



# Amy Gillett Foundation Upskilling Series

Video 3



# Video Series



Video 1 Introduction to safer cycling



Video 2 Planning for bicycle friendly cities/towns



Video 3 Detailed designs for safer cycling



# Video 2 Recap



Strategic  
transport  
planning



Benefits of  
Cycling and  
Community  
preferences



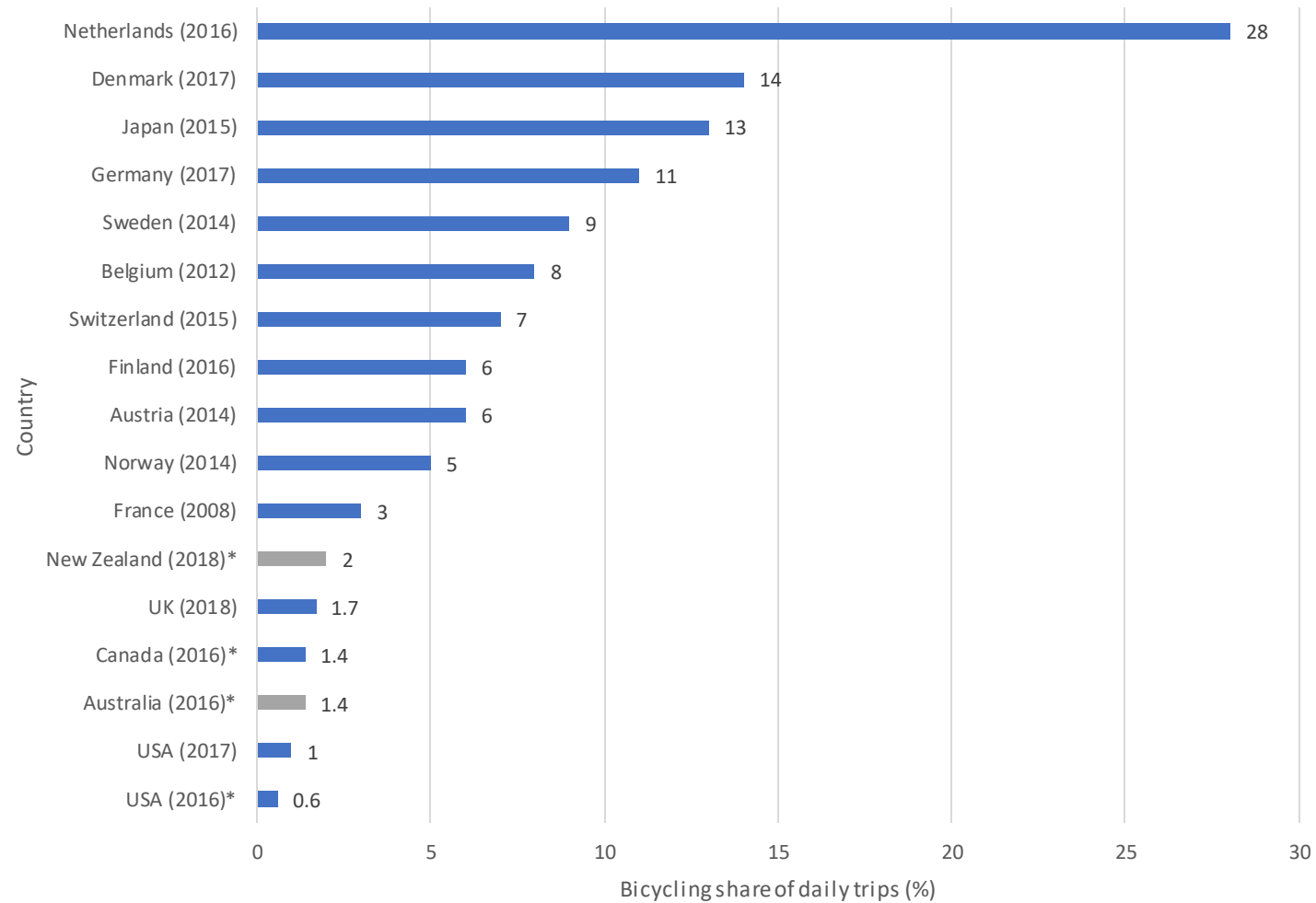
Designing a  
cycling  
network



# Key Benefits of Sustainable Mobility



# Comparison of cycling participation levels



Most metropolitan local governments now have a policy goal to reduce car use





**Safety - Motor vehicles**



**Distance**



**Weather**

## **Barriers to bike riding**



**Need to carry items**



**Security**

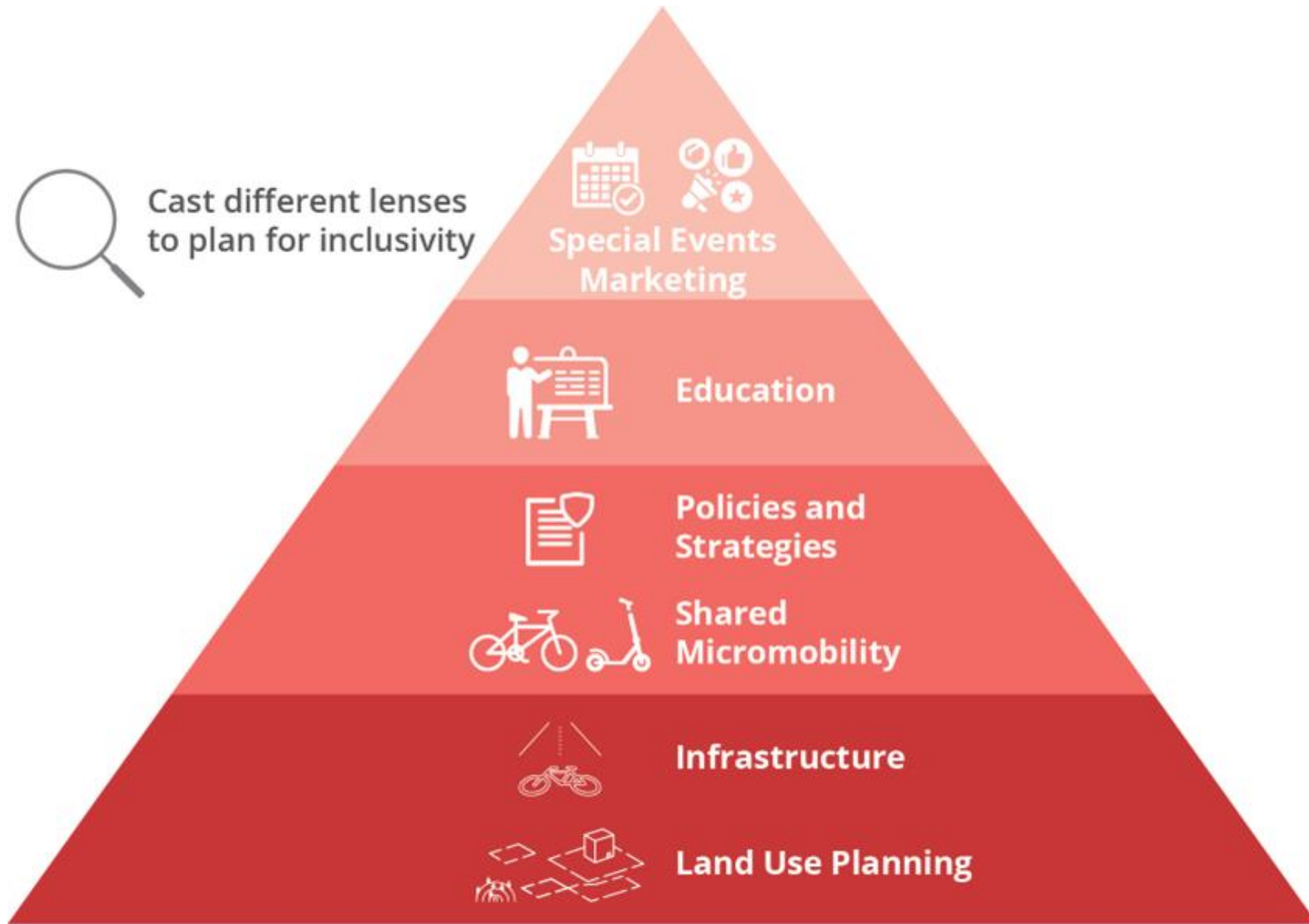


**Social & Cultural**





Cast different lenses to plan for inclusivity



Special Events Marketing

Education

Policies and Strategies

Shared Micromobility

Infrastructure

Land Use Planning

Months

Months and years

Years

Years and decades





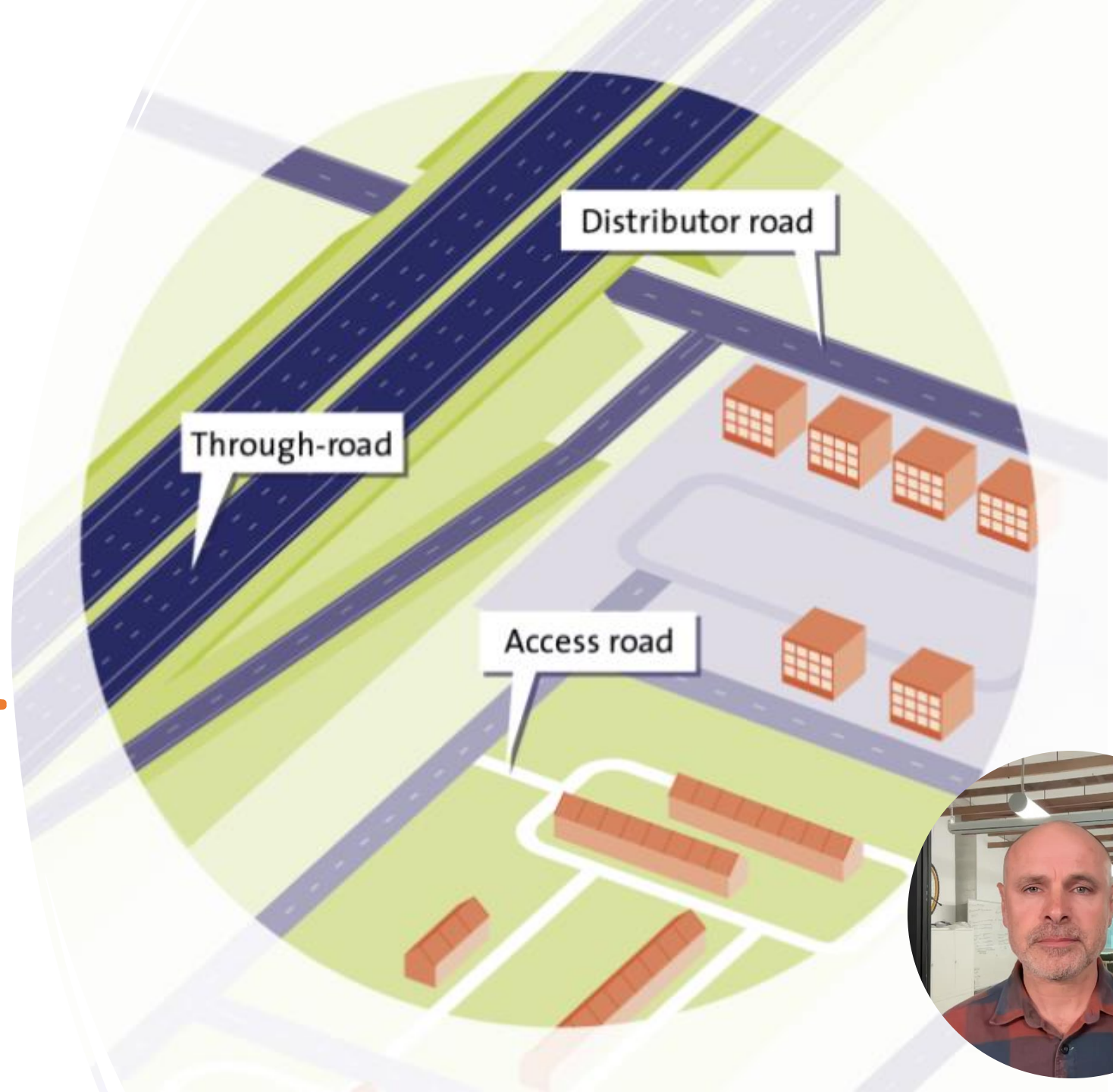


Providing infrastructure that feels safe and *is* safe is central to people's willingness to cycle

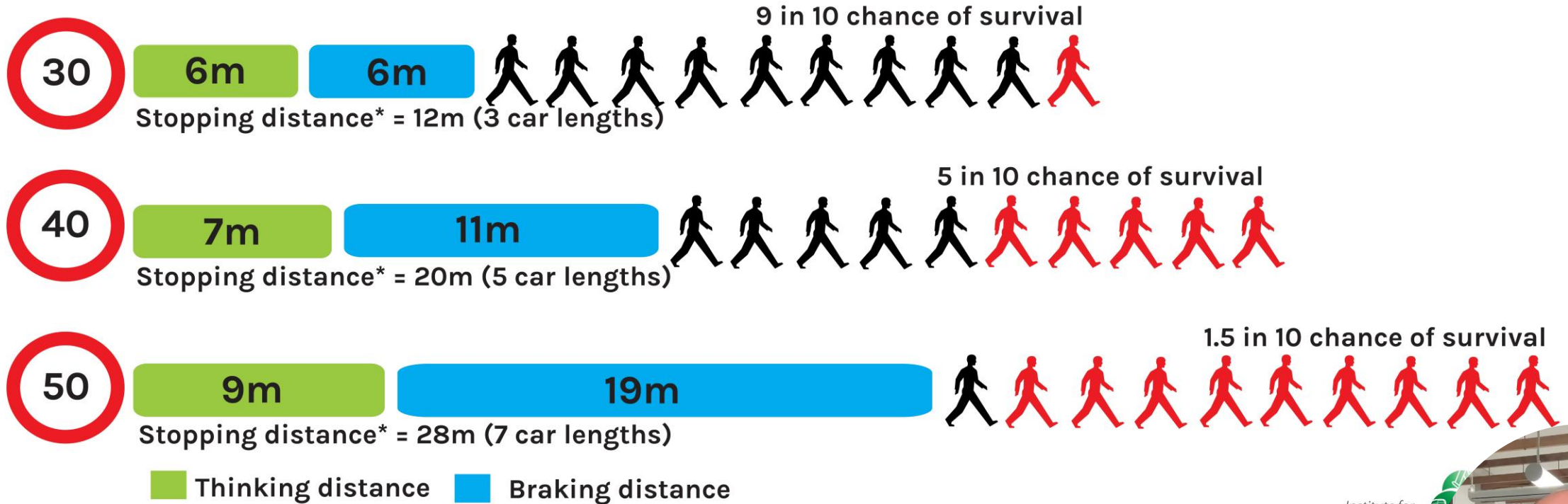


# Different types of roads

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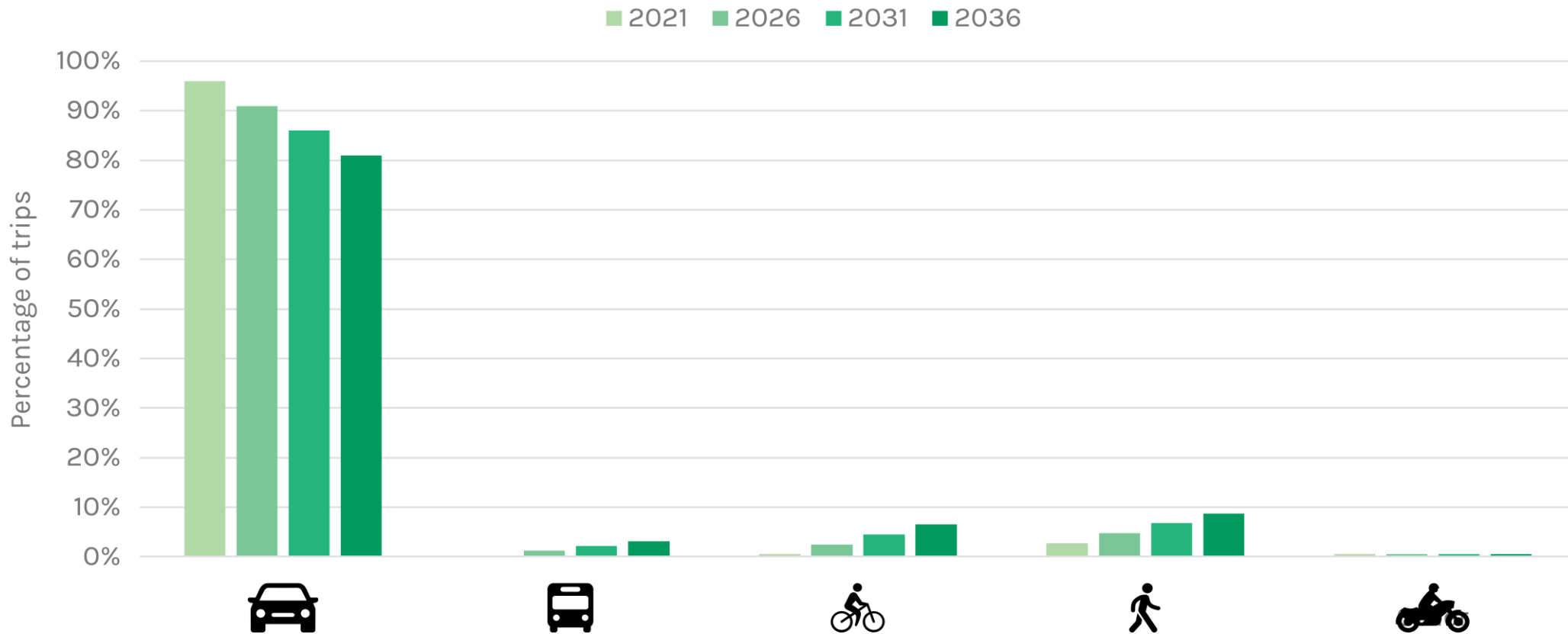
# Setting safe speeds



\*Stopping distance during dry conditions



# Setting mode share targets



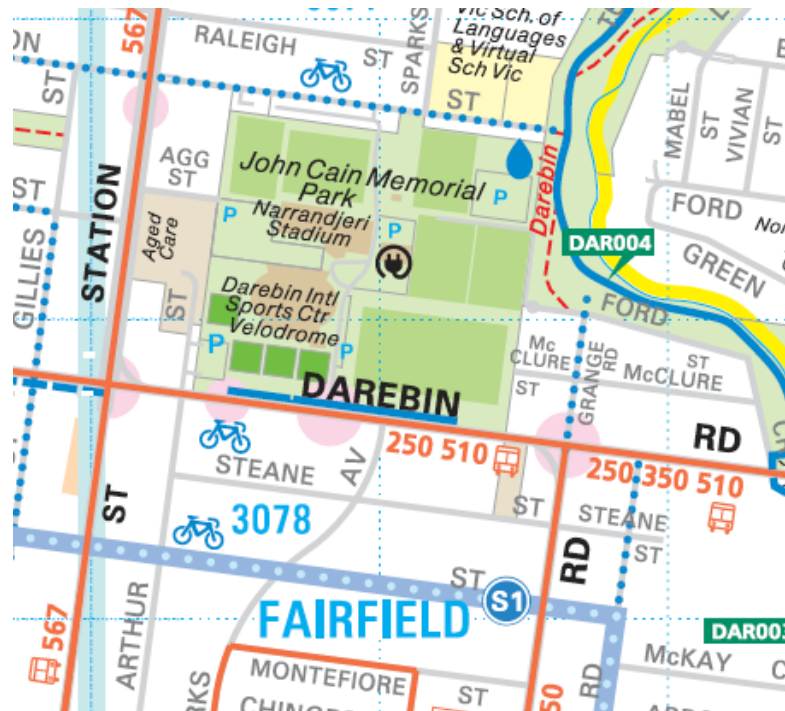
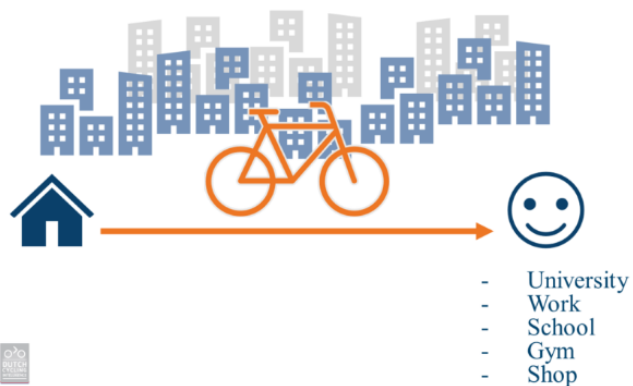
# Bicycle Network Design Principles

1. Cohesion – a comprehensive network of bicycle routes that connect origin and destination.
2. Directness – avoiding circuitous routes and prioritising the shortest practical route possible.
3. Safety – facilities that minimise risk of collision with other road users as well as considering issues of personal security.
4. Comfort – conditions conducive to the efficient and comfortable to the flow of bicycle traffic.
5. Attractiveness – offering routes that are pleasant to cycle.



# Putting principles into practice

**COHESION:** Connecting origins and destinations  
Cycling from anywhere to everywhere



**DIRECTNESS:** Creating short and fast routes  
Minimising detours



- Fast
- Less physical effort
- Competitive alternative



- Slow
- More physical effort
- Uncompetitive alternative



**SAFETY:** Avoid differences in SPEED  and MASS   
Create homogenous traffic flows



# Safety





# (UN)ATTRACTIVENESS



## ATTRACTIVE

- **Green**
- **Open**
- **Water**
- **Well maintained**
- **Quiet streets**



## UNATTRACTIVE

- **Traffic**
- **Congestion**
- **Industry**
- **Dark / unlit**





# Where to start?

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# Measuring latent demand

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**Residential population density**  
people per hectare (SA1)



**Density of young adults**  
number of people aged 18 - 34 per hectare. (SA1)



**Low motor vehicle ownership**  
number of households with zero or one cars per hectare. (SA1)



**Bicycle use - origin**  
number of people riding to work per hectare. (SA1)



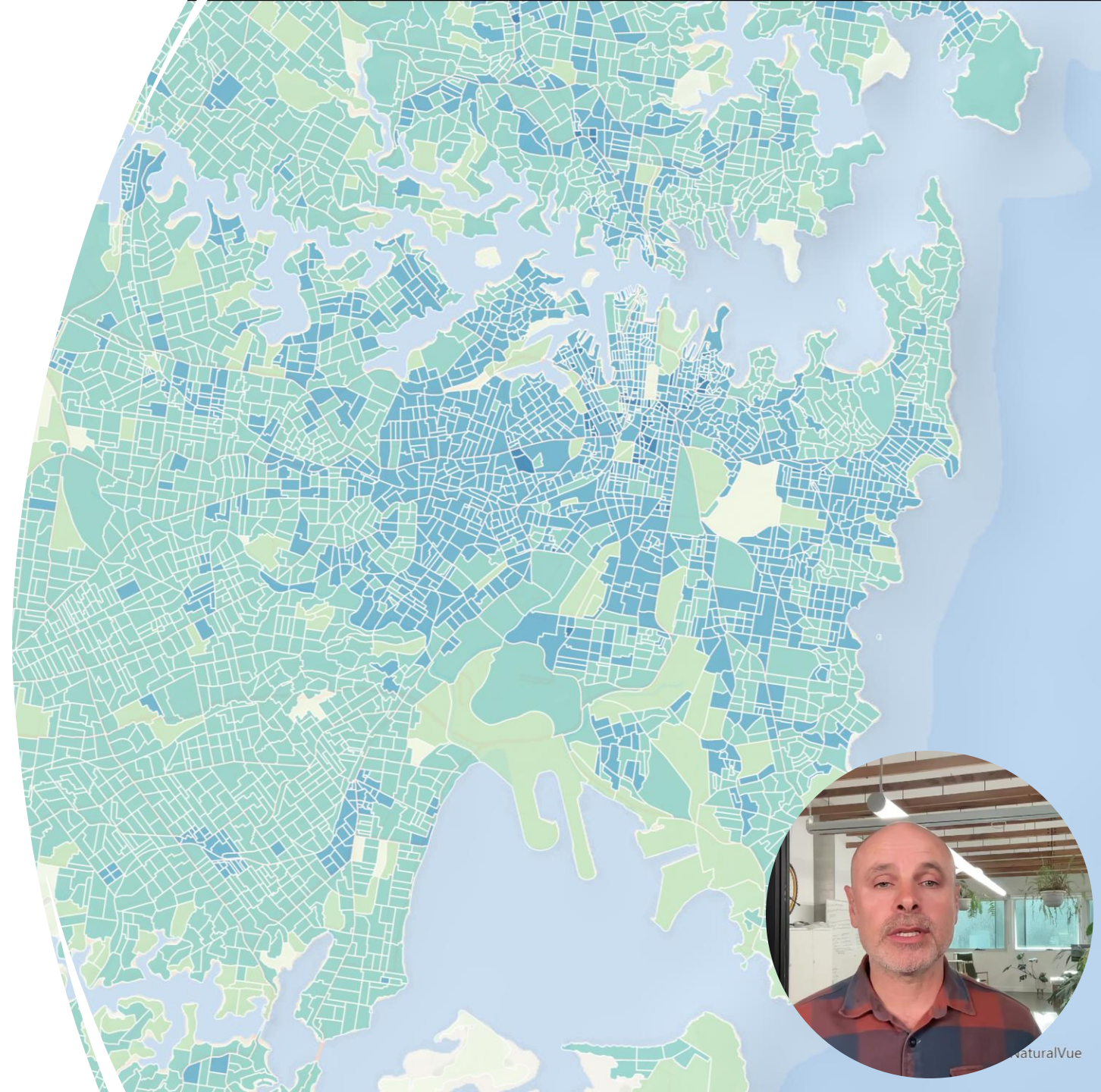
**Employment density**  
number of people working per hectare. (DZN)

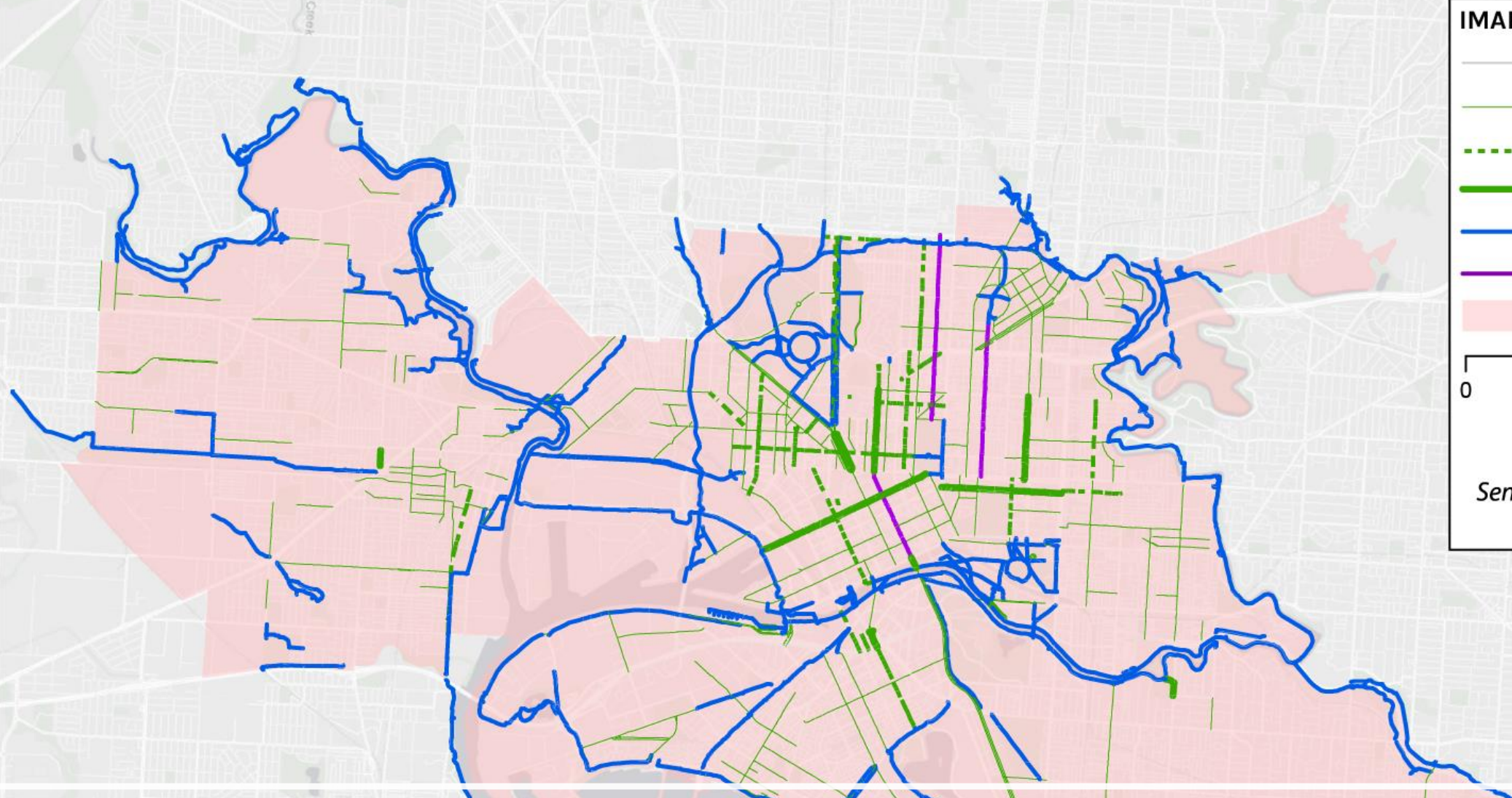


**Bicycle use - destination**  
number of people riding to work per hectare (DZN)



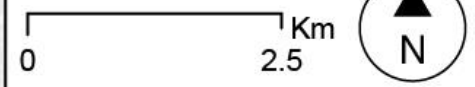
**Short car trips- destination**  
number of people driving to work between 0 and 5 km per hectare (DZN)





### IMAP - Existing Network

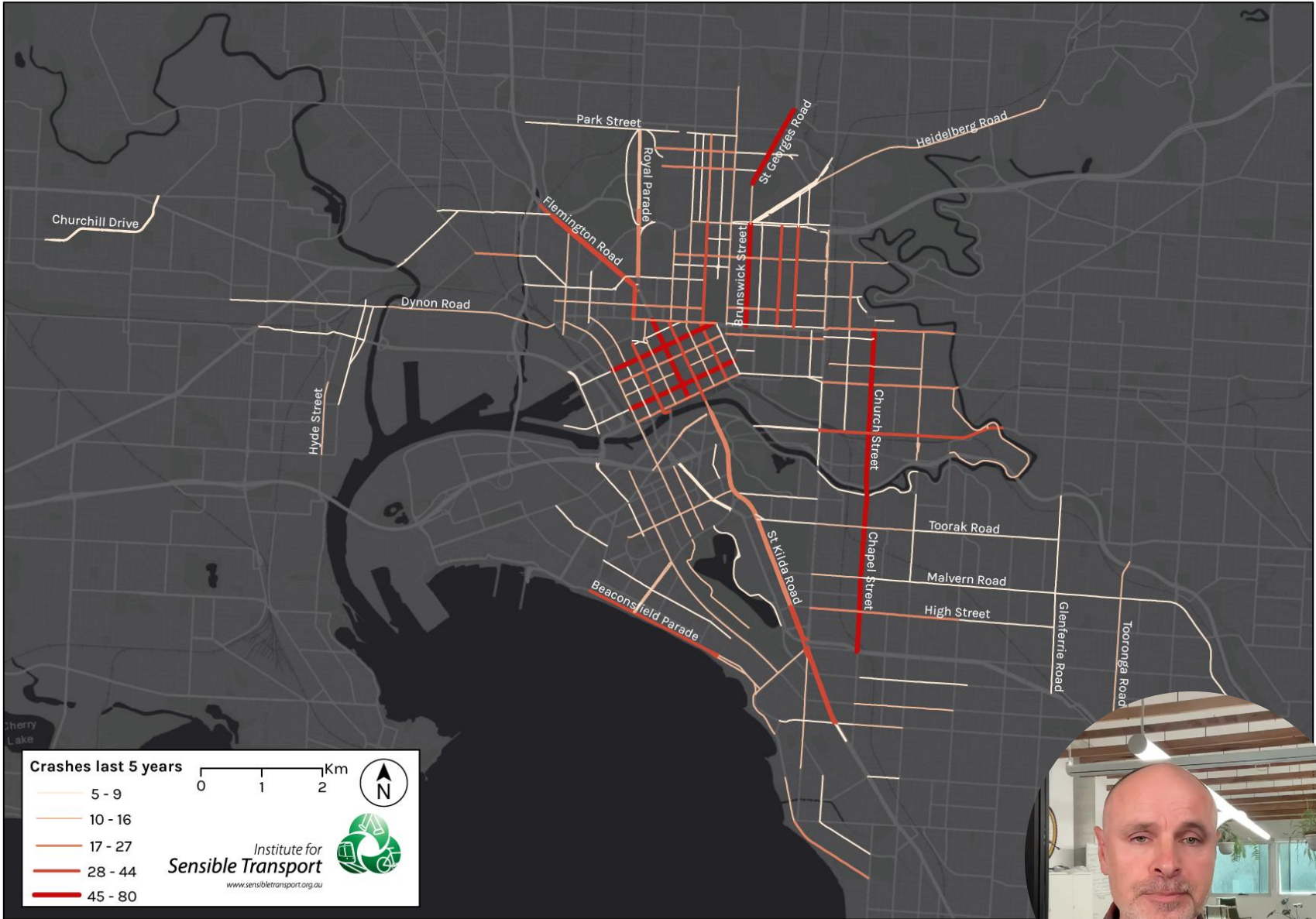
- Nothing
- Painted Lane
- Buffered Lane
- Separated
- Off-road
- Bicycle Blvd
- IMAP Boundary



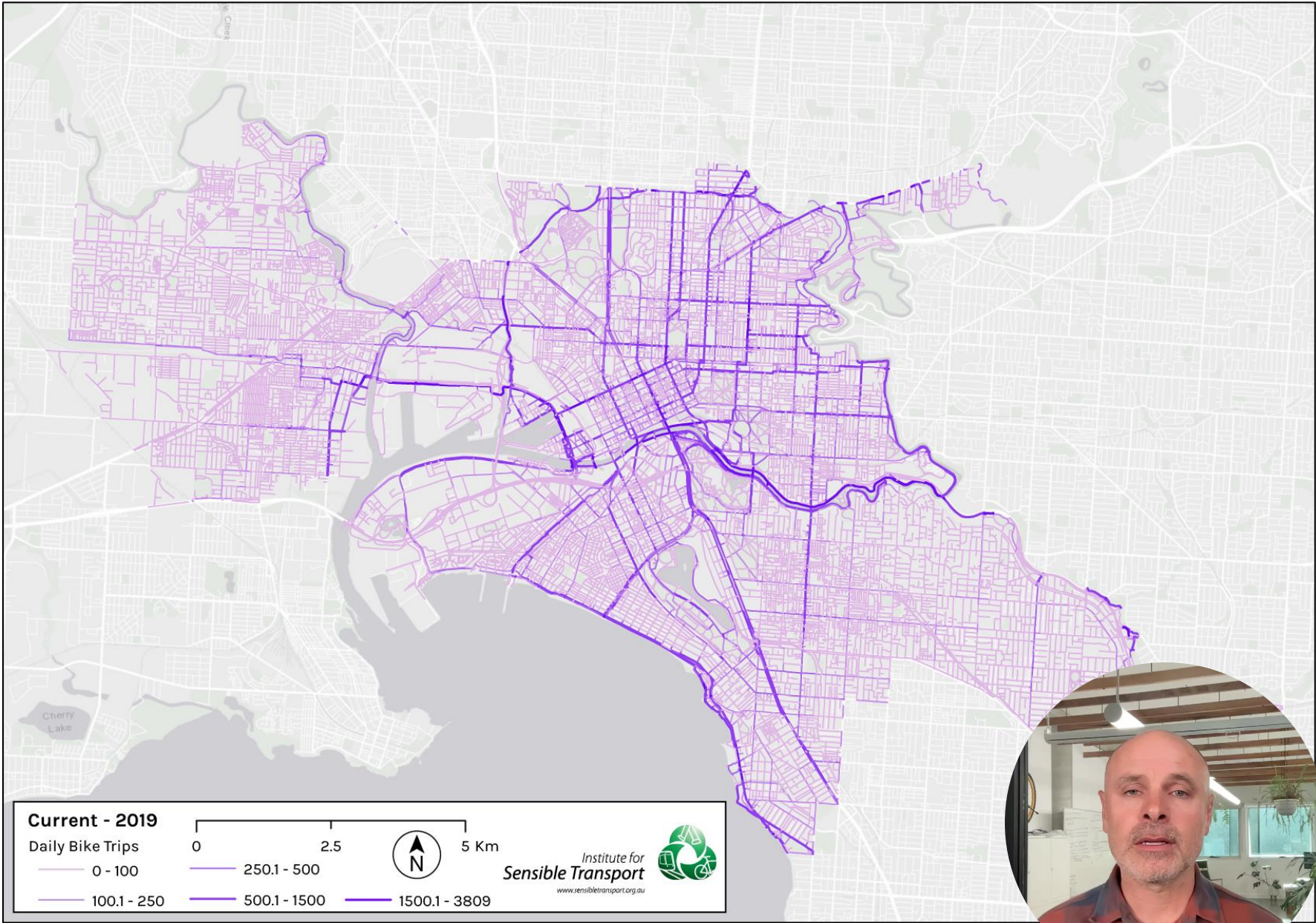
Map your network



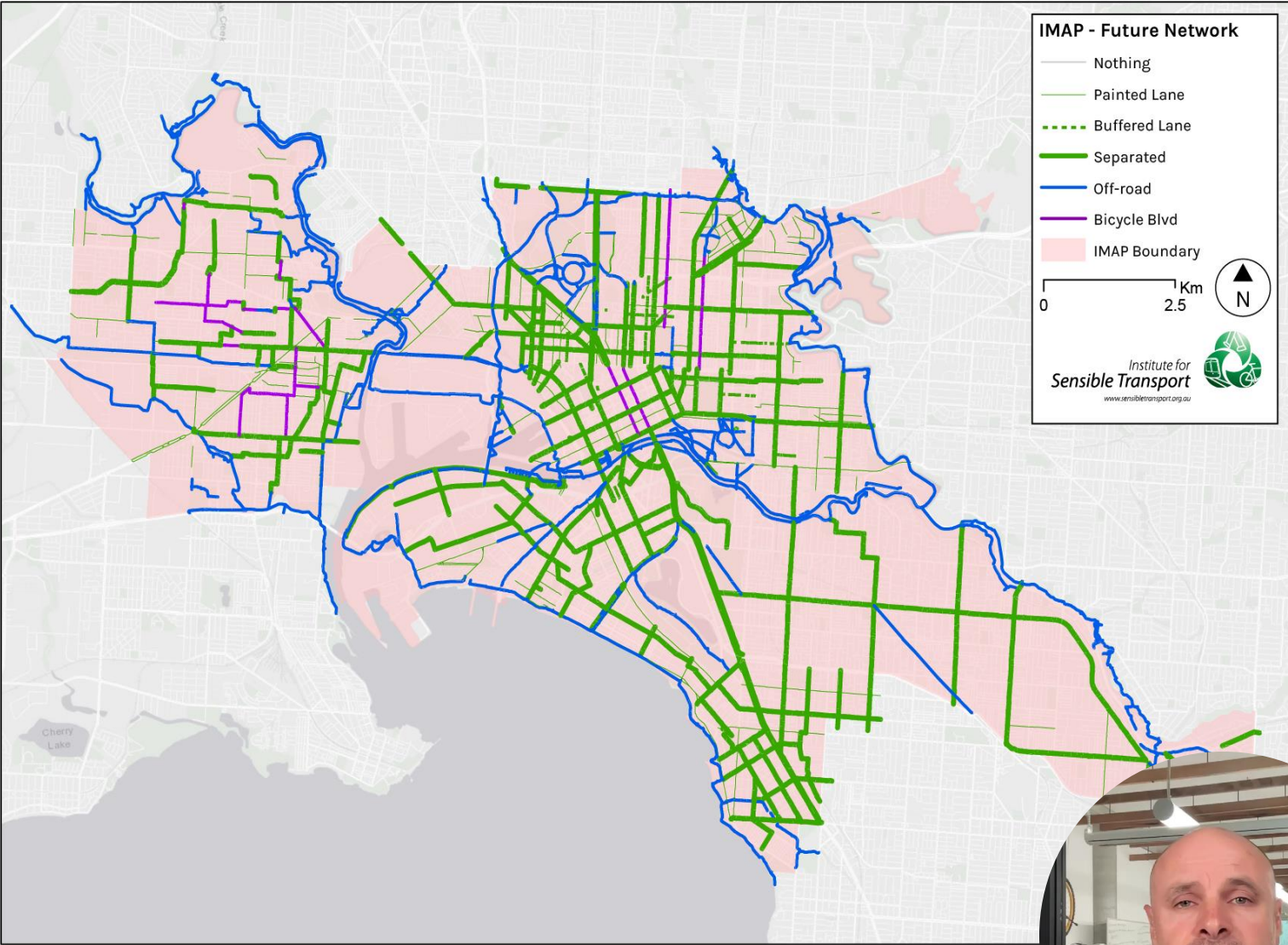
Know where  
the risk is



To measure risk, you need to know where the cycling already happens



Create your future network





# Prioritising your future network – why its important





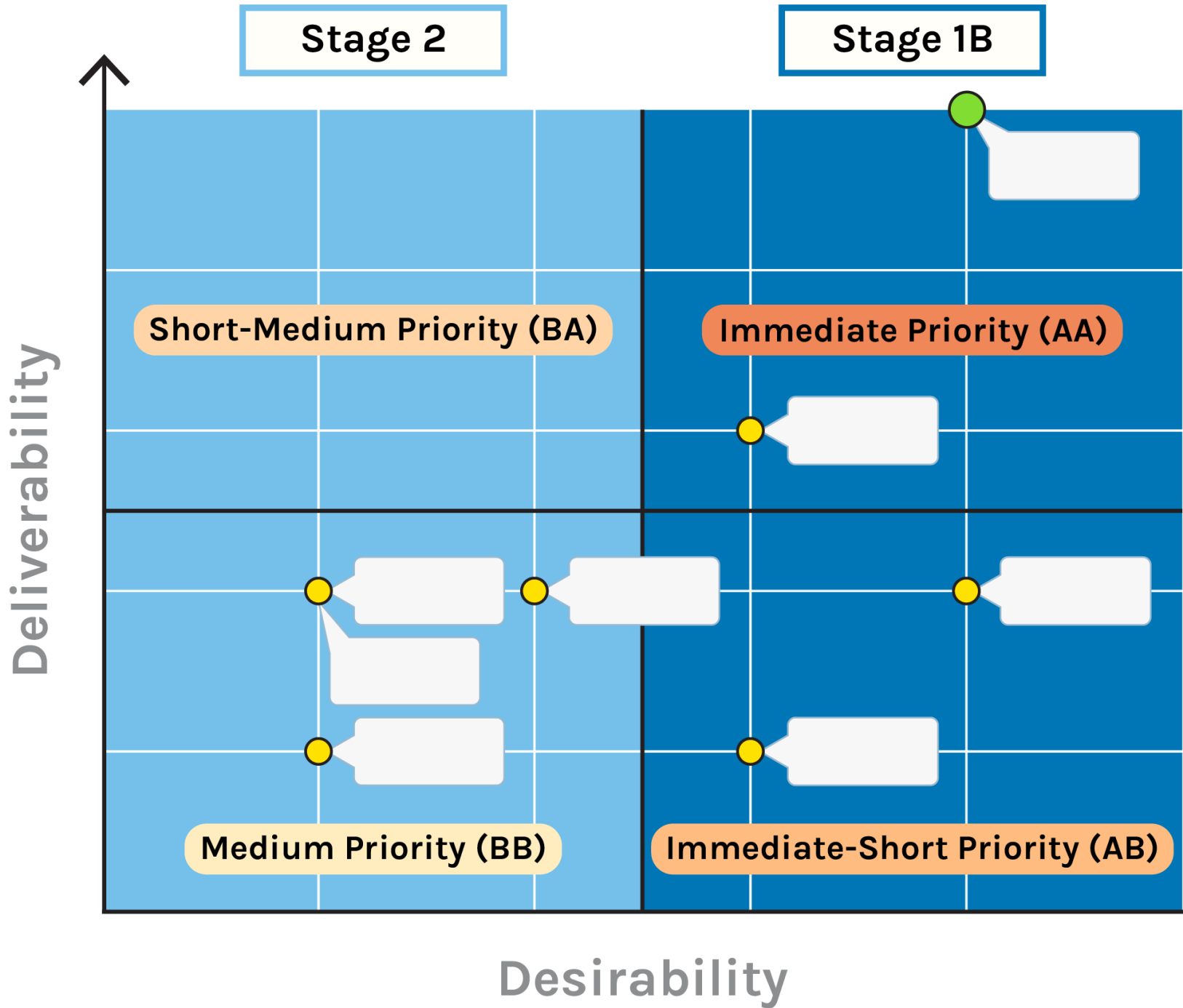


# Target your investment where it will have the greatest impact

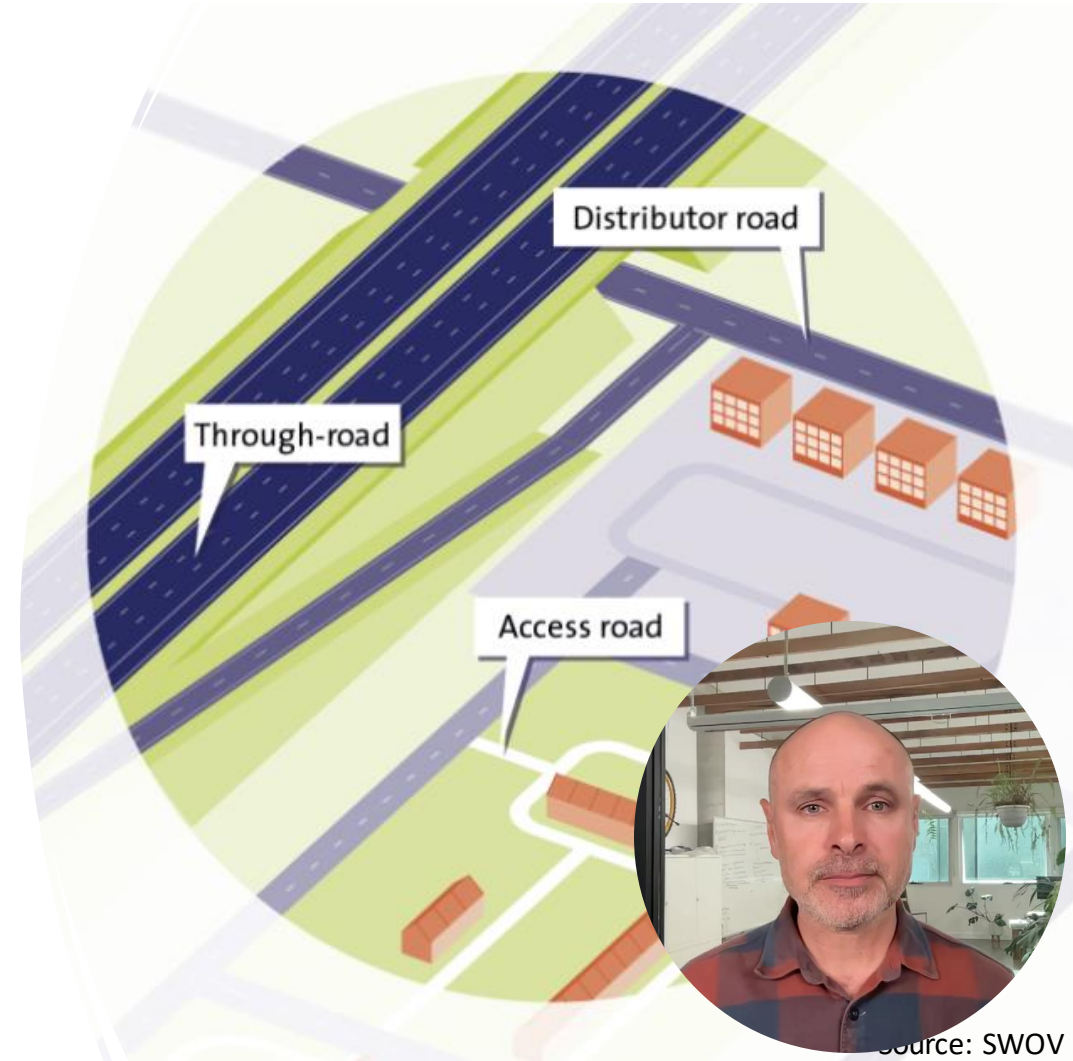
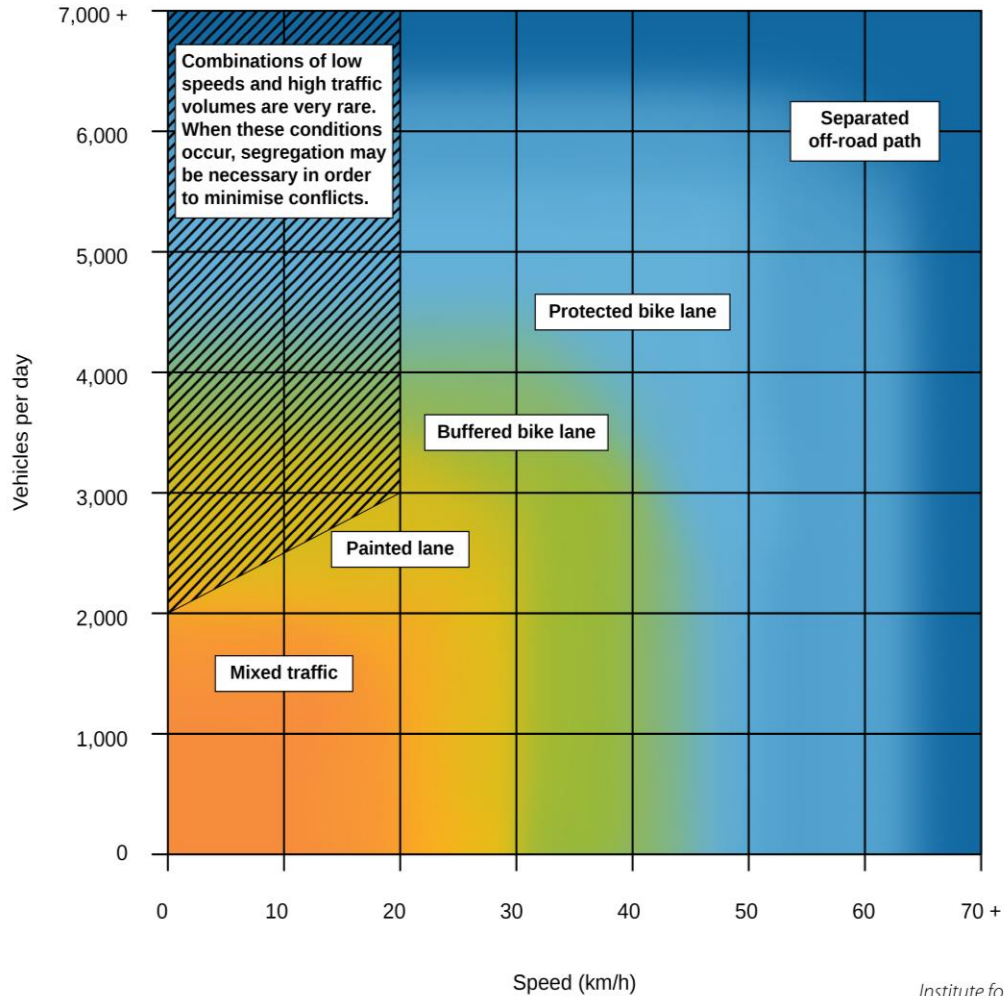
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- Bike infrastructure can be expensive
- Demand for bike infrastructure is not uniform
- Cycling safety varies between different parts of the network





# How to decide on what infrastructure solution is best?



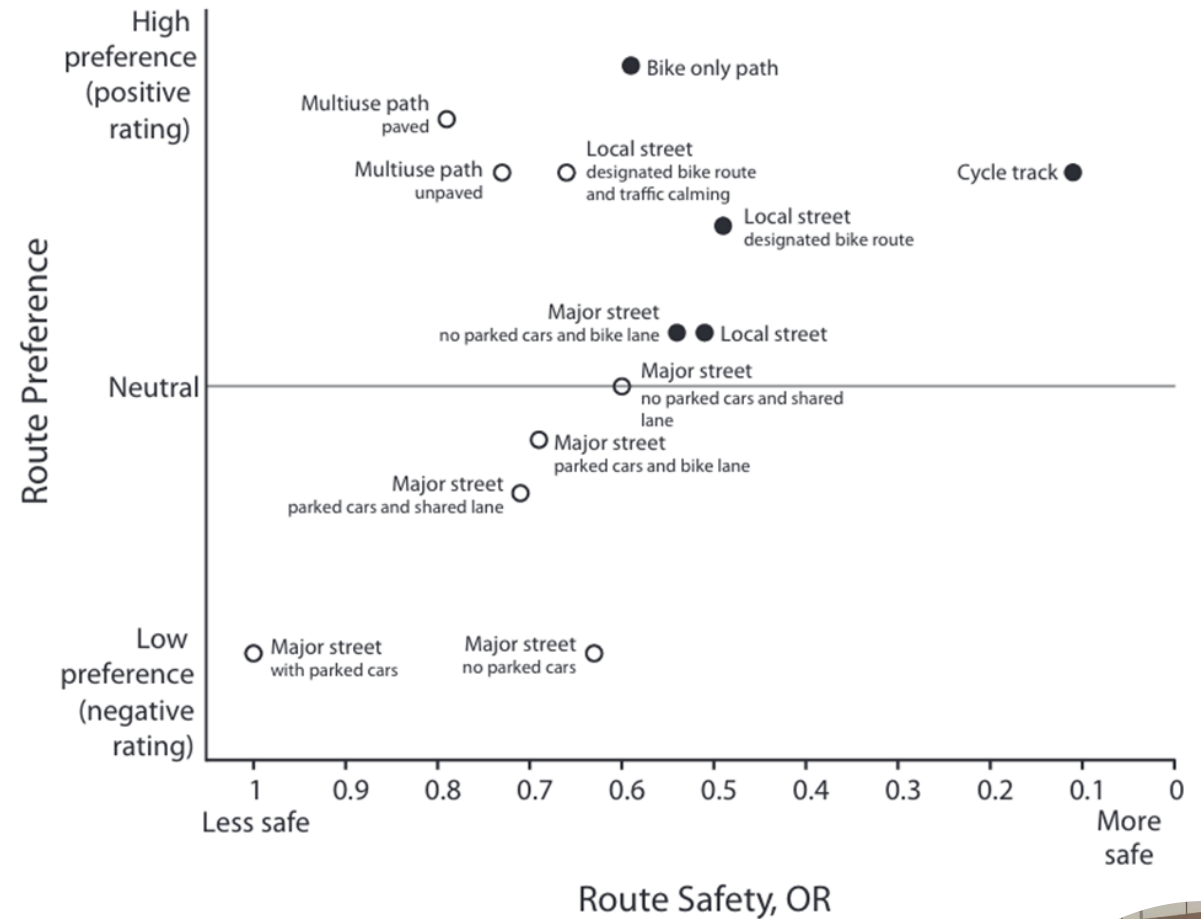
# Safety outcomes for different infrastructure types



# Comparing safety and route preference



Momentum Magazine



Source. Route preference data from 2006 Metro Vancouver opinion survey.<sup>24</sup>

Note. OR = odds ratio. Closed circles represent route types with positive preference rating and adjusted injury risk (e.g., bike only path, cycle track, local street designated bike route and traffic calming, local street designated bike route). Open circles represent route types with negative or neutral preference rating or adjusted injury risk (e.g., multiuse path paved, multiuse path unpaved, major street no parked cars and bike lane, major street no parked cars and shared lane, major street parked cars and bike lane, major street parked cars and shared lane, major street with parked cars, major street no parked cars). "Sidewalk or other pedestrian path" was not included because this route type was not queried in the survey. The adjusted injury risk for injury risk are plotted in reverse order.



# Different types of protection for different streets

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# Sometimes, cycling infrastructure isn't necessary

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- *Filtered permeability* (bollards or garden boxes) limit through traffic
- Creates low volume, low speed streets suitable for active transport and placemaking
  - *Low cost*
  - *Fast*
  - *A Council 'Quick Win'*



Modal filters  
are cheap,  
effective and  
safe





## Temporary interventions

- Helps a city experience their street differently
- Can be short (one day) or longer (summer)

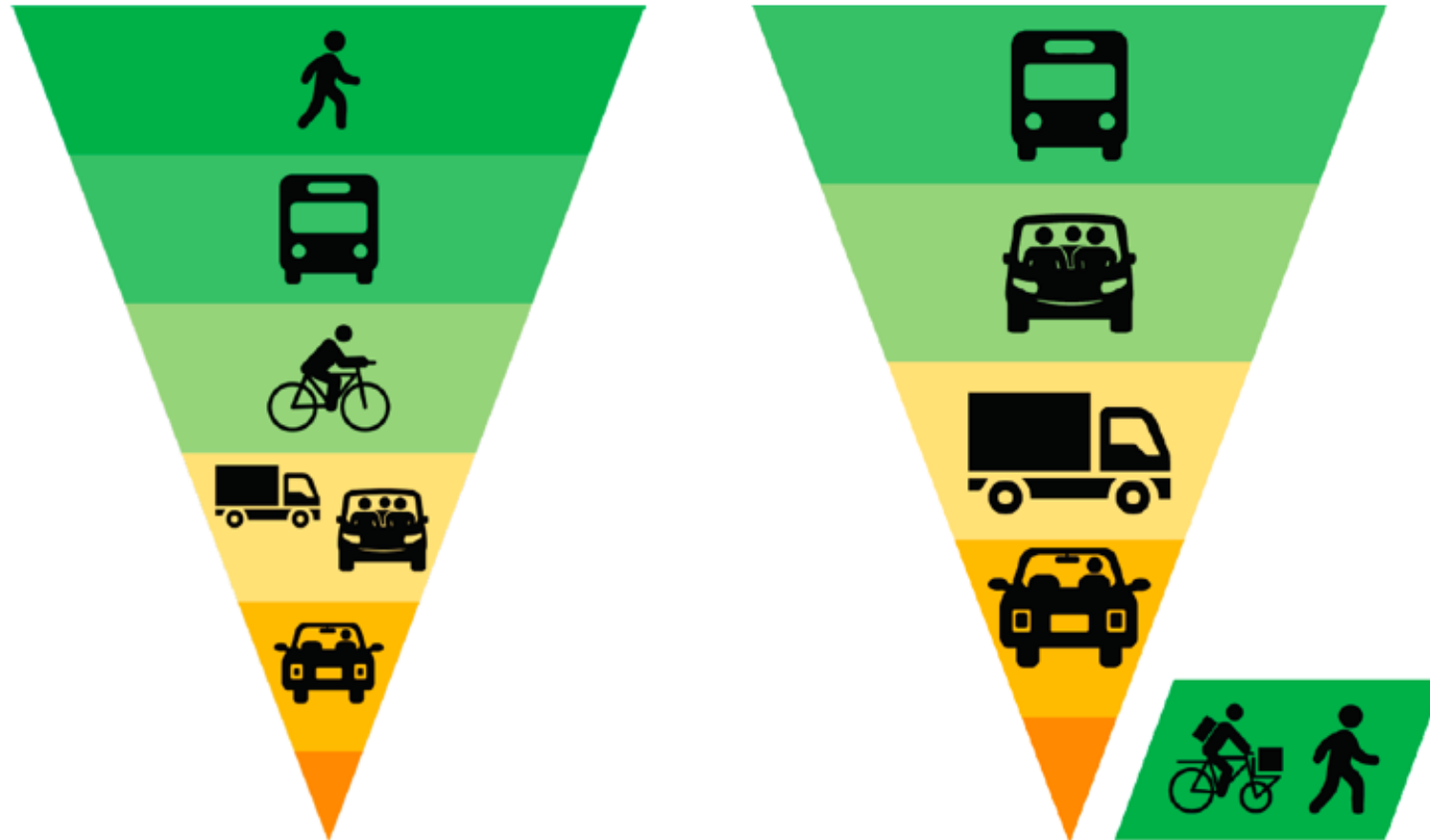


Solutions need to  
be context specific

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# Prioritisation - guided by priorities





Institute for  
*Sensible Transport*

[www.sensibletransport.org.au](http://www.sensibletransport.org.au)



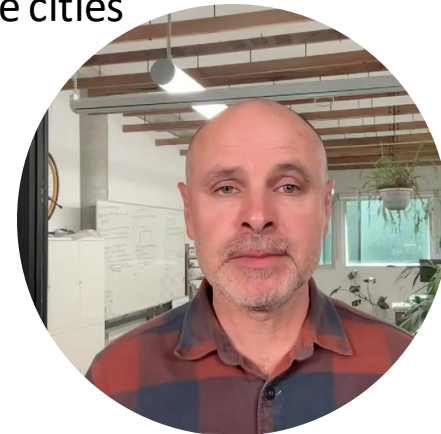




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## Conclusions

- The Co-Benefits of active travel is what sets cycling apart
- Giving people *better choices* is a practical outcome achievable by local government
- Short car trips is the low hanging fruit to aim for
- Meeting emissions targets requires cycling levels to almost double in seven years.
- E-bikes are perfect for many parts of Australia.
- Road space reallocation and safe speeds limits are critical to the creation of more vibrant, accessible cities
- *Business as Usual* is our biggest risk



**Doing more with less**



“We all know the right thing to do, we just don’t know how to get re-elected once we’ve done it”

Jean-Claude Juncker, former Prime Minister of Luxembourg (1995 – 2013)







Thank you

