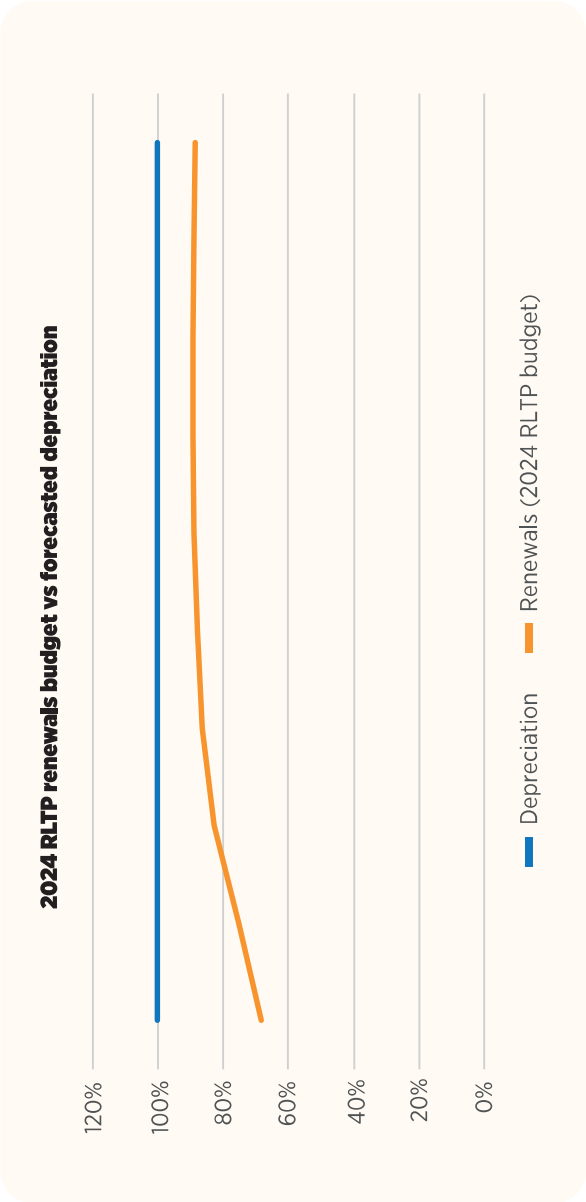


AT 20
AMP 25

Financial Plan

The following graph presents the estimated unfunded renewals gap – 2024 RLTP renewal budget vs. forecasted depreciation – for all three asset portfolios.

Figure 13: 2024 RLTP renewal budget vs forecasted depreciation – all asset portfolios



As the above graph indicates, Auckland Transport renewals (CAPEX) will not match forecasted depreciation within the current RLTP funding period.



Funding consequences

The appropriate level of whole-of-life infrastructure asset management funding ensures the integrity and longevity of infrastructure under Auckland Transport's guardianship. By investing in regular proactive asset management – maintenance (OPEX) and renewals (CAPEX) activities – Auckland Transport will:

- prevent infrastructure integrity issues escalating
- better support a high level of service delivery to ratepayers and asset users
- be cost efficient and effective, for current and future generations
- ensure a reduced level of risk being carried by the organisation.

Given the unfunded OPEX and renewal (CAPEX) asset management works, the allocation of budget through Auckland Transport's RLTP development process is considered insufficient to ensure the integrity of all of Auckland Transport's infrastructure. For the foreseeable future Auckland Transport can expect to carry a higher level of risk in relation to the asset portfolios.

This will be indicated by:

- increasing number of customer complaints
- an overall decline in customer satisfaction
- infrastructure faults continue to increase
- emergency asset repairs take longer to resolve.



Improving Auckland Transport's asset management practices

In 2015 Auckland Transport completed its first assessment of its asset management practices using the International Infrastructure Management Manual (IIMM) approach. There was a growing awareness that continuous improvement of Auckland Transport's asset management practices were a key enabler to improving infrastructure outcomes, building public trust, and increasing stakeholder confidence.

In 2020, Auckland Transport moved to annual, external assessments of its asset management practices. 2024 saw Auckland Transport adopt the Commerce Commission Asset Management Maturity Assessment Tool (AMMAT) for its 2024 maturity assessment. AMMAT adapts the PAS 551 Assessment Methodology (PAM) tools to meet the Commerce Commission objectives for regulated industries. The native PAM includes 121 questions that comprehensively assess the maturity of asset management systems based on 5 levels of maturity (from 0 to 4). AMMAT consists of a self-assessment questionnaire containing 31 questions. The maturity assessment questions are designed to cover the full range of asset management system components and activities while having regard to information that is already disclosed in the organisation's asset management plans.

The six main capability assessment areas are:

- asset strategy and delivery (process-oriented);
- documentation, controls, and review (process-oriented);
- systems, integration, and information management (process-oriented);
- communication and participation (process-oriented);
- structure, capability and authority (people-oriented); and
- competency and training (people-oriented).

In assessing asset management maturity, AMMAT seeks to answer two key questions, namely:

1. How 'mature' or skilled is the business in key areas of asset management
 2. How well have they implemented their skills?
- This framework allows Auckland Transport to compare its maturity with other asset-intensive New Zealand industries, i.e. Vector.

Key assumptions made in this assessment include:

- asset management refers to the way Auckland Transport manages its infrastructure assets and services
- management of assets is end to end, i.e. the whole lifecycle and all functions within Auckland Transport that support the management of assets
- critical assets are operated with a different risk appetite to non-critical assets.

The following figure illustrates the trending improvement made since the initial internal assessment in 2022.

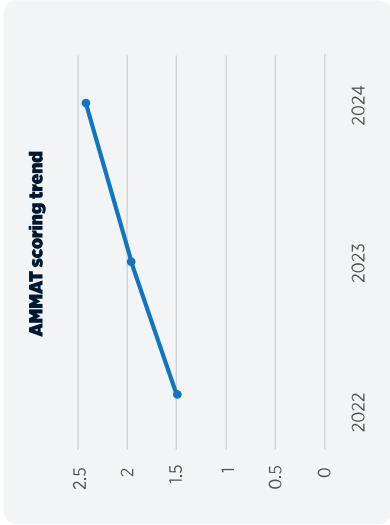


Figure 14: Asset Management Maturity Assessment Tool scoring

Figure 15: Asset Management Maturity Assessment Tool results

2024 AMMAT results



Table 14: High-level Asset Management Maturity Improvement

#	Function	Improvement project	Proposed improvement	Responsibility	Proposed timeline
33	Contingency planning	Contingency plan updates	Regularly update and test contingency plans to ensure readiness for emergencies and non-conformities.	Risk and Assurance	Long-term
48	Training, awareness, and competence	Competency development program	Develop and implement a competency development program tailored to asset management roles.	Human Resources	Mid-term
62	Information management	Data quality improvement	Implement measures to enhance data quality and consistency within the asset management information system.	Asset Information	Long-term
88	Lifecycle activities	Lifecycle oversight	Enhance oversight processes for asset lifecycle activities to ensure alignment with strategic objectives.	Asset Policy Team	Mid-term
109	Corrective & preventative action	Preventive action framework	Develop a framework for systematic preventive actions based on identified risks and incidents.	Risk and Assurance	Short-term
10	Asset management strategy	Stakeholder alignment	Develop a stakeholder engagement plan to ensure that asset management strategy aligns with stakeholder needs and organisational policies.	Asset Management	Mid-term
64	Information management	System relevance assessment	Regularly assess the relevance of the asset management information system to evolving business needs.	Asset Information	
69	Risk management process(es)	Risk management integration	Integrate risk management processes across all asset management activities.	Risk and Assurance	Short-term
91	Lifecycle activities	Maintenance procedure review	Review and update maintenance procedures to ensure cost, risk, and performance controls are effective.	Operations/ maintenance contract management teams (e.g. RAMR)	Mid-term
95	Performance and condition monitoring	Performance monitoring system	Upgrade the performance and condition monitoring systems to provide real-time data and analytics.	Asset Information	Long-term

#	Function	Improvement project	Proposed improvement	Responsibility	Proposed timeline
99	Investigation of asset-related failures, incidents, and non-conformities	Incident management system	Implement a robust incident management system to handle and mitigate asset-related failures and non-conformities.	Operations/maintenance contract teams	Long-term
113	Continual improvement	Continuous improvement program	Establish a continuous improvement program to optimize cost, risk, and performance of assets.	Asset Management	Long-term
3	Asset management policy	Enhance policy awareness	Conduct regular training sessions to enhance understanding and implementation of the asset management policy across all departments.	Human Resources (training department)	Short-term
26	Asset management plan(s)	Plan review cycle	Establish a formal review cycle for asset management plans to ensure they are up-to-date and reflective of current operational needs.	Asset Planning	Long-term
37	Structure, authority and responsibilities	Role clarity initiative	Conduct a review and clarify roles and responsibilities within the asset management team to eliminate silos and improve coordination.	Human Resources	Long-term
59	Asset management system documentation	Documentation audit	Perform a comprehensive asset management system documentation audit to ensure completeness and accuracy.	Risk and Assurance	Long-term
105	Audit	Audit procedure enhancement	Enhance audit procedures to cover all aspects of the asset lifecycle with comprehensive documentation.	Risk and Assurance	Long-term
115	Continual improvement	Technology and practice review	Regularly review and assess new asset management technologies and practices for potential benefits.	Asset Management	Short-term

Monitoring, review and reporting

At time of writing, the final improvement plan was yet to be signed off by the newly formed (2024) Renewals and Resilience Portfolio Steering Group. But once signed off, the monitoring, review and reporting on the achievement of the agreed Improvement Plan will be instigated back to this Steering Group.

