

Shaping the Future of the Railway

Thursday 14 September

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50 Level Crossing Removals



\$5-6 billion

50 level crossings to be removed over 2 full terms of government

A huge program of works with estimated investment to be approximately \$5-6 billion



Cranbourne - Pakenham Rail Upgrade Project



\$2.5 billion

The Cranbourne-Pakenham Line upgrade will deliver more services:

- 65 high-capacity trains
- 9 level crossing removals
- 5 stations to be rebuilt
- Power and signalling upgrades
- New train depot at Pakenham East
- Line capacity boosted by 42%
- Extra 11,000 customers in AM peak

7 car sets
with 20%
more
capacity



Line extension to Mernda & Hurstbridge Line Upgrade



\$600 million

The South Morang line will be extended to Mernda, catering for the significant population growth in Melbourne's north



\$150 million

Duplication from Heidelberg to Rosanna and other supporting upgrades on the Hurstbridge line



Comeng Life Extension Project



\$75 million

The state government has budgeted \$75 million to extend the life of our network-wide Comeng train fleet



Melbourne Metro Rail Project



\$11+ billion

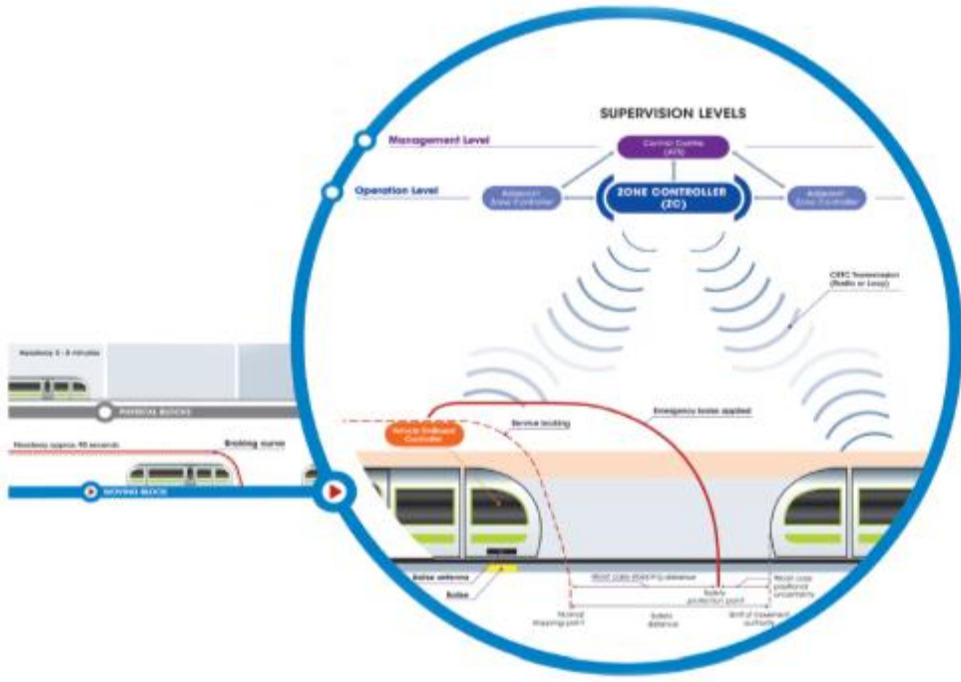
The Melbourne Metro Rail Project will increase capacity through CBD:

- 2 x 9km rail tunnels running from South Kensington to South Yarra
- New underground stations at Arden, Parkville, CBD Nth, CBD Sth, Domain
- Train/tram interchanges to be built at Parkville and Domain

Plus supporting capacity upgrades on the Werribee, Sunbury, Craigieburn, Upfield, Sandringham and Frankston lines to enable extra services to run



High Capacity Signalling



Communication based train control



Design and construction methods are more disruptive



Future Opportunities and Challenges



- The massive Projects pipeline creates a huge opportunity for skills development in the rail sector over the coming decade.
- The key challenge is how the Victorian rail sector will develop / procure the resource capability and capacity to deliver each of the Projects identified.
- Meanwhile existing asset management and operational obligations must continue to be delivered to ensure a safe and reliable network.
- Metro's Graduate Program is one initiative in place to bolster the rail engineering skill set in Victoria.

Supporting the growth projections in passenger rail in next 3-5 years



- Metro is the current asset manager and operator for the Melbourne Metropolitan railway and hopefully will continue to be for the next 10 years.
- Metro contains by far the largest number of railway engineers and subject matter experts in the Victorian rail network. Now also possesses the highest order of complex, high value project delivery expertise.
- Metro is also able to ‘reach back’ into its consortium of shareholders including MTR and its operations globally in London, Stockholm, Beijing, Shenzhen, Hangzhou and Sydney.

Metro Graduate Program



- Metro operates a Graduate Program for engineering and business graduates
- There are 25 graduates in the program, 23 engineering and 2 business
- The engineering Graduate Program is for three years and business for two years
- Metro has a policy of promoting diversity – gender - skills
- The program exposes the graduates to the operating railway including operations, infrastructure and train maintenance, projects and engineering
- The outcome is rounded professionals who understand how their discipline skills apply to the railway and the complex interfaces in the industry

Graduate Program Numbers



- Metro introduced the program in 2011
- 49 have commenced the program
- 6 have left for opportunities elsewhere including one to the US
- 18 have completed the program
- 5 graduates will complete the program this year

Graduate Success Stories



- Game changing projects introduced by Metro Grads
 - Early Week Night Occupations - the concept, program and now management of this new approach to infrastructure maintenance at nights – major productivity gains
 - Remote isolation of electrical systems – safe and quick response for access to electrical works
 - Rail temperature monitoring – remote automatic monitoring of rail temperature for adverse weather conditions
 - Comeng train control system – modifications resulting in greater reliability for 35 year old equipment
 - Passenger counting – development of wifi counting technique with Monash University
 - Remote condition monitoring – continuous monitoring of train systems in service

A wide range of awards across multiple railway disciplines



- Winner Customer Service, Systems Engineering, Young Rail Professional, Frank Franklyn Award (ARIA 2017)
- Winner Young Professional Engineer of the Year (Engineers Australia Awards 2017)
- Winner Large Employer of the Year (Victorian Training Awards 2016)
- Winner Best Apprentice Development Program (Victorian Training Awards 2016)
- Winner Large Employer of the Year (Australian Training Awards 2016)
- Winner Systems Engineering & TrackSAFE Safety Award (ARIA 2016)
- Top 50 Innovative Companies in Australia (AFR and Inventium List 2016)
- Winner Excellence in Accessible Communications & Technology (Victorian Disability Awards 2016)
- Winner Workforce Diversity, Young Rail Engineer, Individual, TrackSAFE Safety Award (ARIA 2015)
- Winner Operator & Service Provider Excellence Award (National Infrastructure Awards 2014)

Supporting Programs



Metro offers other opportunities alongside the Graduate Program

Engineering opportunities arise from time to time for newly qualified engineers

Metro offered 15 Vocational Placements for undergraduates last year

The Future



- Metro's policy is to train its own future professional staff
- Metro has offered professional roles to all graduates at the completion of their program
- Metro is committed to supporting the next generation of rail professionals
 - Metro will offer six positions for the graduate program commencing next January
 - Will also offer Vocational Placements for undergraduates between October and March for 12 weeks later this year
 - Metro will continue the Graduate Program for the duration of its tenure

Questions?

