Auckland Transport Prioritisation Process

Recommendation

That the Board:

i. Endorse the Prioritisation Process for transport investment for the next 3 decades as outlined in this paper and associated attachments.

Executive summary

A process is currently underway between Auckland Transport (AT), the New Zealand Transport Agency (NZTA) and Auckland Council (AC) to identify a 10, 20 and 30 year set of projects and activities designed to optimise transport benefits for any given capital and operating funding envelope.

Programme optimisation has involved a prioritisation process aimed at achieving the strategic transport outcomes in the Auckland Plan. This process has been undertaken in collaboration with AC and NZTA, and builds on the One System approach outlined in the first ITP.

The prioritisation process is described below and is the basis for the next iteration of the Integrated Transport Programme (ITP).

The first 10 years of the ITP will comprise the prioritised projects and programmes for the LTP and RLTP and will be subsequently assessed on a project-by-project basis under NZTA prioritisation criteria for funding eligibility. Projects will also be subject to further AT feasibility and funding reviews as part of the usual project development process.

Consultation with elected representatives from Council is planned to begin at the end of March 2014 – ahead of the 2015 RLTP and LTP processes.

The purpose of this report is to seek the Board's endorsement and feedback on the process outlined in Attachments 1, 2 and 3.

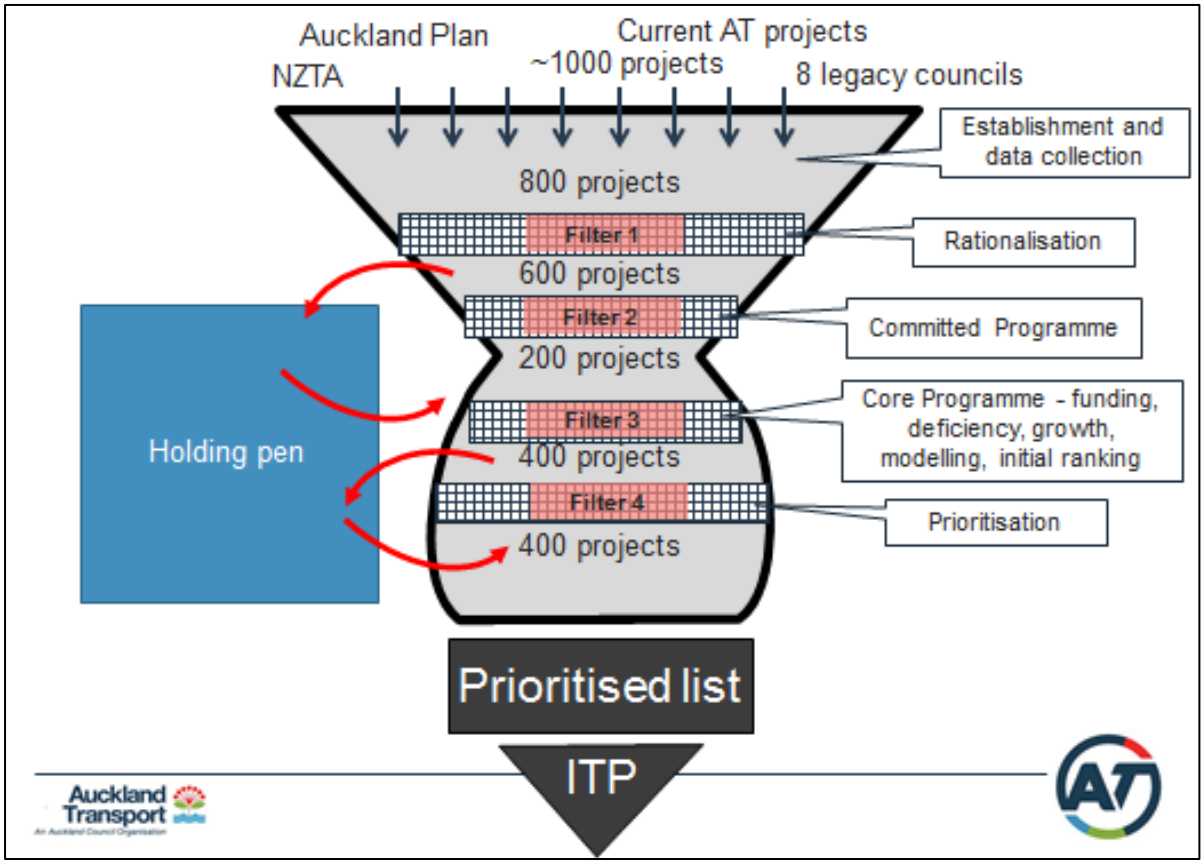
Background

The prioritisation process currently underway will inform the 30 year ITP and the 10 year LTP and RLTP. It is intended to deliver the transport response to the strategic transport outcomes outlined in the Auckland Plan.

The process has been informed by AT priorities articulated in documents including the Regional Public Transport Plan 2013, updated Rapid Transit Network, updated Rail Development Strategy, and draft Parking Discussion Document as well as programmes such as Network Operating Plans and Corridor Management Plans. Relevant NZTA documents include Transport Solutions for a Thriving New Zealand and Auckland State Highway Future Directions.

Prioritisation Process

The prioritisation process undertaken is presented in Attachment 1 and is summarised in the following diagram:



Steps undertaken include:

- Development of a Vision Statement, Problem Definition, Benefits Identification
- Identification of performance indicators and measures
- Assessment of project dependencies, readiness to proceed and consenting timeframes/requirements.
- Assessment of the funding envelope for capital and operational requirements
- Rationalisation and development of a consolidated list of programmes and projects across AT and NZTA
- Definition of a 'Committed Programme' of projects and activities
- Development of a 'Core Programme' of projects and activities based on the estimated 30 year CAPEX financial envelope and informed by a ranking process, deficiency analysis and testing through transport modelling.

As part of developing the prioritisation process, the attached draft Investment Logic Map (Attachment 2) and draft Strategic Framework (Attachment 3) have been developed jointly with Council and NZTA.

The outcome of the prioritisation process will be a programme of investment that represents the best strategic fit and effectiveness to meet the outcomes of the AP.

NZTA prioritisation process and other considerations

While the attached process is intended to identify which projects should be included within the draft ITP, a separate NZTA prioritisation process needs to be undertaken to determine

whether a particular AT project will be part-funded by NZTA under the GPS. The timing and content of the programme may need to be adjusted following this process to make best use of the available NZTA funds.

Other factors will also impact on the timing and content of the programme – including project dependencies, readiness to proceed and consenting timeframes / requirements.

Discussions are underway with NZTA to ensure that as far as possible, the prioritisation process described in this document and the NZTA prioritisation process result in the same outcomes.

Next steps

Endorsement and any feedback from the Board will:

i. Inform the finalisation of the prioritisation processes; and

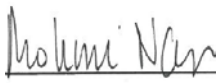
ii. Support the development of the 'Core Programme' of projects and activities.

The contents of the first-cut 'Core Programme' and the modelling results from this programme will be presented to the Board in the second quarter of 2014. A draft ITP will be submitted to the Board in the third quarter of 2014.

Attachments

Number	Description
1	Prioritisation – 13 March 2014 presentation to the Auckland Transport Capital Review Committee
2	ITP Investment Logic Map
3	ITP Strategic Framework

Document ownership

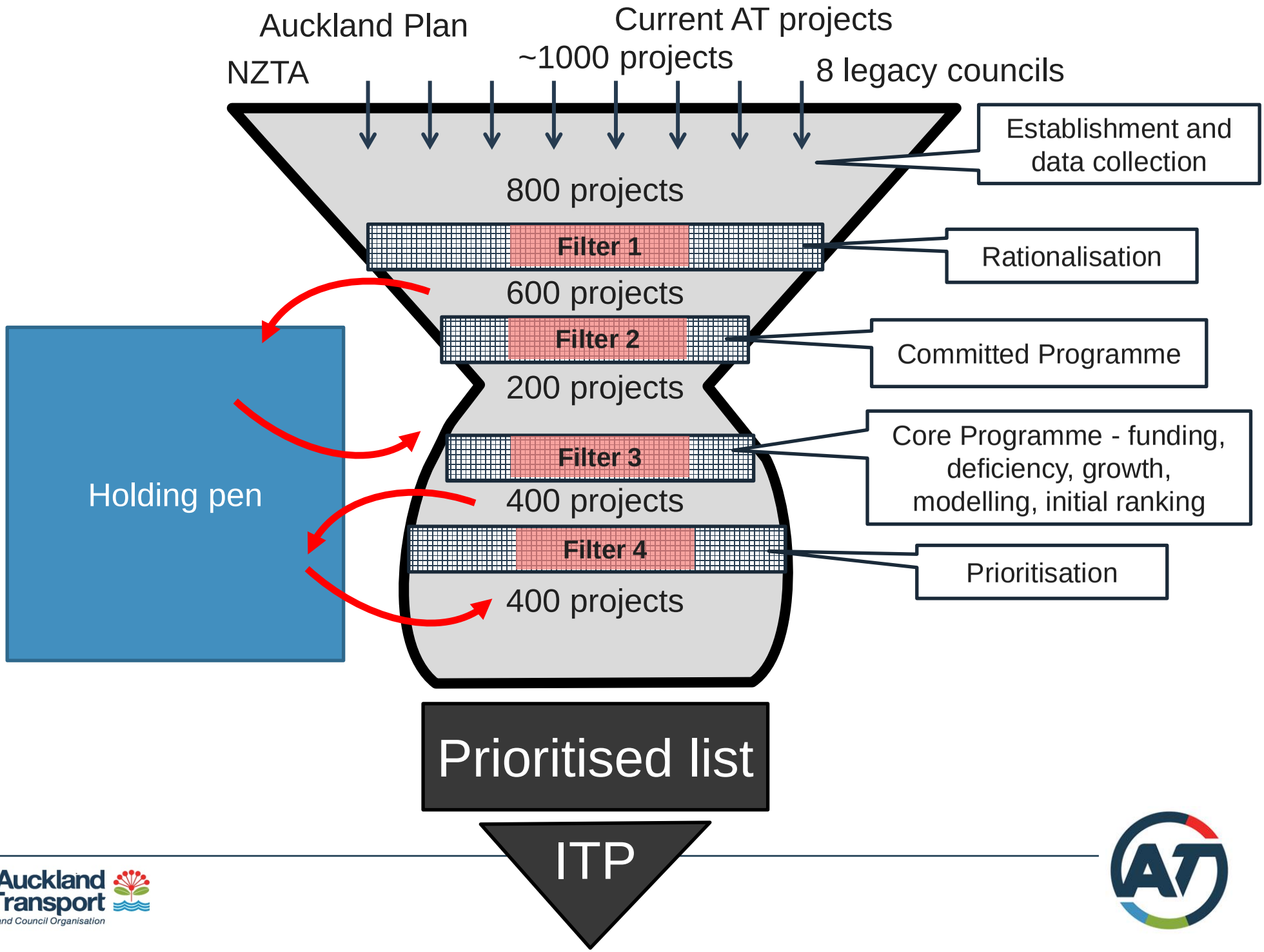
Submitted by	Mohini Nair **Manager Strategic Transport Planning**	
Recommended by	Peter Clark **General Manager Strategy and Planning**	
Approved for submission	David Warburton **Chief Executive**	

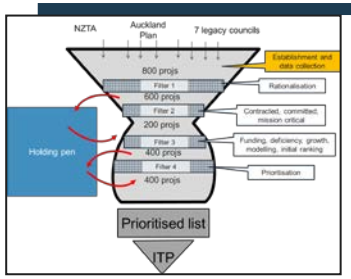
Glossary

Acronym	Description	Business Unit
AT	Auckland Transport	
CBG	Consensus Building Group	
Council	Auckland Council	
CRC	Capital Review Committee	
ITP	Integrated Transport Programme	
NZTA	New Zealand Transport Agency	
RLTP	Regional Land Transport Programme	

Prioritisation

Auckland Transport
An Auckland Council Organisation


Auckland Plan
NZTA
Current AT projects
~1000 projects
8 legacy councils
Establishment and data collection
800 projects
Filter 1
Rationalisation
600 projects
Filter 2
Committed Programme
200 projects
Filter 3
Core Programme - funding, deficiency, growth, modelling, initial ranking
400 projects
Filter 4
Prioritisation
400 projects
Holding pen
Prioritised list
ITP

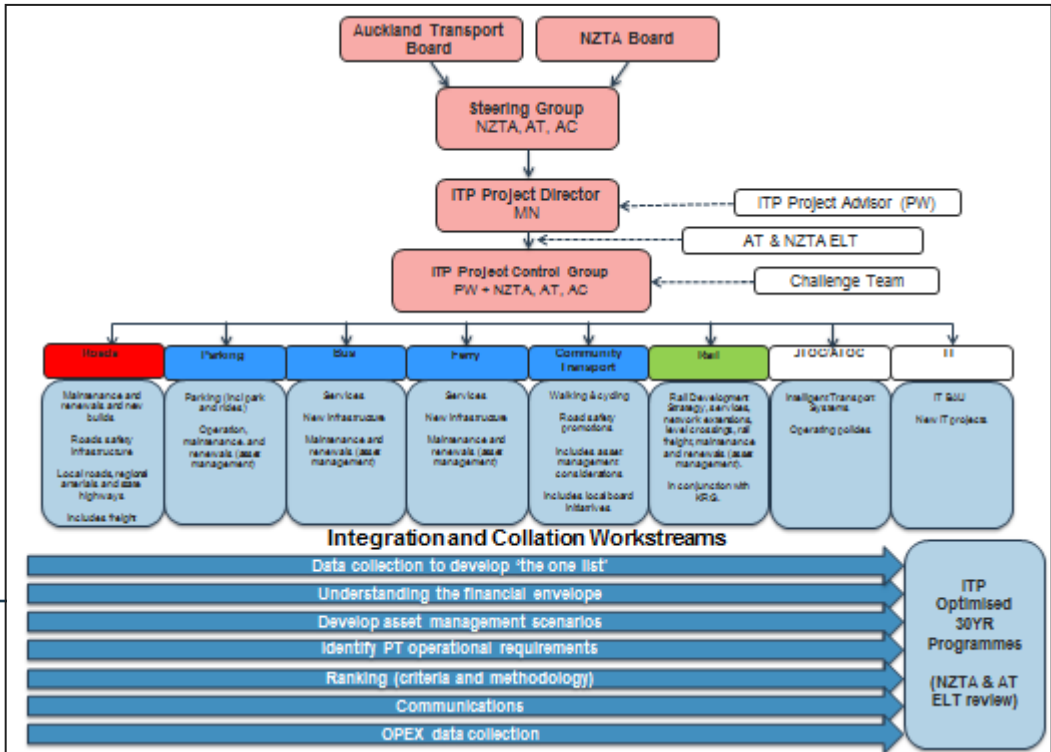


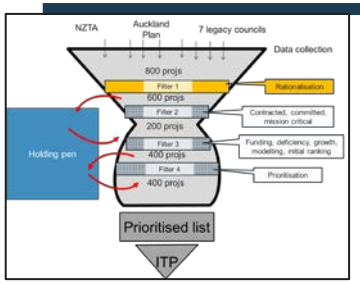
Establishment & Data Collection

PURPOSE - Develop the process to establish the 'One List' of legacy, NZTA and Auckland Plan projects

- Data collection workstream set up (AT/NZTA)
- Capex and opex templates developed and pre-populated (project name, description, problem statement, costs, phasing, dependencies, local board etc)
- Template sent out to eight functional workstreams for input/feedback – AT/NZTA/AC
- 20 workshops with AT/NZTA/AC subject matter experts

OUTCOME – The 'One List' (800 projects)



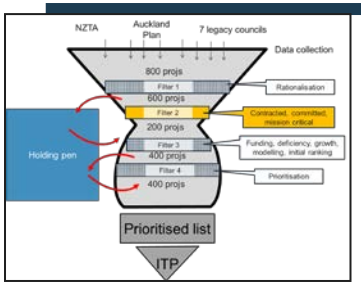


Filter 1 - Rationalisation

PURPOSE – Remove duplicates and projects planned for completion

- Ongoing process of updating and improving project information with AT/NZTA/AC
- Update and correct project costs and phasing
- AT long-term planning database being developed for project information going forward
- Example of duplicate – AT plan change obligations duplicating projects that already existed in the list

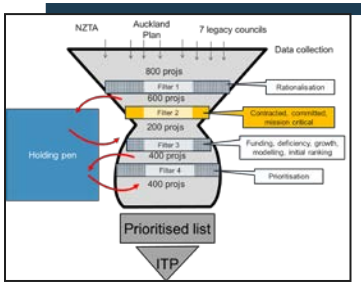
OUTCOME – Rationalised list of 600 projects (from 800 projects)



Filter 2 – Committed Programme

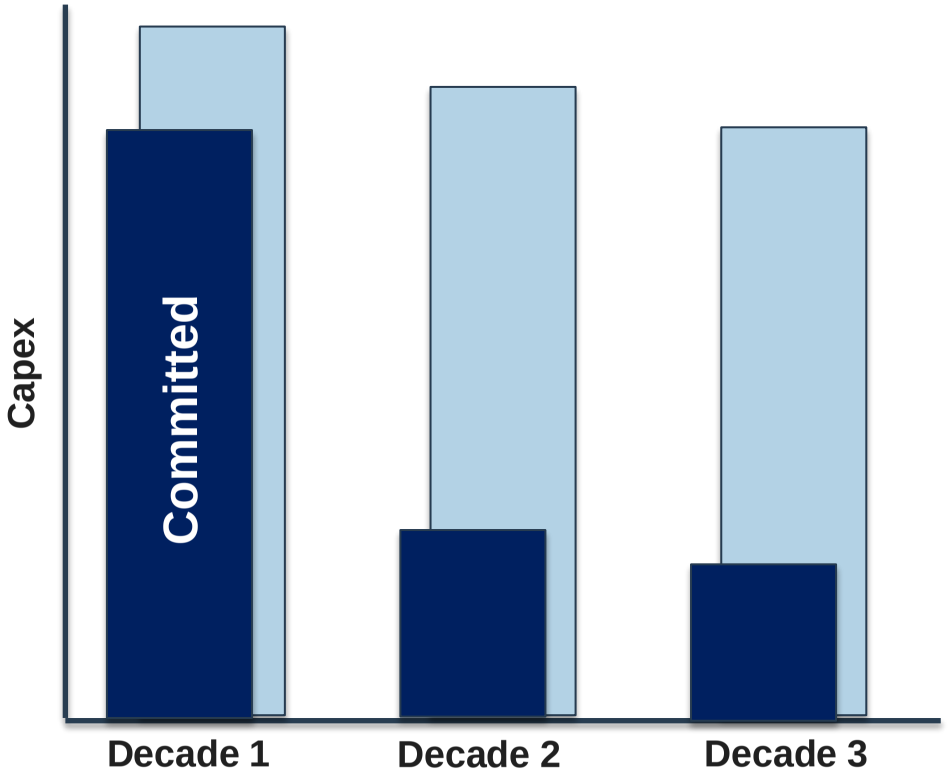
PURPOSE – Develop the 'Committed Programme'

- Committed projects defined as:
  - Already contractually committed (e.g. NORSGA, EMUs)
  - Almost certainly will be contractually committed by 30 June 2015 (e.g. Albany Hwy, the Auckland Package)
  - Programmes where it is difficult/illogical to avoid the expenditure (e.g. safety improvements, local board initiatives)
  - Projects with a documented imperative to deliver (e.g. highest priority roading projects from the RLTP, CRL)
  - Other 'mission critical' projects (e.g. minimal level crossing removal programme)
  - Additional projects that are dependencies for any of the above
- Workshop held 30 Oct 2013 to develop the committed list - AT/NZTA/AC



Filter 2 – Committed Programme

OUTCOME – Committed Programme - 200 projects

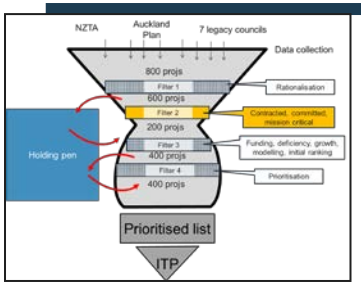


Example projects included in Committed Programme:

- City Rail Link
- SH1 Puhoi to Warworth RONS
- AMETI (Panmure to Pakuranga)
- 'Mini' East-West Link
- Minimum rail level crossing separation programme

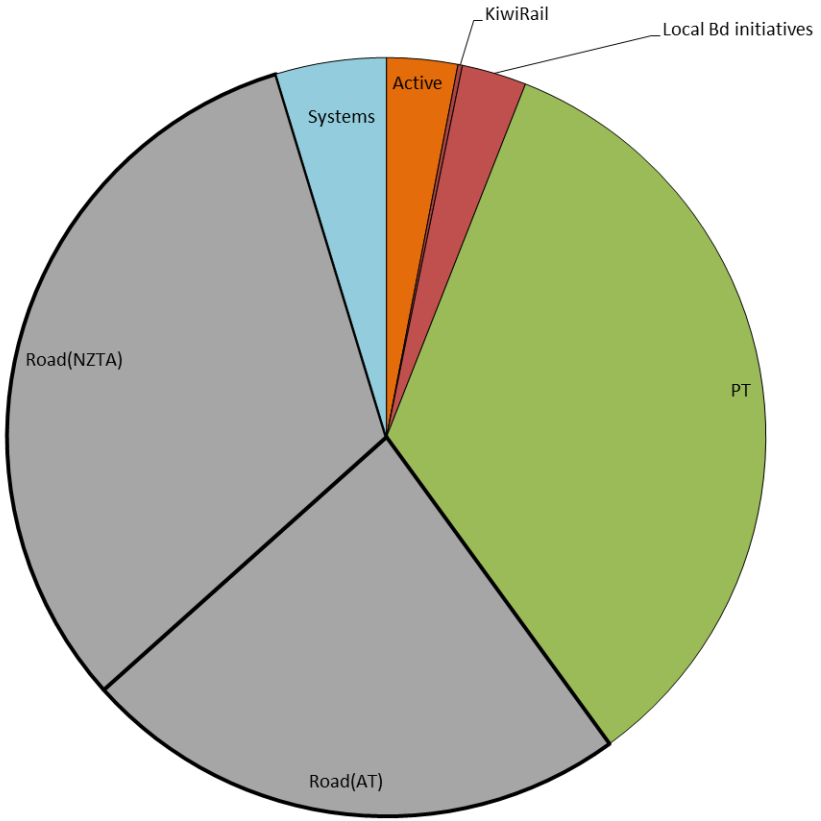
Example projects in Holding Pen:

- AMETI busway Pakuranga to Botany
- AWHC
- Airport Rail
- SH1 Warkworth to Wellsford RONS
- Enhanced East-West Link
- North-Western busway

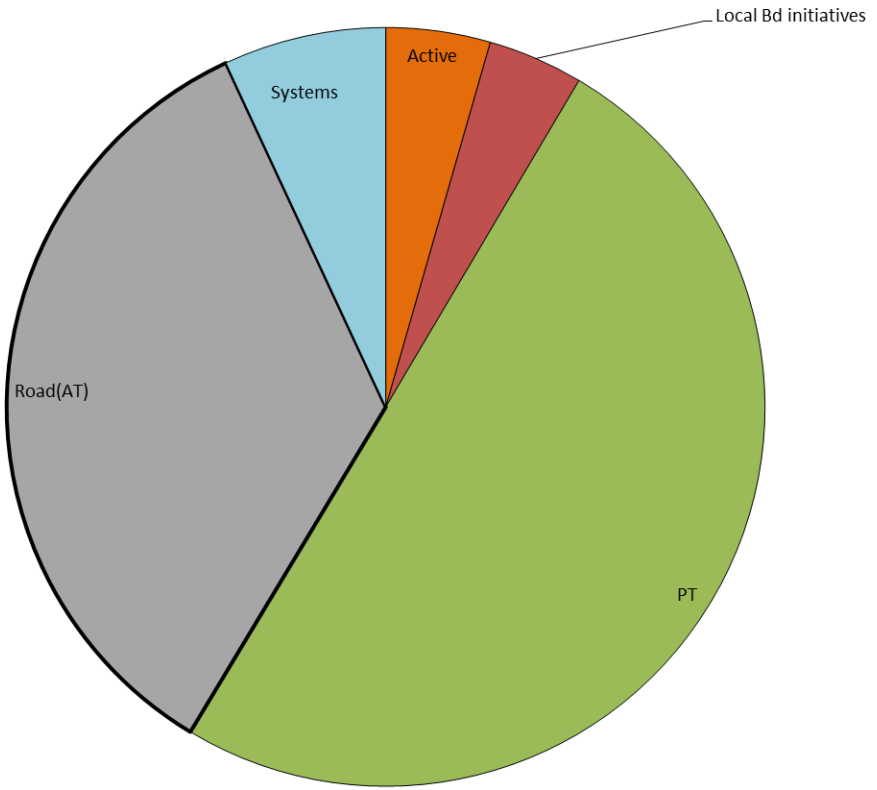


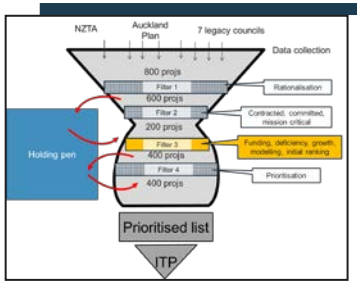
Filter 2 – Committed CAPEX

AT + NZTA + KiwiRail (2015-2045)



AC Family Only (2015-2045)

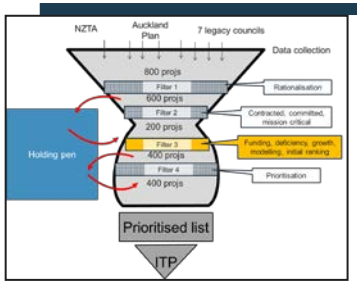




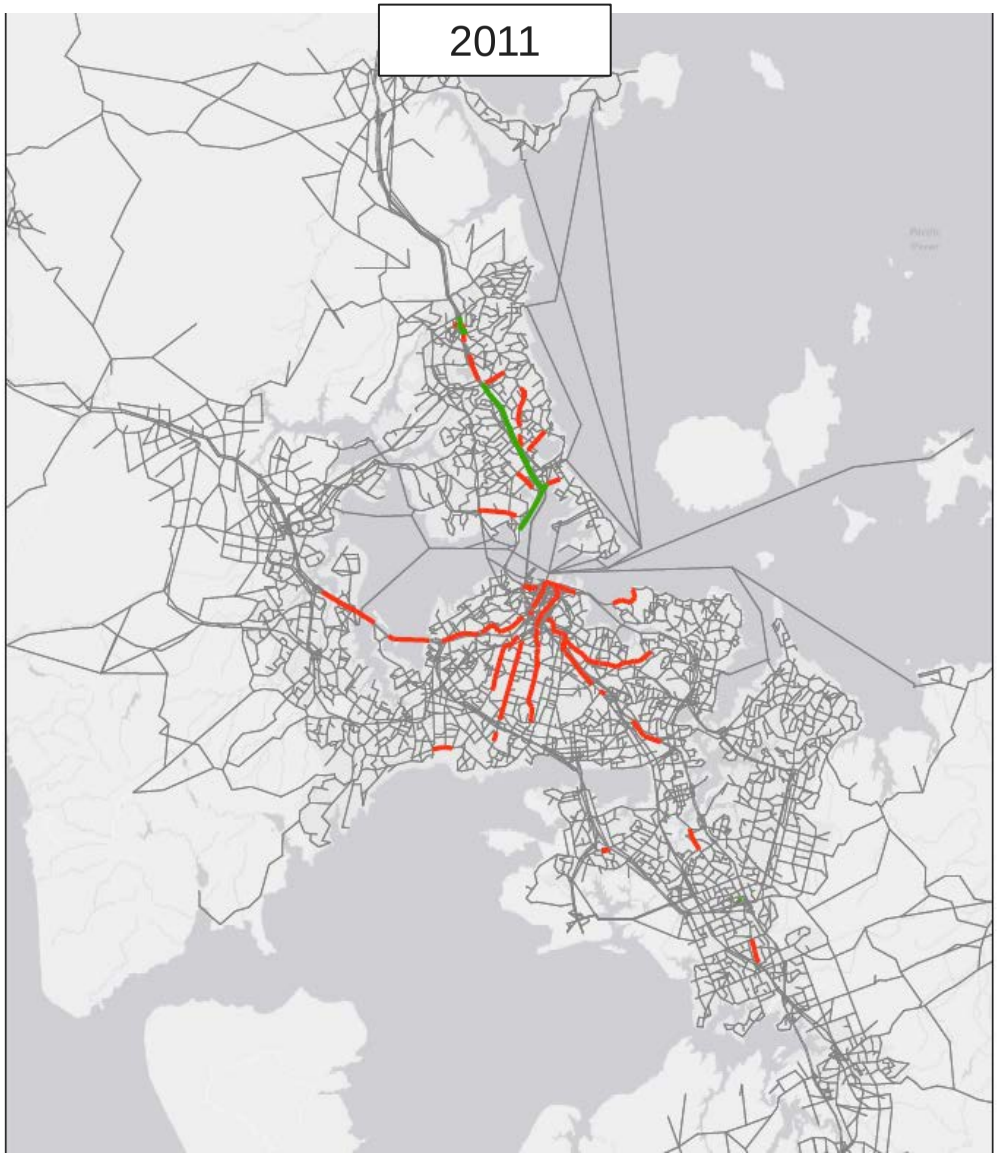
Filter 3 - Transport Modelling and Deficiency Analysis

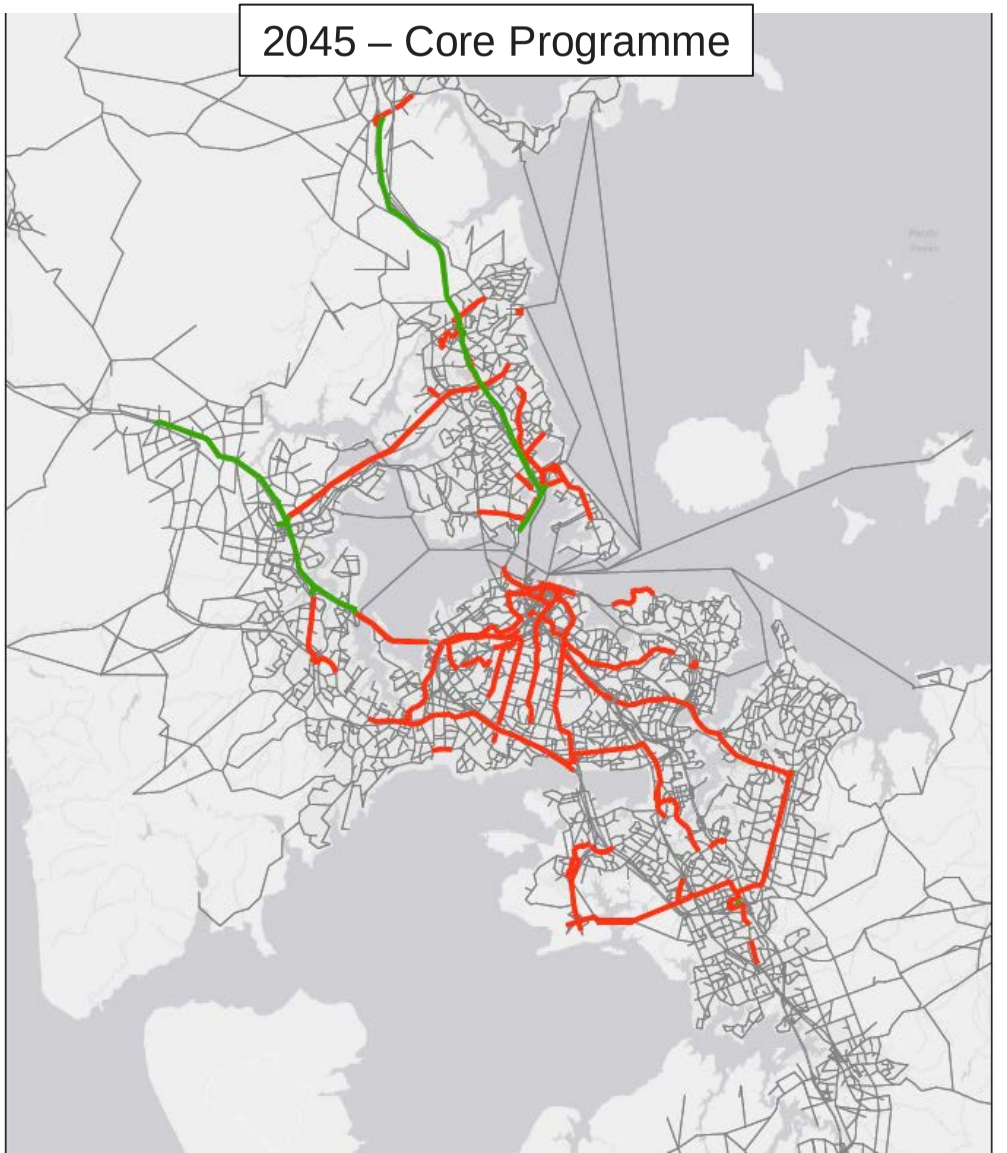
PURPOSE – modelling and deficiency review of the Committed Programme to identify network performance and suggest where additional projects from the 'holding pen' may improve results

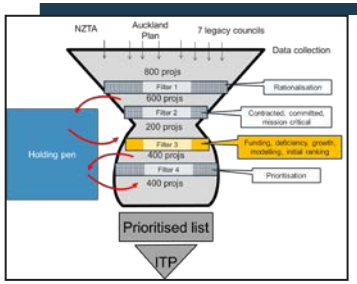
- Transport modelling used as a tool to test the impact of programmes against key indicators (travel times, congestion levels, PT patronage)
- Transport model refinement and updating (e.g. refine, update and correct land use to reflect Unitary Plan, update bus lane assumptions)
- Indicators benchmarked internationally
- Results compare 2011 with 2021 & 2041
- Deficiency workshop



Filter 3 - Transport Modelling Example - bus lanes



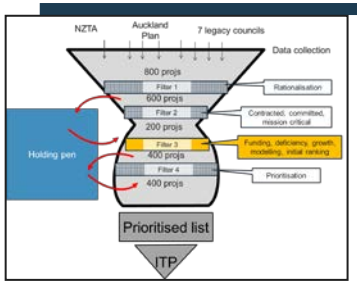




Filter 3 – Initial Ranking

PURPOSE – review projects in the holding pen to understand which may be the highest priority for inclusion in the Core Programme

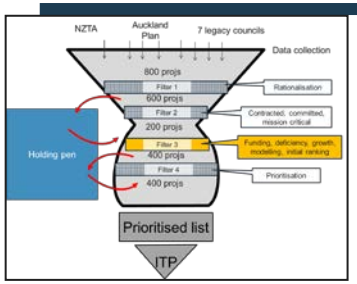
- Projects ranked High/Medium/Low against three defined criteria:
  - Strategic fit against ITP benefits
  - Effectiveness of delivering transport benefits/outcomes
  - ITP Four-stage Intervention Hierarchy
- 11 ranking workshops held in Nov/Dec 2013 with eight functional workstreams (AT/NZTA)
- Ranking results also used to check “sensibility” of the Committed Programme



Filter 3 – Asset Management and Other Considerations

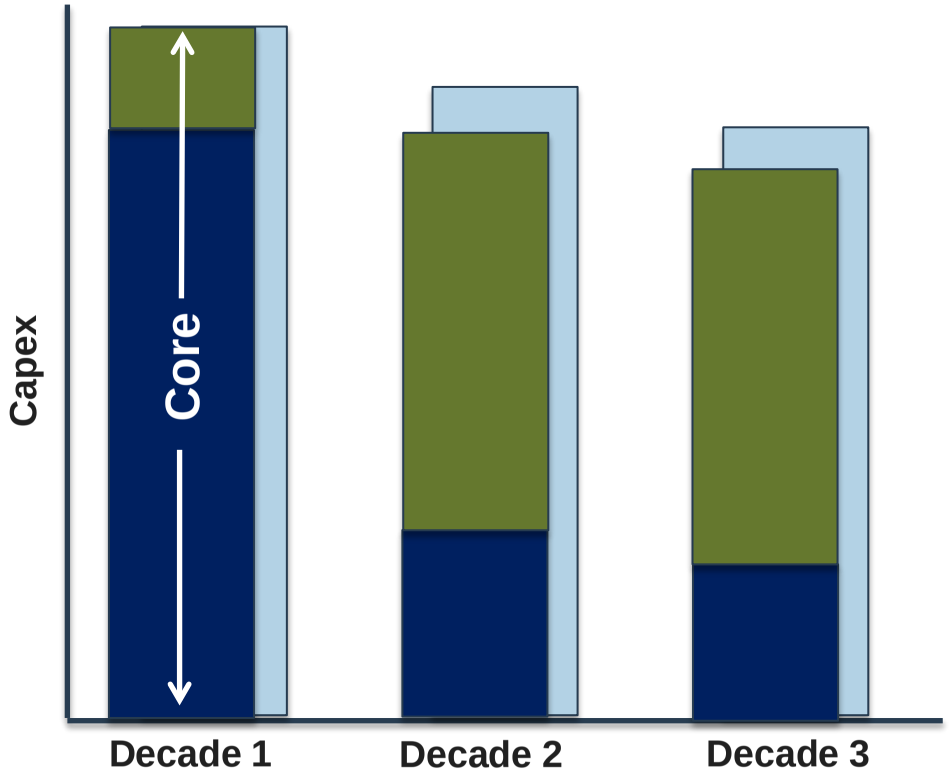
PURPOSE – review projects in the holding pen to understand which may be the highest priority for inclusion in the Core Programme

- Asset management modelling to determine levels of service and allocation of opex and capex
- Additional projects also identified as priorities for Core Programme through review of:
  - Existing strategic documents (draft Parking Strategy, RTN Review, Rail Development Strategy, RPTP)
  - Housing Accord projects
  - Sequencing of greenfields
  - Auckland Council geographic priorities



Filter 3 – Core Programme

OUTCOME – Core Programme (400 projects)

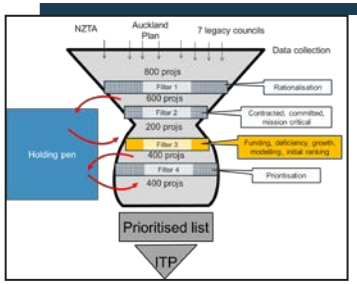


Example additional projects:

- Park and Ride programme
- Enhanced buslane network
- Rail to the Airport
- Mt Roskill Rail Spur
- AWHC
- AMETI busway
- Northern Busway improvements
- North Western Bus RTN
- TIGA projects included in second and third decades
- Regional arterial and state highway improvements

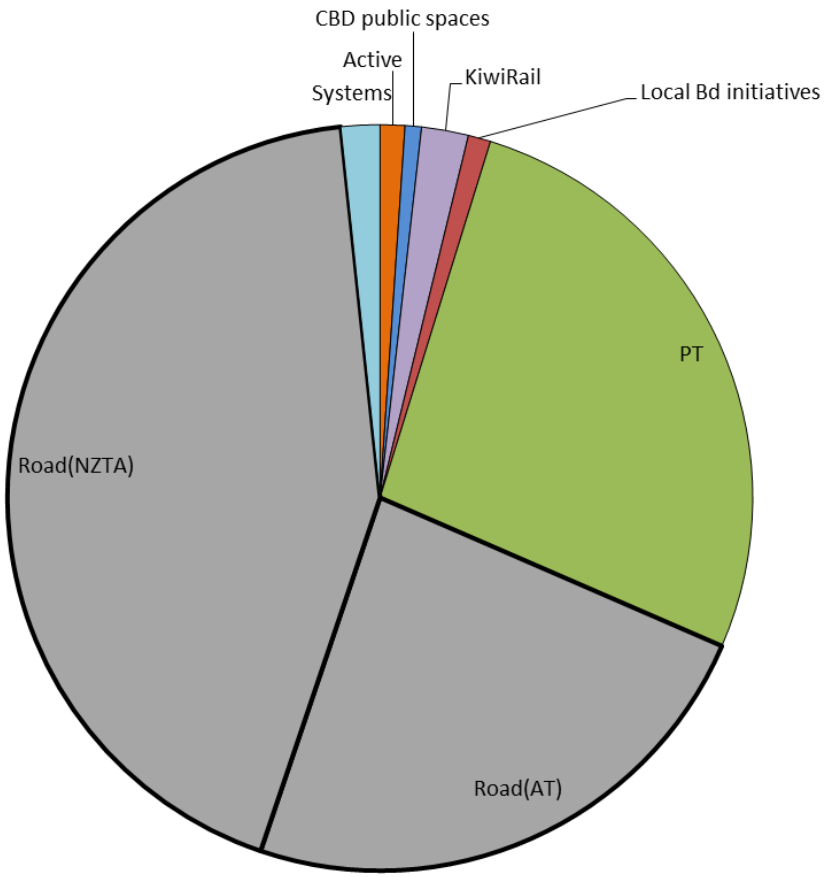
Example projects in Holding Pen:

- Enhanced Walking and Cycling programme
- Increased funding for placemaking and urban design improvements
- Full Avondale-Southdown rail line and Airport Rail Loop
- Light Rail
- Additional funding to remove all rail level crossings

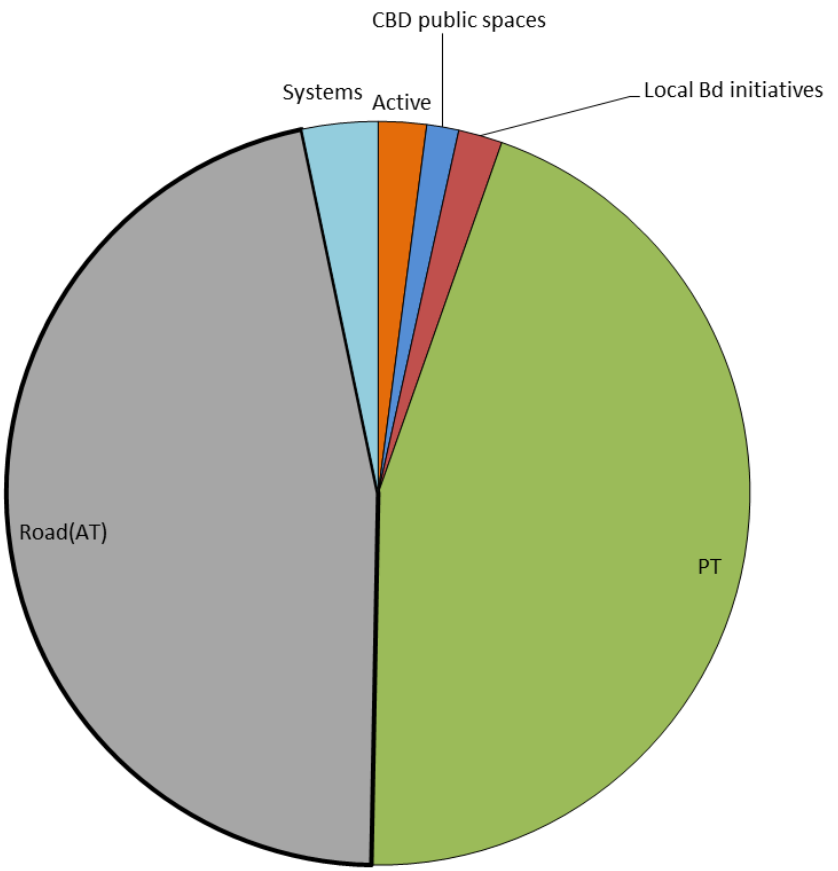


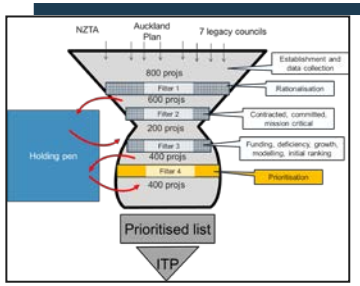
Filter 3 – Core Programme

AT + NZTA + KiwiRail (2015-2045)



AC Family Only (2015-2045)





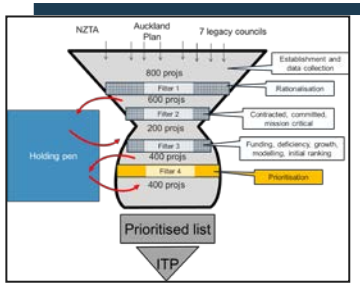
Filter 4 – Prioritisation

- Transport modelling of first cut Core Programme
- Convert filter 3 outputs into strategic fit and effectiveness results for all projects. Strategic fit and effectiveness assessed against the following:

Increased access to a wider range of affordable transport choices	Auckland's transport system moves people and goods efficiently	Better use of transport resources to maximise return on existing assets	Auckland's transport system better connects communities and supports a high quality urban form	Improved safety of Auckland's transport system	Reduced adverse environmental effects from Auckland's transport system

- Cost benefit analysis to be undertaken for the first decade projects as part of the RLTP process

OUTCOME – refreshed Core Programme list of projects – with supporting modelling results + strategic fit and effectiveness results



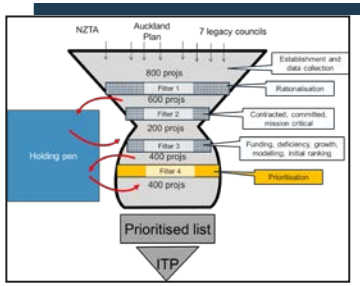
Filter 4 - Prioritisation Example

Project	Dominion Road Corridor Upgrade	
Primary transport response	Better use of transport resources to maximise return on existing assets	
ITP investment hierachy	4. Investment in new infrastructure, services and technology	
Increased access to a wider range of affordable transport choices	++	Improves attractiveness and capacity of public transport. Bus lanes intended to improve PT travel times and reliability. Project includes provision of cycle lanes on adjacent streets.
Auckland's transport system moves people and goods efficiently	n/a	
Better use of transport resources to maximise return on existing assets	++	Project has been designed to deliver maximum benefits within a constrained project funding envelope.
Auckland's transport system better connects communities and supports a high quality urban form	++	Project involves upgrades to three village centres (Mt Roskill, Balmoral and Eden Valley) along the route. Project is intended to support projected population growth in the Auckland isthmus.
Improved safety of Auckland's transport system	n/a	Cycle lanes will improve cyclist safety, however cycle lane improvements captured in transport choices category above.
Reduced adverse environmental effects from Auckland's transport system	+	Project involves initiatives to improve the attractiveness / uptake of public transport and active modes.

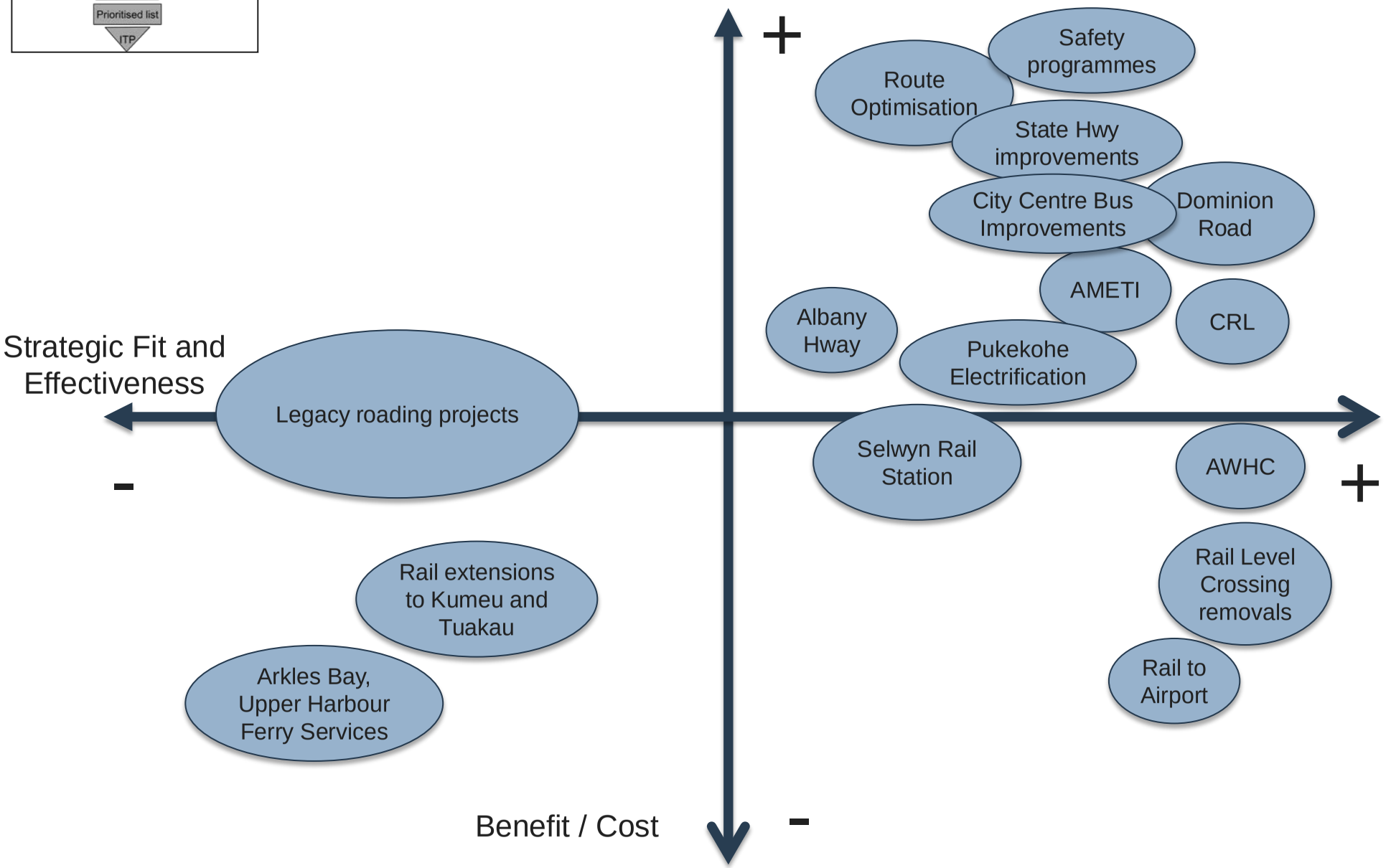
Strategic Fit	H

Assessed Effectiveness	H

Efficiency (BCR)	1.7



Prioritisation Matrix



Next Steps

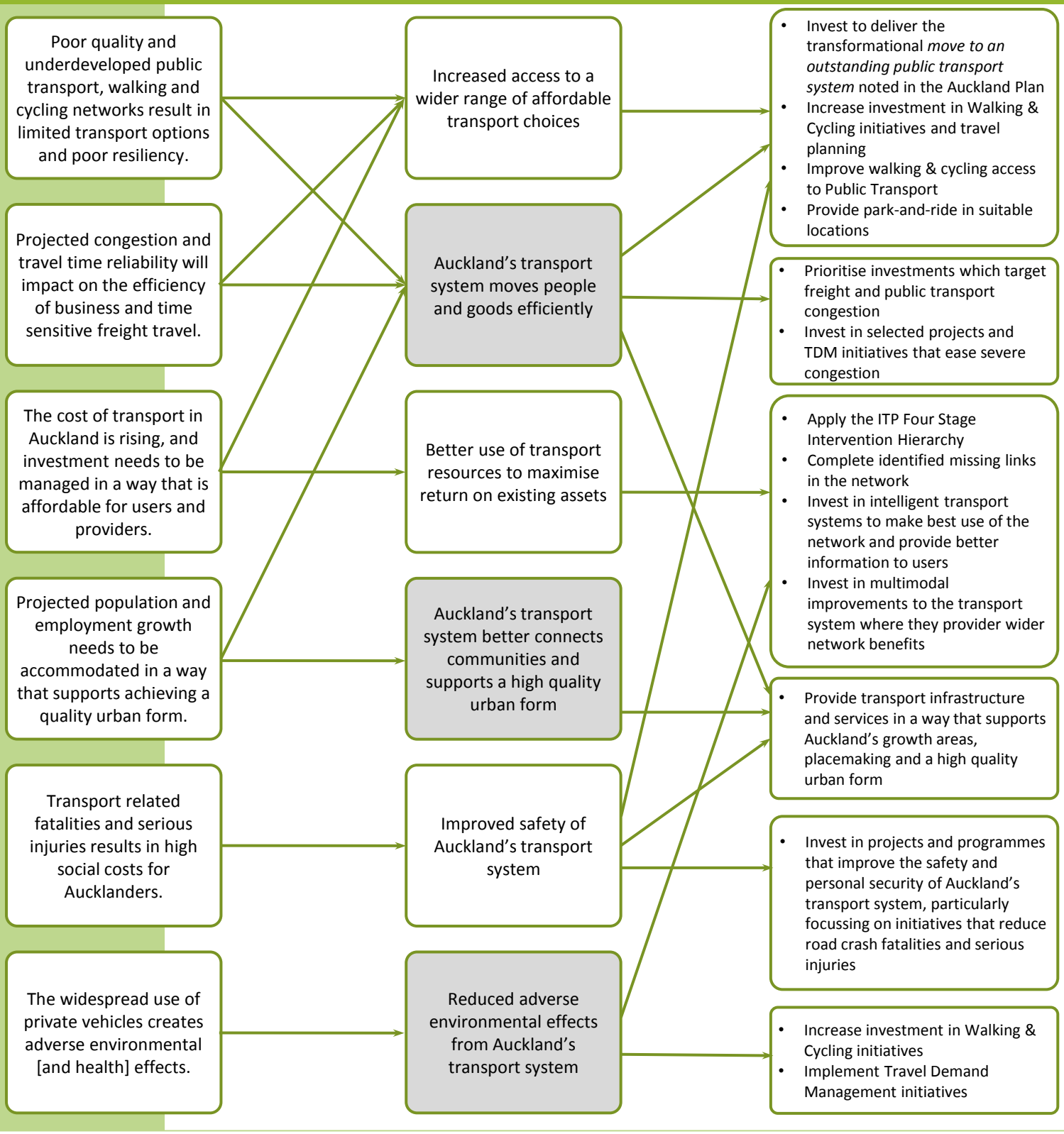
- Weightings within the prioritisation process?
- Alignment of AT and NZTA Strategic Fit, Effectiveness and Efficiency processes
- March AT Board meeting
- Cost Benefit assessment of projects included within the first 10 years
- May CRC meeting – prioritisation matrix completed

Auckland Transport/NZTA/Auckland Council

Integrated Transport Programme (ITP)

DRAFT

INVESTMENT LOGIC MAP



Attachment 3 ITP Strategic Framework (draft)

Key
Modellable measure
Measure to be documented outside models
Measure to be monitored over time

Benefit	Desired outcomes	Investment KPI	Measure
Increased access to a wider range of affordable transport choices	Services that align with future land-use patterns	Increase the proportion of Aucklanders living within walking distance of frequent public transport	Percentage of households within 500m walk of the RTN and FTN
	Services that meet customer needs	Increase the proportion of Aucklanders living within walking distance of public transport	Percentage of households within 500m walk of a PT stop
		Increase the proportion of PT customers who are satisfied with their service	Percentage of customers satisfied with their PT service
	Increased passenger numbers	Increased use of the PT system	Total passenger boardings pa
		Increase Aucklander's average use of the PT network	Annual passenger boardings per capita pa
		Increased PT trips generated by Park and Rides	PT trips generated by Park and Rides in the AM Peak
	Increased PT mode share	Increase the proportion of people accessing the CBD by PT	Percentage of peak period motorised trips to city centre made by public transport
	Faster public transport and reduced journey times	Reduced public transport travel times	Average in vehicle travel time
		Increased public transport travel speeds	Average bus speed (in vehicle) on the Frequent Network during the AM peak
		Reduced delay to PT services due to severe congestion	Proportion of PT hours spent in severe congestion (peak and interpeak)
	Improved reliability of public transport services	Increased punctuality of PT services	Percentage of rail services that arrive at their final destination within 5 minutes of schedule
			Percentage of bus services that commence their journeys within 5 minutes of their timetabled start
		Increased reliability of PT services	Percentage of timetabled services that were operated and reached their final destination
	Improved PT value for money	Increase the farebox recovery ratio to 50%	Farebox recovery ratio (fare revenue divided by total PT costs)
			Operating subsidy per passenger KM
	Reduced private vehicle dependency	Reduced private car VKT per capita (daily)	Private car VKT per capita (daily)
	Improved affordability of transport	Reduced proportion of household expenditure on transport	Proportion of household expenditure spent on transport - from the Household Economic Survey
	A significant increase in the use of active transport modes	Increased active transport mode share	Proportion of total trips made by active modes (walking and cycling) in the AM peak
Auckland's transport system moves people and goods efficiently	Easing of severe urban congestion	Minimised delay due to severe congestion	Proportion of hours spent in severe congestion by private vehicles (peak and interpeak)
		Average network vehicle speeds are maintained at acceptable levels in a growing Auckland	Average vehicle speed during the AM Peak
		Average vehicle speeds on the Strategic Freight Network are maintained at acceptable levels in a growing Auckland	Average vehicle speed on the Strategic Freight Network (AM Peak and interpeak)
	More efficient freight supply chains	Reduced delay to freight vehicles due to severe congestion	Proportion of freight travel in severe congestion on the strategic freight network (peak and interpeak)
	Transport investments support Auckland's economic aspirations	Improved agglomeration of economic activity	
	Improved network resilience and travel time reliability	The Auckland transport network is able to cope with unexpected events	
		Improve / maintain travel time reliability	
Better use of transport resources to maximise return on existing assets	Missing links in the state highway, local road and public transport networks are filled		
	Wider network benefits are achieved through smaller investments in existing assets		
	One System initiatives (including JTOC) are implemented to optimise use of the road network		
	Auckland's transport assets are renewed and maintained optimally	Assets that are critical, front-of-house, high risk or have significant public perception / traffic movement implications must be maintained in a very good, good or moderate condition	Asset condition rating
		No assets with moderate risk and public perception implications are allowed to fall into a very poor state	Asset condition rating
	Initiatives are progressed that provide 'right sized solutions'		
Auckland's transport system better connects communities and supports a high quality urban form	Transport investments support development in special housing areas		
	Transport investments support development in priority infill growth areas and supports the achievement of a quality compact urban form (including locations with approved Plan Changes)		
	Development is supported in priority greenfield growth areas	Aucklanders living in the priority greenfield growth areas have access to a number of jobs	The proportion of jobs accessible to Aucklander's living in the priority greenfield growth areas that are within 30mins of their homes by car (AM Peak)
			The proportion of jobs accessible to Aucklander's living in the priority greenfield growth areas that are within 45 and 60 mins of their homes by public transport (AM Peak)
	Improved connectivity for the city centre, metropolitan centres and town centres	More Aucklanders have access to key destinations	Percentage of people who can get to the CBD in 45 mins by PT
			Percentage of people who can get to their nearest Metropolitan Centre in 45 mins: 1) by car and 2) by PT
			Percentage or people who can get to their nearest town centre in 45 mins: 1) by car and 2) by PT
	Improved accessibility to employment	Aucklanders have improved accessibility to more jobs	The proportion of jobs accessible to Aucklander's within 30mins of their homes by car (AM Peak)
			The proportion of jobs accessible to Aucklander's within 45 and 60 mins of their homes by public transport (AM Peak)
	Transport investments align with Auckland Council's geographic priorities (particularly the Southern Initiative and City Centre)		
	Transport investments support Auckland Council's social and cultural aspirations and focuses on those most in need	Reduced financial burden of transport for those most in need	
		Improved accessibility for young people and Maori (to employment and other activities)	
		Improved Maori social wellbeing	
	Transport investments contribute to 'place-making' in centres or otherwise help to achieve Auckland's aspirations to have a high quality urban form		
Improved safety of Auckland's transport system	Improvements to the Auckland transport system are delivered which reduce serious injuries and fatalities	Reduced fatal and serious injuries	Fatal and serious injuries per capita on roads per annum (per 100,000 population)
			Total annual road crash fatalities and serious injuries
			Total annual injury crashes (to be split by road type)
	Improved personal security on the Auckland transport system	Improved public transport safety and security	Safety and security incidents across public transport per annum, per 100,000 passenger boardings
Reduced adverse environmental effects from Auckland's transport system	Reduced greenhouse gas emissions	Reduced greenhouse gas emissions from transport sources	Greenhouse gas emissions from transport sources (daily)
	Reduced air and water pollutants and harmful emissions	Reduced air pollution (PM10, VOC & Nox) from transport sources	PM10, VOC & Nox particulate emissions from transport sources (daily)
		Improved stormwater quality	Average quality of stormwater from the transport network discharged into waterways
			Number of stormwater treatment devices per lane KM
	Increased health through higher levels of active transport	Increase the total amount of walking and cycling Aucklanders undertake as part of their transport journeys	Proportion of total trips made by cycling in the AM peak
			Proportion of total trips made by walking in the AM peak
	Increased fuel resilience	Reduced fuel consumption from the Auckland transport fleet	Total fuel consumption from the transport fleet
			Per capita fuel consumption from the transport fleet
	Increased use of renewable transport fuels	Increased use of renewable transport fuels	

Attachment 3

Benefit	Example projects / initiatives that may respond to the identified benefits and desired outcomes	Pre-existing strategic document
Increased access to a wider range of affordable transport choices	- complete rollout of new bus network, including construction of new bus-bus and bus-rail interchange facilities (refer 2013 RPTP) - complete RTN (refer 2014 draft RTN review) - construct Park and Rides (refer draft Parking Strategy) - build CRL and city centre bus improvements (refer City Centre Future Access Study) - improve PT journey time reliability through bus lanes and RTN rollout - increased investment in Walking and Cycling programmes	2012 Regional Public Transport Plan (AT - published) 2014 Rapid Transit Network Review (AT - currently WIP) 2013 Rail Development Strategy (AT - currently WIP) 2014 Parking Discussion Document (AT - Board approved) Walking and Cycling Business Plans (AT) 2012 City Centre Future Access Study (SKM for AT/AC - published)
Auckland's transport system moves people and goods efficiently	- Deliver the following freight focussed initiatives: - East West Link stg 1 - SH16 Grafton Gully / port access improvements - freight focussed regional arterial improvements (e.g. East Tamaki) - SH20 improvements - SH1 - SEART improvements - Third rail for freight - Congestion targeting activities: - regional arterial improvements (e.g. Lake Rd, Ellerslie Panmure Hwy, Lincoln Rd and Te Atatu Rd) - Whau Crossing and PENLINK - Additional Waitemata Harbour Crossing - Various intersections and widenings on SH network	
Better use of transport resources to maximise return on existing assets	- complete the following missing links in the state highway network (SH1-SH18, SH20B upgrade, SH20 Waterview Connection) - complete any identified missing links in the PT and local road networks (e.g. electrification to Pukekohe) - optimally maintain and renew existing infrastructure - invest in intelligent transport systems to make best use of the network and provide better information to users - invest in road and regional arterial improvements where they provide network benefits	2013 Arterial Network Deficiency Analysis (AT - currently in draft) AT Freight Strategy (AT - currently WIP) NZTA Highway Future Directions (NZTA)
Auckland's transport system better connects communities and supports a high quality urban form	- build required local road and state highway infrastructure for RUB extension areas (refer outputs from TIGA workstreams) - build PT infrastructure to support RUB extension areas (refer TIGA and RTN Review outputs) - build infrastructure to support special housing areas - build infrastructure to support identified brownfield growth areas, in particular the CBD (incl Wynyard Quarter), metropolitan centres and town centres - implement AT's plan change obligations	Auckland Plan (AC - published) TIGA Review Unitaty Plan (AC - notified)
Improved safety of Auckland's transport system	- invest in projects and ongoing programmes that improve the safety of the Auckland transport system, in particular focussing on initiatives that reduce road crash fatalities and serious injuries	
Reduced adverse environmental effects from Auckland's transport system	- EMUs - Pukekohe Electrification - CRL and all other rail extensions (noting these use electric rather than fossil fuel sources) - Tetratrap installation - Walking and Cycling facilities at PT stations	AT Sustainability Policy (AT - currently WIP)