Future of Wellington Rail

New Zealand Rail & Locomotive Society AGM 2023

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metlink

Proudly part of Greater Wellington Te Pane Matua Taiao

WELLINGTON RAIL PLAN – 30 YEAR VISION

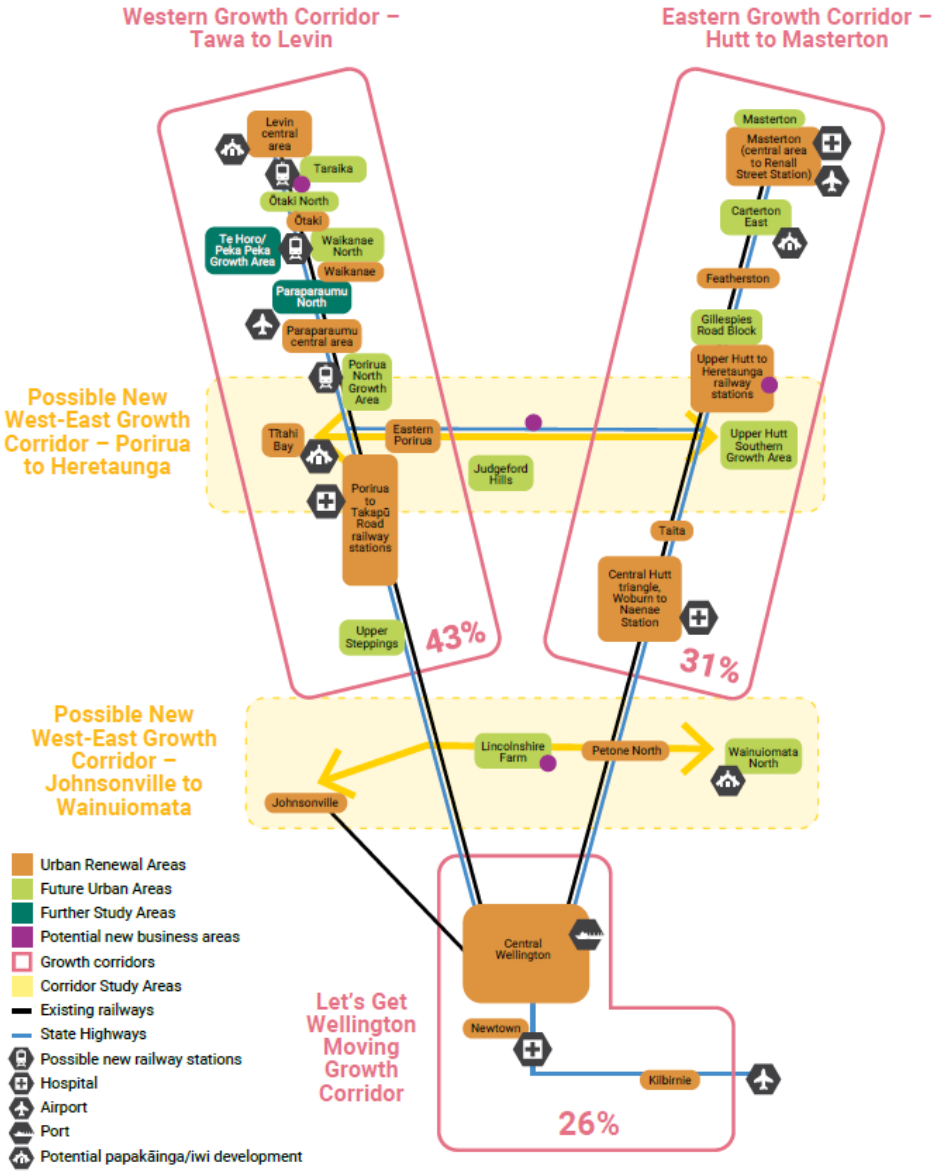
Safe, customer focused and efficient rail passenger and freight services, and supporting infrastructure, to drive the region's economic development and social wellbeing in an environmentally and socially sustainable and resilient manner.

TARGETS AND CHALLENGES

- Strong population growth on the rail corridors
- Increase PT mode share by 40% by 2030
- Reduce carbon emissions by 35% by 2030
  - Peak rail trips must move from 9.7m to 13.6m pa
  - Assuming 14.2m peak trips pa by 2035
- CCC assumes 60% growth in the PT share of travel distance in Wellington by 2030

BUT

- Inconsistent customer journey experience and limited spare capacity is reducing uptake
- Current infrastructure is not capable of safely accommodating additional trains
- The condition and configuration of the rail network makes it vulnerable to disruption making rail more unattractive

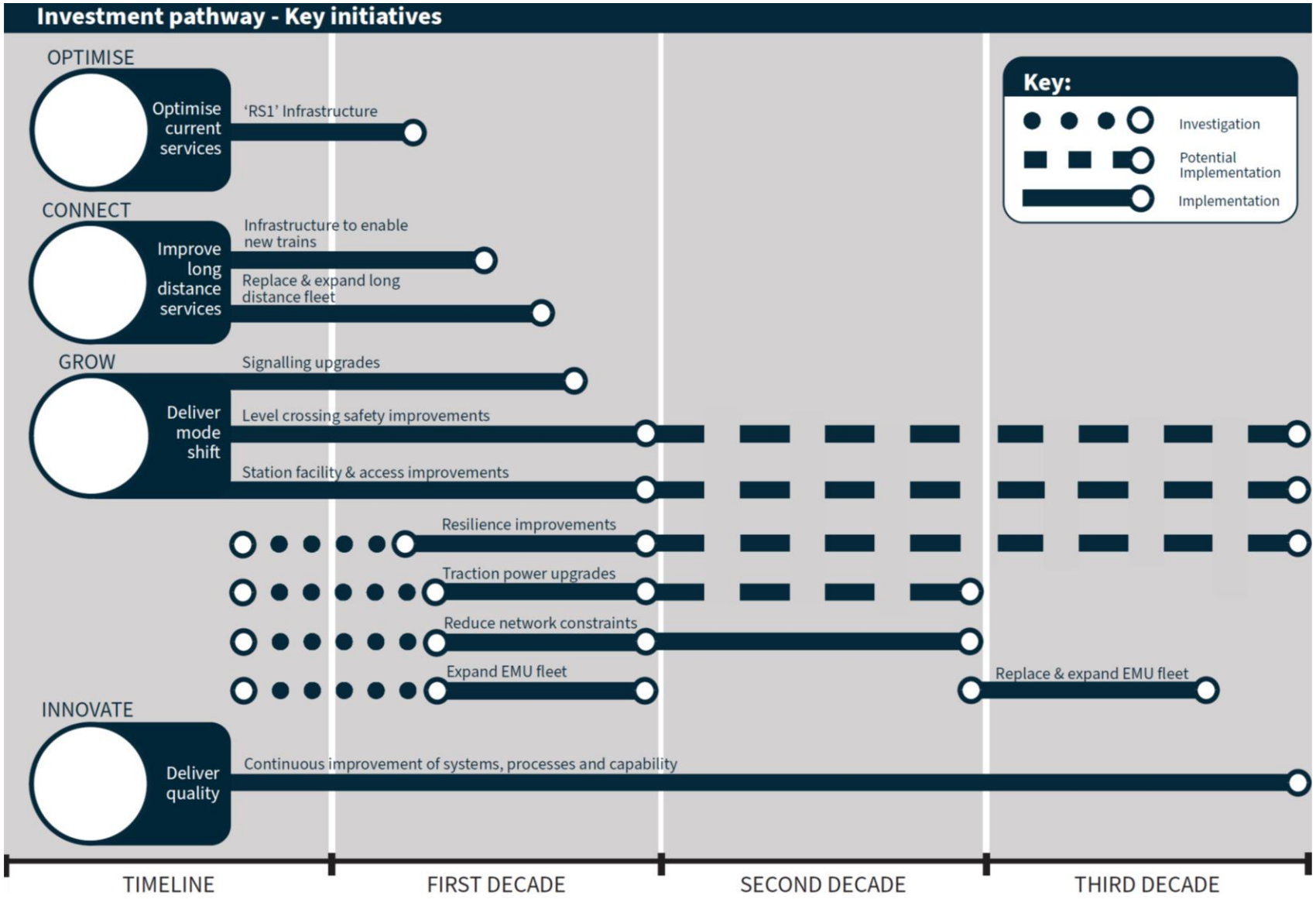


HOW TO DRIVE MODE SHIFT

1. Provide ‘fit for purpose’, resilient and safe rail network and remove capacity constraints
2. Enhance customer experience
3. Provide capacity to drive highest rail patronage growth
4. Enable 6 trains per hour by 2030 (train approx. every 10min)
5. Enable 9-10 trains per hour by 2040 (train approx. every 6 min)

- Network Environmental Resilience Improvements (more and faster)
- Improved Long Distance Services (LNIRIM)
- Signalling Upgrades
- Operational Resilience Improvements
- Station facility and access improvements
- Expanded train fleet to enable capacity and frequency
- Reduce network constraints;
  - Wellington Station and approach
  - North / South Junction
  - Waikanae
  - North of Waikanae
  - Petone / Melling Junction
  - Tawa Basin
- Level cross safety and grade separation improvements
- Traction Power Upgrades
- Transit Oriented Developments around railway stations
- Continuous Improvement of asset management systems, processes and capability

WHAT HAPPENS OVER 30 YEARS



RISKS

- Most ambitious programme
- Requires significant funding from both GW and Central Government
- Significant level of disruption to transform the network

WHAT IF IT DOESN'T HAPPEN?:

- Fail to deliver mode shift and decarbonisation targets
- Fail to enable planned regional growth
- Fail to reduce impact of climate change

Lower North Island Hybrid Trains

Greater Wellington
Te Pane Matua Taiao

horizons
REGIONAL COUNCIL

Currently..

- Aging fleet on both lines, approaching end of life
- Locomotive hauled carriages are diesel powered (carbon emissions, non-renewables)
- Less frequent timetables due to single tracked railways, and freight train movements.
- Carriage maintenance happens at KiwiRail's Wellington depot

MUL Manawatū Line

Two services - 1x AM/PM Peak

WRL Wairarapa Line

Five services - 3x AM/PM Peak 2x Off Peak

We’re getting new trains…

Funding for improvements to come from
- Central Government (Budget 2023)
- Greater Wellington Regional Council
- Horizons Regional Council

Rollingstock

- A new fleet of 18 four-car tri-mode units
- Tri-mode operations feature electric + generator + battery

Track Improvements

- Two passing loops extensions on Manawatū Line

Station upgrades

- Platform and stations upgrades on WRL
- Upgrade of the four Manawatū stations north of Waikanae

Stabling facilities

- Daytime stabling is within the Wellington yard region
- Overnight stabling at Masterton (14 units) and Palmerston North (4 units)

Maintenance

- New maintenance depot at Masterton
- Maintenance and cleaning services for the fleet

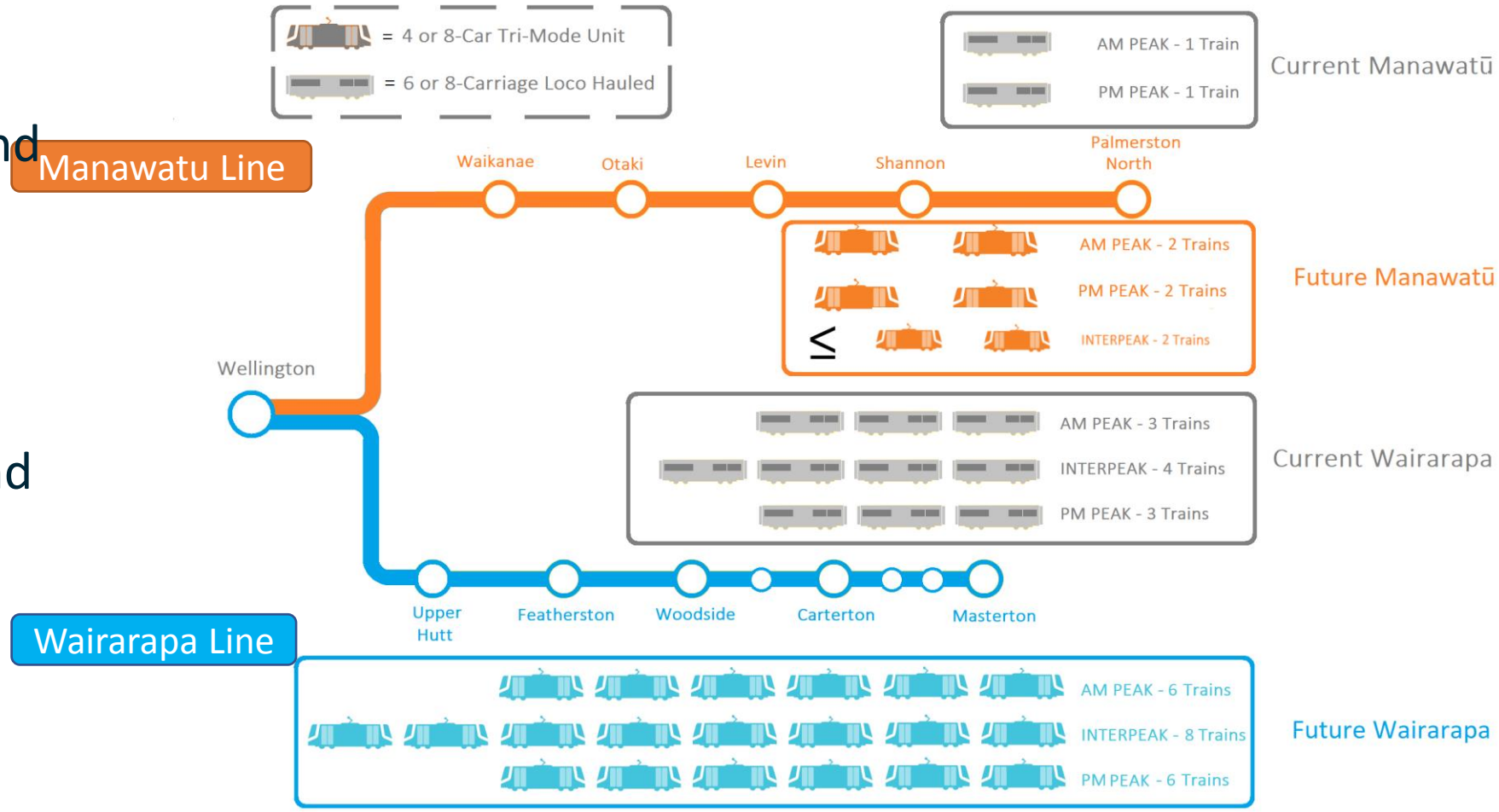
Simulator

- Simulator to support crew training (location to be determined)

…you will get a far superior service

- significantly increased services on both lines
- more reliable, efficient and attractive services

- improve connections between the two regions.
- a win for communities and the environment.



The details

- Six peak time services at 15 min intervals from Masterton, helping double patronage by 2040.
- Two peak services from Palmerston North every morning and afternoon for commuters
  - And weekend services.

- Carriages will have:
  - improved wheelchair accessibility,
  - bathrooms,
  - air conditioning,
  - bike storage,
  - vending machines.

Why hybrid trains?

Electric + generator + battery

We achieve:

- Mode shift target
- Decarbonisation
- Lower line electrification expense

The right option at the right time:

- No money or priority for line electrification
- Hybrid technology coming of age

A closer look at benefits for the regions

Provide a critical community link, the only commuter alternative to road, to enable inclusive access to economic, social and health opportunities

Promote mode shift by enhancing the attractiveness of public transport

It will **divert 23.8 million trips** from the roads, resulting in ~618,000 tonnes of avoided carbon emissions

Support economic growth by enabling regional land use plans with transport infrastructure

Improve the overall transport corridor resilience and capacity with improved frequency, less crowding and better reliability.

Reduce greenhouse gas emissions by introducing a brand-new tri-mode fleet from day one with potential for full decarbonisation as battery technology improves

The new fleet will reduce carbon emission by **2.5x**

Enable value for money with reduced operating risk and increased operating efficiency

New services **will cost almost 50% less** per service, compared to the do-minimum case

Improve public transport attractiveness and mode choice with new amenities

It will provide more comfortable, clean and modern trains with good ventilation

Improve safety by reducing road congestion with safe and accessible rollingstock

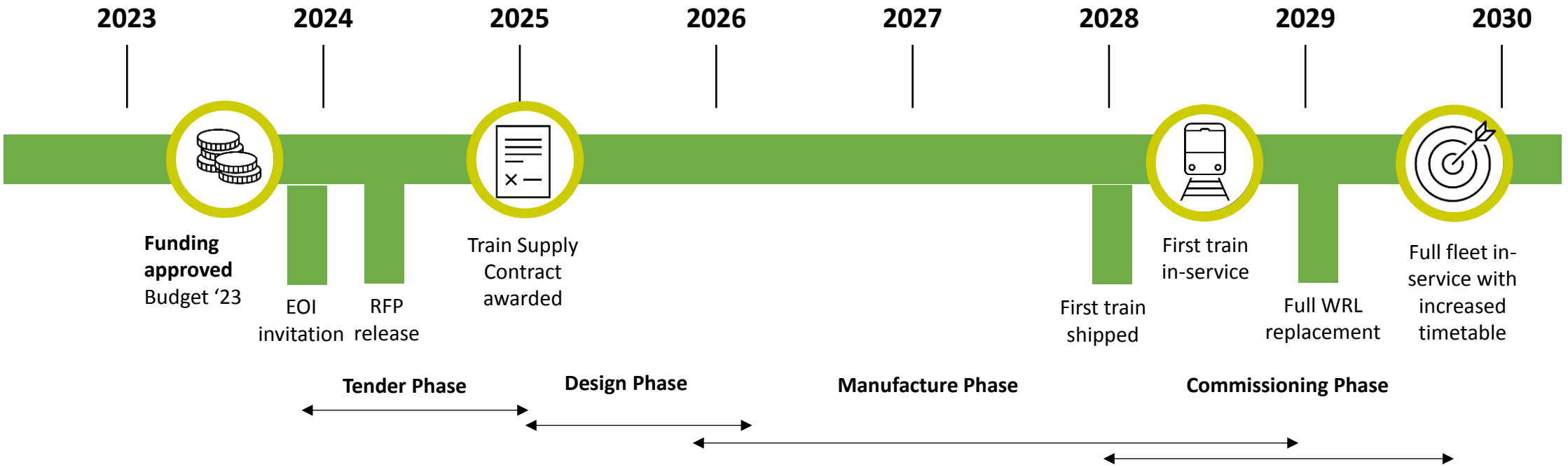
It will **prevent over 100 crashes** resulting in serious injuries or death

$472 million in benefits*

- $186m rail user benefits
- $146m road user benefits
- $59m environmental benefits
- $81m – community benefits

The region will also benefit from rollingstock safety, accessibility, active transport benefits, resilience benefits and wider economic benefits from improved connectivity

Timeline


2023
2024
2025
2026
2027
2028
2029
2030
Funding approved Budget '23
EOI invitation
RFP release
Train Supply Contract awarded
First train shipped
First train in-service
Full WRL replacement
Full fleet in-service with increased timetable
Tender Phase
Design Phase
Manufacture Phase
Commissioning Phase

Questions?