

# How an algorithm makes cycling safer and more accessible

**Max Wang**

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## A focus on the car and public transport

- Car remains the dominant mode of transport
- 3.43 million Australians ride bikes for transport or recreation in a typical week
- Over 80% cyclists ride a bike for recreation
- Under 1/3 use bikes for transport

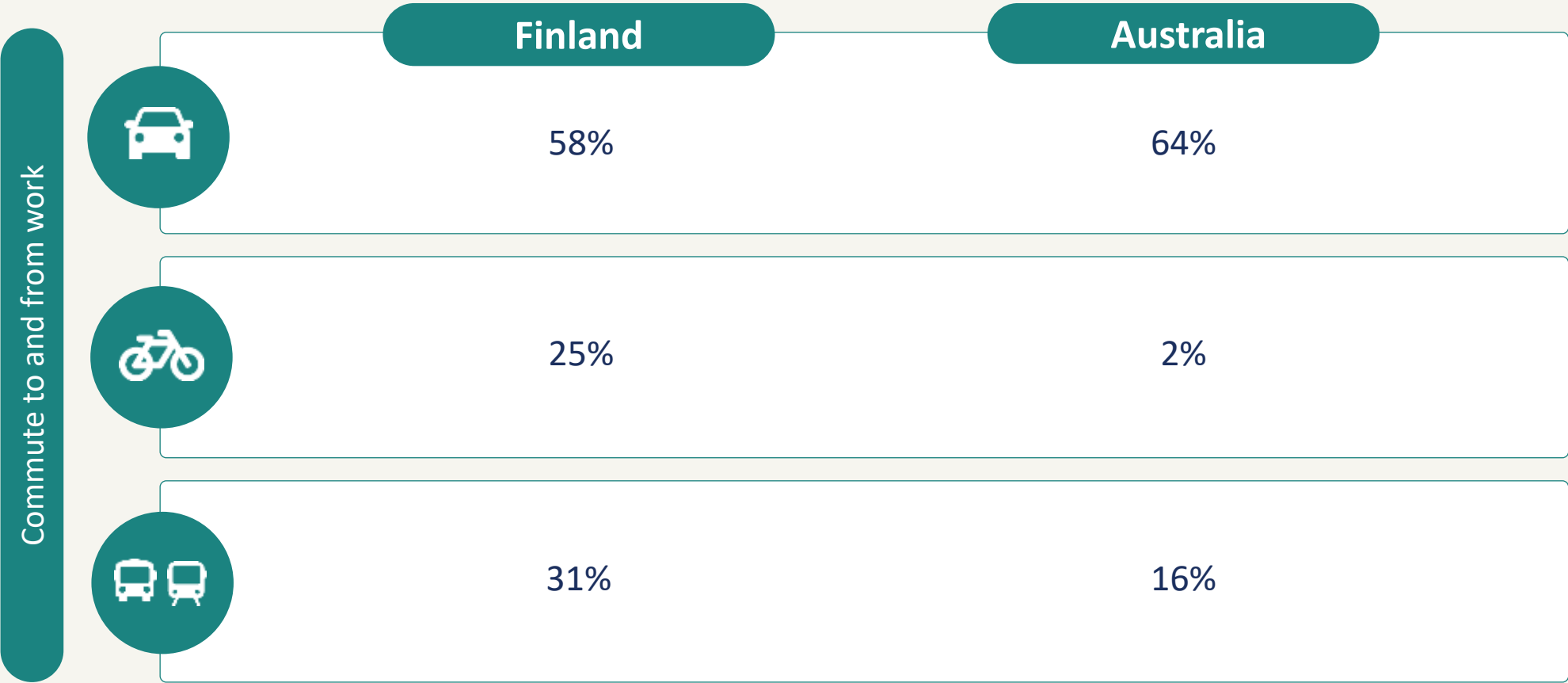
<https://austroads.com.au/latest-news/3.43-million-australians-ride-bikes-for-transport-or-recreation-each-week>



# The Australian travel experience



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# Barriers to entry



What's preventing people from taking up cycling in Australia?

## Perception

### Inconvenient

Perceived as time-consuming and inconvenient compared to alternatives like driving

### Difficult

People are put off by steep roads and routes that are unfamiliar or difficult to navigate

### Unsafe

People feel that cycling is unsafe and don't feel confident to cycle on roads

## Obstacles

### Infrastructure

In many towns and cities, there is a lack of infrastructure in place to support safe cycling



“Many people who currently drive would rather ride a bike, but the biggest barrier to increasing the uptake of bike riding is how unsafe someone feels when riding, particularly in the presence of car traffic.”



Dr Ben Beck,  
Head of Sustainable Mobility and Safety Research at  
Monash University



To increase uptake in cycling, we need to make it safer and more accessible to all

Technology is key to break the barrier for unconfident or new cyclists



# What is Mobility-as-a-Service (MaaS)?



Integration of services,  
designed to make end-to-end  
multi-modal transport as  
seamless, accessible, and  
convenient as possible







# Benefits of MaaS for the user

How MaaS can change the perception and reality of cycling in Australia



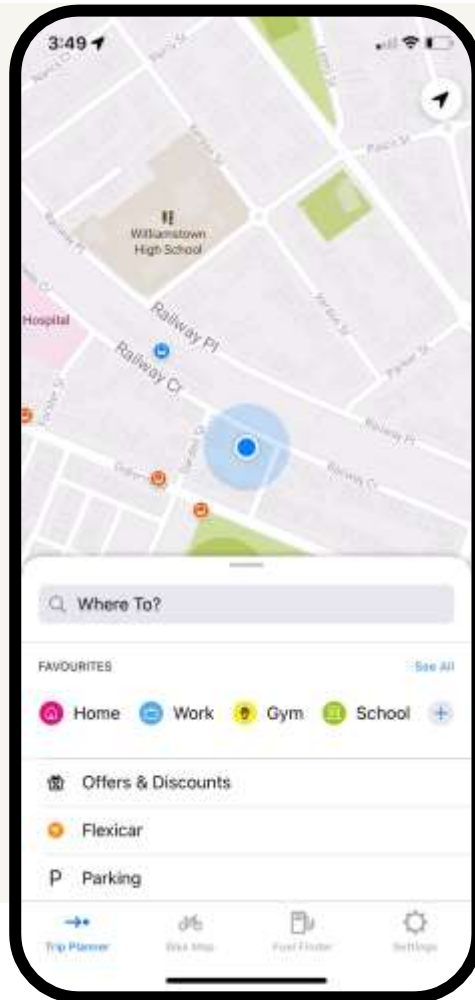
Provide access to safe cycling routes with awareness and selection of cycling infrastructure



Journey planning with turn-by-turn navigation and voice guidance

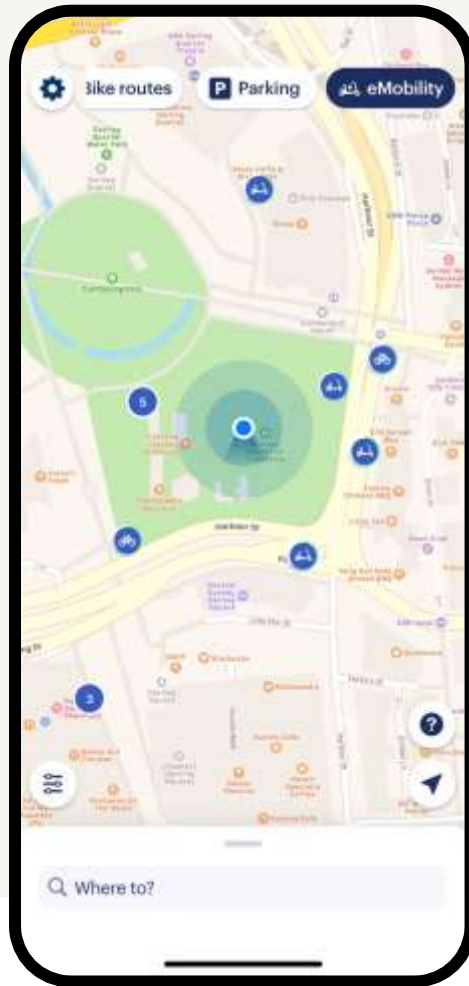


Bringing cycling into the trip with multi modal trip chains and micromobility



## Bike riding

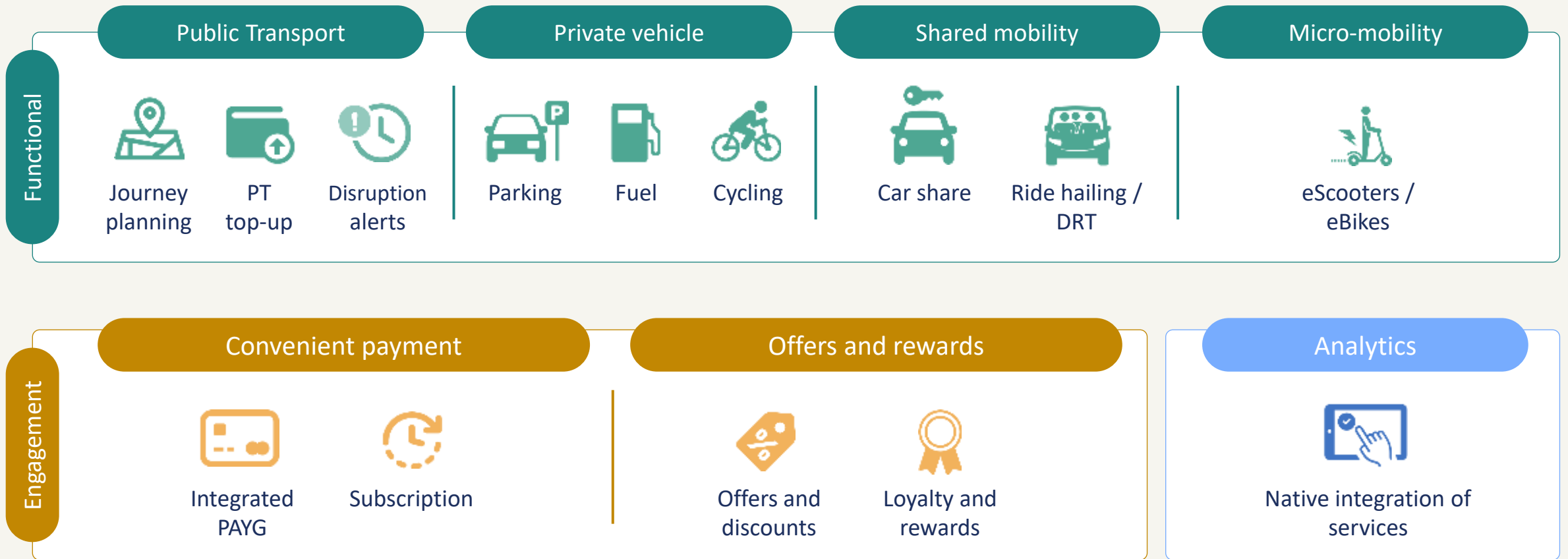
- Colour-coded visual categorisation of roads according to type and 'level of traffic stress'
- Route optimised based on preference – according to quietness of roads, directness, or incline
  - Approx 70% of adults are 'interested but concerned', less than 20% 'confident'
- Navigate safely using turn by turn voice guidance
- Pre-loaded home / work / school 'favourite' addresses, ingested from client CRM system



## Micromobility

- Integration of multiple third-party Transport Service Providers
- View available bikes and scooters, and associated pricing and charge levels
- Routing and parking rules based on local laws and restrictions
  - Melbourne 784k+ trips, 1.8m kms travelled

# Omniway: A modular approach to MaaS





# Benefits of MaaS for Governments and Local Councils

## Making MaaS work for everyone



Encourage uptake in existing infrastructure



Understand travel behaviours and trends



Access to data to make informed decisions around infrastructure planning



Reduce congestion, and manage road 'stress'



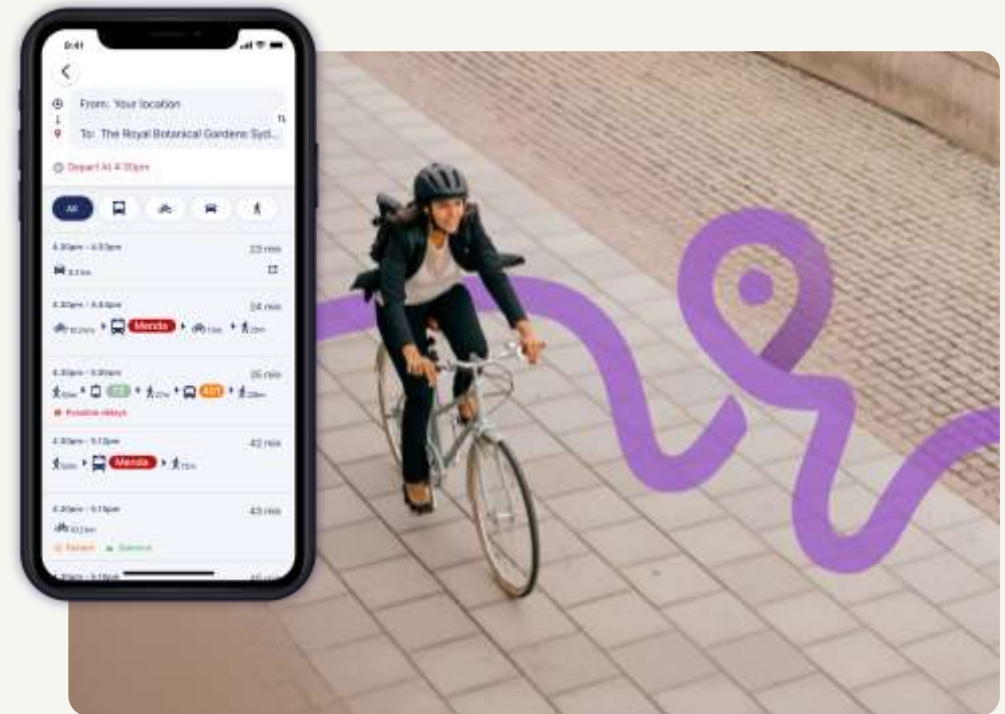
Meet safety and sustainability objectives



## Safe cycling with *ridePlan*

ridePlan's safety algorithm accounts for road infrastructure, such as bike lanes, and different road surfaces

- Developed for TfNSW
- Fully integrated multi modal journey planner for NSW with turn-by-turn navigation and voice guidance
- Option of choosing the quietest, flattest or fastest route.





## Lug+Carrie

- Merri-bek City Council (July - Sep 2022) trialled by mums and dads at three inner-city primary schools.
- Forty riders used the app to conduct school drop-offs and pick-ups.
- Pre-loaded home, school and work destinations to make the adoption of the service easier for triallists.
- Now integrated into Lug+Carrie's onboarding and orientation process



# Using data to understand cycling behaviour



Lug+Carrie and Merri-bek (Melbourne) – Active Transport Trial (July-September 2022)



- **Mission:** ‘zero carbon’ community targets by 2035 -2040
- **Strategy:** to get residents to switch to Active Transport Modes
- **Problem:** safety perception creates a barrier for taking up cycling
- **Solution:** to provide safe routing options and provision of services
- **Feedback:** heat maps demonstrated core routes used by trialists



City of Moreland





# Who we work with



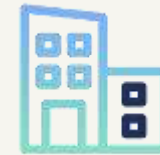
## **Auto clubs & OEMs**

Seeking to broaden member base, augment traditional automobile services and sales



## **Government & Local Councils**

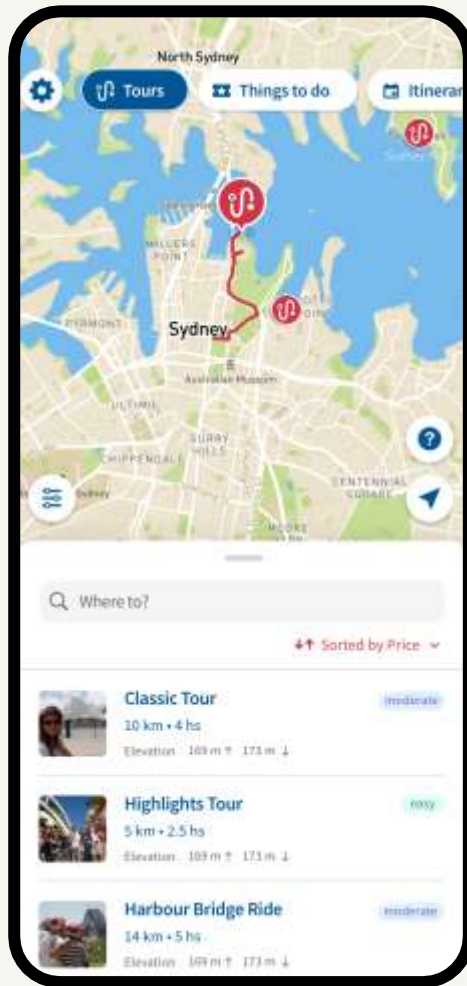
Seeking to effect behaviour change, to improve social and environmental outcomes, and tourism



## **Corporations & Universities**

Looking to optimise transport for staff, students and customers, via offering of transport packages

# What's next



## Tourism

- Points of interest info
- Tailored A>B trips or round trips

## Safety

- SOS call
- View and report incidents

## UX enhancements

- User profiles tailored to cycling preferences
- Turn-by-turn improvements incl speedo

## Behaviour change

- Incentivise certain modes via gamification



Delivering safer, more convenient, and more sustainable travel in Australia.

Find out more: [intelematics.com/omniway](https://intelematics.com/omniway)



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# About Intelematics

Since 1999 we've been building our reputation across all areas of the mobility industry. To make progress we dream big, set bold targets and commit to delivering on our purpose to advance the mobility revolution.

Owned by the Royal Automobile Club of Victoria (RACV), Intelematics has delivered B2B solutions across Australia, North America, and Europe. A deep R&D culture and focus on innovative technologies has earned us the trust of some of the world's most respected technology and automotive brands. We're here to take on the challenge of making mobility safer, faster and more sustainable.

