



# Looking to the Future

A Procurement Perspective

October 2018

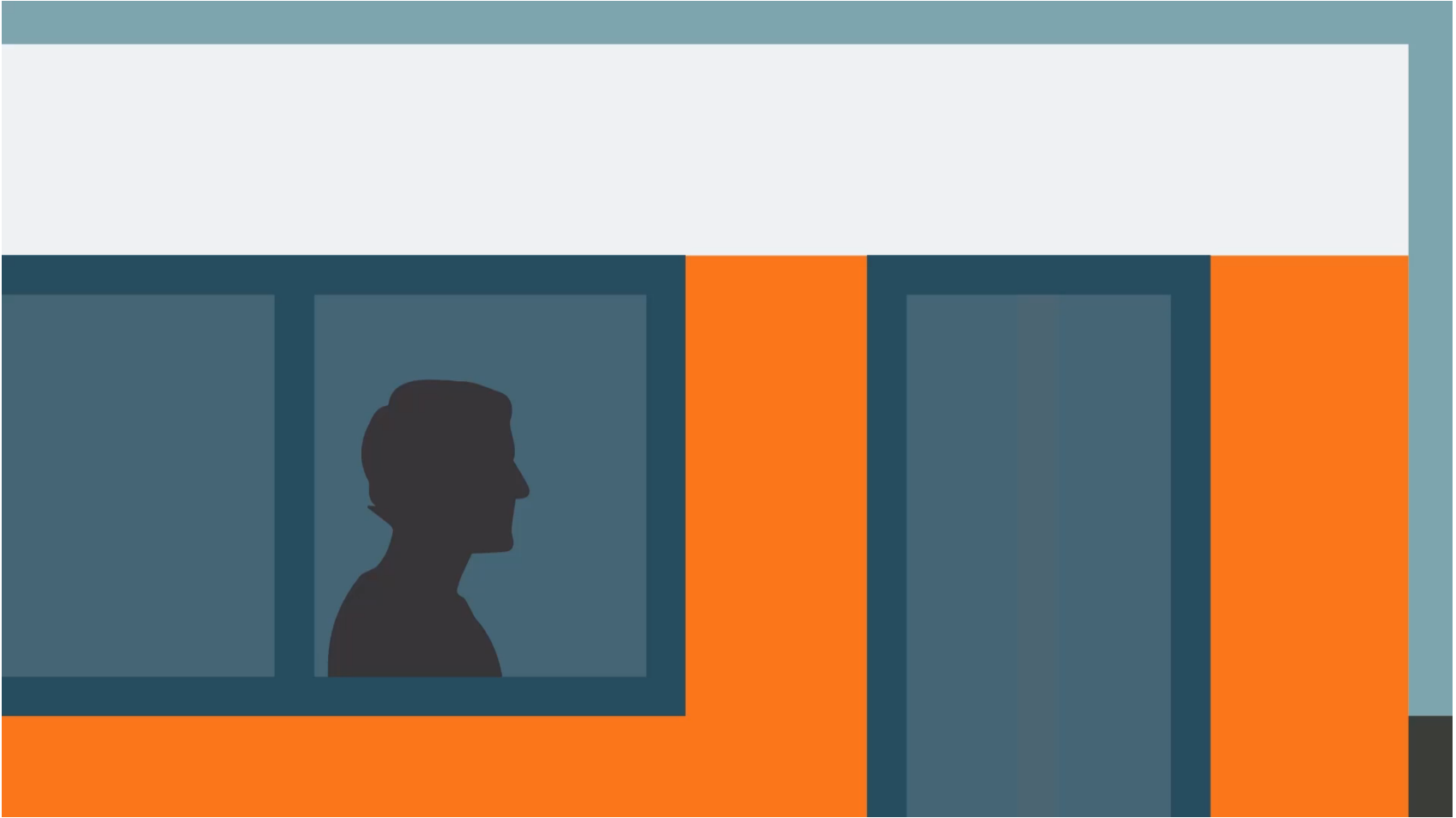


**Stronger  
Connections.**

Better  
New Zealand.

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# A Perfect Storm: Context

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- KiwiRail's current scope and mandate
- Transport Policy (GPS) and emerging mandate for rail
- Current financial position and source of \$'s
- So for the industry
  - What's real and what's good intention
  - Scale of opportunity
  - Risk
  - Timelines



# Project Portfolio

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**Auckland Metro**

**Wellington Metro**

**Northland**

**iReX**

**Mechanical rolling stock  
& depots**

**General network capital**

**Other Facilities**

**Provincial Growth Fund**

**Others**



# Auckland Metro

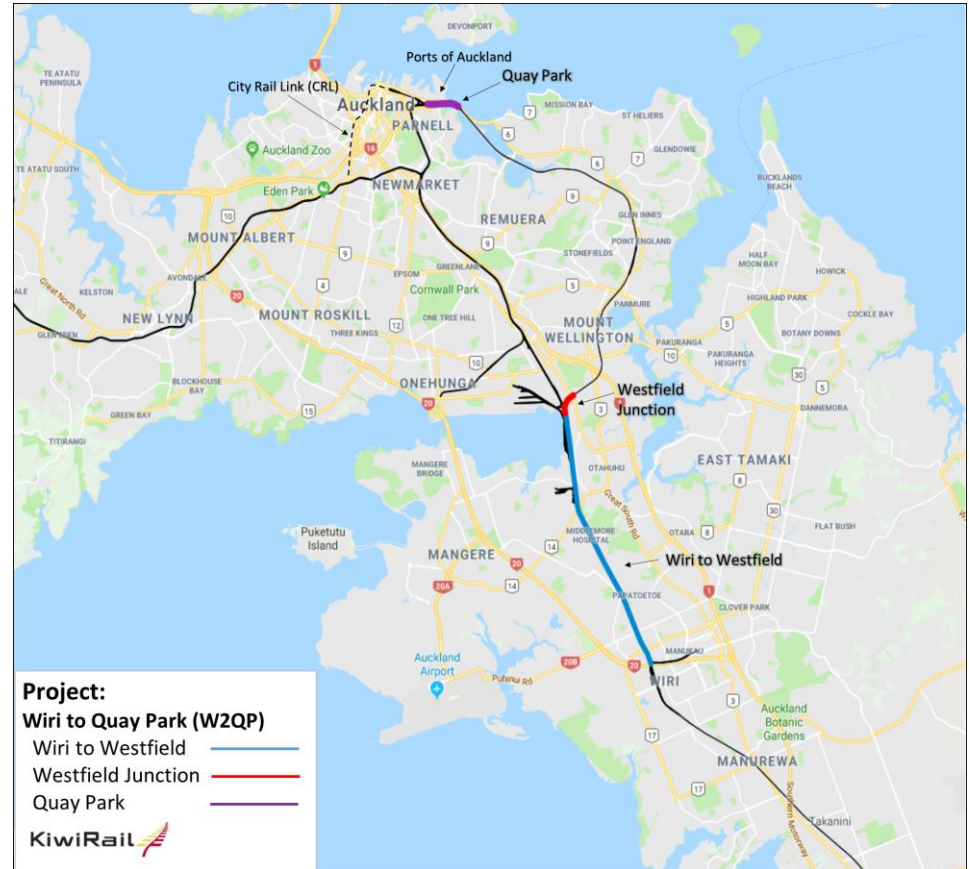
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- Road congestion levels in Auckland are having major impacts on the economy.
- The Auckland Metro rail network has reached saturation between Wiri and Westfield.
- In 2024, the City Rail Link project will enable more trains to be on the network
- Unless matched by investment in the network, City Rail Link project will not deliver its potential
- The Auckland Metro Projects are part of the wider Auckland Rail Development Programme and have been identified in ATAP and AT's RLTP.
- These projects will contribute to the improvement of the overall transport system in Auckland.
- The two main projects are: Wiri to Quay Park third main (W2QP), and Papakura to Pukekohe electrification (P2P).



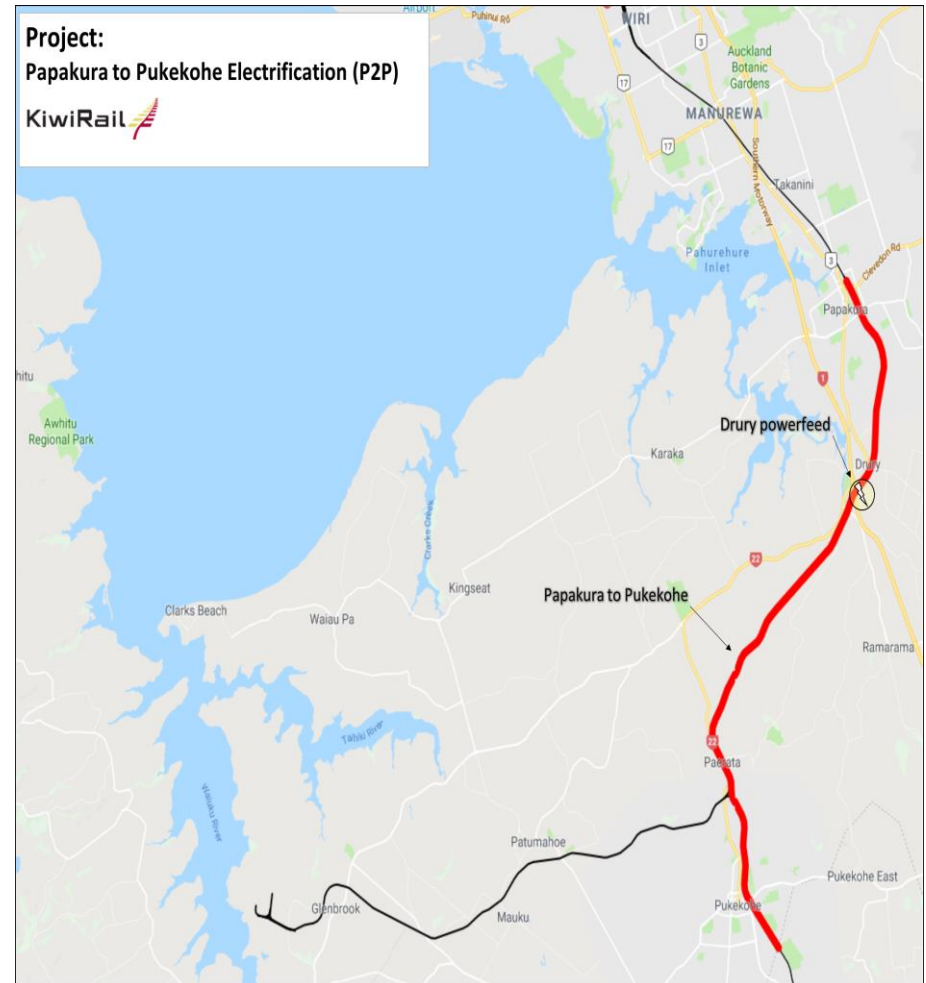
# W2QP (Wiri to Quay Park)

- Complete a third railway line between Wiri and Westfield
- Improve Westfield junction
- Enhance rail access to Ports of Auckland.
- Start in FY19 completed FY23 \$147m
- Civil, structures (retaining walls, bridges) and rail systems



# P2P (Papakura to Pukekohe)

- Extend the Auckland Metro Electrification from Papakura to Pukekohe, including new EMU stabling
- Provide an additional power feed from Drury
- Create an additional platform and freight bypass at Pukekohe Station
- Extend the ETCS train signalling system
- Improve corridor safety improvements at level crossings.
- Stations – by Others
- Start in FY19 completed FY23 \$202m
- Line electrification, bridge, civils

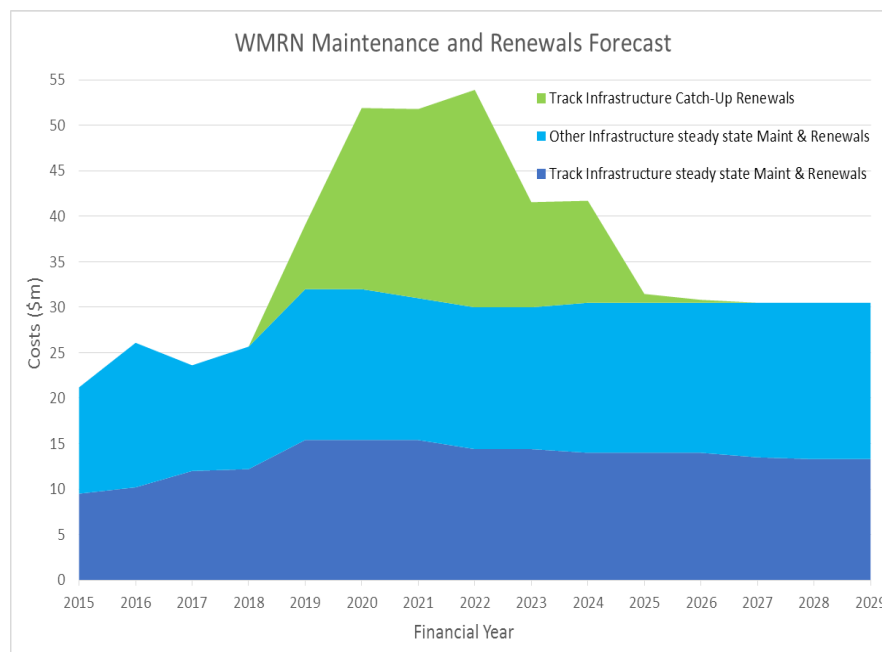




# Wellington Metro

Wellington Metro rail network faces a combination of;

- A growing work bank of deferred renewals
- A rapidly rising work-bank of long term renewals coming due
- Increasing patronage with peak limits being reached soon
- Limited scope for competing modes to grow capacity
- Combined with aspirations for significant growth expected and required in 2020's



# Wellington Metro Programme II

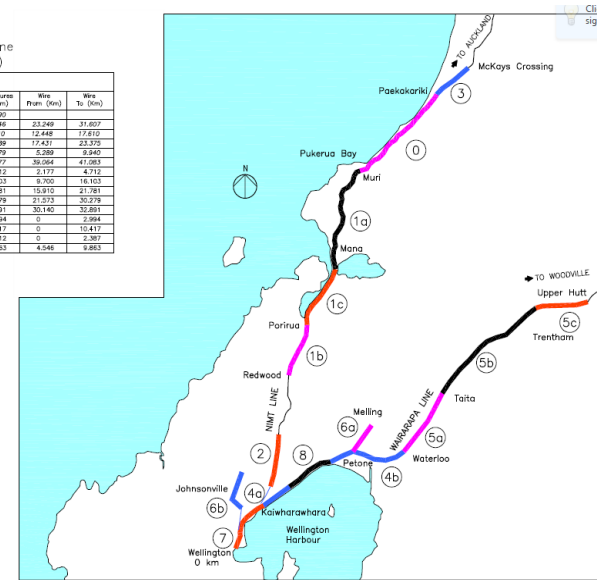
- “Catch up” renewals of Traction Overhead Line System
- Eliminate all remaining legacy traction OHL:
  - WRS and yards
  - Hutt and Melling Lines
  - Ngaio - Johnsonville
  - Any isolated legacy OHL
- Complete the replacement of 3.3kV aerial signals power supply with ducted 600 V system. Started in FY18 completed FY21
- \$98.4m Crown funded under way and largely committed

Wellington Traction Overhead Line System Route Renewal (WTOSR)

WTOSR Separable Portions

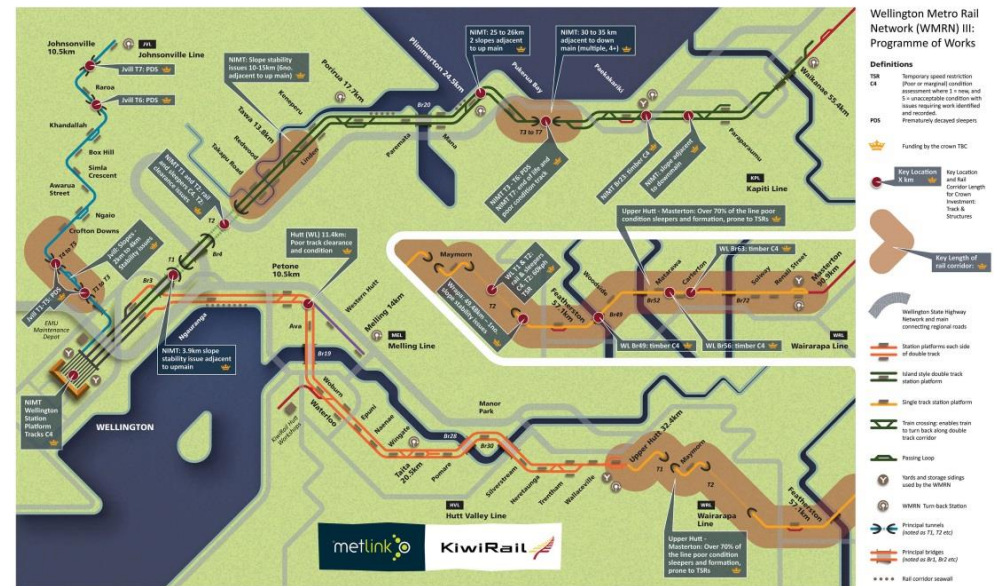
Phase	Line	Tracks	Location From	Location To	Structures From (km)	Structures To (km)	Wire From (km)	Wire To (km)
0	N&M	Double	South Junction	Paekakariki	30.796	38.590		
1a	N&M	Double	Manu	Muri	23.449	30.746	22.469	31.697
1b	N&M	Double	Redwood	Porirua	22.882	27.610	22.448	27.610
1c	N&M	Double	Porirua	Mana	27.624	28.189	27.431	28.376
2	N&M	Double	Garner 1	Garner 2	6.664	9.779	6.599	9.840
3	N&M	Double	Paekakariki	McKays Crossing	38.646	41.677	38.064	41.983
4a	Wairarapa	Double	Kaioharawhara	Ngauranga	2.435	4.722	2.177	4.710
4b	Wairarapa	Double	Manu	Porirua	9.507	16.103	9.700	16.103
5a	Wairarapa	Double	Wairarua	Taita	16.172	21.781	15.910	21.781
5b	Wairarapa	Double	Taita	Trentham	21.844	30.278	21.213	30.278
5c	Wairarapa	Single*	Trentham	Upper Hutt	30.346	32.881	30.140	32.881
6a	Melling	Single	Melling Junction	Melling	0	2.984	0	2.984
6b	Johnsonville	Single	Ngaio	Johnsonville	5.363	10.417	0	10.417
7	M&M/Traps	Complex	Wellington	Kaioharawhara	0	2.412	0	2.397
8	Wairarapa	Double	Ngauranga	Palone	4.756	9.853	4.546	9.853

NOTES:  
 \*Currently single - but will be renewed for double track.  
 Italics - Phases completed.



# Wellington Metro Programme II

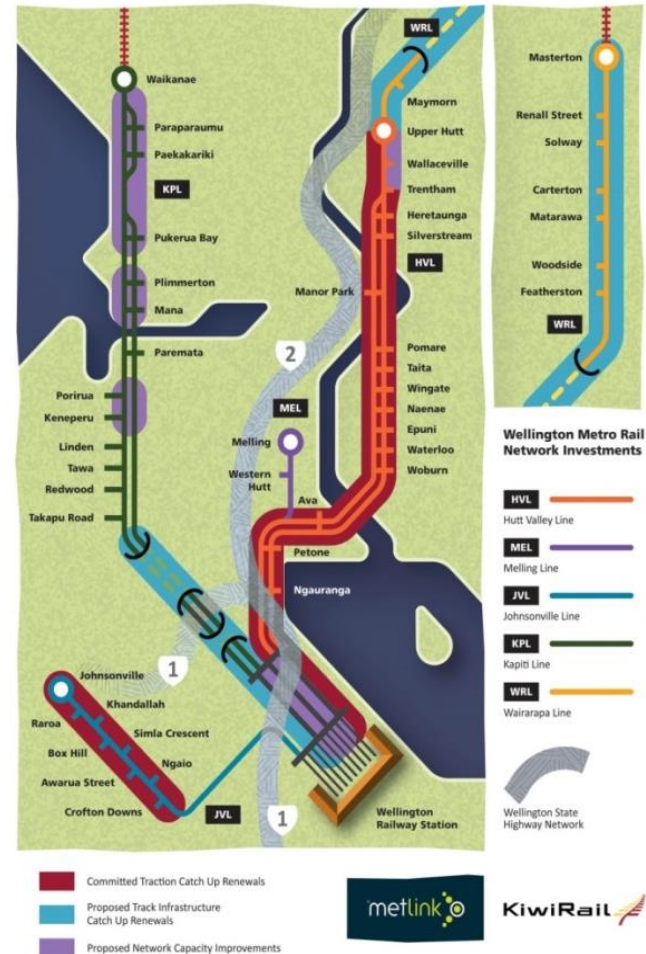
- “Catch up” renewals of Track, Structures and Civil assets
  - Track and formation
  - Major tunnels
  - Slope stability
  - Four bridges
- Significant end of life in coming decade
- Start in FY19 complete FY26
- \$95.8m
- Some studies funded
- Civil and rail systems
- Probability - Very High



# Wellington Metro Programme

Unlocking network capacity and improving resilience

- Providing enhanced infrastructure to allow longer and more electric trains
- Meet growing demand
- Enhance growth
- Start in FY19 complete FY23
- \$97.7m (plus \$3.0 further GW funding)
- Traction overhead, traction power, signalling, civil and rail systems
- Power study under way funded under WMUP II



# Northland

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- Northland is an Orphan
  - North of Kauri and Dargaville is mothballed – very poor asset
  - South of Kauri
    - Axle weights are low by industry standard <18 tonnes
    - 6 bridges in very poor condition
    - Tunnels too small for standard export boxes on standard wagons
- Marsden Point is an orphan port given that it has no rail link
- Figures we have used in the public domain
  - Marsden Point c\$200m
  - North Auckland Line South of Whangarei c\$100m
  - North Auckland Line North of Whangarei incl. Dargaville Line c\$60m
  - Ongoing network maintenance/renewal c\$15m per annum



# iRex – Cook Strait Link

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- Ships and related infrastructure nearing end of life
- There is insufficient capacity to cope with growth in the market
- Buying new ships
- New marine and land side infrastructure
- Connections to other networks
- New ships and work to be completed 2022/23



# Kaikoura – The Rebuild

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- About a quarter of the restoration project remains for NICTR
- KiwiRail commences daylight train services this month
- Tunnel 21 between Blenheim and Ward remains the last major engineering challenge to the business.
  - Severely damaged, the business looks for an enduring solution
  - Currently in design but most probably involves a major route realignment to navigate around



# BAU Network Capital and Procurement

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Typical work programmes include;

- Bridge design and construction
- Building/facilities design and construction
- Specialist design, fabrication and construction i.e. CABA
- Heavy maintenance design and construction
- Civil, track, signals consolidated programmes i.e. Level crossings
- Technical and specialist options analysis/review





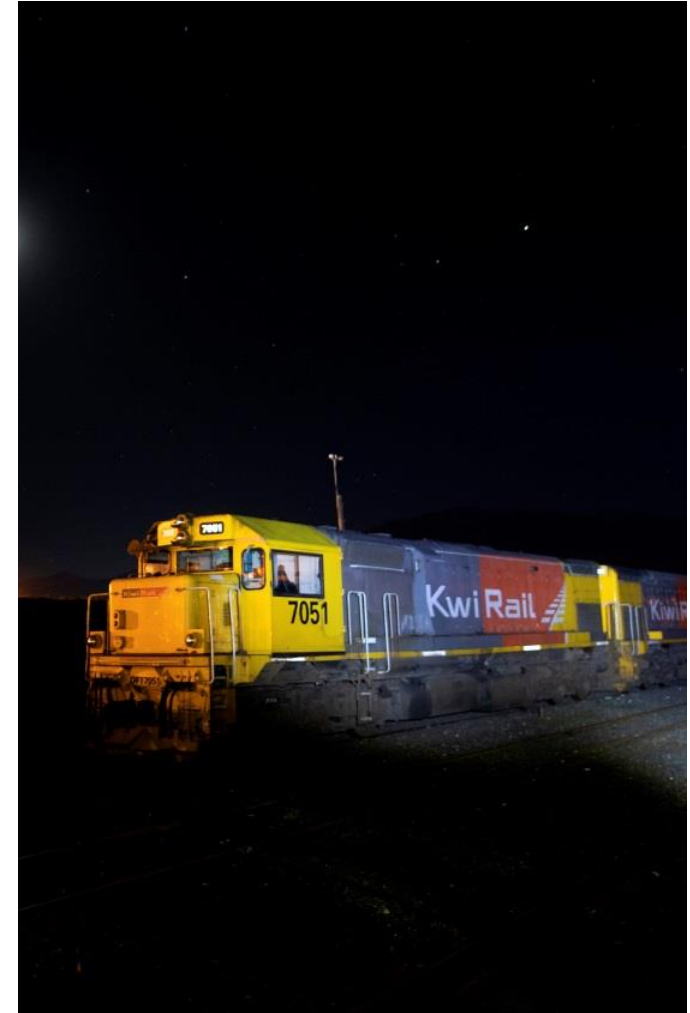
# Intent of Engagement

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**“Grow the next generation of capability and capacity in the rail industry”**

What we will be looking for are:

- Partners for the long term rather than short term designers and builders
- Growing together
- Collaboration vs pure engineering or management
- Ability to learn from each other
- Ability to grow the next generation



# | Questions

