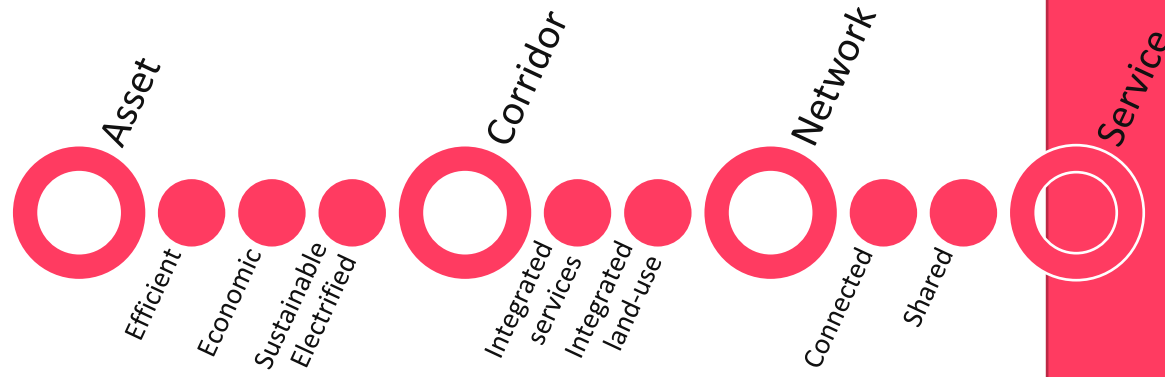




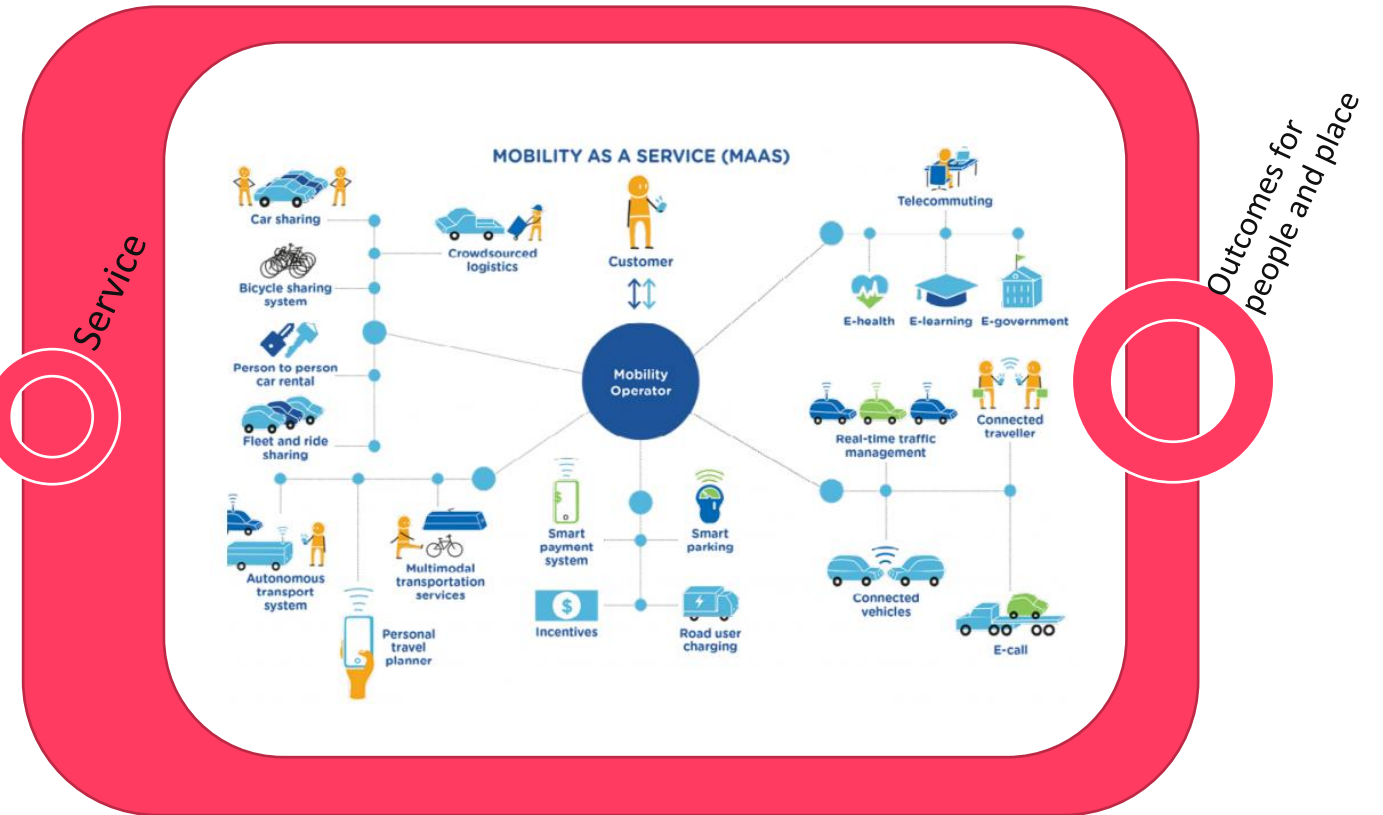
Megaprojects Take Decades. We Cant Afford to Wait

May 2023

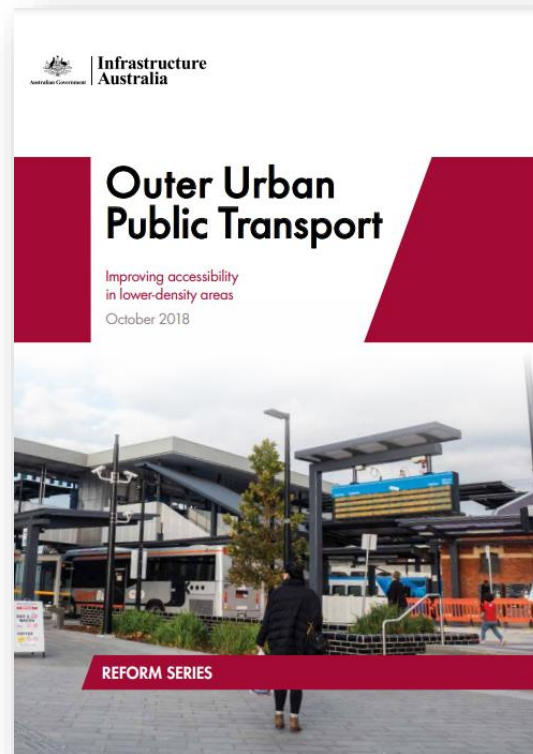
Where is transport headed?



Focus on the customer



How do we deliver network efficiency and better outcomes?



Manage demand

Link value and price

Shift to the best mode

Integrate networks

Integrate movement and place

Don't forget the last mile

Relieve pinch-points

Stage investment

Regulation



Digital working and COVID-19

Demand management



Move work closer to home

80%

Public transport use in Sydney and Melbourne still below pre-Covid levels

30%

Workers expected to work from home post-COVID, up from 10%.

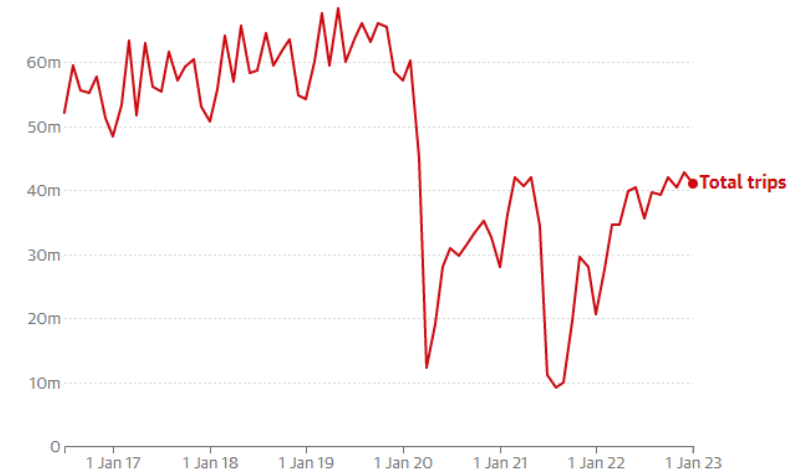
16%

Working from home is on average (from 16,000 people) more productive according to a Stamford study

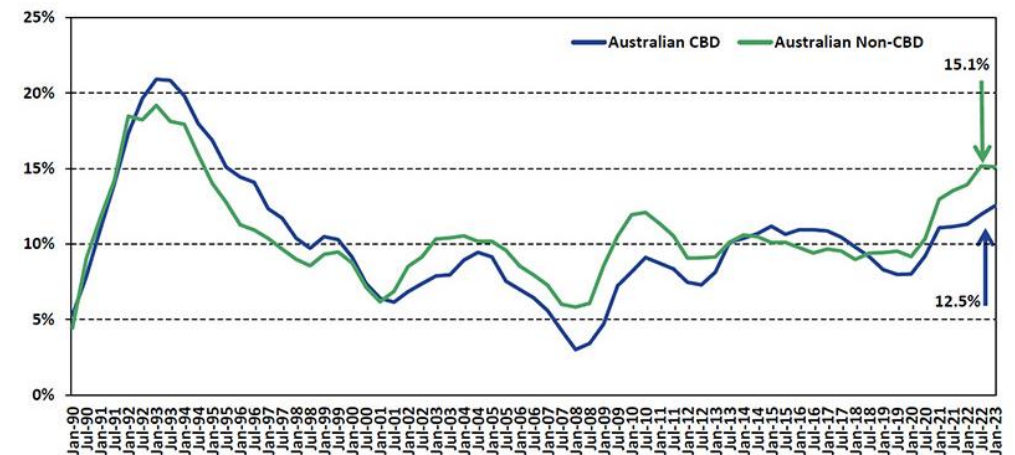
77%

of workers more productive according to connect solutions

Monthly public transport trips in Sydney to January 2017 to January 2023



Australian CBD v Non-CBD-vacancy, 1990 to 2023



Australian CBD vacancy increased while the Non-CBD vacancy slightly decreased

How do we keep the good?

Work-from-home

Work-from-anywhere

Flexible working hours

Staggered school and work
hours

Travel plans





High occupancy toll lanes

Value and pricing



From a culture that
embraces expediency



Lightning Lane

Enjoy the Convenience of Spending Less Time Waiting in Line

Get quicker entry to select attractions by purchasing
arrival windows for our Lightning Lane entrances
throughout Disneyland Park and Disney California
Adventure Park.



Express lanes apply the same **logic** to a trip to your kids or the airport

Why do people get cleaners?

Why do people pay for an ironing service?

Why do people get pre-made meals?

We all pay for time... its just not overt.

- High occupancy tolled / Express lanes provide the guaranteed service people expect when they pay a toll by dynamically regulating the toll to guarantee journey times
- Cars with multiple occupants travel for free.
- Benefits include:
 - Guaranteed journey times
 - Improved journey times for car-pooling
 - Optimised asset use





Busways and prioritisation

Mode shift



Addressing the PT image problem

“A man who, beyond the age of 26, finds himself on a bus can count himself as a failure.” - (potentially) Baroness Margaret Thatcher

“They get teenager to college,. They drive pensioners to see their friends. They connect people to jobs they couldn’t otherwise take... They sustain town centres, they strengthen communities and they protect the environment. They are lifelines and they are liberators.” – Boris Johnson



Brand and frequency

BRT-lite

19% increase in capacity on the corridor

5.9 million trips in the first 12 months

90% customer satisfaction



Timeline of Events for the B-Line Bus Service	
Event Date	Development within the Project
November 2015	Project announced by NSW Government
December 2016	Major contract awarded
December 2016	Public display / consultation opened
February 2017	Public consultation closed
February 2017	Major works begin
October 2017	Newport community consultation
November 2017	B-line service begins
July 2018	Newport extension cancelled
July 2019	Cremorne tidal flow

Visibility and accessibility

Central Area Transit

Staged roll-out of 5 routes since 1996 (with similar suburban services in Fremantle, Joondalup, Rockingham and Midland). Services feature

- Distinctive livery
- High (10 minute frequency)
- Low emission vehicles
- Short-wheel base to service urban core

5% year-on-year patronage growth on routes for first four years





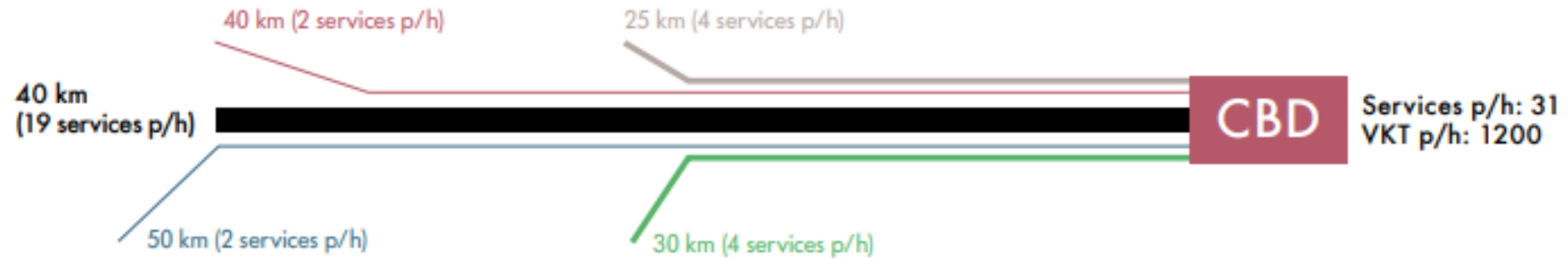
From trips to journeys

Mode integration

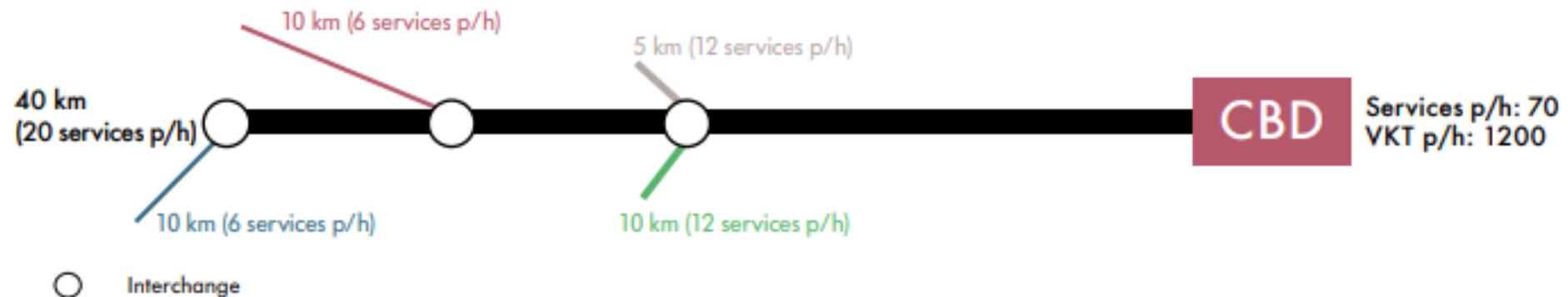


Overcoming the pain of interchange

Traditional unconsolidated



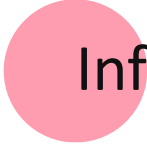
Integrated



Network
integration
requires broad
thinking



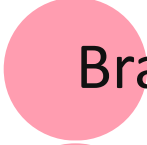
Physical integration



Information integration



Journey planning integration



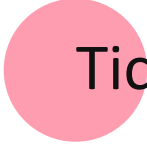
Brand integration



Experience integration

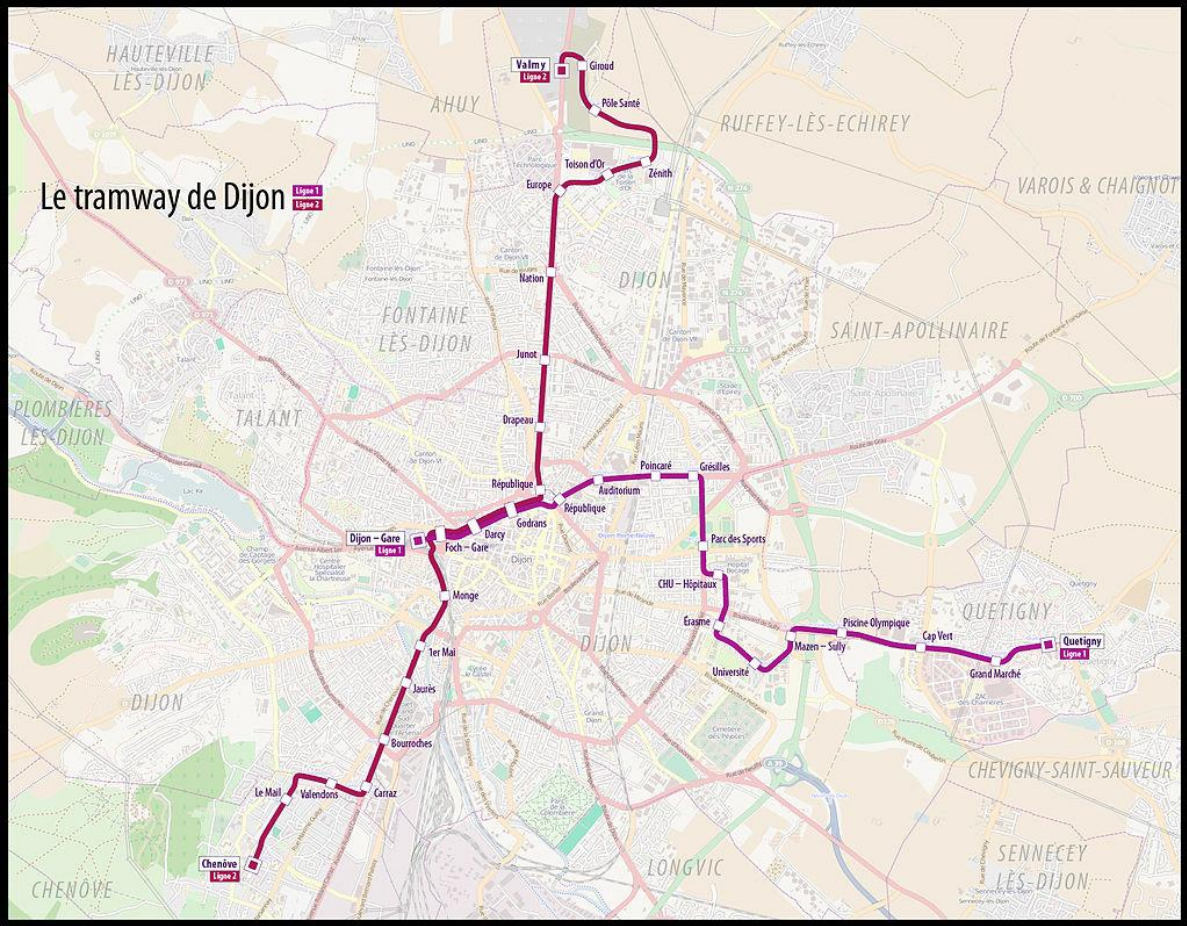


Fare integration



Ticket integration

The French connection



Newcastle transport



The French model adopted in Oz

The first multi-modal transport concession in Australia

Incorporates innovative service design including:

- On-demand bus routes
- Autonomous shuttles
- Operator (not client) designed network
- Stand-alone branding

2% year-on-year patronage decline, reverse with single year **20% increase**





Accessibility, amenity and identity

Place integration









Movement & place

Operationalising outcomes for people and place

The movement and place framework balances the accessibility needs of different types of road users across the network

Movement and Place is a framework for identifying **which roads serve what purpose**, recognising that some transport facilities are more about the movement function, and others about the place (land access) function, and that streets themselves act as places and serve multiple modes.

- Roads that are high place and low movement should have slower speeds and be oriented to people on foot (lower right).
- Roads that are high movement and low place (limited access motorways, e.g.) may prohibit people on foot (upper left).





Door-to-door

Last mile



A Singaporean bus stop

What am I?

- Cafe
- Playgroup
- Library
- Rooftop garden
- Bicycle parking
- Phone chargers
- Comfortable furnishing
- Design from local artist



Uber for the price of the local bus?

After 30 years, regional dial-a-ride goes digital.

Public transport typically operates on a fixed schedule that attempts to aggregate and cater to when and where people want to travel. This approach optimises journeys to the timetable period

On-demand and demand responsive transport caters for changes in demand in real time, optimising travel and journeys to the day.

38% of journeys not serviceable by regular bus service



Operating model	Route variability	Stop location flexibility	Use	Example	Illustration
Demand responsive	High. Fast route between confirmed pick-up and setdown locations.	Fixed to flexible	Low density, intra-urban	Dial-a-ride, e.g. LinkSA	
Capacity responsive	High	Flexible	Low density, intra-urban or inter-urban	Carpool, e.g. Liftango or Uberpool	
Local pick-up	High	Flexible	Various	Carpool, e.g. Liftango or Uberpool	
Single destination	Moderate. Various pick-ups within predefined boundary, single destination.	Origin flexible, destination fixed	Servicing to a trunk line or trip generator	On-demand bus, e.g. Bridj or Keoride	
Single origin	Moderate. Single origin, destinations within predefined boundary.	Origin fixed, destination flexible	Servicing from a trunk line or from a trip generator	On-demand bus, e.g. Bridj or Keoride	



Micro-investments

Pinchpoints



Target the pinch

Easing Sydney's Congestion

Targeted investments

- Bus prioritisation – give PT the jump
- Clearways – maximising the availability of road space
- Smart motorways – including ramping and active lane management
- Advanced signalling technology - allowing travel speed monitoring
- Transport control centre and real-time network management

Measurable benefits

- 30% increase in peak capacity
- 50% increase in reliability
- 30% reduction in accidents





Staged investment and tidal flow

Tidal flow



Different is beautiful

Avoid the big bang

The Zipper Truck

Lane Management Systems (LMS) can increase perceptions of safety and therefore throughput

Typically, a combination of movable medians, candy bar bollards, and in-pavement lights are used to separate the traffic travelling in opposite directions and to show the live lane configurations when we can.

Can increase capacity by **one to two lanes**.



The world's longest one-way road

Adelaide's Southern Expressway was originally built as a reversible one way freeway, and was the world's longest after its completion in 2001.

Between 2010 and 2014, it was expanded and it is now a regular 2-direction freeway.

Delayed investment in new capacity by **more than a decade**..



Stage the investment

Avoid the big bang

Linear network enhancement programs

- Staged investment in rail networks – Sydney Metro, Suburban Rail Loop
- Staged road corridor enhancement - Pacific, Princes and Bruce Highways
- Stage Road network enhancements - NT Beef Roads

Staged network capacity investment

- Brisbane Busway conversion to Brisbane Metro
- Rolling stock capacity enhancements





Parking and kerbside management

Regulation



Regulation and rationalisation

Controlled access

30% of congestion caused by vehicles looking for a place to stop

12% of CBD traffic in Sydney and Melbourne is traditionally light commercial vehicles (LCVs)

Courier Hub reduced operating cost for courier companies by:

- Reducing vehicle movements
- Reduced loading time occupancy
- Reduced CBD driving
- 50% Reduced vehicle emissions



An aerial photograph of a large concrete dam with a walkway. Several people are walking on the path. A teal sunburst graphic is overlaid on the right side of the image.

Thank you

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Avista
Strategy