

29 April 2019

**2019 INVESTOR DAY PRESENTATION**

Please find attached the investor presentation that will be provided at the Transurban Investor Day today.

The presentation will be webcast live from 9:30 am AEST on the Transurban website:  
[www.transurban.com/investor-centre](http://www.transurban.com/investor-centre)



**Amanda Street**

Company Secretary

**Investor enquiries**

Jessica O'Brien  
General Manager Investor Relations and  
Strategic Projects  
+61 3 8656 8364

**Media enquiries**

Josie Brophy  
Manager, Media and Communications  
+61 437 165 424

Classification **Public**

**Transurban Group**

Transurban International Limited  
ABN 90 121 746 825

Transurban Holdings Limited  
ABN 86 098 143 429

Transurban Holding Trust  
ABN 30 169 362 255

ARSN 098 807 419  
[corporate@transurban.com](mailto:corporate@transurban.com)  
[www.transurban.com](http://www.transurban.com)

Level 31  
Tower Five, Collins Square  
727 Collins Street  
Docklands  
Victoria 3008 Australia  
Telephone +613 8656 8900  
Facsimile +613 9649 7380

A blurred background image of a multi-lane highway stretching into the distance under a clear sky. The motion blur gives a sense of speed and forward movement.

# TRANSURBAN INVESTOR DAY

# DISCLAIMER

This publication is prepared by the Transurban Group comprising Transurban Holdings Limited (ACN 098 143 429), Transurban Holding Trust (ARSN 098 807 419) and Transurban International Limited (ACN 121 746 825). The responsible entity of Transurban Holding Trust is Transurban Infrastructure Management Limited (ACN 098 147 678) (AFSL 246 585). No representation or warranty is made as to the accuracy, completeness or correctness of the information contained in this publication. To the maximum extent permitted by law, none of the Transurban Group, its Directors, employees or agents or any other person, accept any liability for any loss arising from or in connection with this publication including, without limitation, any liability arising from fault or negligence, or make any representations or warranties regarding, and take no responsibility for, any part of this publication and make no representation or warranty, express or implied, as to the currency, accuracy, reliability, or completeness of information in this publication. The information in this publication does not take into account individual investment and financial circumstances and is not intended in any way to influence a person dealing with a financial product, nor provide financial advice. It does not constitute an offer to subscribe for securities in the Transurban Group. Any person intending to deal in Transurban Group securities is recommended to obtain professional advice.

## **UNITED STATES OF AMERICA**

These materials do not constitute an offer of securities for sale in the United States of America, and the securities referred to in these materials have not been and will not be registered under the United States Securities Act of 1933, as amended, and may not be offered or sold in the United States absent registration or an exemption from registration.

© Copyright Transurban Limited ABN 96 098 143 410. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the written permission of the Transurban Group.

# CONTENTS

06

## STRATEGY AND FUTURE OUTLOOK

SCOTT CHARLTON, CEO

21

## AUTOMATED AND ZERO EMISSIONS VEHICLES INFRASTRUCTURE ADVICE

JONATHAN SPEAR, INFRASTRUCTURE VICTORIA

36

## CAPITAL STRATEGY

ADAM WATSON, CFO

43

## PROJECT DELIVERY

TONY ADAMS, GROUP EXECUTIVE PROJECT DELIVERY

49

## WESTCONNEX

ANDREW HEAD, CEO WESTCONNEX

55

## NORTH AMERICA DEVELOPMENT

JENNIFER AUMENT, PRESIDENT NORTH AMERICA

62

## SUPPLEMENTARY INFORMATION

TAX AND TRAFFIC INSIGHT SESSIONS, FOOTNOTES, GLOSSARY

# EXECUTIVE COMMITTEE



**Scott Charlton**  
CEO



**Adam Watson**  
CFO



**Sue Johnson**  
Group Executive,  
Queensland



**Jennifer Aument**  
President, North  
America



**Kristine Cooney**  
Group Executive,  
Customer



**Tony Adams**  
Group Executive,  
Project Delivery



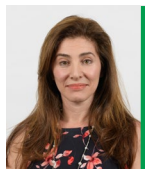
**Andrew Head**  
CEO, WestConnex



**Michele Huey**  
Group Executive,  
New South Wales



**Henry Byrne**  
Group Executive,  
Corporate Affairs



**Lisa Tobin**  
Group Executive,  
Technology



**Wes Ballantine**  
Group Executive,  
Victoria and  
Group Strategy



**Suzette Corr**  
Group Executive,  
People and Culture



**Vin Vassallo**  
Group Executive,  
Development

# WORK ZONE SAFETY DISPLAY

- Transurban and Telstra developed a connected technology platform proof-of-concept to improve safety for workers
- Detects approaching vehicles and alerts workers on site
- Sensor enabled devices detect errant vehicles and warn workers, as well as track if workers move outside designated safe areas
- Robotic self-wheeling traffic cones reduce exposure to live traffic through remote deployment from a safe location

Transurban

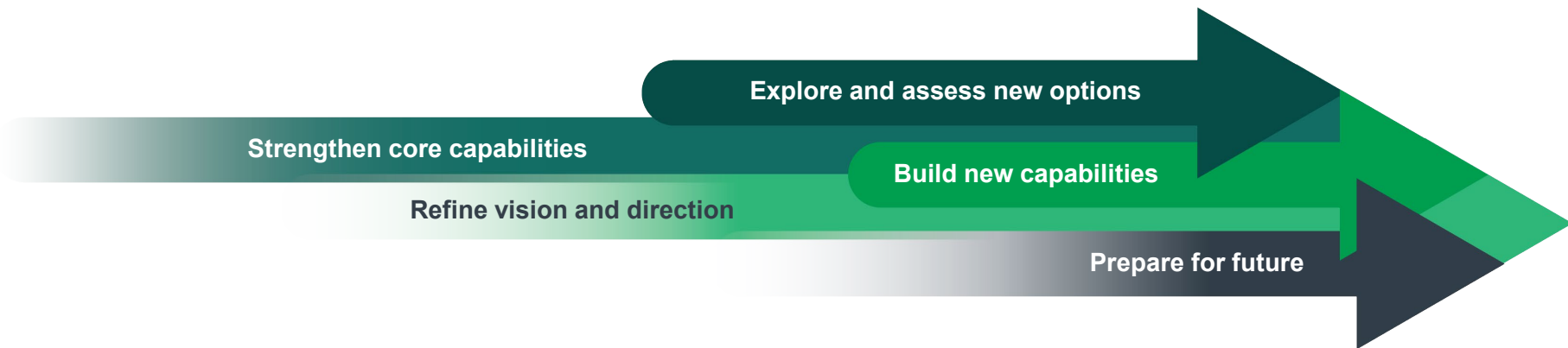


A blurred, high-speed photograph of a multi-lane road stretching into the distance under a clear sky, serving as the background for the text.

# STRATEGY AND FUTURE OUTLOOK

SCOTT CHARLTON – CEO

# SUSTAINED PERIOD OF VALUE CREATION



	2012	2013	2014	2015	2016	2017	2018	2019	
<b>Market dynamics</b>	<b>Changing market conditions</b> <ul style="list-style-type: none"> <li>• Post GFC consolidation</li> <li>• Toll road bankruptcies</li> </ul>			<b>Expansion in opportunity set</b> <ul style="list-style-type: none"> <li>• Progression of government market-led proposal framework</li> <li>• Asset recycling program and infrastructure ramp up in NSW and VIC</li> </ul>			<b>Preparations for future</b> <ul style="list-style-type: none"> <li>• Infrastructure remains an attractive investment class</li> <li>• Emerging sector dynamics: smart mobility, RUC, CAVs and ZEVs</li> </ul>		
<b>Transurban portfolio milestones</b>	<ul style="list-style-type: none"> <li>• M5 West widening</li> <li>• 95 Express Lanes</li> <li>• Cross City Tunnel</li> <li>• Queensland market entry</li> <li>• CityLink-Tulla Widening</li> </ul>			<ul style="list-style-type: none"> <li>• AirportlinkM7, ICB, LEP</li> <li>• NorthConnex</li> <li>• 95 Express Lanes extension</li> <li>• 395 Express Lanes</li> <li>• West Gate Tunnel Project</li> </ul>			<ul style="list-style-type: none"> <li>• 95 Express Lanes Fredericksburg Extension</li> <li>• A25 acquisition</li> <li>• WestConnex</li> <li>• 495 Express Lanes Northern Extension</li> </ul>		



# NEAR-TERM PRIORITIES



DELIVER  
COMMITTED  
PROJECTS



MAXIMISE  
PERFORMANCE OF  
OPERATIONS



ENHANCE CUSTOMER  
AND COMMUNITY  
OFFERINGS

# DELIVER COMMITTED PROJECTS<sup>1</sup>

Timelines illustrative and not to scale.



**Logan Enhancement Project (\$320M)**

**Mid-2019**

**NorthConnex (\$1.3B)**

**FY20**

**WestConnex – New M4 tunnels, New M5, M4-M5 Link (\$900M<sup>2</sup>)**

**New M4 - Mid-2019    New M5 - FY20    M4-M5 Link - FY23**

**West Gate Tunnel Project (\$4B<sup>3</sup>)**

**FY23**

**395 Express Lanes (USD475M)**

**FY20**

**95 Express Lanes Fredericksburg Extension (USD565M<sup>4</sup>)**

**FY23**

**495 Express Lanes Northern Extension (TBC<sup>5</sup>)**



See appendix for footnotes.

## Continued optimisation

- New Express Lane access points in GWA
- Optimise use of dynamic speed management on CityLink
- Implement low-cost congestion solutions in NSW
- Progress ramp-metering trials in QLD
- Continued focus on incident response and clearance times

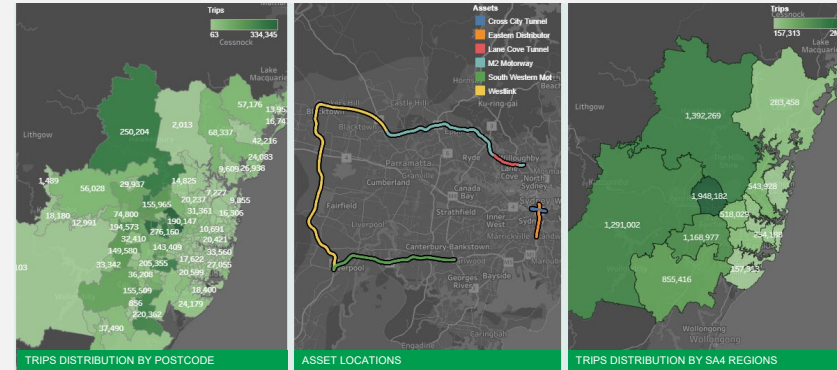
## Technology-driven process improvements

- Trial of new video-tolling technologies to optimise revenue collection and improve incident management on assets
- Optimise traffic forecasting processes and explore predictive maintenance with artificial intelligence

## Operational efficiencies

- Scalability of systems across tolling operations and finance

## Asset enhancement opportunities



## Operational improvements



## Ongoing stakeholder engagement

- WestConnex
- West Gate Tunnel Project
- Community partnerships and best practice engagement principles

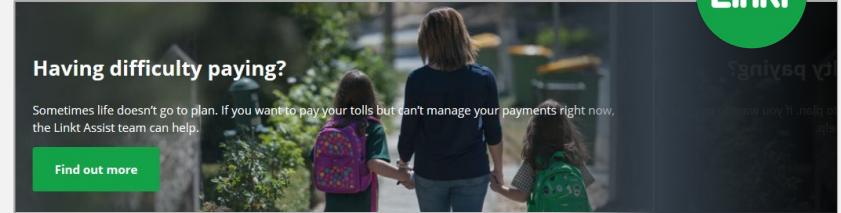
## Improved customer experience

- Linkt Assist – dedicated hardship team
- Trip Compare
- Decision point signage

## Innovative offerings for customers

- Parking trials with LinktGO
- Fuel partnerships

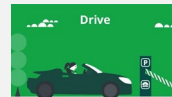
## Linkt Assist



## Parking trials – QLD

### Background

- Testing desirability and feasibility of ticketless parking experience using Linkt toll accounts
- Trial period: 6 months (Jan 19 to Jun 19)



The boom gate will automatically lift on entry



Park your car



The boom gate will automatically lift on exit and your account will be debited

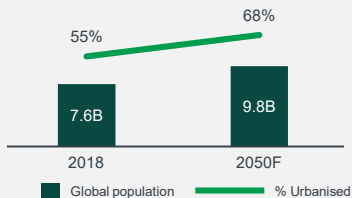


4.8

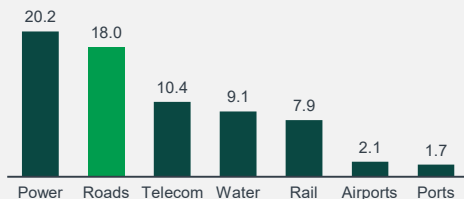
Average customer rating

# ROBUST OUTLOOK WITH CONTINUED NEED FOR PRIVATE SECTOR INVESTMENT

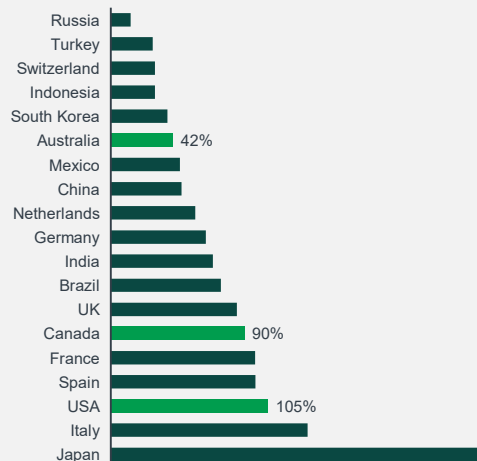
## Growth in population and urbanisation<sup>1</sup>



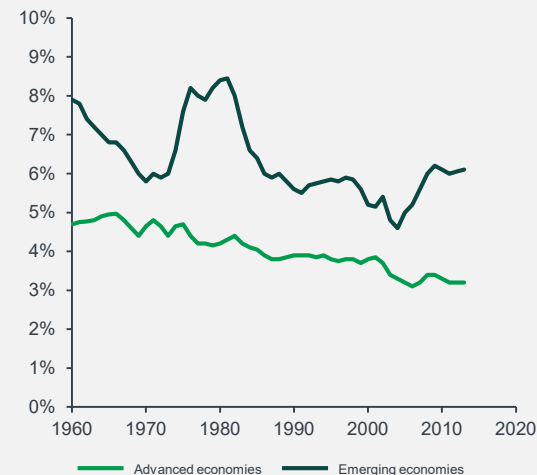
## Aggregate global infrastructure need 2017-35<sup>2</sup> (USD trillions)



## 2017 global debt levels<sup>3</sup> (% of GDP)



## Public investment<sup>4</sup> (% of GDP)



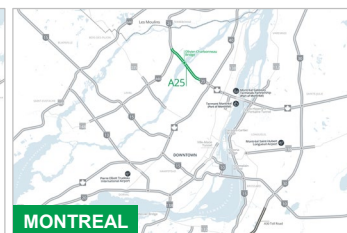
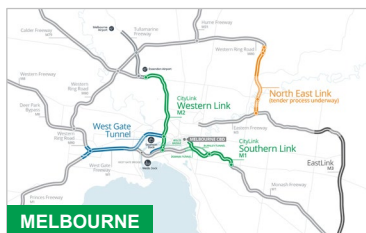
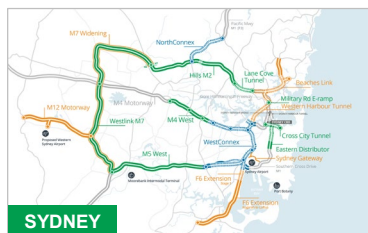
See appendix for footnotes.

## Existing asset base

- Government-owned 49% WestConnex stake (Sydney)
- M7 widening (Sydney)
- Gateway Motorway widening (Brisbane)
- Logan Motorway widening (Brisbane)

## Additional development opportunities

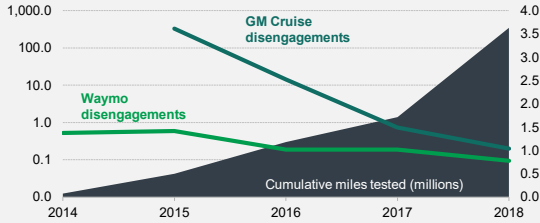
- Western Harbour Tunnel and Beaches Link (Sydney)
- Broader GWA opportunities
- Engagement in Montreal with new Quebec government
- USA asset privatisation agenda



# DISRUPTIVE MARKET DYNAMICS CONTINUE TO TAKE SHAPE

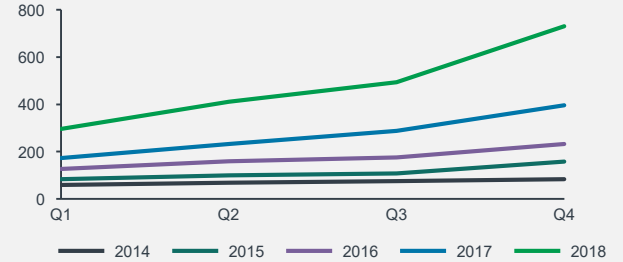
## Cumulative miles tested and disengagements<sup>1,2</sup>

(Disengagements per 1000 miles – log scale (left), Miles tested – millions (right))



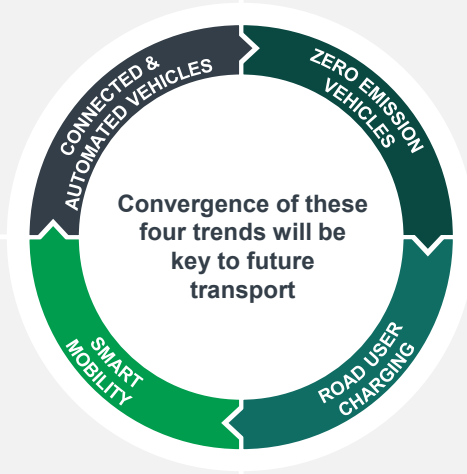
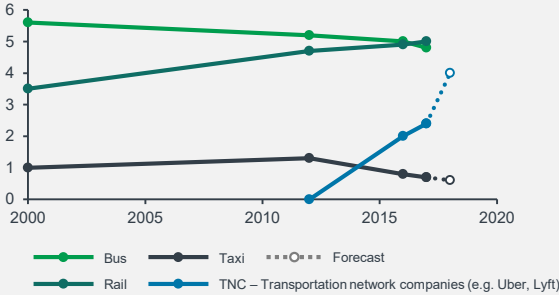
## Global passenger electric vehicle sales<sup>3</sup>

(Thousands units)

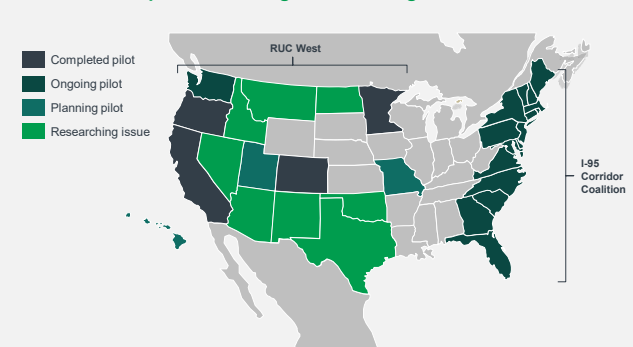


## USA trips by mode<sup>4</sup>

(Total trips – billions)



## Status of USA pilots on mileage-based charges<sup>5</sup>



See appendix for footnotes.

## Conceptual integrated transport network

### PERSONAL MOBILITY

### FREIGHT TRANSIT



*Changing social attitudes coupled with favourable economics will result in increased usage of new mobility options offering greater convenience and personalised choices*

- 1 CONNECTED AND AUTOMATED VEHICLES (CAVs)**  
Self-driving vehicles will shuttle people in and out of the city and private vehicle ownership will decline
- 2 ROAD USER CHARGING (RUC)**  
Use of roads will be charged based on distance with dynamic pricing to manage time-of-day congestion
- 3 ZERO EMISSION VEHICLES (ZEVs)**  
ZEVs will dominate new car sales with infrastructure and services updated to support a substantial vehicle fleet
- 4 SMART MOBILITY**  
New services will integrate multiple transport modes, payments and routing options to provide a seamless customer mobility experience

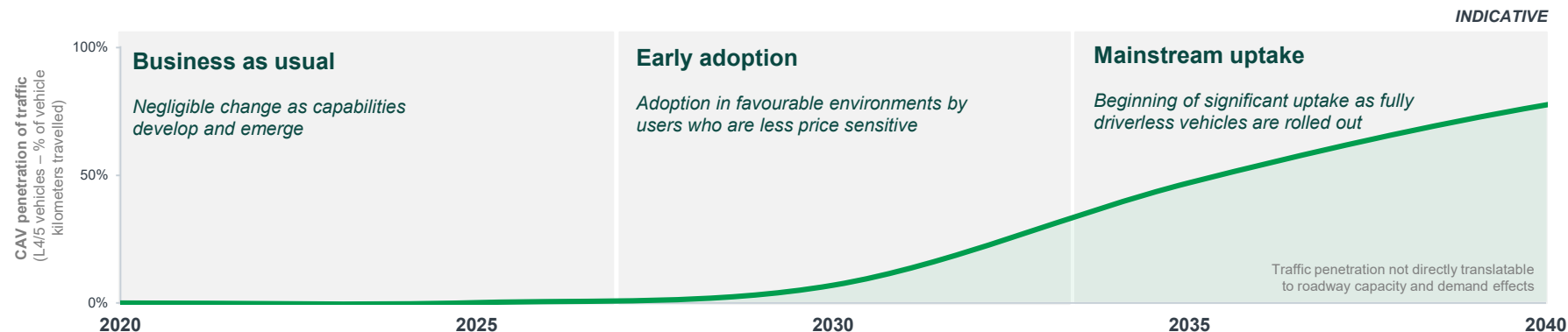
*A highly automated and integrated freight sector will rely increasingly on dedicated freight hubs, corridors and active management of the road*

- 5 DRONES AND AUTONOMOUS GROUND VEHICLES**  
Drones and autonomous ground vehicles will enable and drive down the cost of last mile deliveries in dense urban areas
- 6 LOAD POOLING AND LOGISTICS SERVICE PROVIDERS**  
New offers will shift businesses from dedicated fleets to service providers whilst third parties will capitalize on pooling spare capacity
- 7 PLATOONING AND INTEGRATED NETWORK MANAGEMENT**  
V2X communications will enable automated platooning and integrated network management services
- 8 URBAN CONSOLIDATION CENTRES AND FREIGHT HUBS**  
Increased last-mile freight demand will drive new dedicated freight consolidation areas and restrictions on large vehicles in inner cities



# REINFORCING EFFECTS OF MULTIPLE TRENDS WILL ACCELERATE THE TRANSITION

## A potential path towards an integrated transport future



CAVs

- Improved safety with increasing adoption of driver assistance and collision avoidance features (L1/2)

- Introduction of commercially viable L4/5 vehicles with relevant policy and regulation in place

- Introduction of designated lane facilities on motorways for CAVs



Smart mobility

- Multiple all-in-one journey planning transport apps in market

- Rollout of subscription based transport payment models

- Increased use of CAVs in ridesharing fleets as cost differential of driverless vehicles enhances appeal of smart mobility



ZEVs and RUC

- Adoption of ZEVs increase as they reach cost parity with conventional vehicles

- ZEV adoption continues to accelerate with increasing uptake by ridesharing/shared fleets
- Need for RUC grows as fuel excise revenues fall with ZEV adoption

- Wide-spread ZEV uptake as government policies towards cleaner emissions take effect
- Broad-based RUC in effect for heavy and light vehicles

# FUTURE CHANGES POSITIVE FOR TRANSURBAN'S CUSTOMERS AND COMMUNITIES



## Improved safety

Increasing interconnection and automation removes human error, reducing accidents and congestion



## New mobility options

CAVs have the potential to stimulate longer trips and can provide new mobility solutions for freight/delivery and for those otherwise unable to drive



## Favourable economics

Use of ZEVs and rise in smart mobility could lead to lower travel costs

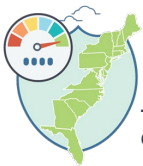


## Improved infrastructure use

The introduction of platooning allows smaller headways and higher speeds for more efficient use of road space. Motorways set to benefit earlier with CAV-designated lane operations

## Investigate strategic growth options

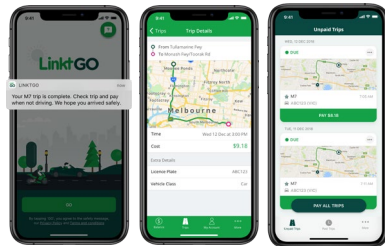
- RUC trials (USA)
  - Awarded grant to run Virginia component of I-95 RUC phase 3 trials
  - Twelve month program, set to recruit 400 light vehicle participants
  - Part of USDOT’s five year, USD95 million program<sup>1</sup>
- Next-gen tolling back-office development



The I-95 Corridor Coalition

## Develop internal capability

- Machine learning for traffic forecasting and dynamic pricing
- Video for traffic analytics and management
- LinktGO development



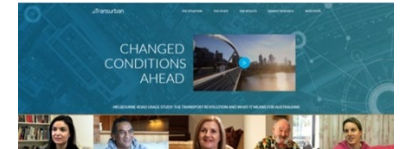
## Build response to disruption

- CAV trials
  - Partially automated vehicle trials complete
  - Connected motorway applications in exploration
- GPS tolling trials



## Contribute to policy development

- Road Usage Study
- Partnership with Telstra on work zone safety systems
  - Remotely controlled cones
  - Connected PPE



See appendix for footnotes.

Our purpose:

**To strengthen  
communities  
through transport**

Our strategy:

Provide sustainable  
transport solutions that  
offer choice, reliability,  
safety, transparency  
and value

What we focus on to realise our strategy:



Stakeholder  
engagement



Optimal  
networks



Delivery and  
operations



Disciplined  
investment

## Deliver near-term priorities



Deliver committed projects



Maximise performance of operations



Enhance customer and community offerings

## Positioning for future transport opportunities



Future evolution will make transport safer, more convenient and efficient



Future changes positive for Transurban's customers and communities



Monitor future developments and remain proactive in capturing new opportunities

INFRASTRUCTURE  
VICTORIA



# AUTOMATED AND ZERO EMISSIONS VEHICLES INFRASTRUCTURE ADVICE

Dr Jonathan Spear | Executive Director

# WHO WE ARE AND WHAT WE DO



**30-year** infrastructure strategy



Research



Independent advice to government  
(automated and zero emissions vehicles)

## OUR VALUES

Independence Influence Partnership Openness Innovation People

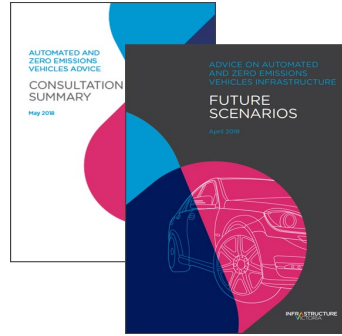
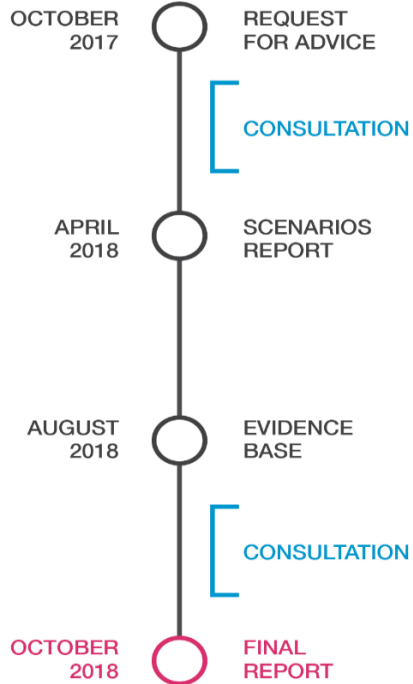


# context of the study

























The Victorian Government asked Infrastructure Victoria to provide advice on what infrastructure might be required:

- to enable operation of highly automated vehicles (AVs)
- in response to the ownership and market models that may emerge from the availability of highly automated vehicles
- for zero emission vehicles (ZEVs) as a high proportion of the Victorian fleet.

# timeline



# scenarios

Scenario	Year	Driving mode	Power source	Ownership/ market model
1. Electric Avenue	2046			
2. Private Drive	2046			
3. Fleet Street	2046			
4. Hydrogen Highway	2046			
5. Slow Lane	2046	 	 	 
6. High Speed	2031			
7. Dead End	2046			

  
DRIVERLESS

  
DRIVER

  
ELECTRIC

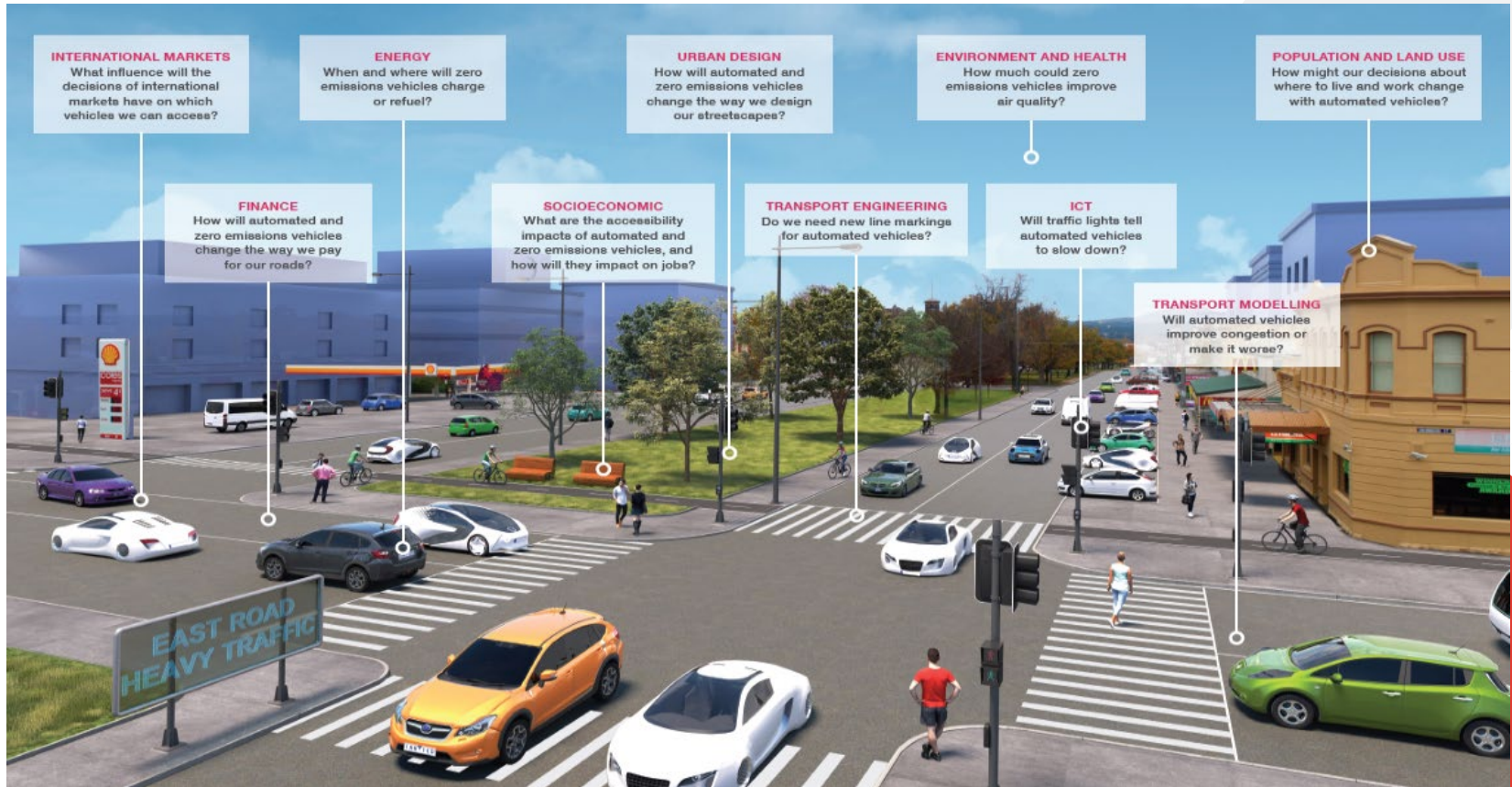
  
HYDROGEN

  
PETROL/  
DIESEL

  
SHARED/  
ON-DEMAND

  
PRIVATE  
OWNERSHIP

# evidence base



# key themes

- Convergence of the transport and energy sectors.
- Convergence of the transport and ICT sectors.
- Blurring of the distinction between 'public' and 'private' transport.



Advice:

# 17 RECOMMENDATIONS



*Infrastructure Victoria has called on the Victorian Government to clear the way for the roll out of driverless and zero emissions vehicles to reap unprecedented benefits for the economy, community and environment.*

Recommendations cover:

- Transport
- ICT infrastructure and data
- Energy
- Planning
- Waste
- Monitoring and coordination



# 'do now' transport recommendations

- **Update Victoria's roads**, including an audit of suitability for automated vehicles and evaluation of the impact of changing road network features (for example sign consistency, machine readability and placement; line quality, consistency and reflectivity).
- **Rethink road space**, including proactively increasing pick-up and drop-off areas in and around public transport stations, activity centers and destinations.
- **Future-proof projects** by incorporating real options to defer, stage, modify or cancel projects due to technology or demand change, review planned projects and seek low marginal cost opportunities that allow for future flexibility.

# 'do now' ICT recommendations

- **Integrate on-demand and mobility as a service** (including booking and payment systems) into the transport mix in preparation for automated vehicles.
- **Identify priority corridors for high quality cellular data coverage**, based on need and demand, and monitor the market's delivery of coverage in these areas as automated vehicles are adopted.
- **Expand the availability of open, real-time information** on government-owned transport system data and establish principles for data sharing between government and commercial transport service providers.

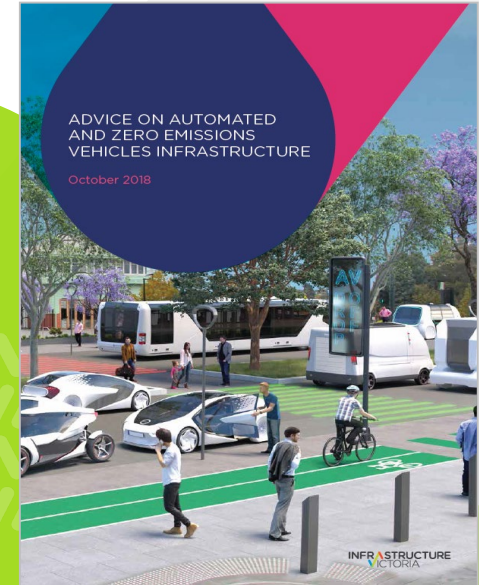


# 'do now' energy recommendations

- ➔ **Ensure regulatory frameworks governing energy network investment are flexible** enough to facilitate investment in the transmission and distribution networks at the right times and places to support the uptake of zero emission vehicles.
- ➔ **Allow for incentives or other mechanisms** (such as controlled charging services) to shift energy demand from peak periods.
- ➔ **Develop design standards** for public EV charging infrastructure and **principles for interoperability** between charging providers.

# more information

- ***Advice on automated and zero emissions vehicles infrastructure*** contains all 17 recommendations, decision pathways, triggers and the evidence base
- A short animated video explaining our scenarios and advice is available on our website.
- A suite of before/after images that reimagine Victorian streets and neighbourhoods with automated and zero emissions vehicles is also online.
- View and download:  
**[www.infrastructurevictoria.com.au/AVadvice](http://www.infrastructurevictoria.com.au/AVadvice)**



# Keep in touch

## website

[infrastructurevictoria.com.au/AVadvice](https://infrastructurevictoria.com.au/AVadvice)



## email

[enquiries@infrastructurevictoria.com.au](mailto:enquiries@infrastructurevictoria.com.au)



## phone

03 9936 1737



## twitter

[@infravic](https://twitter.com/infravic)



## facebook

[facebook.com/infrastructurevictoria](https://facebook.com/infrastructurevictoria)

INFRASTRUCTURE  
VICTORIA

# CAPITAL STRATEGY

ADAM WATSON – CFO

# CAPITAL STRATEGY – BALANCING DISTRIBUTION GROWTH WITH LONG-TERM VALUE CREATION



MAINTAIN DISTRIBUTION  
GROWTH



STRONG INVESTMENT-  
GRADE CREDIT METRICS



MAXIMISE  
EQUITY VALUE

## Maintain strong investment-grade credit metrics



- Maximise access to a broad range of debt capital markets
- Ratings agencies consulted throughout transactions to ensure outcomes are known prior to financial close
- Corporate credit ratings:
  - S&P BBB+, Moody's Baa1, Fitch A-

## Manage Group debt to balance cost and tenor



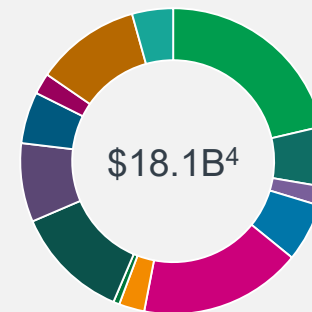
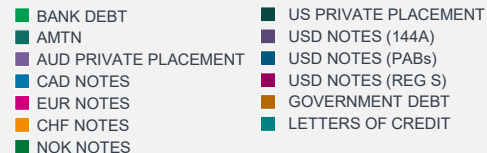
- Continue to target the largest long-term debt capital markets
- Shorter-term bank debt used to support delivery of development pipeline
- Funding decisions co-ordinated at Group level to minimise refinancing risks
- Weighted average maturity of 9.1 years<sup>1</sup> and average cost of 4.7%<sup>2</sup>

## Maintain diversity of funding sources, manage risk



- Maximise funding optionality, thereby reducing reliance risk
- Allows the Group to source the most attractive terms at any given time
- 98% interest rate and currency hedged<sup>3</sup>

## December 2018 Group debt

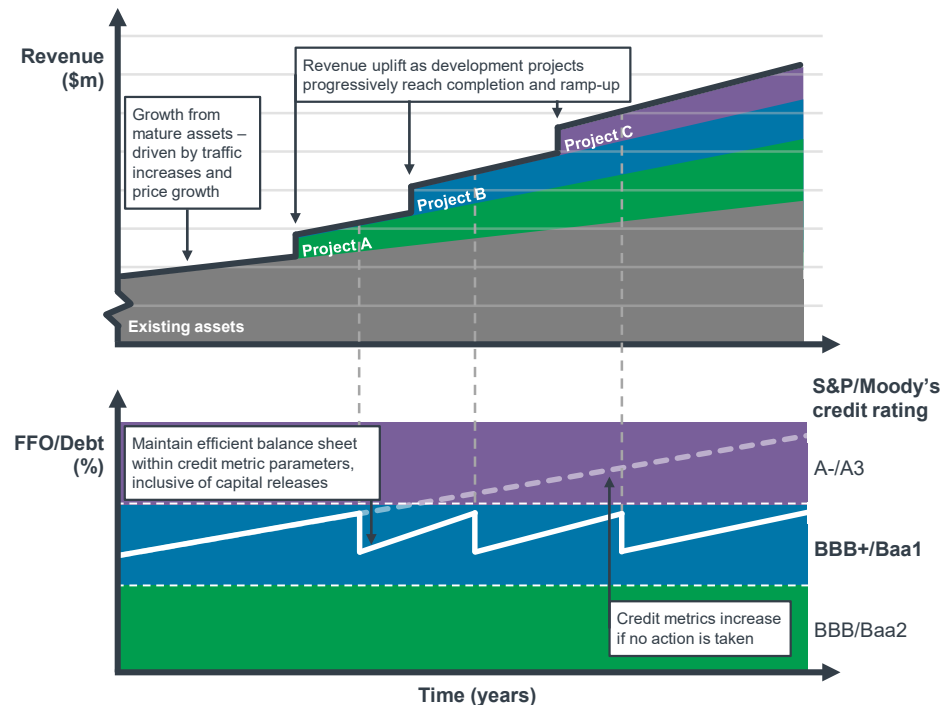


See appendix for footnotes.

# CAPITAL RELEASES

- Transurban's business model provides scope for balance sheet optimisation as assets mature, given upfront equity funding of major developments
- As traffic ramps up, credit metrics improve due to increasing cash flow against a fixed debt balance
- Capital releases pre-agreed with governments and undertaken within credit metric parameters
- In the near term, capital releases allow for ongoing consistent distribution growth despite additional equity issued to support the development pipeline
- In the longer term, capital releases provide funding flexibility, with proceeds able to be used to:
  - Further enhance distributions
  - Fund development pipeline
  - Manage credit metrics

## Theoretical application



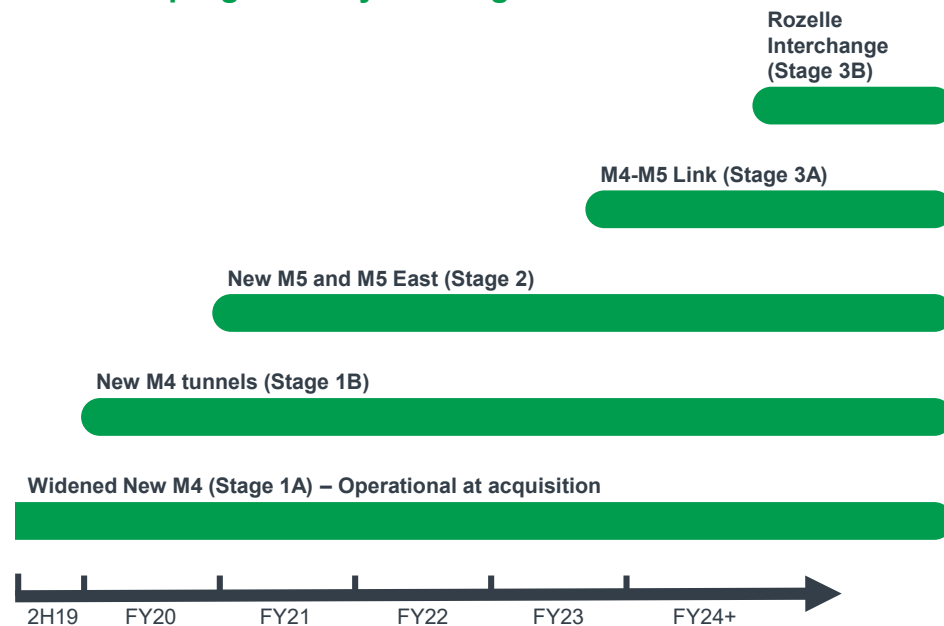


**Total acquisition price: \$9.3 billion  
(51% of WCX)**

**Transurban equity contribution: \$4.1 billion**

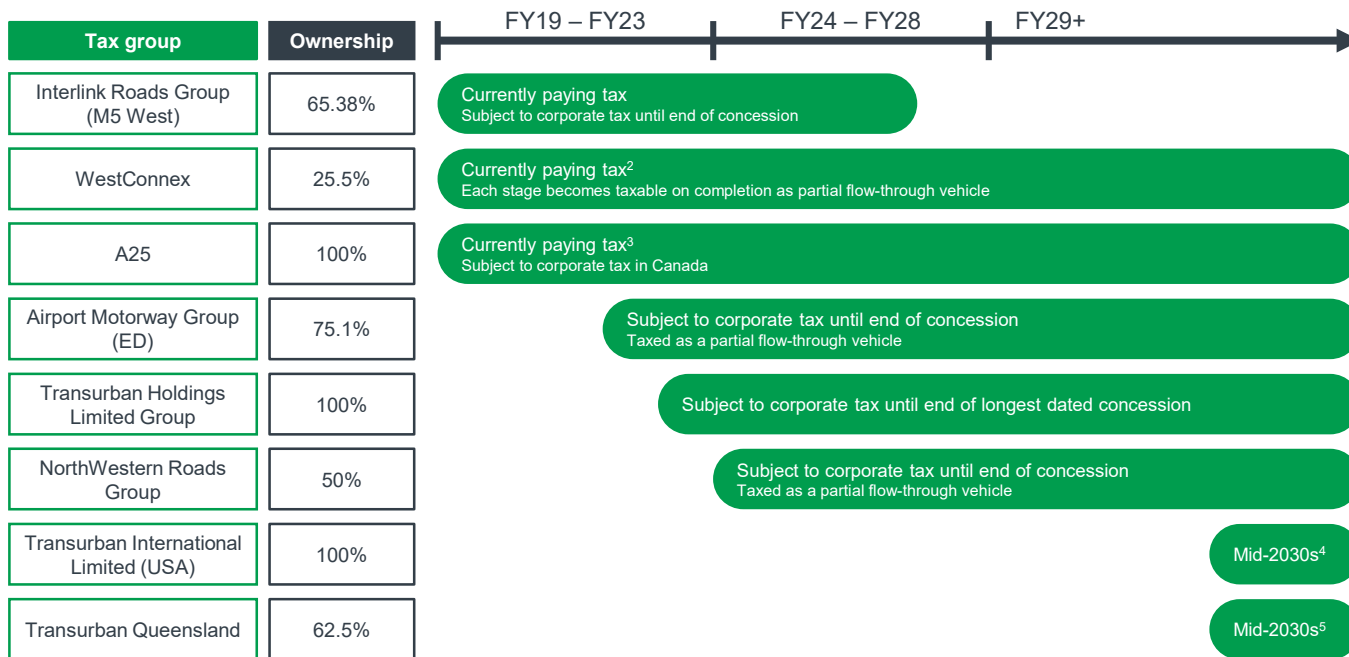
- Acquisition funded with equity upfront given assets are in construction phase
- As construction completes and traffic ramps up, additional debt can be raised and distributed to WestConnex shareholders in the form of capital releases, which can be passed on to Transurban investors in the form of distributions
- Parameters enabling ability to release capital pre-agreed with NSW Government
- Refinancing strategy underpinned by target to maintain investment-grade credit metrics

## Cash flow progressively building<sup>1</sup>



See appendix for footnotes.

# FORECAST TAX PROFILE<sup>1</sup>



- Staped structure results in Transurban's Australian corporate entities being subject to Australian corporate tax, and investors being subject to tax on trust distributions
- Capital intensity of Transurban's business leads to significant upfront and ongoing capital investment, resulting in large accounting and tax losses in early years of investment
- Refer to Tax Insight Session for further information

See appendix for footnotes.

# OPERATIONAL EFFICIENCY MAINTAINED DURING PERIOD OF PORTFOLIO GROWTH



## **Maximise performance of operations**

- Scalable operating platform
  - Consolidation of maintenance providers
  - Tolling and back-office systems
  - Customer operations

## **Deliver committed projects**

- Operating costs for new assets
- Maintenance provision for developments e.g. CityLink

## **Enhance customer and community offerings**

- Customer product development in North America
- Linkt Assist
- Trip Compare and decision point signage

# PROJECT DELIVERY

TONY ADAMS – GROUP EXECUTIVE,  
PROJECT DELIVERY

# DELIVERY STRATEGY FOCUSED ON PRUDENT RISK MANAGEMENT AND MINIMISING DISRUPTION



## Stakeholder engagement

- Build community relationships with engagement from inception through to operation
- Ensure interest groups are engaged during all project phases

## Active contract management

- Experienced Transurban teams working in partnership with major contractors
- Actively manage whole-of-project HSE, leveraging opportunity for continuous improvement

## Minimal disruption

- Focus on minimising construction impact to community, operational assets and broader road networks
- Maintain access and amenity for impacted stakeholders throughout construction

# TRANSURBAN APPROACH TO DELIVER DEVELOPMENT PIPELINE

## Experience in safely delivering complex projects

- Demonstrated capability in delivering development projects as infrastructure owner/operators
- Highly experienced project management teams with backgrounds spanning government, construction and consulting
- Safety-first culture embedded across Transurban and delivery partners

## Effective risk management

- Fixed-time, fixed-price contracts
- Commercial protections, including bank guarantees and liquidated damages to contain the impact of project completion date variability

See appendix for footnotes.

## Project Delivery workforce<sup>1</sup>

2013

69

2019

225



# STRONG TRACK RECORD

12

significant upgrades or new assets completed alongside major contractors and state government partners since Transurban's inception

**JOHN HOLLAND**

**CPB CONTRACTORS**

**SAMSUNG SAMSUNG C&T**

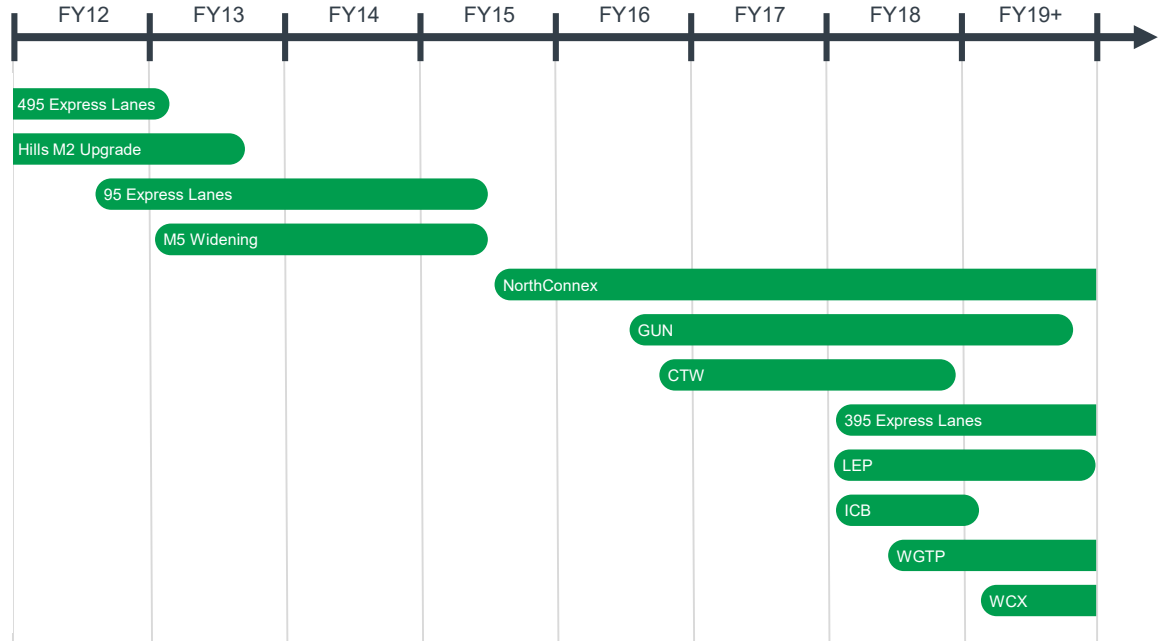
**FLUOR**

**BOUYGUES CONSTRUCTION**

**lendlease**

See appendix for footnotes.

## Recent project history and current pipeline<sup>1</sup>



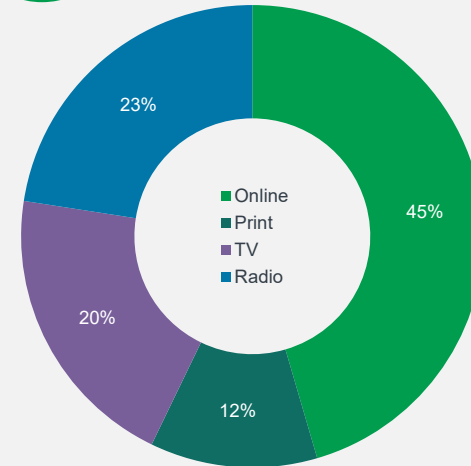
- Transport infrastructure is politically significant due to its broad economic and social impact
- This significance creates considerable public attention, amplified by traditional and social media
- High volume of media reach contained to a small number of issues



## High volume of media reach contained to a small number of issues

1,600+

appearances in traditional media for Transurban and our projects during March 2019





## Experience in stakeholder engagement

- Appropriate resources in place to engage stakeholders and enhance outcomes where possible
- Focused on agenda of delivering projects to meet agreed objectives on time, budget, safety and quality with government partners and D&C contractors

## Design involvement and influence

- Understanding the needs and ambitions of stakeholders allows Transurban to influence project design, creating support prior to construction

## Construction methodology involvement, influence

- Transurban challenges methodologies to reduce impacts on the community and build long-term relationships

## West Gate Tunnel Project

7,308

engagements with stakeholders in the last 12 months; greater than 50% proactive



## Logan Enhancement Project

Community feedback shaped the design – changes include significant fauna connection improvements, and duplicating the Wembley Road bridge over the Logan Motorway



## NorthConnex

Regular community meetings throughout construction specific to areas of impact, providing opportunities for two-way communication



# WESTCONNEX

ANDREW HEAD – CEO, WESTCONNEX

# WESTCONNEX OVERVIEW<sup>1</sup>

## New M4 (Stage 1)

- Widened New M4 (M4 West), existing M4 West motorway widened to four lanes in each direction from Parramatta to Homebush (7.5km)
- New M4 tunnels (M4 East), new 6.5km motorway section of three lanes in each direction. This includes 5.5km of new twin tunnels and associated surface works

## M5 (Stage 2)

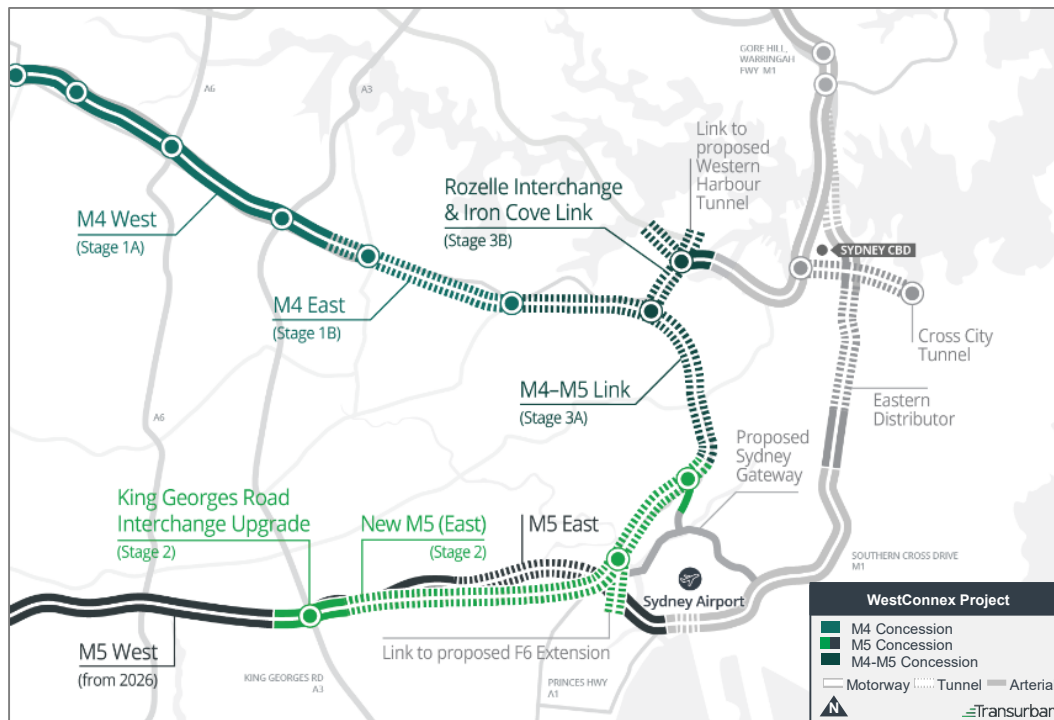
- New M5 motorway, 11km motorway with 9km twin tunnels, provision for connection with future F6 Extension
- Transfer existing M5 East motorway between King Georges Road and General Holmes Drive, after opening of New M5

## M4-M5 (Stage 3)

- M4-M5 Link, new 7.5km twin tunnels of four lanes connecting to the New M5 (East), and stub connections for future Rozelle Interchange and Iron Cove Link
- Rozelle Interchange, new interchange connecting M4-M5 Link to the surface and the Anzac Bridge, provision for future connectivity to proposed Western Harbour Tunnel

## M5 West

- Existing motorway of three lanes in each direction stretching between the M5 East and Westlink M7 to form part of the WestConnex M5 concession from December 2026, once the existing concession expires



See appendix for footnotes.

# WELL-POSITIONED TO FACILITATE SYDNEY'S GROWTH

Vehicle trips expected to use WestConnex<sup>1</sup>



## Population growth<sup>2</sup>

40%

Sydney population expected to live within 5km of WestConnex

## Freight task<sup>3</sup>

48%  
growth

Freight task in Greater Sydney area projected to grow from 194 million tonnes in 2016, to 288 million tonnes in 2036

## Business districts and employment

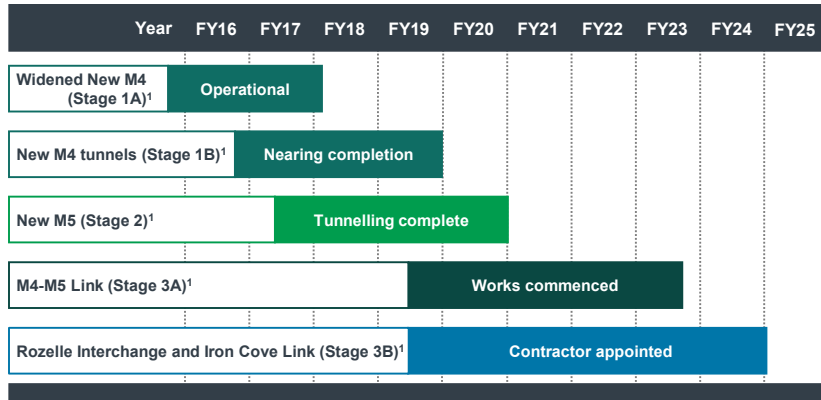
Key industrial areas adjacent to or near the WestConnex corridor, including Botany/Banksmeadow, Silverwater, Lidcombe, Homebush and Eastern Creek

See appendix for footnotes.

# DELIVERY AND INTEGRATION EFFORTS IN PROGRESS

## Construction progress

- New M4 tunnels commissioning underway
- New M5 progressing mechanical and electrical fit-out
- M4-M5 Link tunneling works commenced, five road headers
- Delivery of Rozelle Interchange underway, managed by RMS



See appendix for footnotes.

## Integration efforts

### PHASE 1 – CORPORATE

- Business review completed, with five year business plan and financial budgets approved by WestConnex Board
- Systems alignment and restructure of WestConnex business completed
- Co-location with NSW business at 1 Chifley Square
- Streamlined processes and corporate systems

### PHASE 2 – TECHNOLOGY AND CUSTOMERS

- Implementation of GLIDe progressing, on track to replace existing tolling systems
- Transurban's Linkt to become the preferred retailer for WestConnex

### PHASE 3 – O&M

- Insource road operations and asset management

First 6 months

We are here

6-12 months

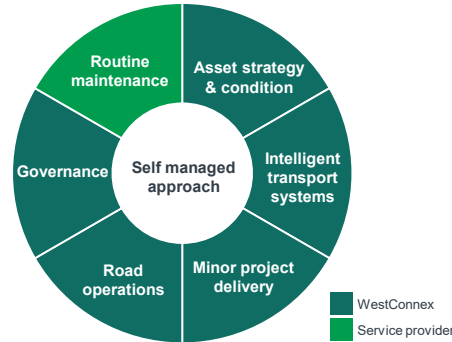
## Establish Program Control Group to drive optimum delivery processes



Panel of internal experts established to ensure learnings across Transurban's delivery portfolio are shared with WestConnex and other delivery projects

Panel is chaired by Tony Adams, Group Executive Project Delivery and comprises an experienced group of internal experts

## Consolidate and insource operations to realise synergies



Multiple opportunities to realise operation synergies by leveraging existing Transurban resources

- More efficient operations through insourcing O&M and asset management
- Transition to Transurban back-office systems to enhance revenue capture and reduce costs

## Investigate future tolling technologies to reduce lifecycle costs



Tag-based tolling superseded by next-generation video tolling technologies.

Presents an opportunity for WestConnex to migrate, driving savings by reducing major maintenance costs



# PRIORITIES GOING FORWARD



**Deliver projects  
successfully**



**Build strong  
partnerships**



**Ensure operational  
excellence**



**Enhance customer  
experience**



**Drive sustainability  
outcomes**



**Maximise  
value for investors**

A blurred, high-angle photograph of a multi-lane highway stretching into the distance under a clear sky. The image is overlaid with a semi-transparent dark green filter.

# NORTH AMERICA DEVELOPMENT

JENNIFER AUMENT – PRESIDENT NORTH AMERICA



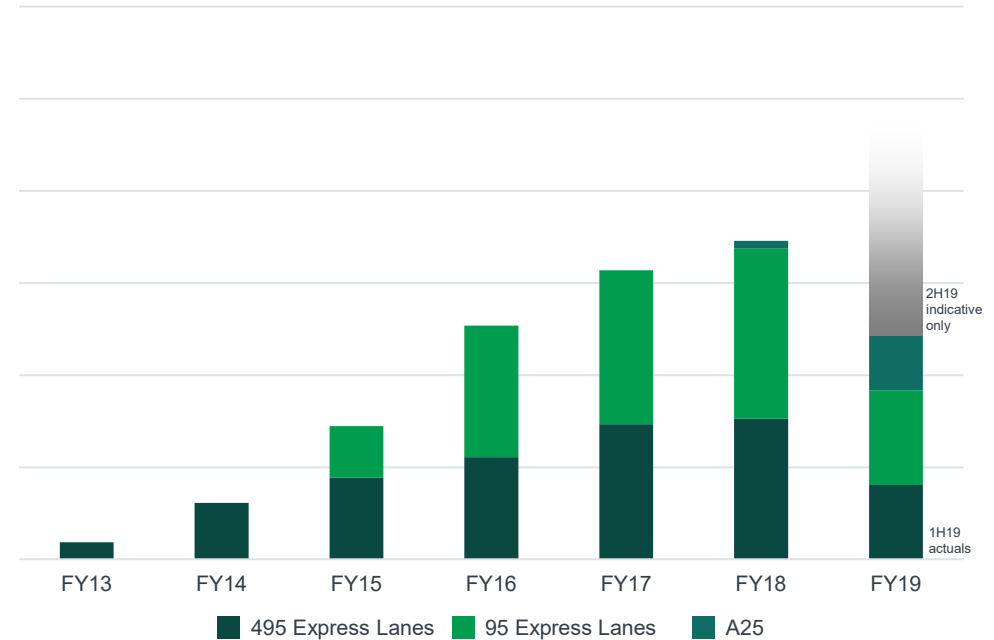
# FOCUSED EXECUTION AND SUSTAINABLE GROWTH

North America is considered an emerging market for global infrastructure investors

Transurban is focused on growing incrementally:

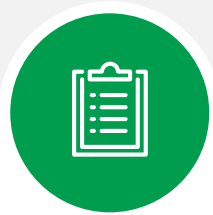
- Sustainable business model
- Strong and growing customer base
- Value for clients, communities and securityholders
- Transurban has achieved 24% market share of greenfield road, rail and airport P3 projects closed since 2016<sup>1</sup>

## North America revenue<sup>2,3</sup>

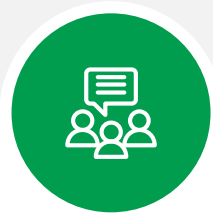


See appendix for footnotes.

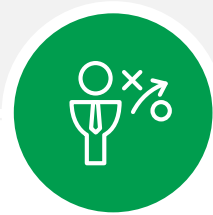
# DRIVING LONG-TERM GROWTH THROUGH DISCIPLINE



**Disciplined evaluation of  
development opportunities**



**Engagement with clients,  
community and industry**



**Proactive approach  
to opportunities**

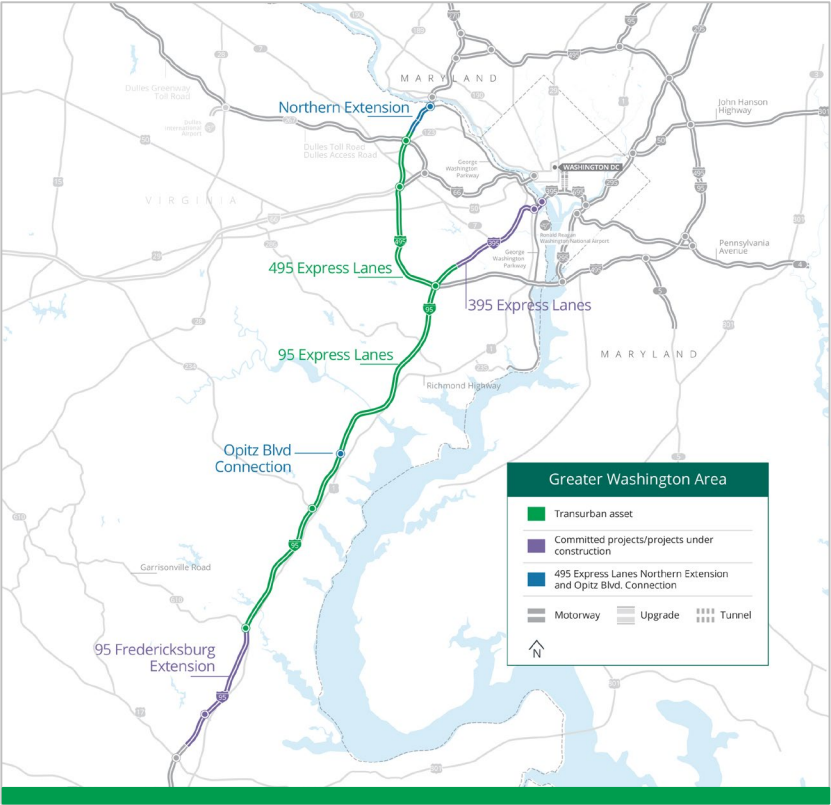


**Local expertise  
and experience**



**Customer focus**

# EXPANDING GWA NETWORK



**495 EXPRESS LANES**  
2012 | 22 km



**95 EXPRESS LANES**  
2014 | 50 km



**395 EXPRESS LANES**  
2019 | 13 km



**FREDERICKSBURG EXTENSION**  
2022 | 16km



**OPITZ BOULEVARD**  
**FUTURE NEW CONNECTION**



**495 NORTHERN EXTENSION**  
**FUTURE | 3.2 km**

## Dynamic operational responses



### 495 oil tanker shutdown

- Fuel tanker spill in general purpose lanes resulting in widespread congestion
- Transurban-led lane diversions and real-time customer communications

## Customer-focused solutions



### First-time forgiveness

- Multiple ways to pay missed tolls
- Program includes self-imposed court-fee cap
- Model for new Virginia legislation governing unpaid toll enforcement

## Working with government and community



### Occoquan capacity

- Listening to client and community needs to find mutually aligned solutions
- USD1 billion investment to reduce congestion and improve connectivity on 95 and 495

## Environmental outcomes informing operations



### A25 – sustainable snow removal

- Snow clearing of bridge without disposal in river
- Abrasive spreading – natural beet juice compound reducing reliance on salt

## Customer product development



### Mobile tolling

- Mobile tolling app development underway in GWA and Montreal
- Provides infrequent users additional payment options



## Amazon HQ2

Amazon to develop a second headquarter in 395 corridor

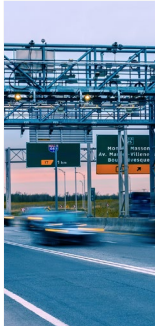
Transurban brought forward payments to VDOT which enabled infrastructure improvements in the 395 corridor, helping to secure Amazon's selection of Crystal City as location for second headquarters



## 495 Northern Extension

Addressing one of the region's worst multistate bottlenecks

3.2km extension to Maryland border with new connections to major commuter routes. Demonstrates incremental network growth, supporting long-term transportation needs of the region



## Electric Vehicles

Helping grow Quebec's leadership in sustainable transportation

The Quebec Ministry of Transport, in partnership with the A25 team, is testing a program that allows free travel for electric vehicles on toll roads, including A25 – supporting the shift from conventional vehicles to ZEVs<sup>1</sup>



## Marine Base Quantico

Access to major military and federal campus in high-growth Prince William County

Fredericksburg Extension will improve access to 12,000 residents of the marine base, FBI Academy and Drug Enforcement Agency – allowing Transurban to deliver valuable public improvements on behalf of the Virginian Government

See appendix for footnotes.

- Advance GWA network opportunities
- Demonstrate partnership and expand in Quebec
- Leverage track record and experience to best position for long-term North American market opportunities



A25 – Montreal



# SUPPLEMENTARY INFORMATION

# TAX INSIGHT SESSION

SHASHI SIVAYOGANATHAN – PRINCIPAL TAX ADVISOR



## Purpose of staple

- Stapled structures are commonly used in capital intensive businesses like infrastructure and property
- Large initial and ongoing capital investment and debt funding, leads to accounting losses during the early years of the project due to amortisation. These accounting losses prevent the payment of dividends to shareholders. Stapled structures allow the payment of distributions to securityholders during this time.
- Stapled structures ensure the Australian Taxation Office (ATO) collects tax, at the investor level, despite tax losses being generated in the early years of a project
- The majority of Transurban's Australian operating assets are structured as a stapled Company/Trading Trust (which operates the road and collects tolls – Operating Entity) and an Asset Trust (which operates as a passive investment vehicle – Asset Trust)
- Each Asset Trust is classified as a flow-through trust, the distributions from which are taxable in the hands of investors

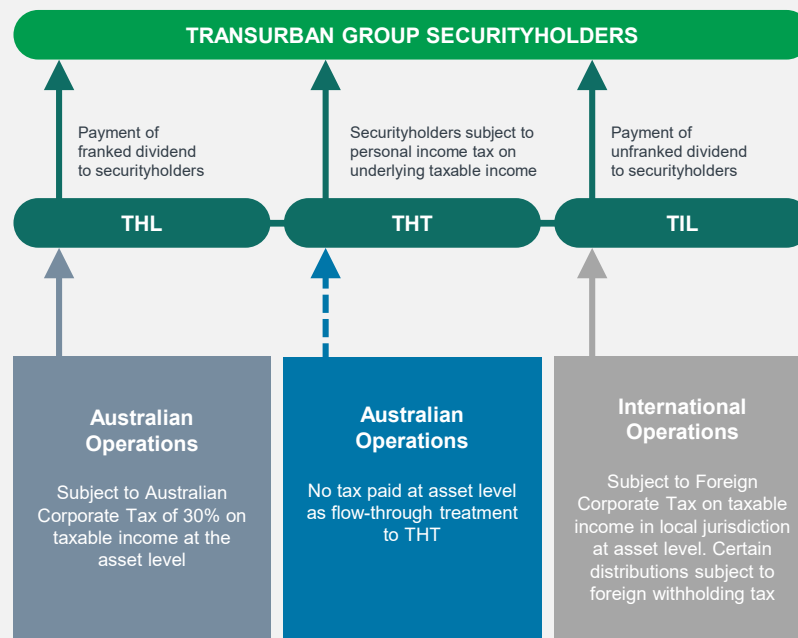
## Transurban Group staple

- Transurban Group comprises of three separate legal entities – THL, THT and TIL
- Each triple stapled security comprises one share in THL, one unit in THT and one share in TIL, none of which can be traded separately to the other



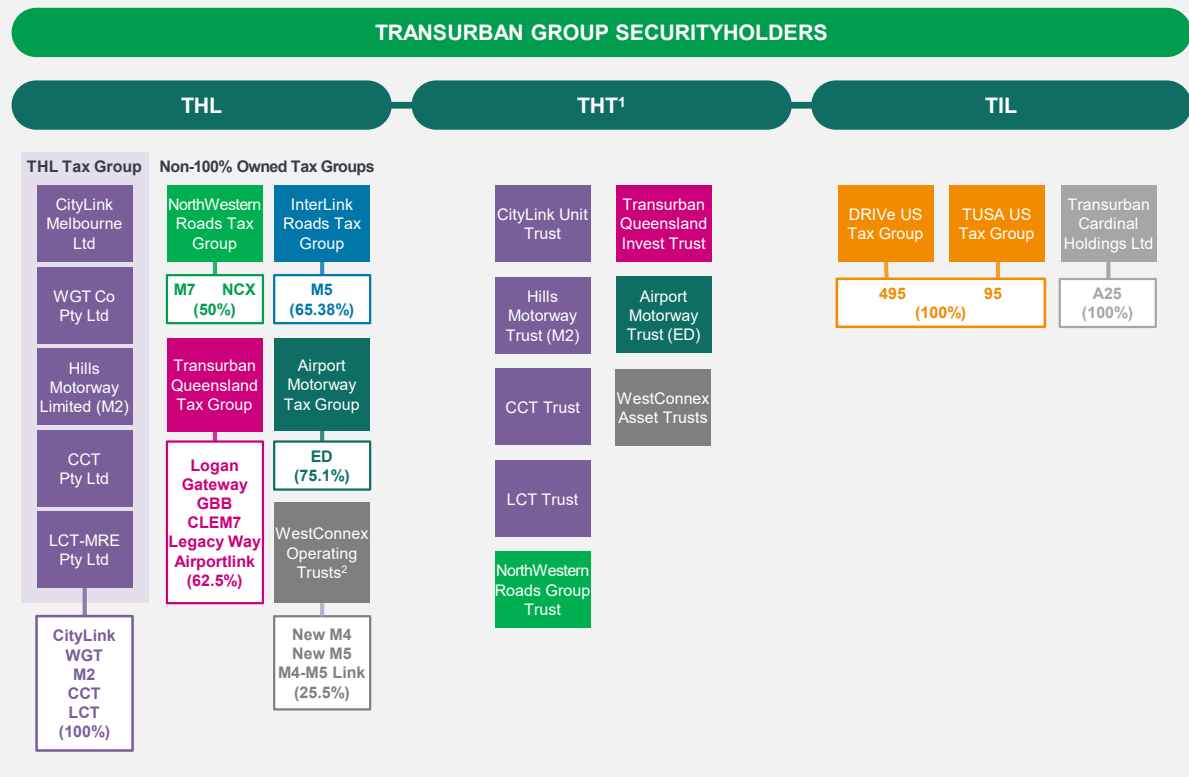
## Corporate structure

- THL is an Australian resident company that operates as the parent company of the Transurban Group for financial reporting purposes. THL is subject to Australian income tax at 30 percent on its taxable income
- THT is an Australian resident unit trust that qualifies as a managed investment trust. THT operates as a flow-through trust for tax purposes resulting in THT's income being subject to tax at the investor level at their respective tax rates
- TIL is an Australian resident company that acts as the holding company for Transurban's operations in North America. Assets held under TIL are subject to foreign income tax in their respective jurisdictions and withholding tax on certain distributions
- In addition to corporate taxes paid by THL and TIL, Transurban estimates that approximately \$1.3 billion in taxes have been paid by investors since 2002 on distributions paid to date



## Asset structure

- Each asset within the Transurban Group has its own individual structure
- Some of the assets are structured as corporate entities – M5, GBB, Clem7, Legacy Way and foreign assets. Other assets are structured as stapled entities
- The portion of taxable income flowing through the Operating Entity or Asset Trust (where applicable) varies between assets and can change based on intragroup transactions, traffic volume, interest rates and structure
- Different holding structures causes tax being paid at different levels of the structure, by different tax groups and at different times



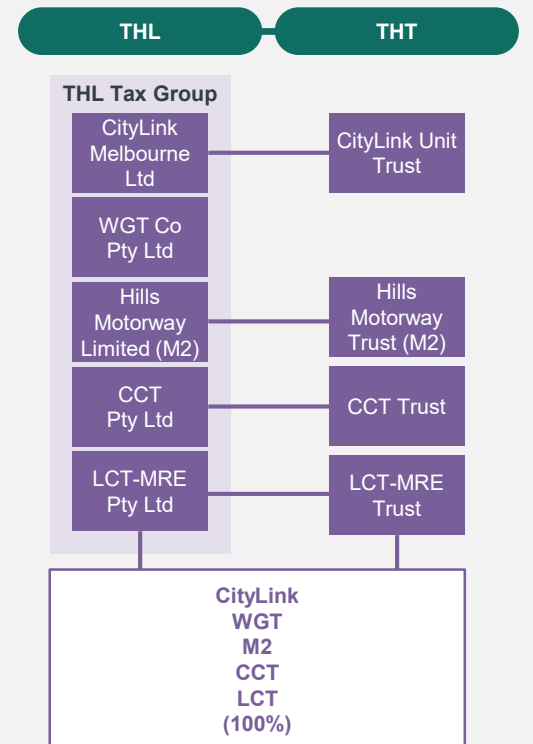
See appendix for footnotes.

## THL tax consolidated group

- The THL tax consolidated group comprises Transurban Group's 100% owned Australian assets
- THL is the head company of the tax consolidated group comprising its wholly-owned Australian entities
- Each asset owned by the THL tax consolidated group operates through a stapled structure
- Taxable income derived by each Operating Entity is subject to the 30% corporate tax rate consolidated at THL; and
- Tax paid by THL gives rise to franking credits which are then passed to securityholders as franked dividends

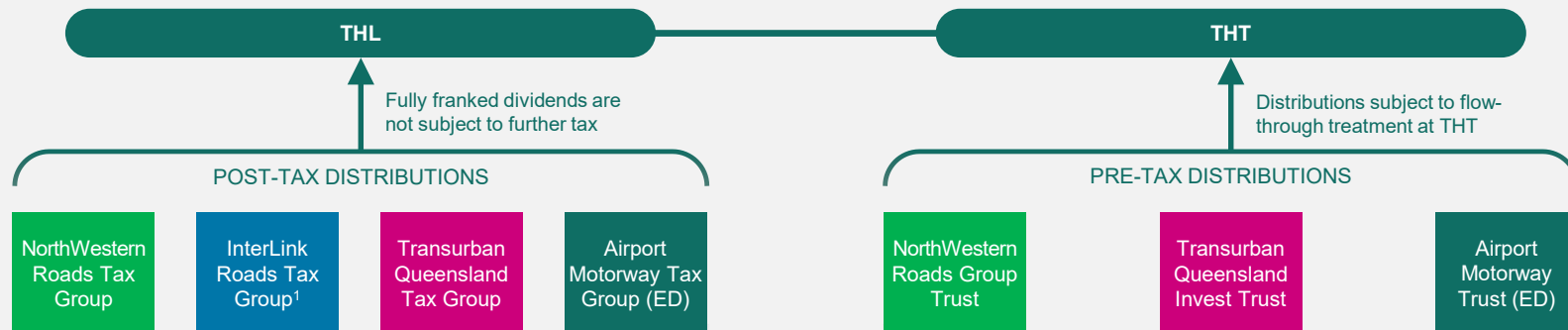
## THT tax treatment

- Taxable income derived by each Asset Trust flows through to THT
- THT, as a flow-through trust for tax purposes, does not pay income tax itself
- Investors pay tax on trust distributions received based on their respective tax rates
- Transurban publishes an annual Tax Statement Guide advising investors on how distributions should be disclosed in their tax return



## Non-100% owned tax groups

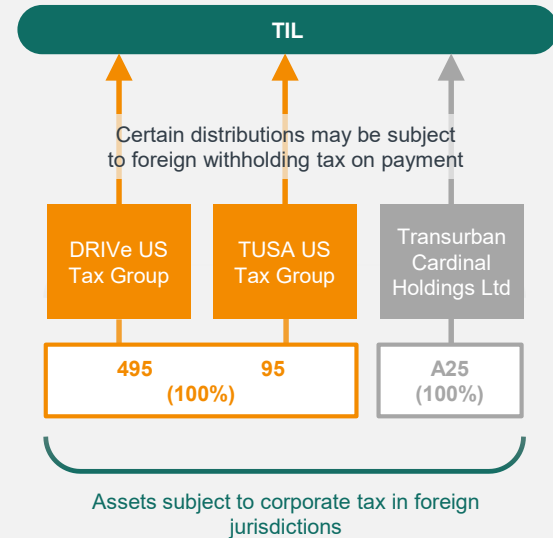
- Australian assets that are not wholly-owned by Transurban Group have their own respective tax groups and a different tax profile to Transurban Group
- The head company of each non-100% owned tax group is subject to tax at the 30% corporate tax rate on its Australian taxable income
- Distributions made by these tax groups to THL by the Operating Entity are generally fully franked, or treated as flow-through distributions if paid to THT by the relevant Asset Trust
- If fully franked distributions are received by THL they are generally not subject to further tax, and franking credits can be distributed to securityholders



See appendix for footnotes.

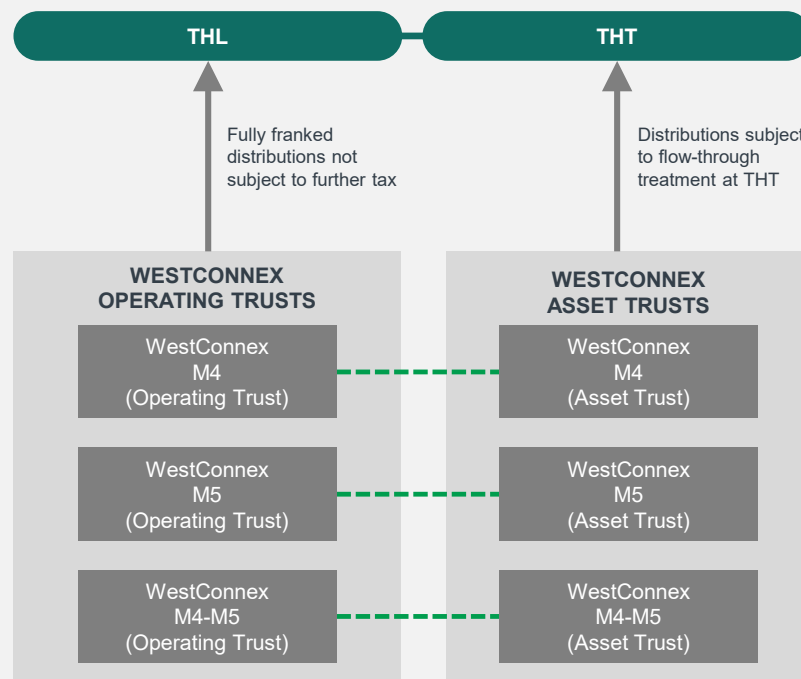
## North America tax groups

- The TIL tax consolidated group comprises Transurban Group's 100% owned North American assets
- Each asset owned by TIL is subject to tax in its foreign jurisdiction at the local corporate tax rate:
  - A25 is subject to Canadian tax from acquisition; and
  - 495/95 are forecast to pay US tax in mid-2030s
- Withholding tax may be levied on certain distributions paid to TIL from its wholly-owned subsidiary entities
- All distributions received by TIL from its wholly-owned North American entities are not subject to further tax in Australia

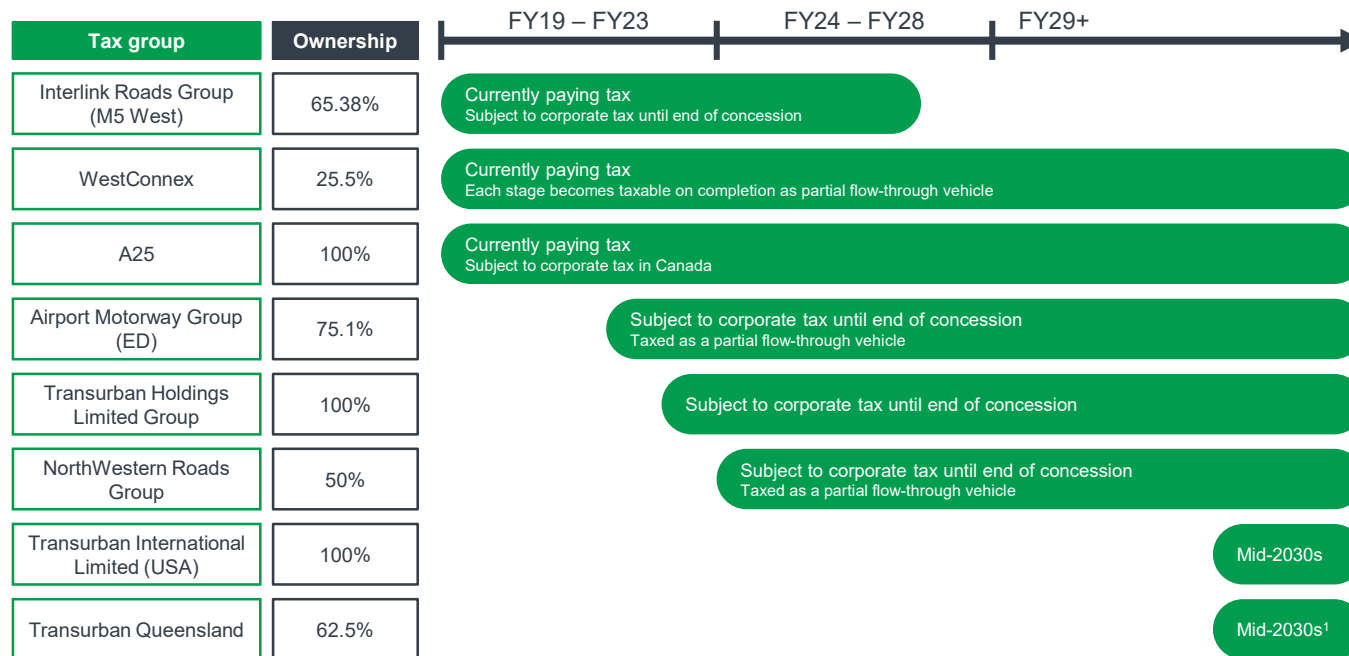


## WestConnex tax treatment

- As a legacy holding structure of Sydney Motorway Corporation, each asset of WestConnex is held through a staple arrangement between an Operating Trust and an Asset Trust
- The WestConnex operating trusts are not consolidated for Australian income tax purposes and are therefore subject to tax at the 30% corporate tax rate on an individual basis for as long as the NSW Government retains a 20% or greater ownership in WestConnex. These trading trusts will revert to being flow-through if the Government owns less than a 20% interest
- Each stage is forecast to pay tax on the commencement of tolling activities, with Stage 1 already subject to corporate tax in FY19



# FORECAST TAX PROFILE



See appendix for footnotes.



## Tax paid by each tax group is subject to a number of variables

- New development projects – new projects generate additional tax deductible costs, including tax depreciation, costs of transferring assets and borrowing costs
- Timing differences between accounting and tax treatment of depreciation and amortisation – tax depreciation on capital works based on a statutory effective life of 40 years whereas the effective life of concession assets may be shorter
- Intragroup charges and arrangements – charges paid by the Operating Entity to the Asset Trust for the use of assets and funds (i.e. rent and interest) reduces tax paid. These charges form the basis of the taxable distributions from THT
- Traffic volume – changes in traffic volume will either increase or reduce taxable income
- Interest rates and gearing levels – as interest is a tax deductible expense, higher borrowing costs reduce taxable income

## Factors affecting near term taxable distributions

- Taxes paid by each tax group will be used to frank dividends from THL
- All other taxable income is expected to be paid out of THT as a trust distribution
- THL and TIL are not expected to pay unfranked dividends
- The split of taxable income between Operating Entity and Asset Trust is dependent on factors specific to the structure but is guided by ATO accepted principles. These principles and examples are provided by the ATO in LCR 2015/15

## Transurban Group's approach to tax

- Transurban Group adopts tax positions that comply with tax laws, allow for efficient business activities and utilise structures that maximise value for investors
- Transurban Group continues to foster its longstanding and co-operative relationship with the ATO and other Revenue Authorities in Australia and abroad, by undertaking self-assessment activities with a view to be well positioned to meet the ATO or other Revenue Authorities expectations
- Transurban Group recognises the inherent value for investors resulting from compliance with all tax laws by maximizing operational efficiencies, reducing the risk of penalties and maintaining a reputation as a compliant and transparent corporate taxpayer. A Tax Transparency Report is published annually by Transurban

## Recent tax policy changes

- Transurban Group continuously monitors all developments in tax policy which may affect Transurban Group's tax positions
- Recent integrity measures introduced for stapled structures in Treasury Laws Amendment (Making Sure Investors Pay Their Fair Share of Tax in Australian and Other Measures) Act 2019 will have application to Transurban. However, Transurban believes its structures are compliant with the new law
- The introduction of these integrity measures will not impact Transurban's distributions or its tax paid. Transurban is currently assessing the impact of the new rules on the rate of withholding for certain distributions paid to non-resident investor for distributions after 1 July 2019

See appendix for footnotes.

# TRAFFIC INSIGHT SESSION

DARRYN PATERSON – GENERAL MANAGER NETWORK STRATEGY  
AND TRAFFIC ANALYSIS

## Team experience and strengths

- In-house multi-disciplinary team of 35+ specialists, covering:
  - Strategic modelling
  - Land use and macroeconomics
  - Econometrics and analytics
  - Traffic and operational modelling
  - Freight
- External support from specialist consultants
- Independent inputs and auditors

## Forecasting approach

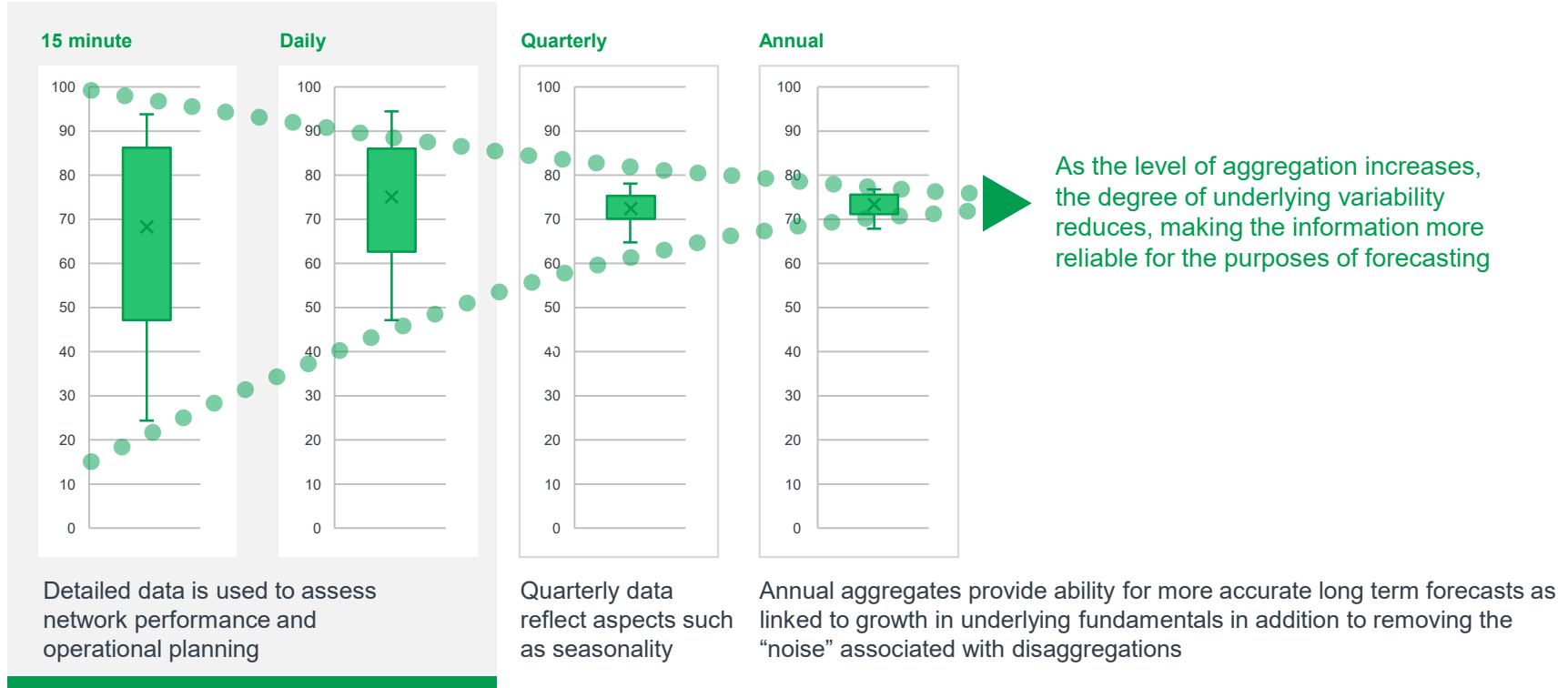
Methodology selection driven by time horizon and purpose of assessment:

- Transurban's strategic models used to develop independent valuations from long term forecasts
- Trend, econometrics and artificial intelligence models used for near term forecasts of assets
- Operational models use detailed daily and time-period data to assess and manage current asset performance

## Forecasting data

- Key forms of traffic data collected and used by Transurban encompasses:
  - Region wide and asset specific traffic and vehicle class data
  - TomTom information providing travel time, speed and reliability data for all facilities
  - Independent land use and macroeconomic data for national and regional impacts
- Level of aggregation aligns with the form of the tools

# DATA RELEVANCE AND LEVEL OF AGGREGATION KEY TO ACCURACY

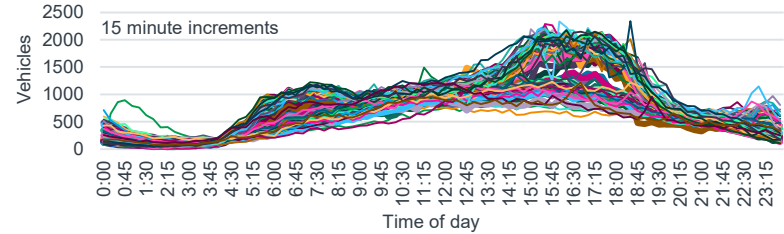


# NETWORK PERFORMANCE MANAGED USING DETAILED DATA

## Detailed traffic count data

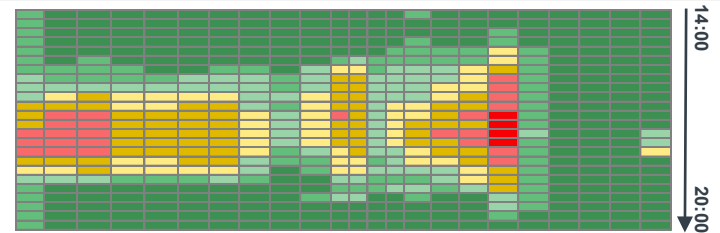
Detailed traffic count data can be obtained from a range of sources, and segmented in various ways; such as by time period and vehicle class

Granular traffic data provides one perspective of traffic performance that can be used to guide operational planning



## Travel speeds, delay, and queuing

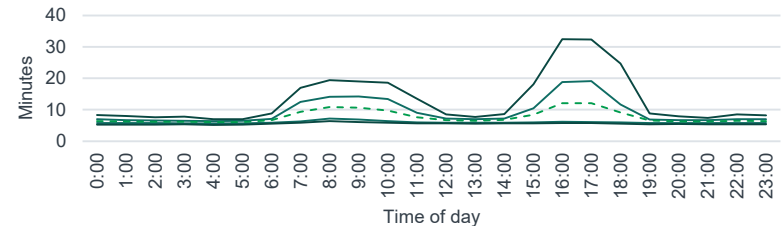
When used in conjunction with other available sources of data (e.g. travel time, and speeds) patterns and impacts can be more readily identified, and options developed to mitigate customer impacts



## Travel time variability

The inherent/natural variability of both the traffic and travel time related data reflects the natural variations in traffic conditions, customer timing, accidents, weather, etc.

Variability highlights the limitations associated with using detailed data for long term forecasts and the importance of context in establishing meaningful conclusions

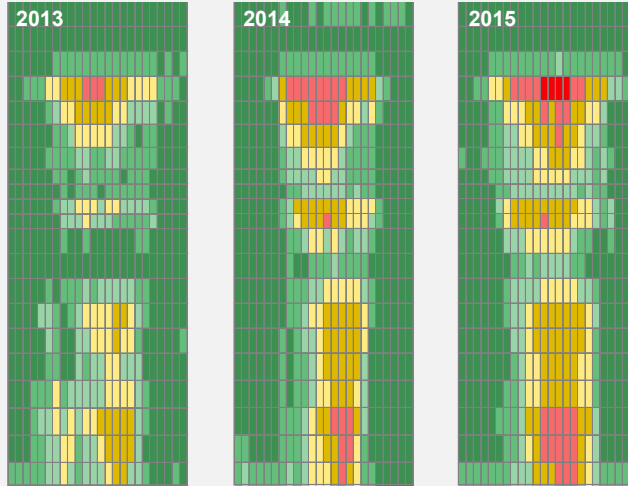
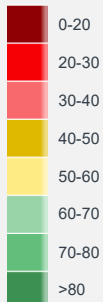


# TIME BASED ASSESSMENTS HIGHLIGHT TRENDS AND SUPPORT PLANNING

Data analytics provides the basis for identifying localised issues and monitoring evolution over time, allowing for targeted interventions to prevent emerging issues

Increasing congestion and delay are key triggers for capacity enhancements and the introduction of supporting technologies

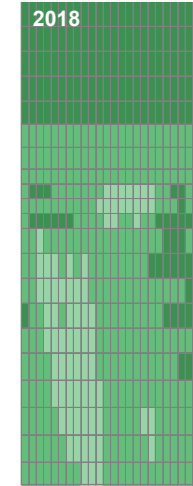
Speed (km/h)



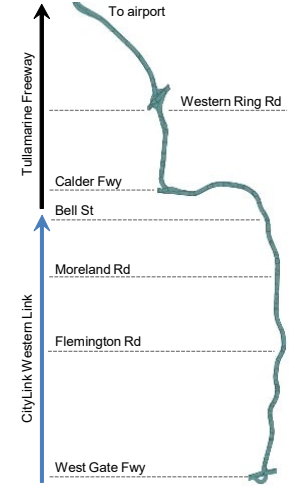
CityLink  
Tullamarine  
Widening  
works

Progressive increases in demand result in a build up in congestion, slower speeds, and customer delays

Post-CTW



14:00 20:00



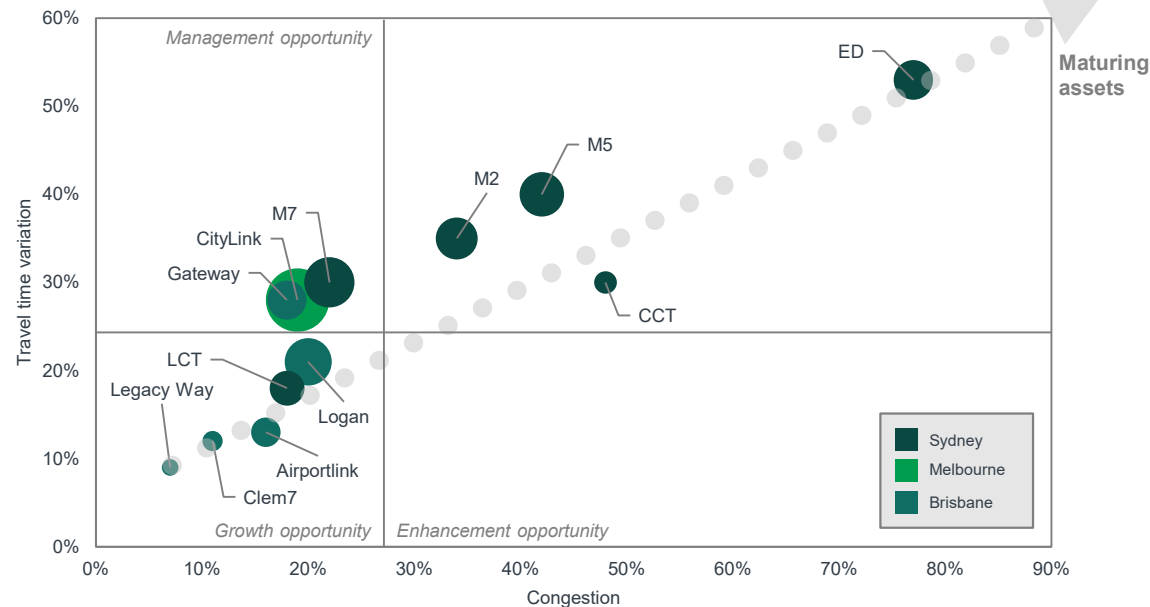
# COMPARATIVE ASSESSMENTS HIGHLIGHT THE EVOLUTION OF ASSETS AND OPPORTUNITIES

Using aggregate annual data to assess, and understand relative asset performance provides opportunity to compare across the portfolio

- Opportunities and focus areas regarding demand and supply
- Potential learnings across the portfolio
- Natural evolution of assets as they move from growth to maturity

Collectively these guide intervention strategies and a proactive approach to the management and enhancement of the facilities to continually improve performance

## Congestion and reliability assessments



Note: The identified boundaries indicated on the chart are indicative only



# LONG TERM FORECASTING USING STRATEGIC TRAFFIC MODELS

## Strategic traffic models

- Approach founded on proven methodologies developed over 40+ years
- Include roadway and transit networks, population and employment, and economic data to estimate expected demand
- Mathematical equations used to represent travelers decision making process of: “why”, “when”, “where”, and “how” to make the trip, and “what” route to follow to complete the trip
- Results for choices combined so that aggregate impacts of roadway vehicle volumes on average travel times can be determined
- Capture fundamental relationships between traffic demand and the key drivers (population, employment, households, wealth, etc.)
- Explain the interaction between residential areas, employment centres, and other trip generators
- Simulate dynamics of the future land use and network development and any potential shifts from existing conditions
- Only forecasting tool to consider roadway capacity explicitly
- Provide information on traffic patterns and congestion levels for project and wider network (competing facilities, feeder roads, capture area, patterns, etc.)
- Segments driver population based on socio-economic background, explains decision making and measures sensitivities

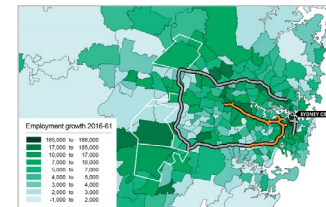
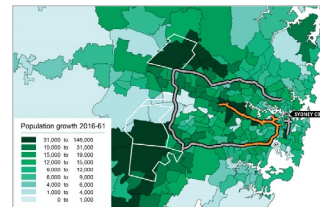
Transurban strategic models are based on a conventional four step model, which is used to capture both demand and supply, reflecting the relationship between traffic demand and the key drivers of population, employment, households, and wealth

## Land use and demographics

Land use and demographics represent fundamental aspects of forecasting, which define the overall level of demand in the network and the relative patterns of usage across the city

Base land use and socio-demographic information has been sourced from Deloitte Access Economics (DAE) in order to ensure the independence and robustness of the information

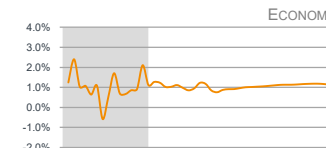
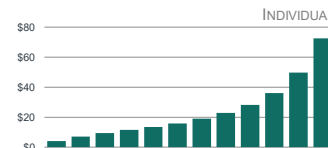
Information has been validated by the in-house Land Use team, and then supplemented with a range of alternative scenarios



## Wealth and macroeconomics

Economic information has been developed for both Individuals and the broader economy to establish key characteristics associated with wealth (influencing individuals ability to pay tolls), and the broader economy (dictating employment and freight related activity)

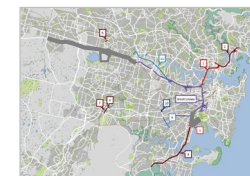
This has been sourced from DAE and integrated into the calibration of the models



## Networks

Major network changes can have significant impacts on traffic. These are sourced from available information (such as government planning documents) and examined to establish the timing and materiality of any impacts due to changing congestion levels and drivers of route choice decisions

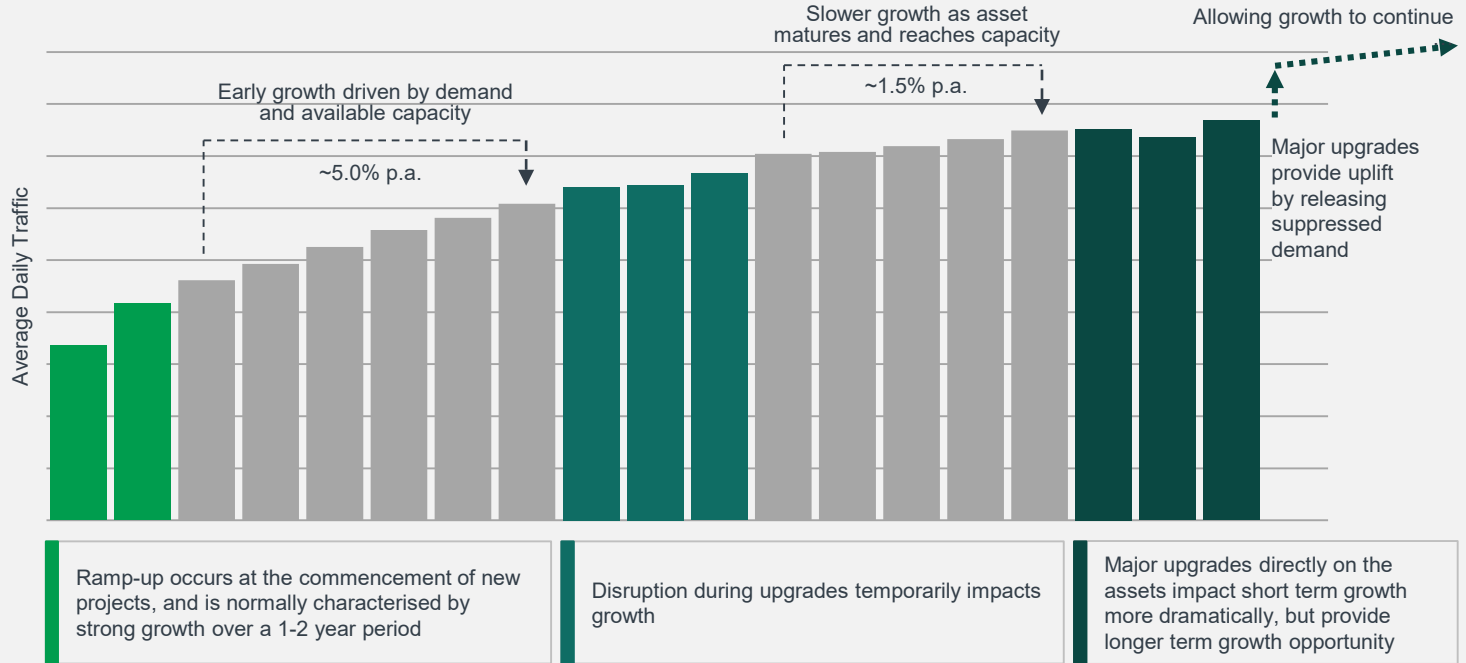
ID	Project	Description
1	Western Harbour Tunnel	Tunnel from the end of WestConnex to Gore Hill Frey
2	Beaches Link-Lang	Tunnel bypassing Military Rd and connecting Ernest St with Condonville St
3	FS Short	4 Lanes from Military Rd to Rockdale
4	FS Long	4 Lanes from Rockdale to Luffield
5	Prospect Way	New Link
7	Macdonald Av.	6 Lanes from Newbridge Rd to US (Macdonald Intermodal Freight Terminal)
8	Macdonald Av./Newbridge Rd/ Newbridge Rd	Intersection upgrade (Macdonald Intermodal Freight Terminal)
9	King Georges Rd	Completion of 6 lanes for remaining sections including grade separation at Wilson Av.
10	King Georges Rd	Centenary Rd and Punchbowl Rd grade separations
11	Prospect West/Mapo	Additional main line running between Sydney CBD and Parramatta CBD



# FORECASTING ASSET LIFECYCLE

Assets evolve over time as external factors change

Lifecycle is influenced by drivers familiarity with the asset, corridor and city fundamentals, changing conditions (such as tolls and enhancements), and localised constraints (such as capacity)





## Recommendations

## Cautions / adjustments

## Express lanes

### General considerations

- Asset level projections
- Annual aggregation level
- Vehicle classes; aligned with tolling arrangements
- Alignment with regional fundamentals of population and employment growth
- Reflecting broad based economic factors
- Reflecting relative income changes

- Major network changes over time need to be considered and reflected

Given the nature of express lanes, toll rates are not fixed; hence:

- Forecasts can more readily be developed based on revenues (as toll rates and traffic levels are interrelated and 'tradeable')
- Forecasts should reflect tolled vehicles (noting that HOV3+ vehicles are toll free)

### Asset specific considerations

- Asset specific tolling regime
- Capacity constraints
- Lifecycle stage:
  - Ramp-up
  - Mature

- Local network enhancements, both on and off asset
- Disruptions from works programs
- Toll rate changes – material/rapid

# FOOTNOTES

# STRATEGY AND FUTURE OUTLOOK

## Slide 9

1. Project completion dates shown are approximations and are subject to final schedules. The government completion estimate in any given jurisdiction is still the most appropriate estimate for media reporting and commentary. Estimated spend reflects Transurban's proportion of the total project cost, net of government contribution at time of announcement.
2. Represents Transurban's projected proportional capex contribution, net of State Works Contribution, to completion of WestConnex.
3. WGTP cost to Transurban of \$4.0 billion of the total \$5.5 billion WGTP D&C and associated costs (inclusive of Webb Dock Access and Monash Freeway Upgrade).
4. Transurban's offer also includes an additional payment to VDOT of USD45 million at financial close and USD232 million at service commencement in lieu of forecasted toll revenue sharing commitments under the current concession agreement.
5. Development framework agreed with VDOT.

## Slide 12

1. United Nations, World Urbanization Prospects: The 2018 Revision, custom data acquired via website.
2. McKinsey Global Institute 2017 – Bridging infrastructure gaps has the world made progress?
3. Trading Economics 2019 – “Country List Government Debt to GDP – G20” (Accessed April 2019).
4. International Monetary Fund 2014 – Trends in public investment.

## Slide 14

1. BloombergNEF 2019 – BNEF Summit New York Innovation Forum.
2. Disengagements are deactivation of autonomous mode when a failure of the autonomous technology is detected or when the safe operation of the vehicle requires the human test driver to disengage and take manual control of the vehicle.
3. BloombergNEF 2019 – Global Electrified Transport Market Outlook 1Q 2019.
4. University of California (2018) – Daniel Sperling and Austin Brown; transit data from APTA, taxi data from US Census, projections from Schaller Consulting, 2018.
5. BloombergNEF 2019 – Governments brace for imminent drop in fuel tax revenue.

## Slide 18

1. Five year, USD95 million Surface Transportation Funding Alternative grant program.

# CAPITAL STRATEGY

## Slide 38

1. Calculated using proportional drawn debt at 31 December 2018.
2. AUD debt only, calculated using proportional drawn debt exclusive of issued letters of credit.
3. At 31 December 2018. A total of USD967 million and CAD650 million of corporate debt is not swapped to AUD, this debt forms part of the Group's net investment hedge relating to the US and Canadian entities respectively.
4. CAD, CHF, EUR, NOK and USD debt converted at the hedged rate where cross currency swaps are in place. USD debt is converted at the spot exchange rate (0.7060 at 31 December 2018) where no cross currency swaps are in place. CAD debt is converted at the spot exchange rate (0.9623 at 31 December 2018) where no cross currency swaps are in place. Proportional drawn debt inclusive of issued letters of credit.

## Slide 40

1. Project completion dates shown are approximations and are subject to final schedules. The NSW Government completion estimate is still the most appropriate estimate for media reporting and commentary.

## Slide 41

1. Effective tax rates may differ to the corporate tax rate due to a number of items, including timing differences in accounting vs. tax depreciation and amortisation, intragroup funding arrangements and asset holding structure.
2. WestConnex to convert to flow-through taxation entity in the event of a NSW Government sell-down.
3. Certain distributions made by the A25 are subject to withholding tax on payment.
4. Certain distributions made by US assets are subject to withholding tax on payment. US assets subject to tax in United States of America.
5. Taxed as a partial flow-through vehicle.

# PROJECT DELIVERY

## Slide 45

1. As at 30 June 2013 and 31 March 2019. Includes employees and contingent workers.

## Slide 46

1. Approximate project construction timeframes. WestConnex shown from acquisition date.

## Slide 50

1. Map is for illustrative purposes only and is not indicative of distance, proximity or scale.

## Slide 51

1. Map is for illustrative purposes only and is not indicative of distance, proximity or scale.
2. In 2031, based on Deloitte Access Economics estimates and Transurban's own internal estimates and assessments. Expectations relating to population and employment growth are based on a number of assumptions including fertility and mortality rates, overseas and interstate migration, land use, the form and timing of government planning and infrastructure policies, demographic trends and macroeconomic factors and there can be no assurance that these projections are accurate and actual outcomes may differ materially from such projections because events and actual circumstances frequently do not occur as projected.
3. TfNSW Freight and Ports Plan 2018 – 2023, September 2018.

## Slide 52

1. Project completion dates shown are approximations and are subject to final schedules. The government completion estimate in any given jurisdiction is still the most appropriate estimate for media reporting and commentary.

# NORTH AMERICA DEVELOPMENT

## Slide 56

1. Inframation data: <https://inframationnews.com/deals>.
2. FY19 bar represents 1H19 North America revenue only. 2H19 revenue is shown for indicative purposes only and should not be considered as a Transurban forecast.
3. Transurban reached financial close on acquiring A25 on 5 June 2018.

## Slide 60

1. Program allowing free travel for electric vehicles on A25 commenced prior to Transurban acquiring A25.



# TAX INSIGHT SESSION

## Slide 66

1. There are no tax groups under THT. Each sub-trust is treated as a flow-through trust.
2. WestConnex operating entities are operating trusts and are not part of a tax consolidated group.

## Slide 68

1. InterLink Roads is a stand-alone entity.

## Slide 71

1. Taxed as a partial flow-through vehicle.

## Slide 73

1. For more information on Transurban Group's approach to tax, see Transurban Group's FY17 Tax Transparency Report: <https://www.transurban.com/investor-centre/distributions-and-tax/tax-profile>.

# GLOSSARY

# GLOSSARY

TERM	DEFINITION
<b>1H/2H</b>	First or second half of a financial year
<b>95</b>	95 Express Lanes
<b>495</b>	495 Express Lanes
<b>A25</b>	A25 toll road
<b>ADT</b>	Average Daily Traffic. ADT is calculated by dividing the total number of trips on each asset (transactions on CityLink) by the number of days in the period
<b>ABN</b>	Australian Business Number
<b>ACN</b>	Australian Company Number
<b>AFSL</b>	Australian Financial Services Licence
<b>Airportlink</b>	AirportlinkM7
<b>AMTN</b>	Australian Medium Term Note
<b>ARSN</b>	Australian Registered Scheme Number
<b>ATO</b>	Australian Taxation Office
<b>AUD</b>	Australian Dollars
<b>CAD</b>	Canadian Dollars
<b>CAV</b>	Connected and Automated Vehicles
<b>CCT</b>	Cross City Tunnel
<b>CHF</b>	Swiss Franc
<b>CTW</b>	CityLink Tulla Widening
<b>DAE</b>	Deloitte Access Economics
<b>D&amp;C</b>	Design and Construct
<b>DOT</b>	Department of Transport
<b>DRIVE</b>	Direct Road Investment Vehicle. Transurban entity that holds an interest in the 495 and 95 Express Lanes
<b>ED</b>	Eastern Distributor
<b>EUR</b>	Euros
<b>FFO</b>	Funds From Operation
<b>FY</b>	Financial year 1 July to 30 June

TERM	DEFINITION
<b>Gateway</b>	Gateway Motorway
<b>GBB</b>	Go Between Bridge
<b>GDP</b>	Gross Domestic Product
<b>GFC</b>	Global Financial Crisis
<b>GLIDe</b>	Transurban's tolling back-office system
<b>GUN</b>	Gateway Upgrade North
<b>GWA</b>	Greater Washington Area meaning northern Virginia, Washington D.C., areas of Maryland and the surrounding metropolitan area
<b>GPS</b>	Global Positioning System
<b>HCV</b>	Heavy Commercial Vehicle
<b>HOT</b>	High Occupancy Toll
<b>HSE</b>	Health, Safety and Environment
<b>ICB</b>	Inner City Bypass
<b>L1/2 CAV</b>	Driver Assisted or Partial Automation Connected and Automated Vehicles
<b>L4/5 CAV</b>	High Automation or Full Automation Connected and Automated Vehicles
<b>LCR</b>	Law Companion Ruling
<b>LCT</b>	Lane Cove Tunnel
<b>LCV</b>	Light Commercial Vehicle
<b>LEP</b>	Logan Enhancement Project
<b>LGW</b>	Legacy Way
<b>Linkt</b>	Transurban's retail tolling brand
<b>Linkt Assist</b>	Specialist team dedicated to helping customers in social and financial difficulty
<b>LinktGO</b>	LinktGO is a mobile phone application which uses GPS to track a customer's trip. The app is perfect for occasional toll road users as the customer does not require a tag
<b>Logan</b>	Logan Motorway
<b>M2</b>	Hills M2
<b>M5</b>	M5 West motorway

# GLOSSARY

TERM	DEFINITION
<b>M7</b>	Westlink M7
<b>MRE</b>	Military Road E-Ramp
<b>NCX</b>	NorthConnex
<b>NOK</b>	Norwegian Krone
<b>NSW</b>	New South Wales
<b>NWRG</b>	NorthWestern Roads Group
<b>O&amp;M</b>	Operations and Maintenance
<b>P3</b>	Public Private Partnership
<b>PPE</b>	Personal Protective Equipment
<b>QLD</b>	Queensland
<b>RMS</b>	Roads and Maritime Services is the New South Wales government agency responsible for transport infrastructure
<b>RUC</b>	Road User Charging
<b>S&amp;P</b>	Standard and Poor's
<b>State Works Contribution</b>	The capital contribution for WestConnex M4-M5 Link to be provided by RMS. This is separate to the NSW Government's 49% share of the equity funding commitment for M4-M5.
<b>THL</b>	Transurban Holdings Limited
<b>THT</b>	Transurban Holding Trust
<b>TIL</b>	Transurban International Limited
<b>TQ</b>	Transurban Queensland. Name change post acquisition of Queensland Motorways (QM). Transurban has a 62.5% interest in TQ
<b>TfNSW</b>	Transport for New South Wales
<b>USD</b>	US Dollars
<b>USDOT</b>	United States Department of Transportation
<b>V2X</b>	Vehicle to Everything
<b>VDOT</b>	Virginia Department of Transportation
<b>VIC</b>	Victoria
<b>WCX</b>	WestConnex
<b>WGTP</b>	West Gate Tunnel Project
<b>ZEV</b>	Zero Emission Vehicles (includes EVs and Hydrogen vehicles)

The logo for Transurban features a stylized green icon on the left, consisting of three horizontal bars of increasing length from top to bottom, resembling a staircase or a signal. To the right of this icon, the word "Transurban" is written in a dark grey, sans-serif typeface.

Transurban