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Electric Buses Opportunities and Challenges for Melbourne



Image Source: Sustainable-Bus.com

A red electric bus is shown in motion, with a cyclist in a blue jacket and helmet in the foreground. The bus has a green graphic on its side with text and a lightning bolt icon. Passengers are visible through the windows.

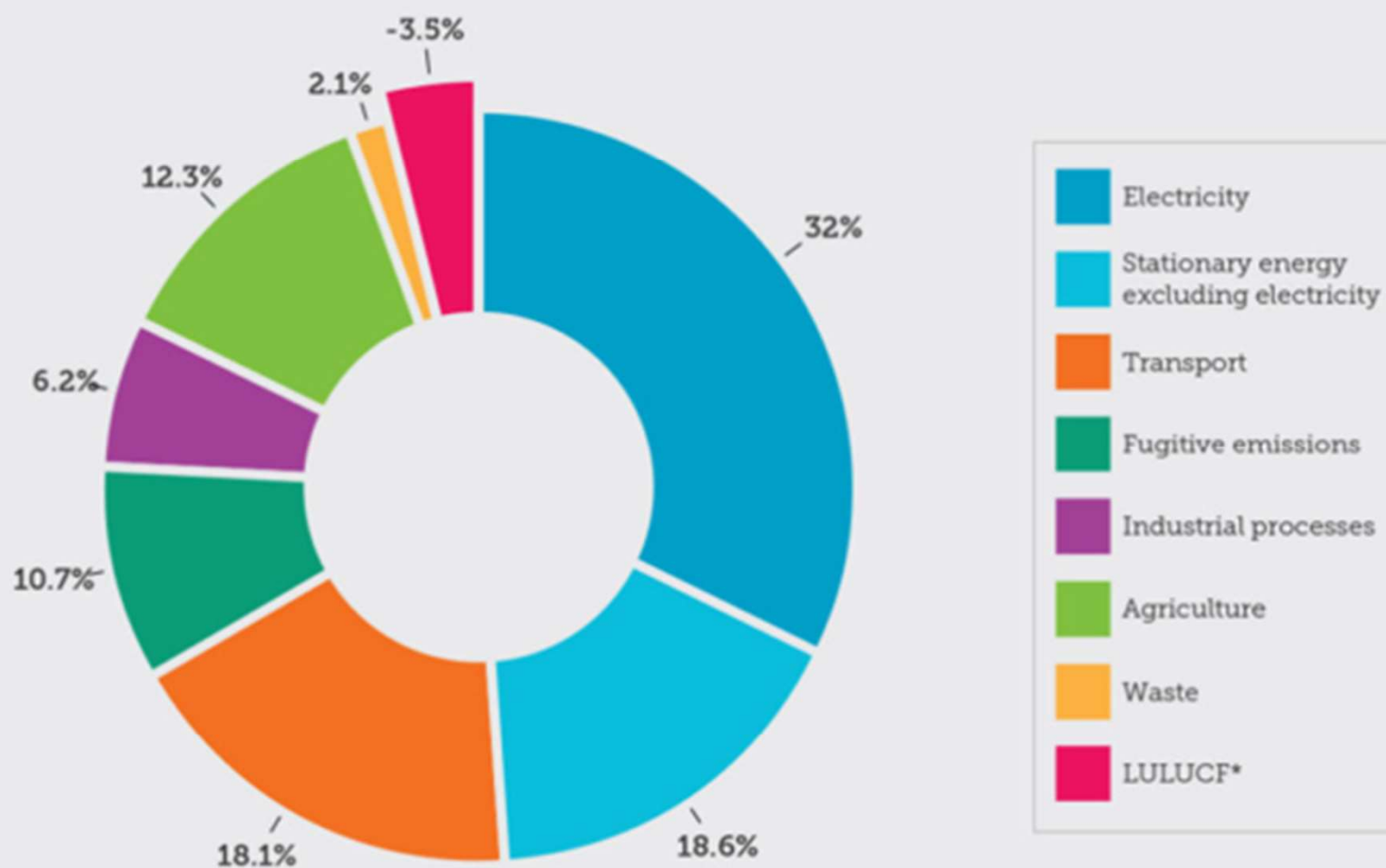
Why is electrifying our bus fleet important?

I'm an electric bus, helping
to improve air quality



Image Source: REUTERS/Toby Melville

EMISSIONS CONTRIBUTION BY SECTOR, AUSTRALIA, QUARTER TO MARCH 2019



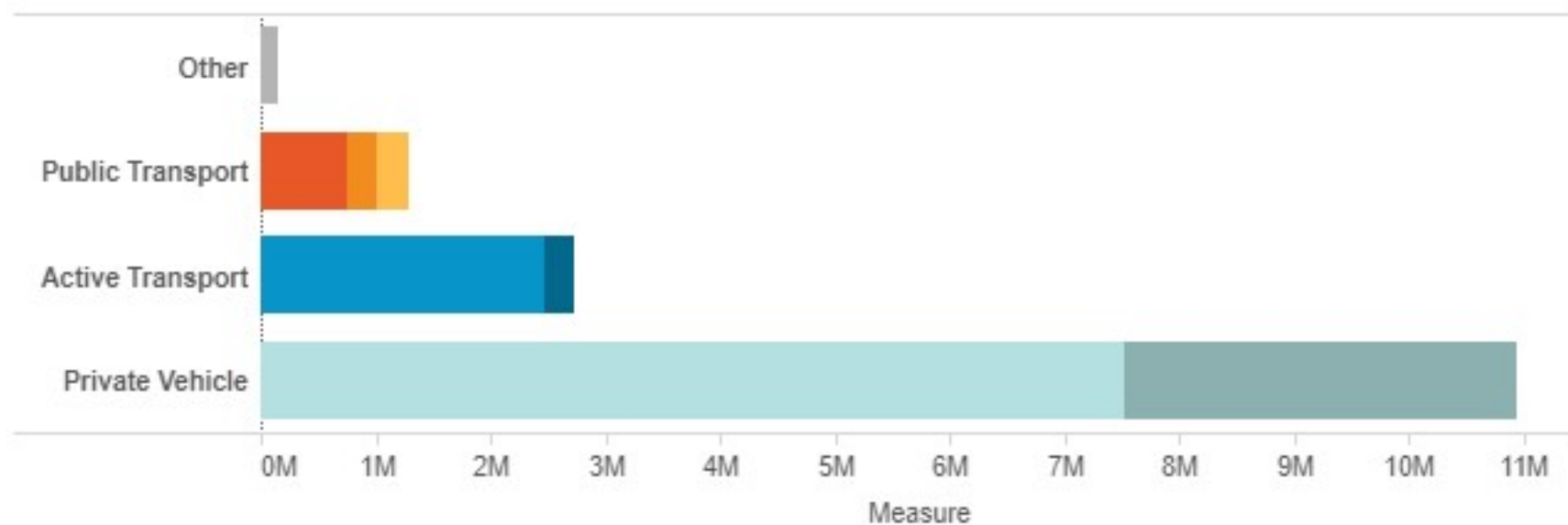
* LULUCF refers to land use, land use change and forestry emissions
Source: Adapted from Australian Government, 2019.

Source: Climate Council 2020

Mode

- Bus
- Tram
- Train
- Bicycle
- Walking
- Vehicle Passenger
- Vehicle Driver
- Other

Number of trips by mode



Data Source: Victorian Integrated Survey of Travel and Activity (2018)

Melbourne's bus network

14 separate franchised bus operators

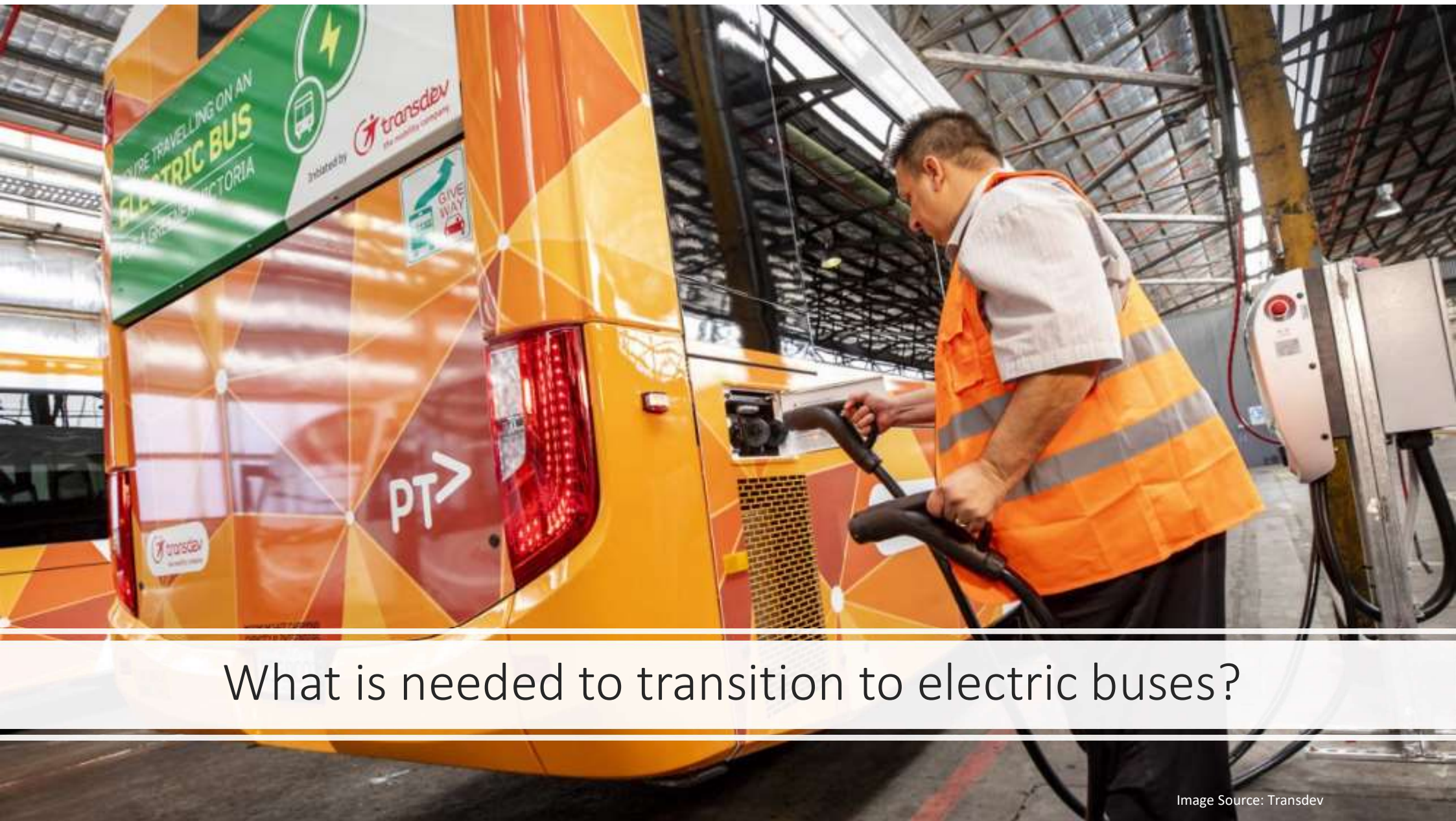
355 routes

2400+ buses

34 depots

Just **3.4%** of journey to work





What is needed to transition to electric buses?

Image Source: Transdev

The electric bus transition will be difficult in Melbourne



Image Source: Wongm

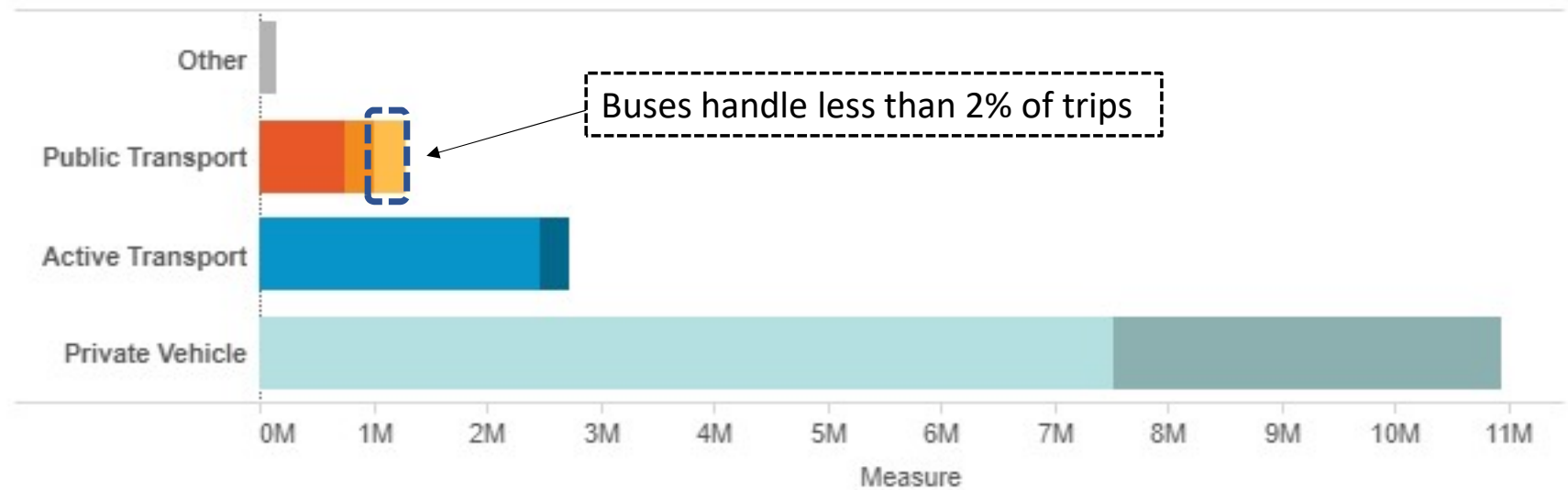


Image Source: The Age

Mode

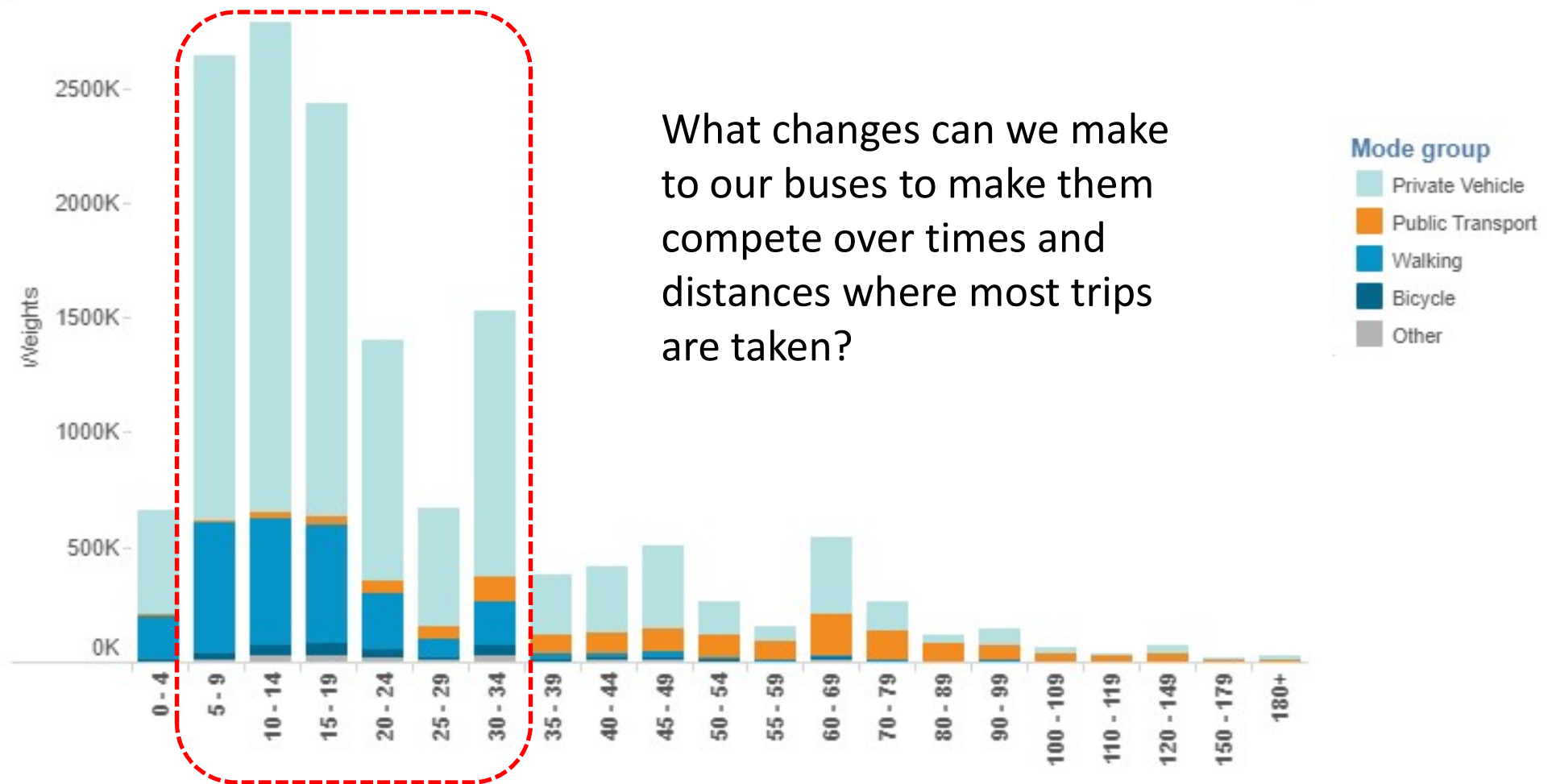
- Bus
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- Train
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- Walking
- Vehicle Passenger
- Vehicle Driver
- Other

Number of trips by mode



Data Source: Victorian Integrated Survey of Travel and Activity (2018)

Number of trips by travel time (mins)



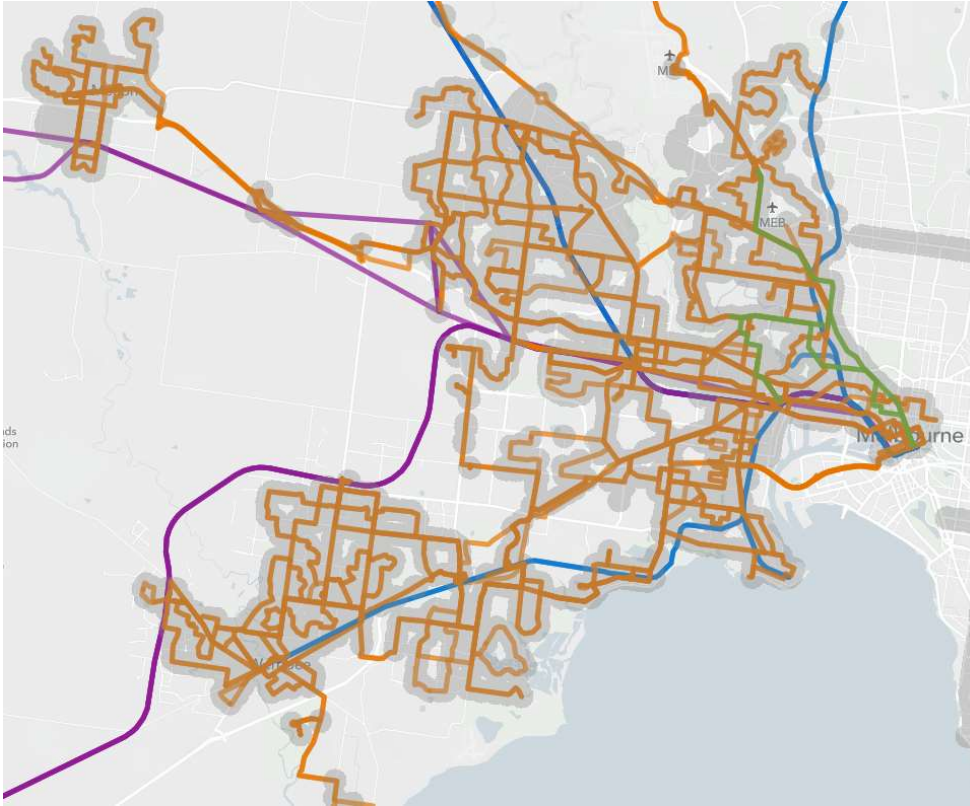
Data Source: Victorian Integrated Survey of Travel and Activity (2018)

What's needed? Fast, frequent and direct services



Image Source: Steve Pemberton RMIT

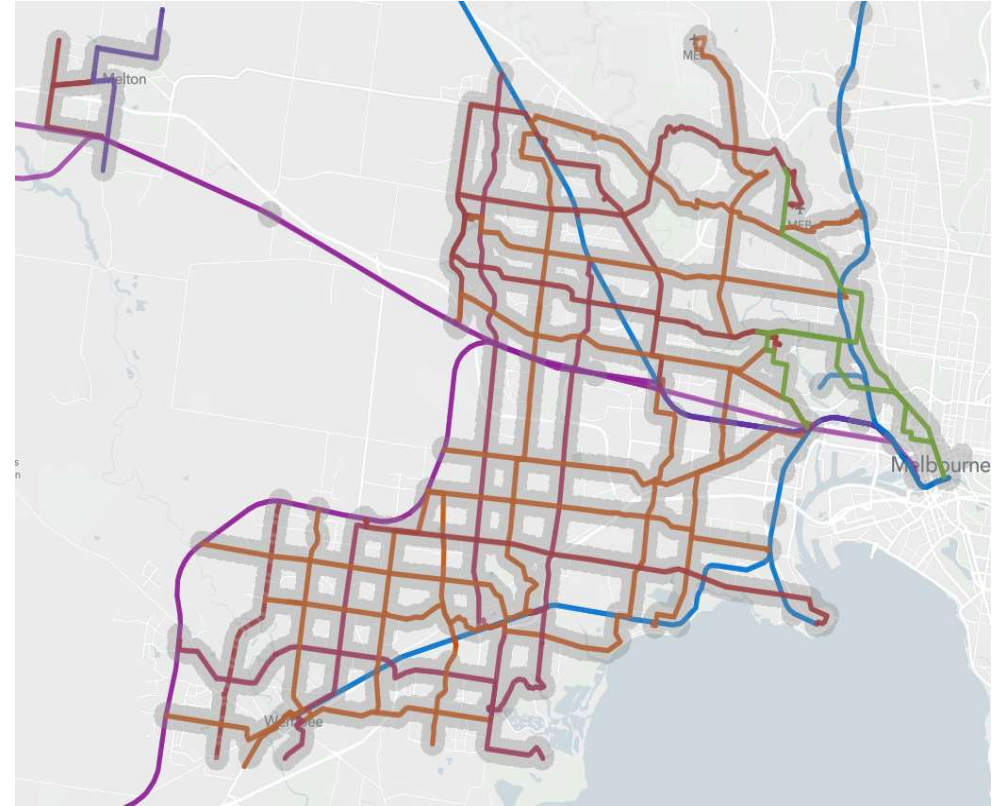
What might it look like? Western Suburbs Example



Now:

Indirect routes, variable infrequent service.

Median 30-minute weekday accessibility: **41,258**

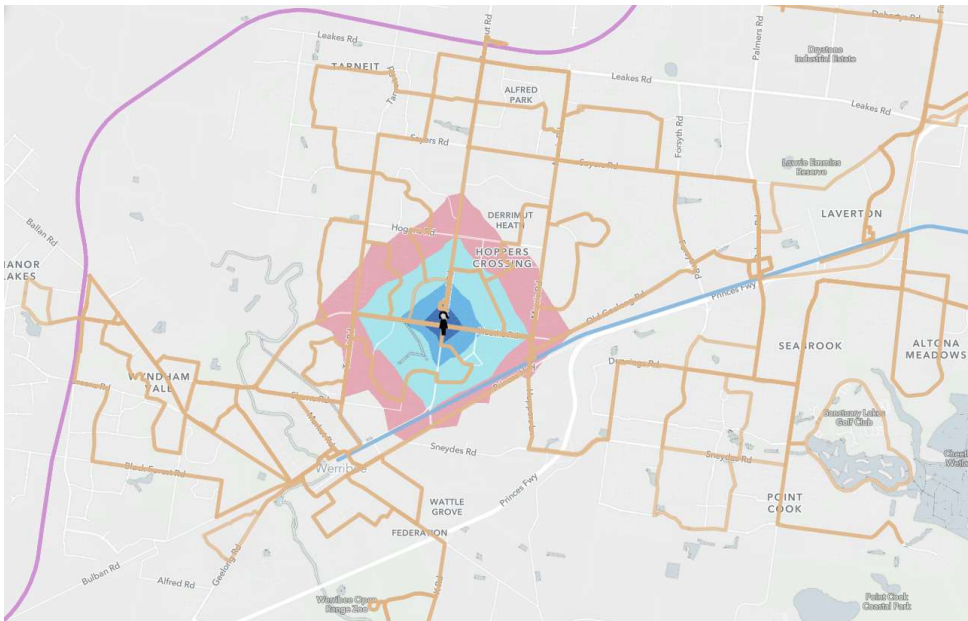


Alternative Network:

Direct routes, 10-minute daytime frequencies

Median 30-minute weekday accessibility: **147,000**

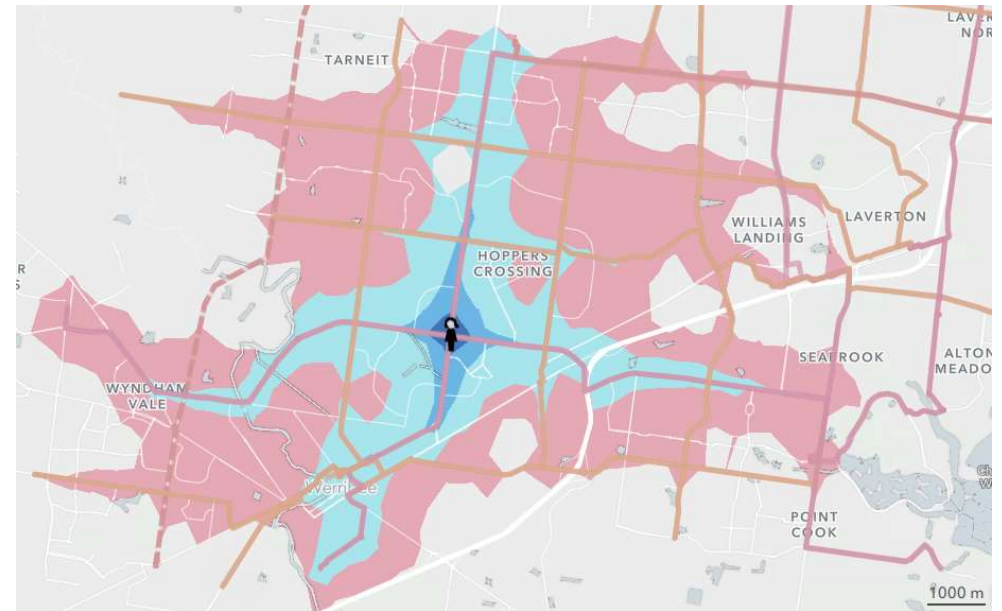
Where can you get to in 30 minutes at 5 pm on a weekday from Pacific Werribee?



Now:

31,279 population

8,267 jobs



Alternative Network:

153,732 population

29,296 jobs



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Thank You



Image Source: Sustainable-Bus.com