



Equity in Transportation

Transportation
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THE UNIVERSITY OF
AUCKLAND
Te Whare Wānanga o Tamaki Makaurau
NEW ZEALAND

Pedestrian Route Choice at Road Crossings

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Outline

1. When / Where / How pedestrian crashes occur?
2. Relating pedestrian road safety policies over time with performance?
3. How do pedestrians perceive mid-block jay-walking?
4. What can we do to improve pedestrian safety in New Zealand?

1. When / Where /How pedestrian crashes occur?

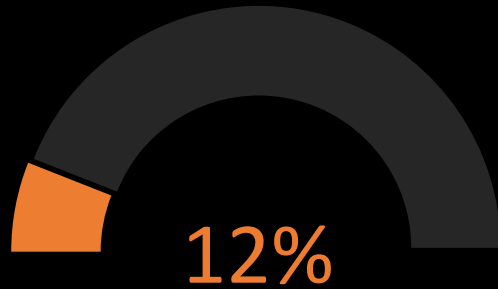


**Pedestrian
Crash
Analysis**

- *Crash Analysis System (CAS) from 1990-2016*

1. Commonality of NZ pedestrian crashes

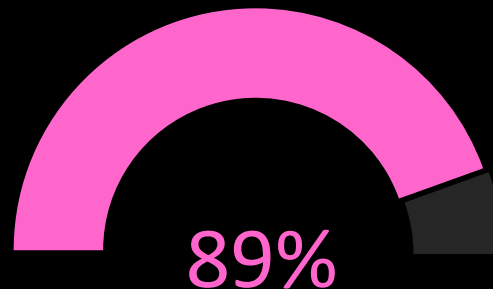
Pedestrians are the most vulnerable road users.



12%

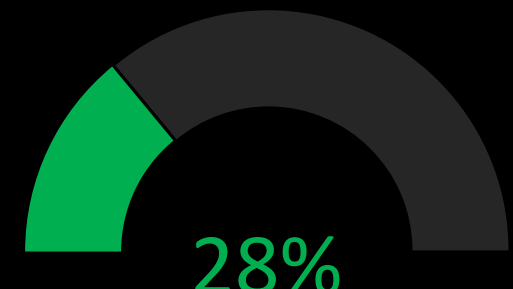
Pedestrian fatality in 2018

- 31 were killed
- 218 were seriously injured
- 592 were minor injured



89%

Mid-block sections
in urban environment

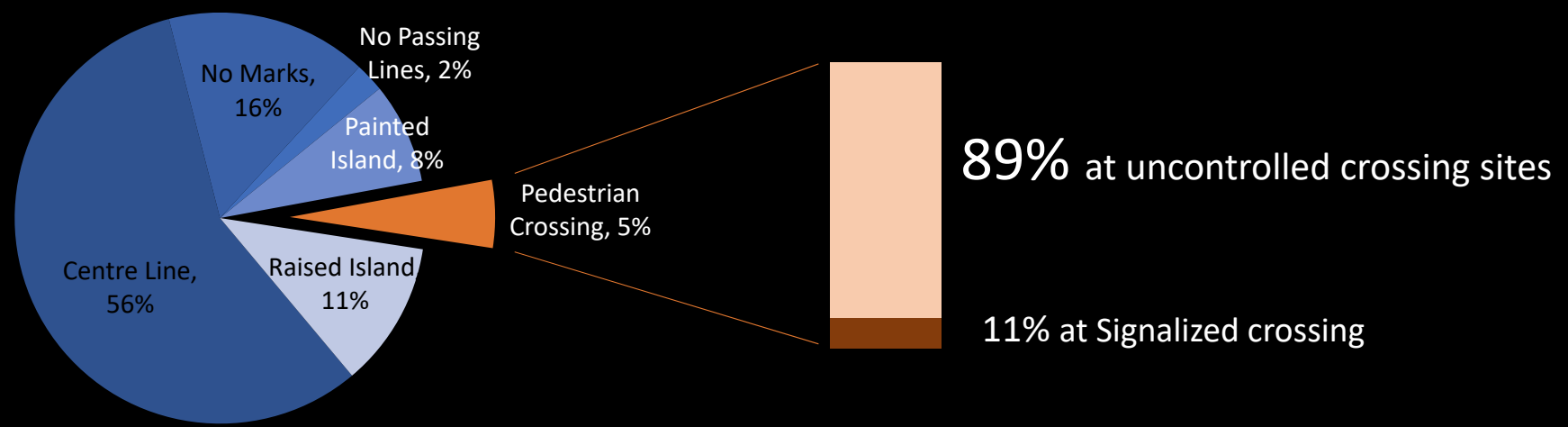


28%

Crossing the road

1. NZ Pedestrian crashes by location

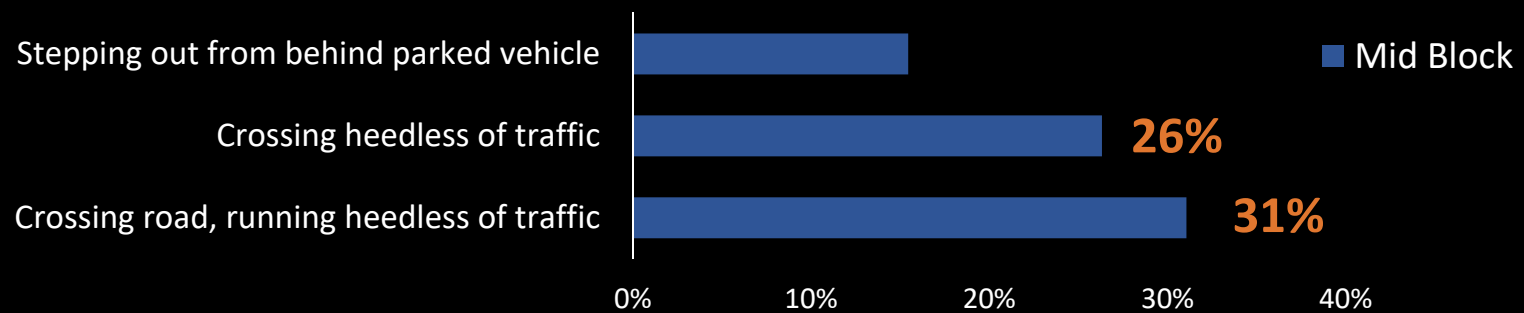
95% occurred outside of pedestrian crossing



Data source: Crash Analysis System (CAS) 2012-2016

1. Human factors-NZ reported pedestrian crashes

89% of all factors related to road user behavior (people making unsafe choices)



2. Relating pedestrian road safety policies over time with performance?



**Policy
Review
(1990-2019)**

- *Safer Journeys : 2010-2030*
- *road safety to 2010*
- *Getting there-on foot, by bicycle 2006-2009*
- *Pedestrian planning and design guide*
- *Neighborhood accessibility plans (NAP)*

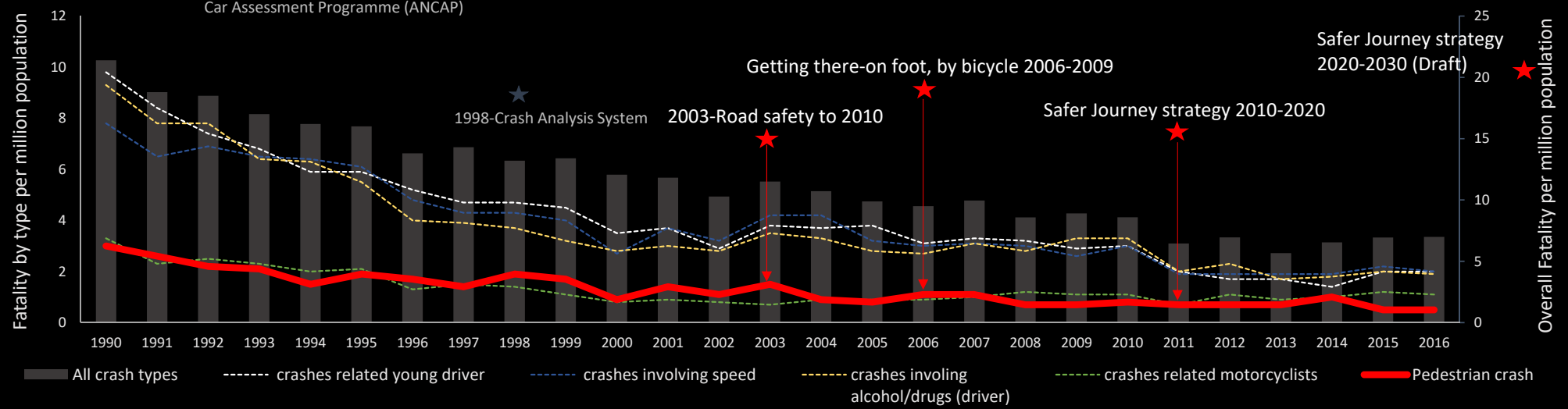
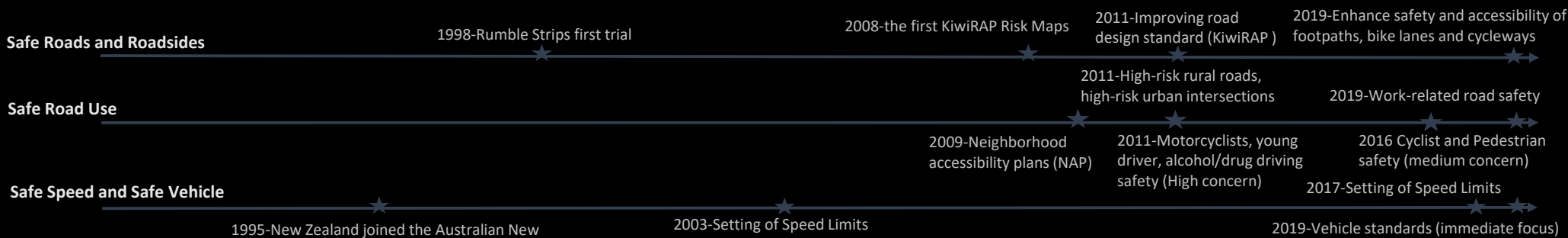


2. NZ Safe System Approach

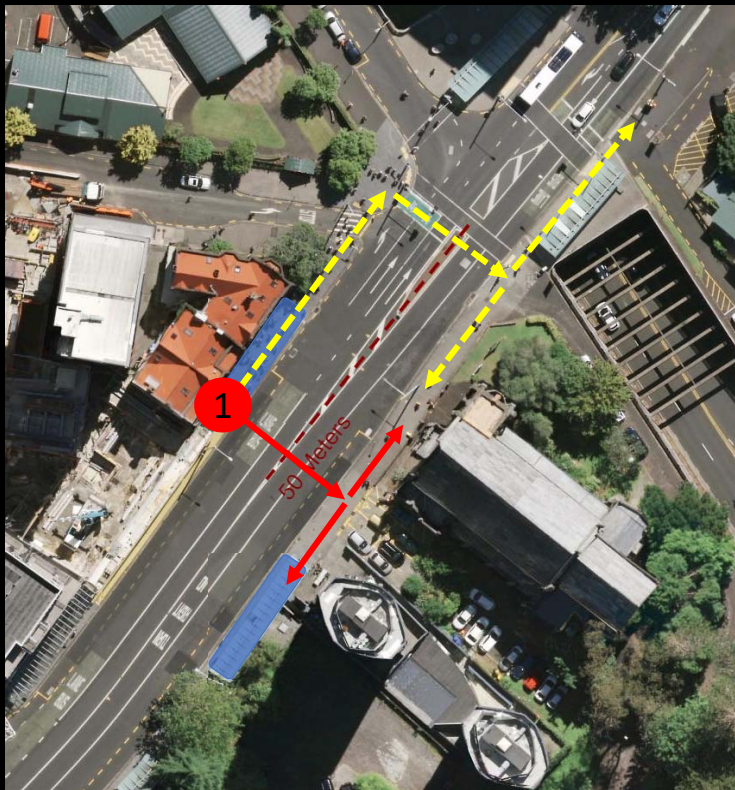


- Contribute to creating a safer transport system
- Safe road use focus on the drivers
- Less evidence-based practices on pedestrian behaviors
- Need to increase equity between users

2. Pedestrian fatalities & major road safety policies



3. How do pedestrians perceive mid-block jay-walking?

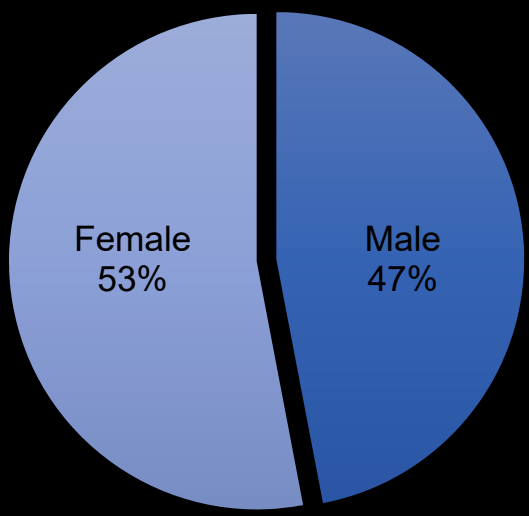


3. On-Street Survey Participants

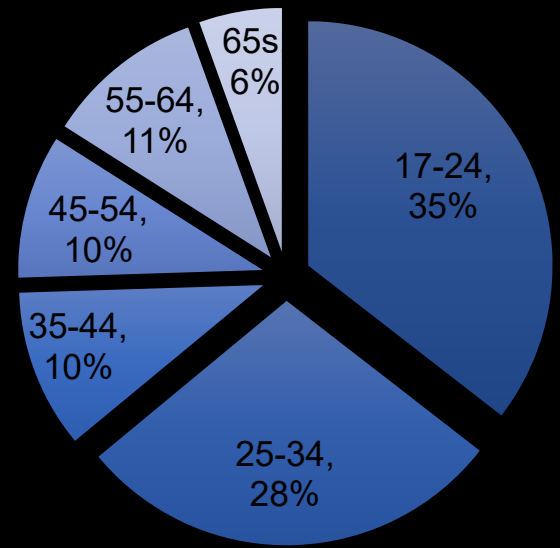


- On-street survey (400 participants)
- 15 questions using a five-point Likert scale
 - Strongly disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly agree
- 4 selected sites in Auckland CBD :
 - Symonds St, Grafton North Rd, Park Rd, and Broadway Rd

Gender

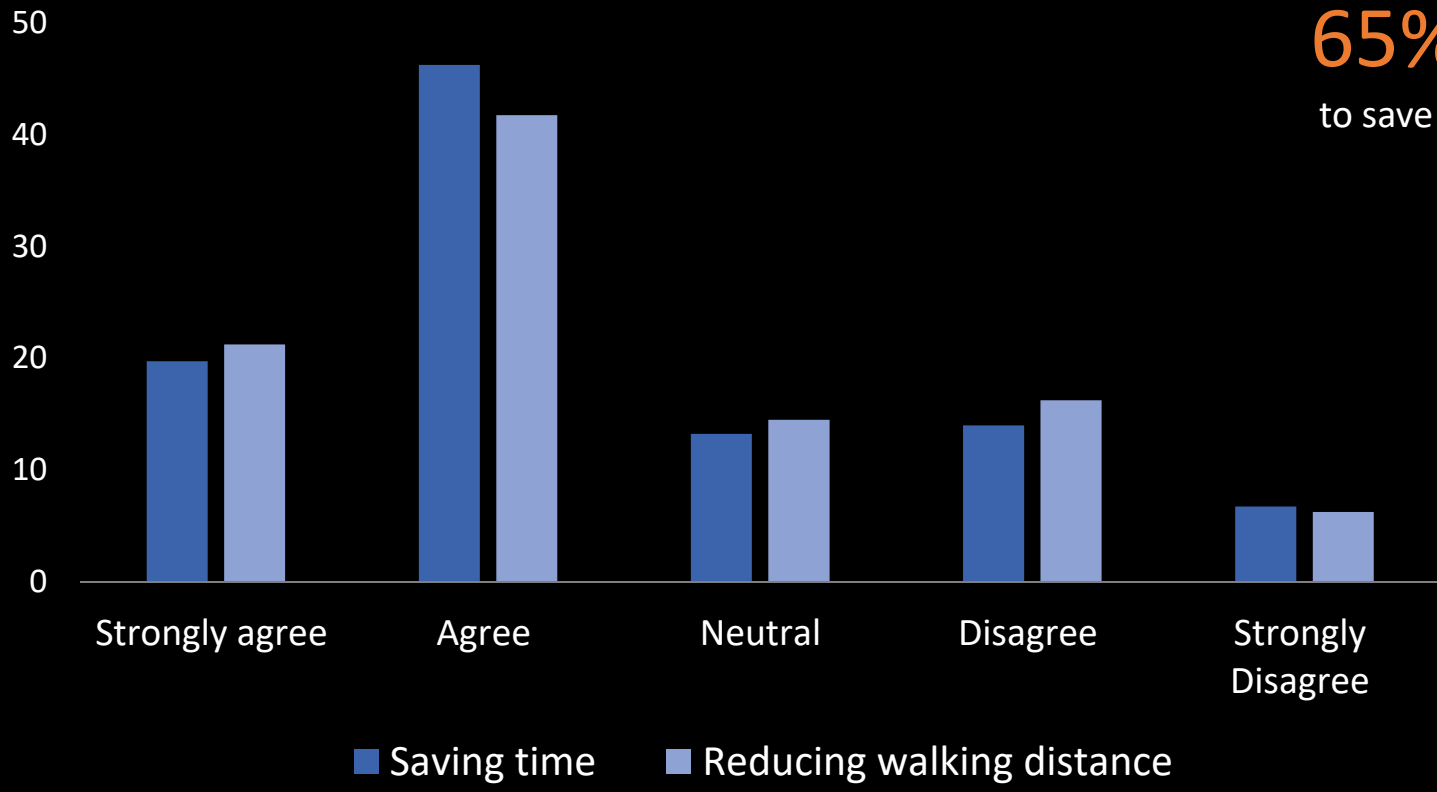


Age



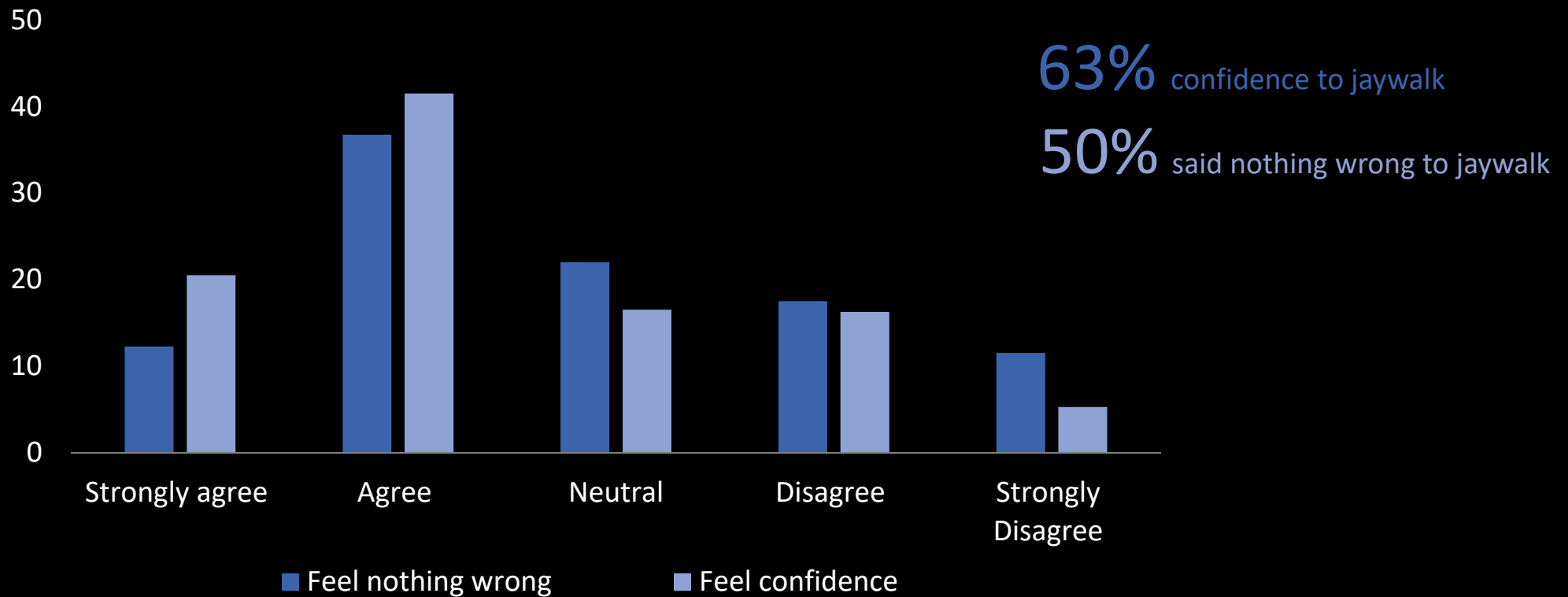
3. Pedestrians' **attitude** towards jaywalking

A set of emotions, beliefs, and behaviors



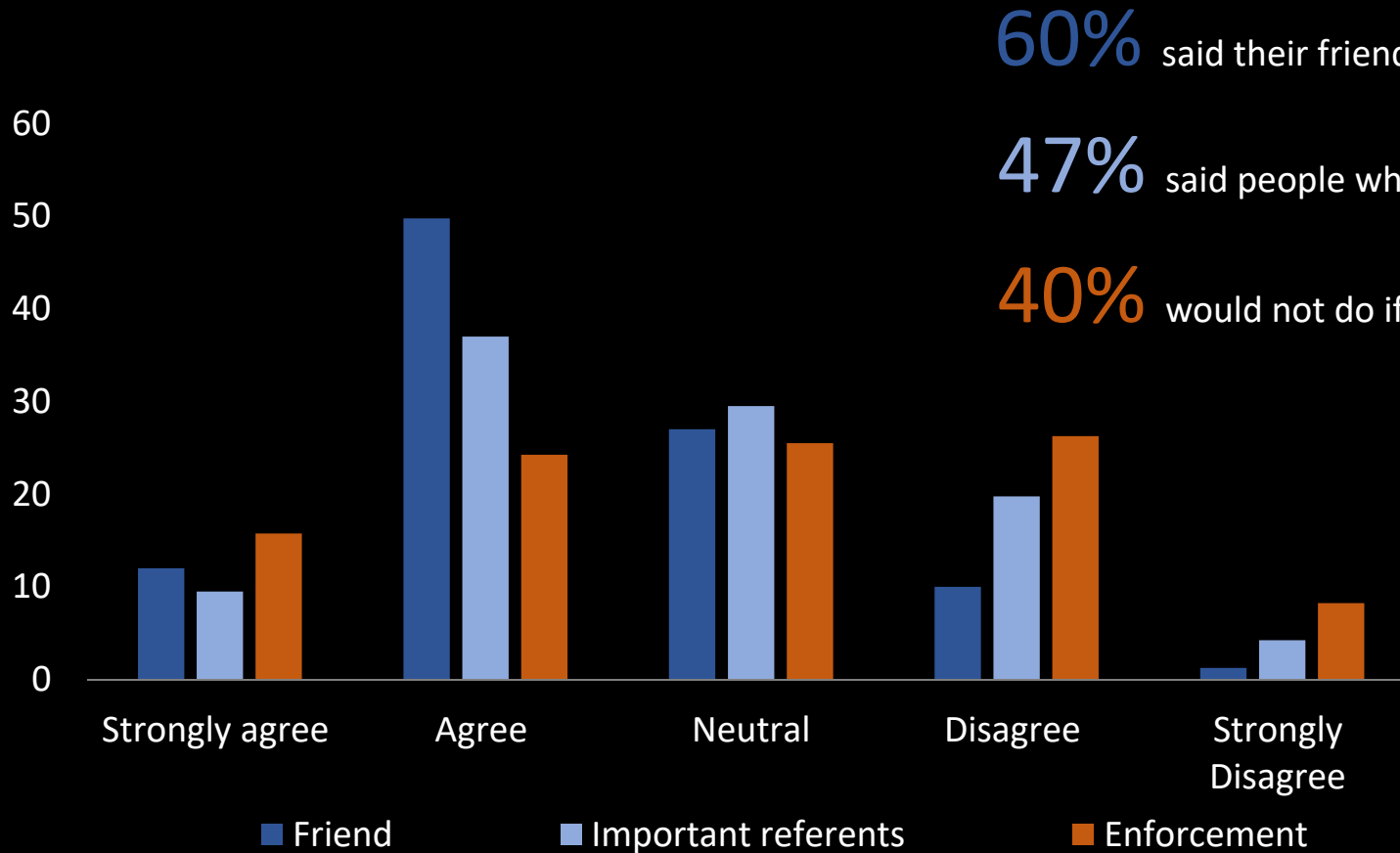
65% intend to jaywalk
to save time or reduce walking distance

3. Pedestrians' **belief** in their ability to jaywalk



3. The role of social norms

The belief of what most approve or disapprove of this behavior



60% said their friends would not think that it is wrong

47% said people who are important to them would do

40% would not do if there is a police car around

4. What can we do to improve pedestrian safety in New Zealand?



4. Conclusions

Pedestrian fatalities and the strategic plans

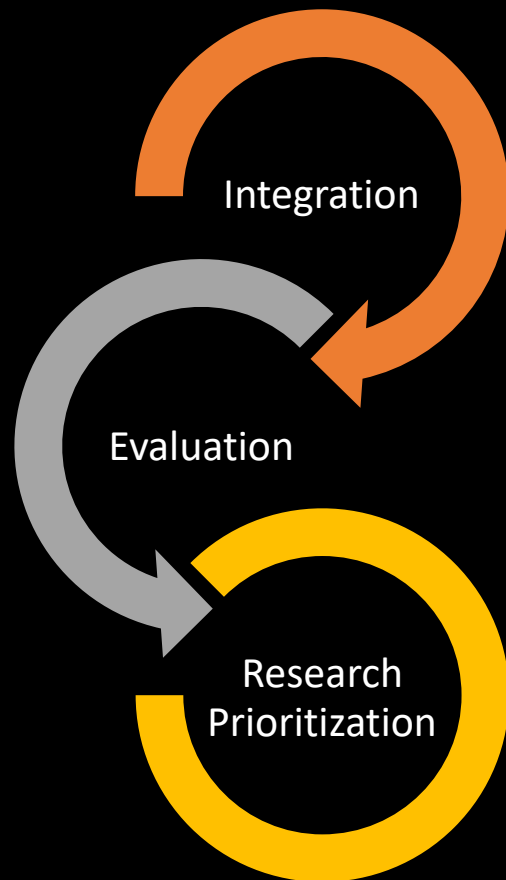
- Road safety policies have not provided equity or a fair deal for pedestrians.
- A correlation between recent NZ road safety policies and pedestrian safety outcomes is less evident.

Pedestrians' attitudes towards jaywalking

- In NZ, jay-walking is commonly perceived as an acceptable act in society.
- They are aware of road rules and follow if necessary.
- The decision to jaywalk is related to convenience gain.

4. Future Directions

Cars can fix, but people ...?



An integrated evidence-based policy

Re-evaluated sites that have a high conflict between road users

Prioritised research is required on the risk profile of different road users