



# Trends in cycling patterns and interactions with pedestrians in the city centre

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Centre for Accident Research & Road Safety - Queensland

CARRS-Q is a joint venture initiative of the  
Motor Accident Insurance Commission  
and Queensland University of Technology



ihbi



[www.carrsq.qut.edu.au](http://www.carrsq.qut.edu.au)

CRICOS No. 00213J



# Background

- All levels of government promote cycling
- Density of cars, pedestrians and cyclists is high in city centres
- Pedestrian concerns about injury threat from cyclists
- Recent debate about compulsory helmet laws

# Aims of the research

- Explore overall trends in cycling behaviour
- Observe bicyclist-pedestrian, and bicyclist-vehicle interactions
- Examine riding location choice, and use of CityCycle, over time
- Monitor helmet use by cyclists

# Study design

- Replicating methodology of 2010 study
- 46 observation periods
  - Including uni-directional and bi-directional traffic; with and without bike facilities
- 2-hr periods on weekdays
  - 7-9 am, 9-11 am,
  - 2-4 pm, 4-6 pm
- All obs. in dry weather
  - Mon-Thursday (1 day postponed)



# Observation Checklist

Recorder sheet  
Date: 11/10/2012  
Location: William St

Timeslot: 7-9am

Apparent Gender

Male

Female

Apparent Age

Child (<13)

Adolescent (13-17)

Adult (>17)

Helmet Use

Yes

No

On but not fastened

Location

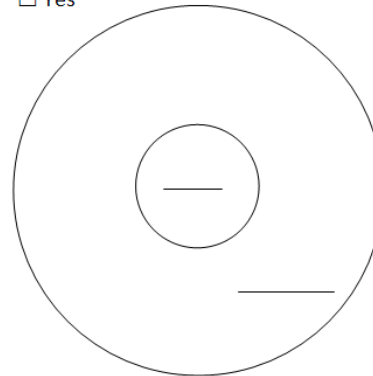
Footpath

Marked Bicycle Lane

Traffic Lane

Bicycle Hire Scheme bicycle

Yes



Number of pedestrians within 1m

Number of pedestrians within 5m

Conflict

None

Pedestrian

Vehicle

Evasive manoeuvre by cyclist

None

Swerving

Hard braking

Other

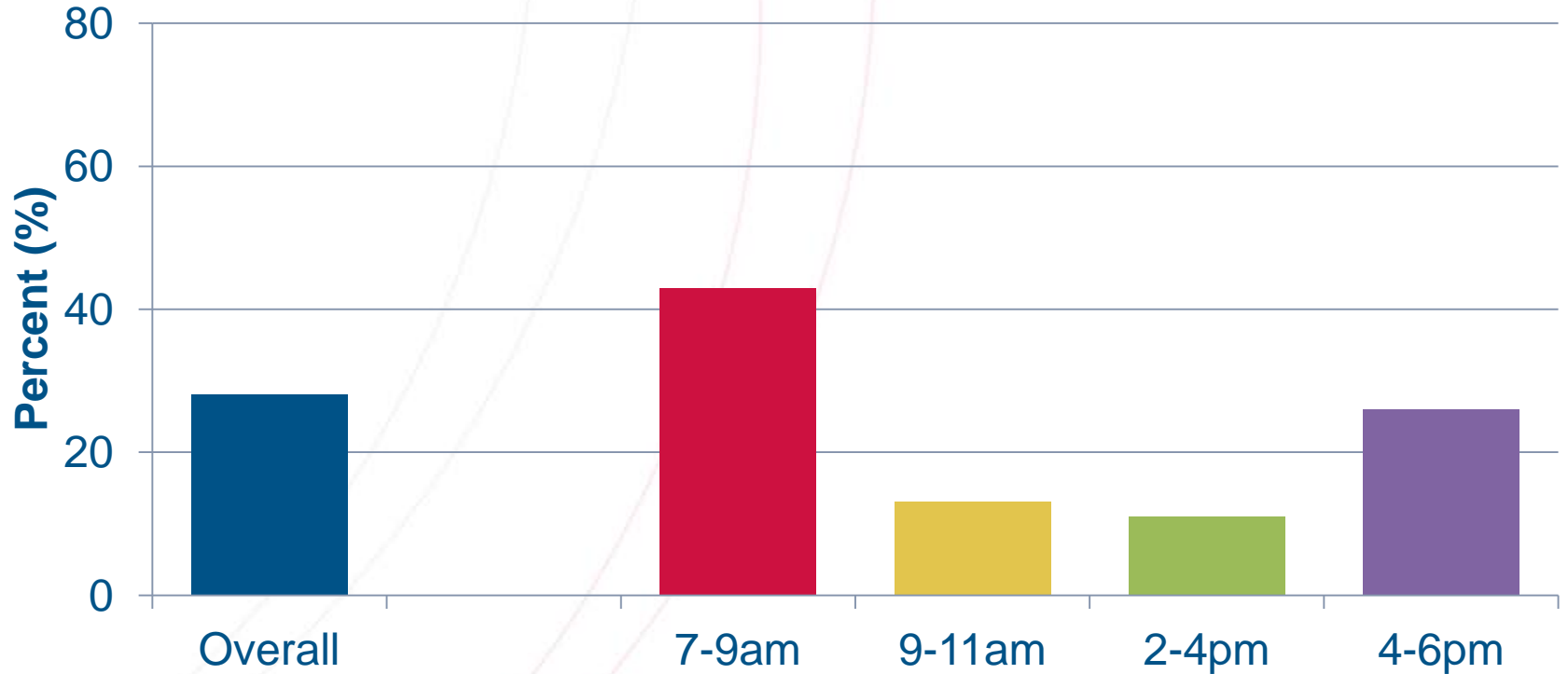
Collision

None

Yes



# Increases in bicycle counts



# Change in bicycle counts by location

George St: ↓8 %

2010: 265 2012: 253

Ann St: ↓8 %

2010: 287 2012: 265

Adelaide St: ↑82%

2010: 407 2012: 742

Eagle St: ↑36%

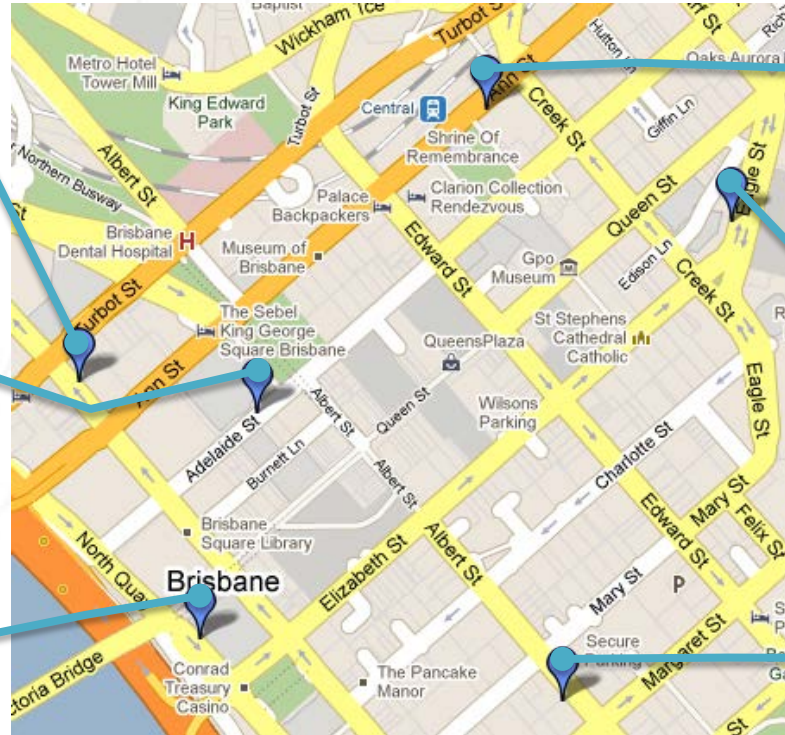
2010: 333 2012: 453

William St: ↑ 25%

2010: 318 2012: 399

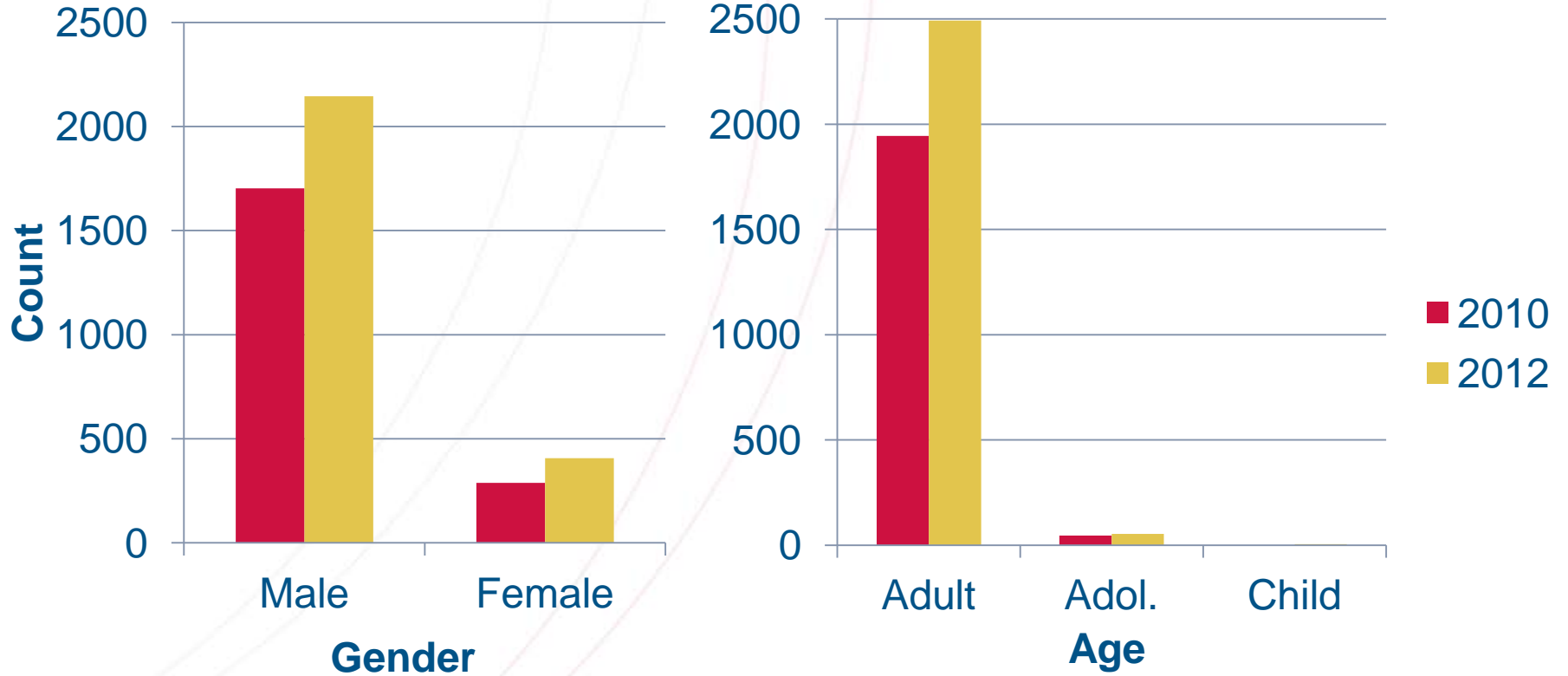
Albert St: ↑15%

2010: 382 2012: 440





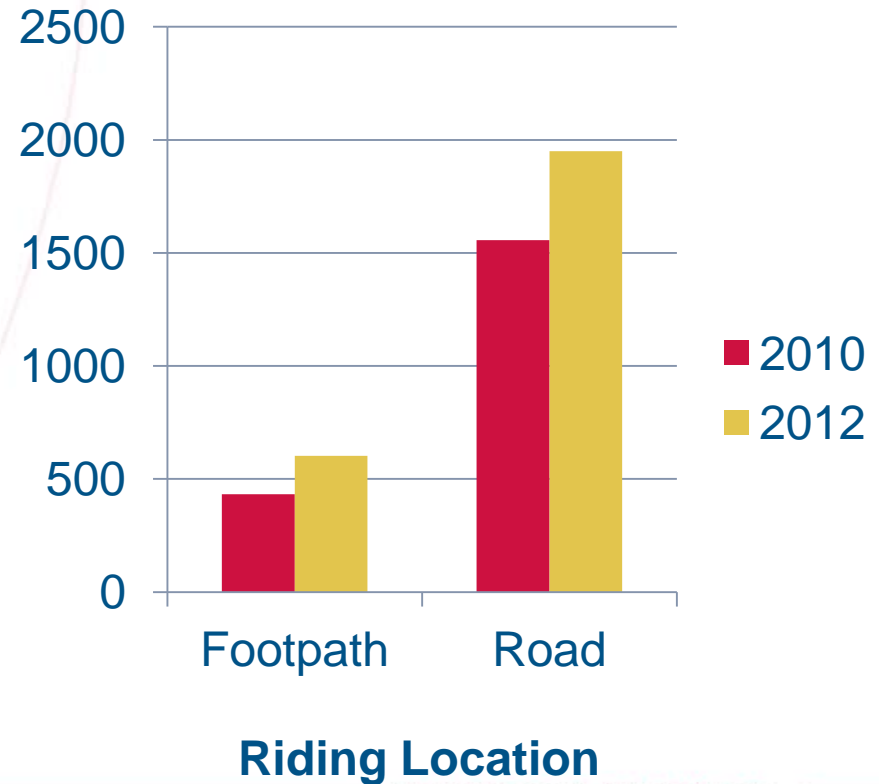
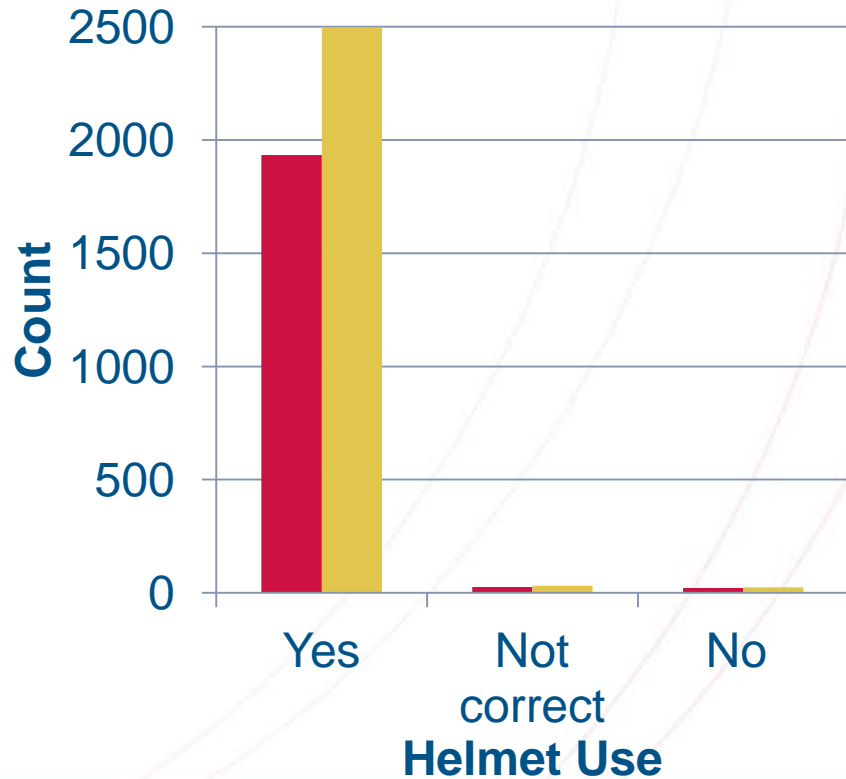
# Rider Characteristics





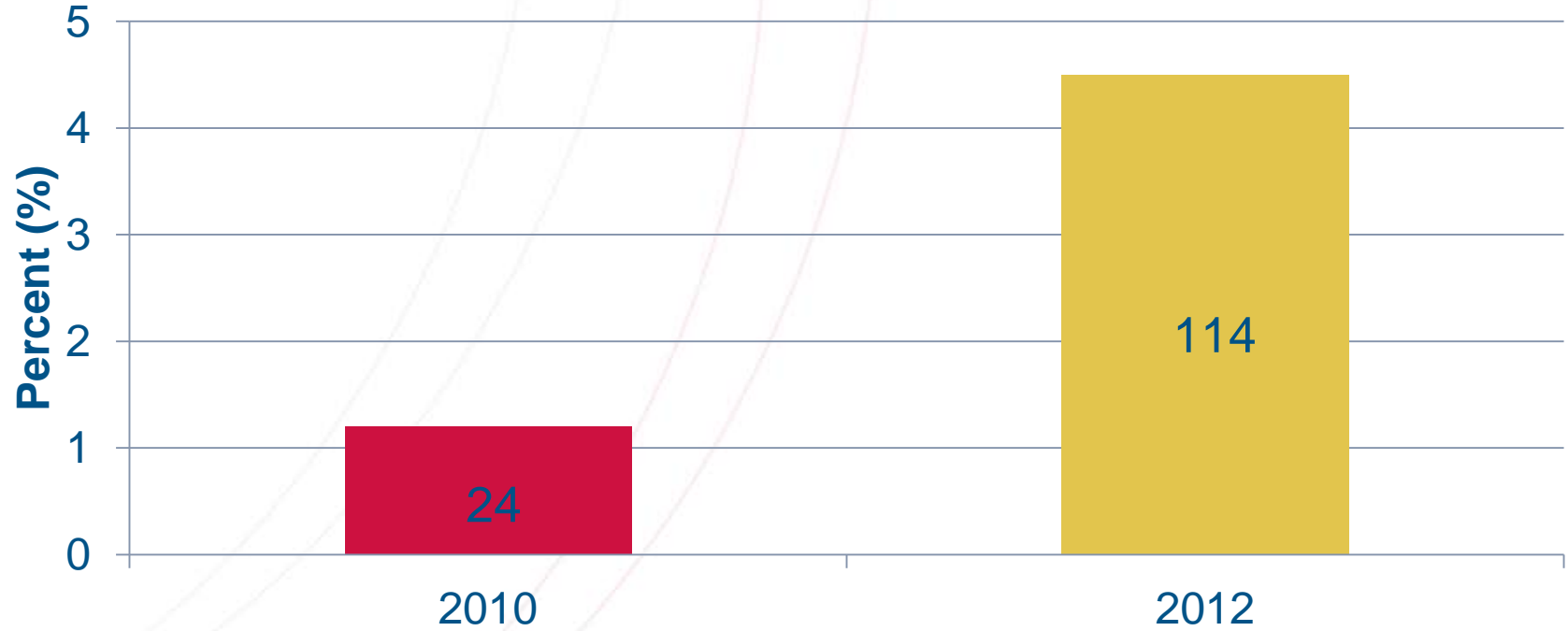


# Riding behaviours

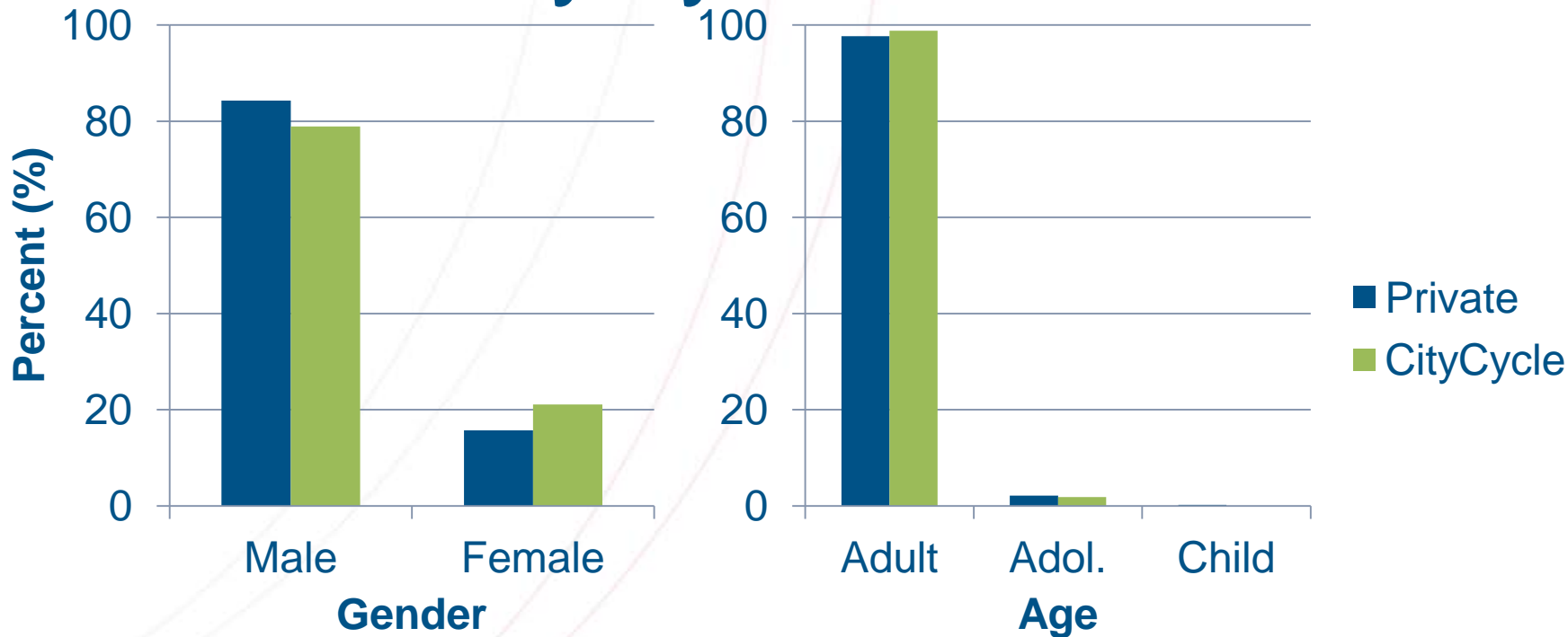




# CityCycle Use

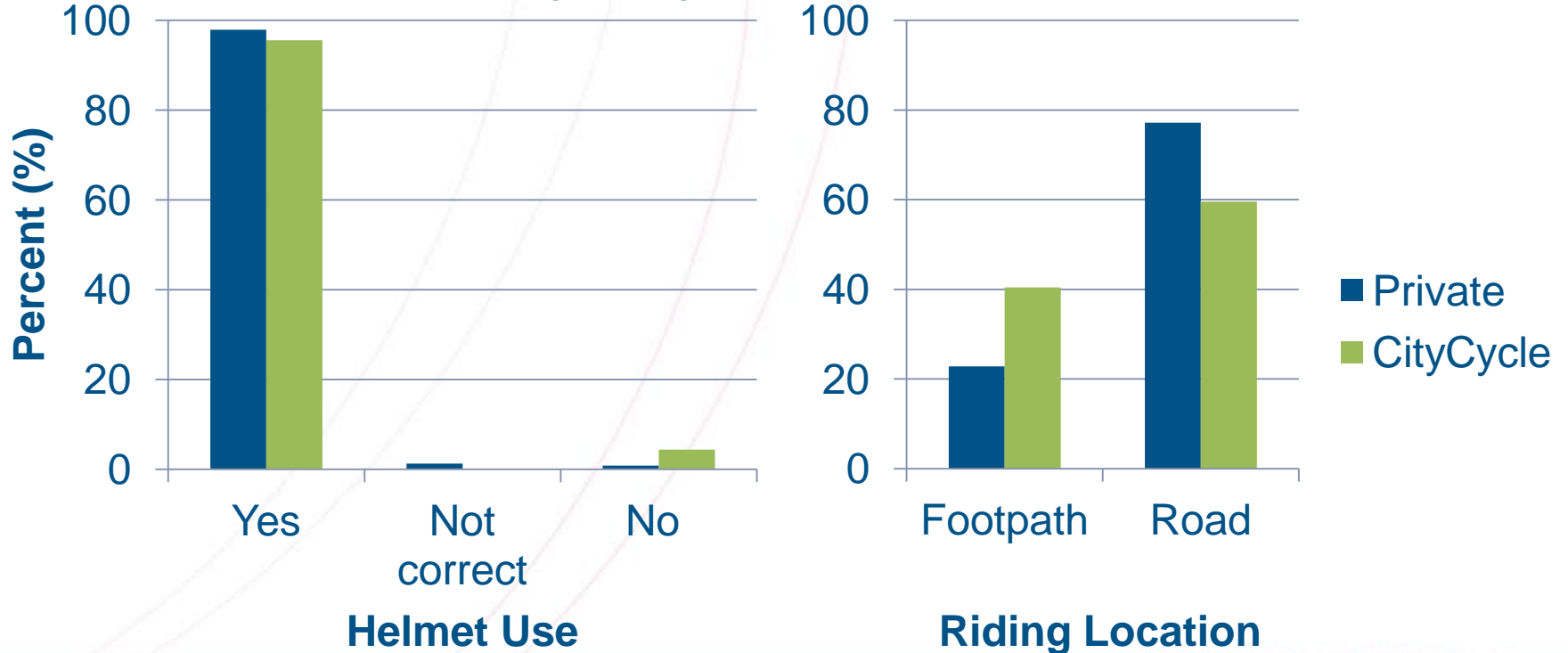


# Characteristics of private or CityCycle riders



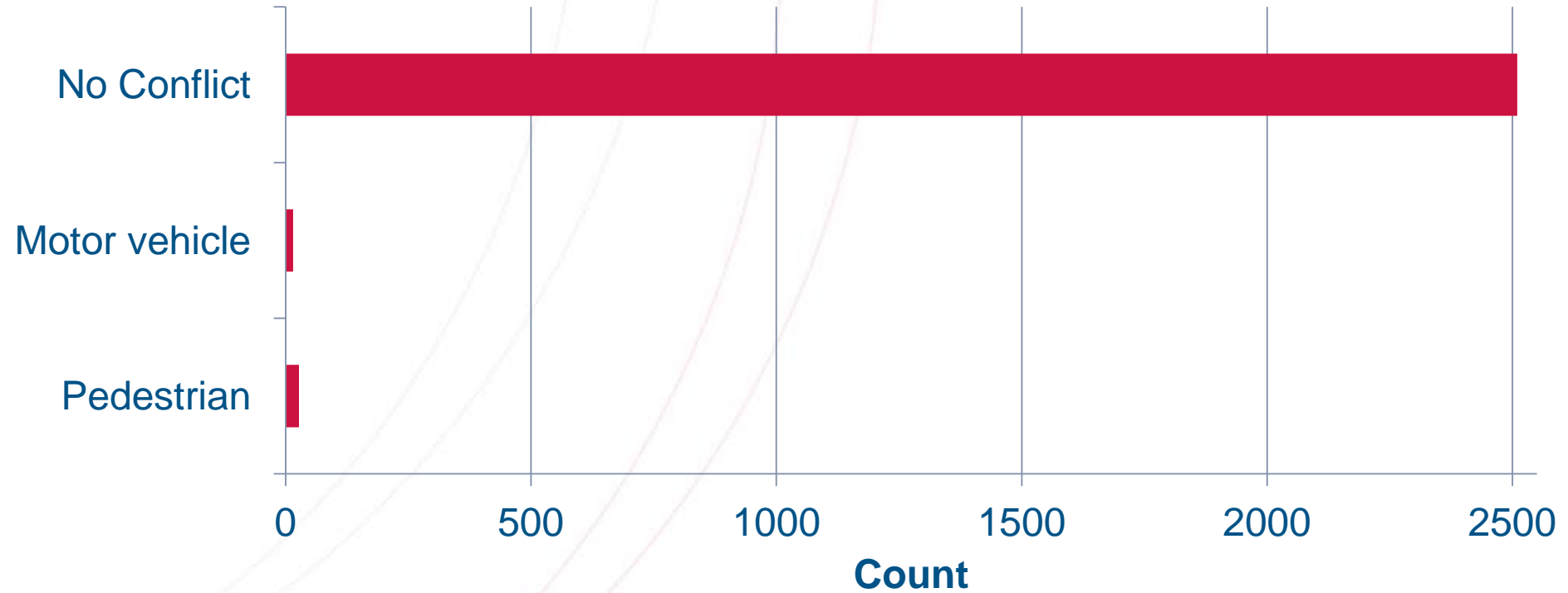


# Behaviours of private or CityCycle riders



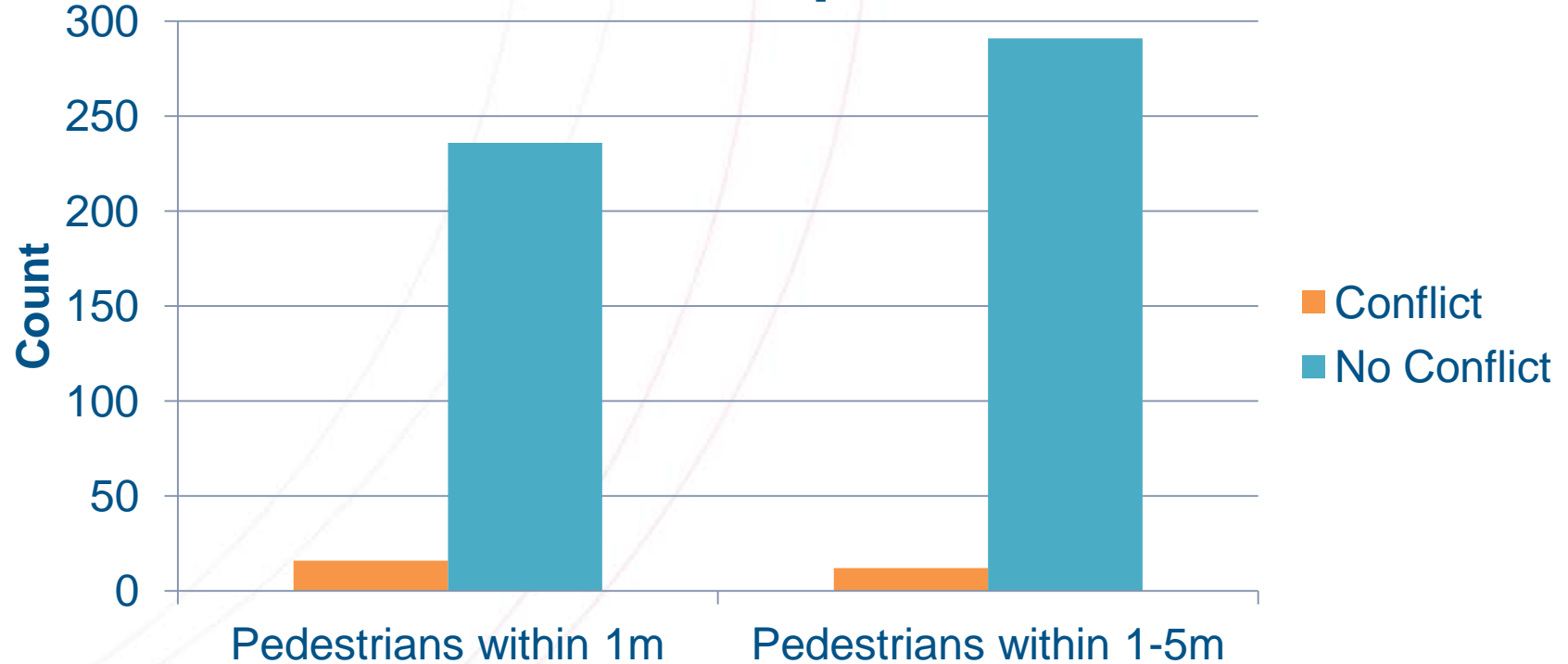


# Conflict with other road users



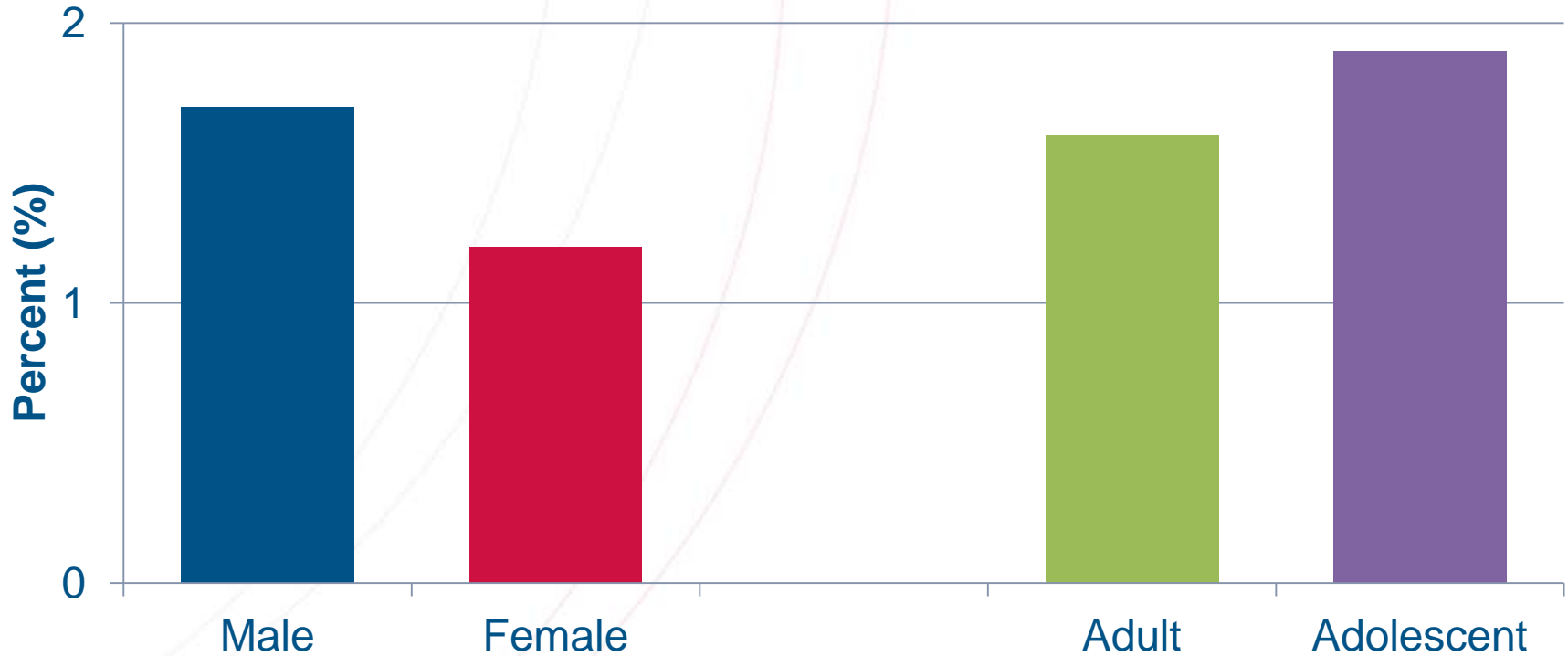


# Pedestrian vicinity and conflict on footpaths



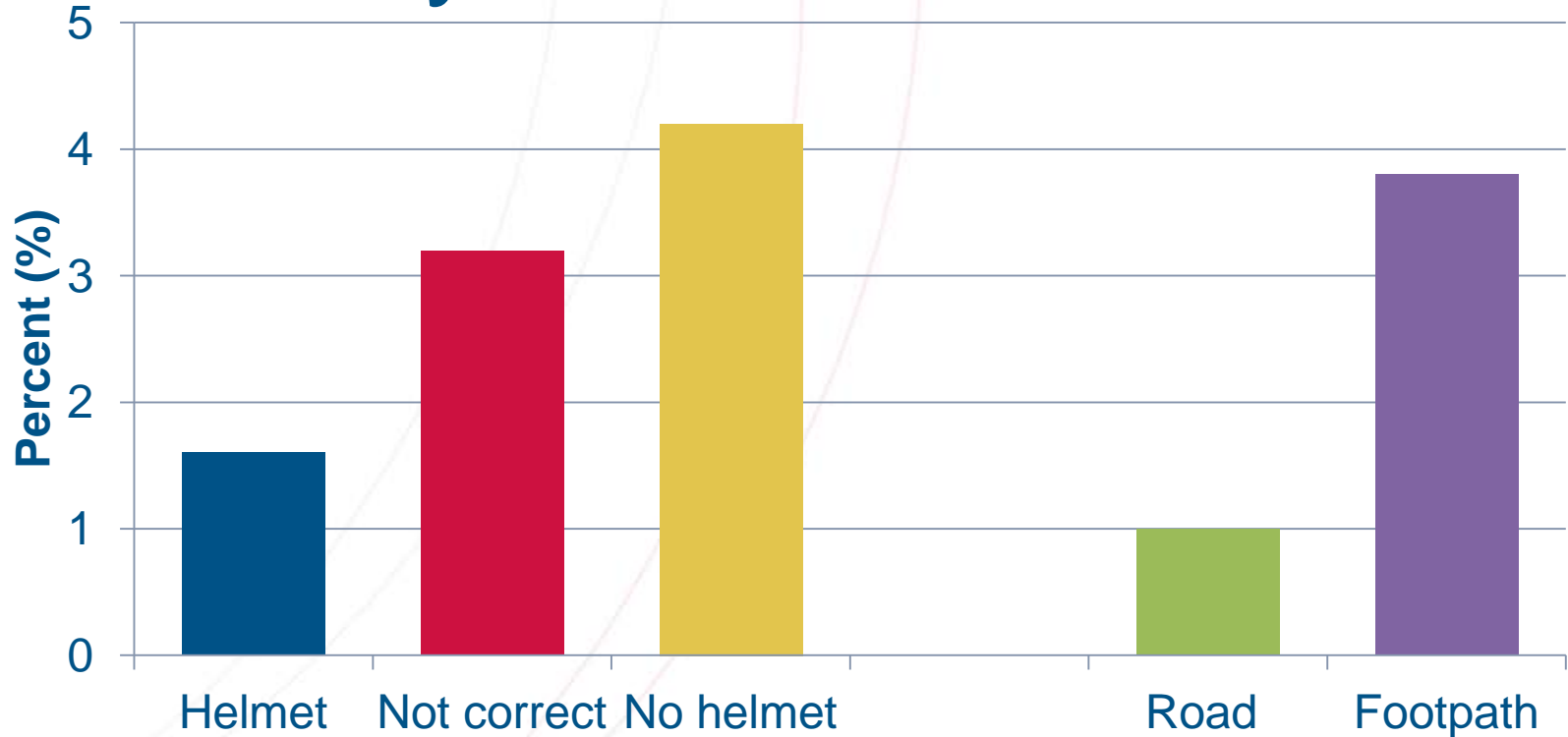


# Conflict, by Gender and Age





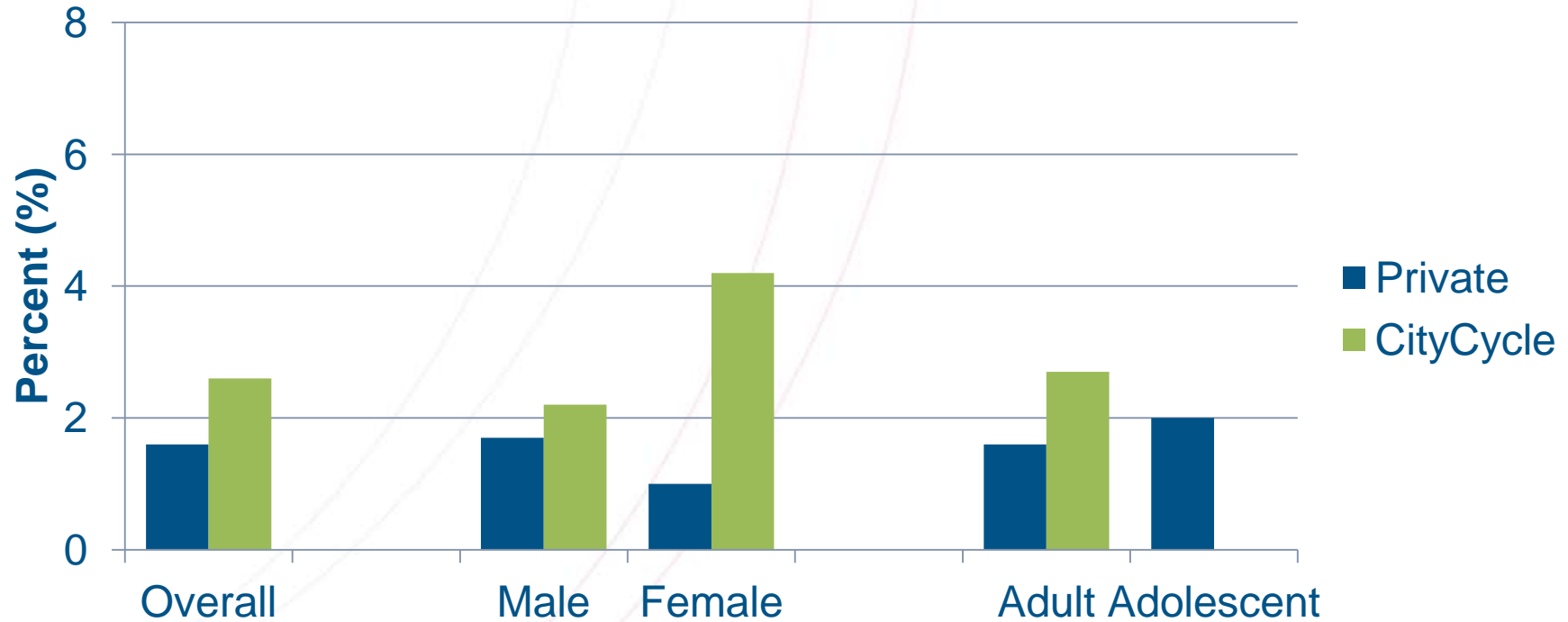
# Conflict, by helmet use and location





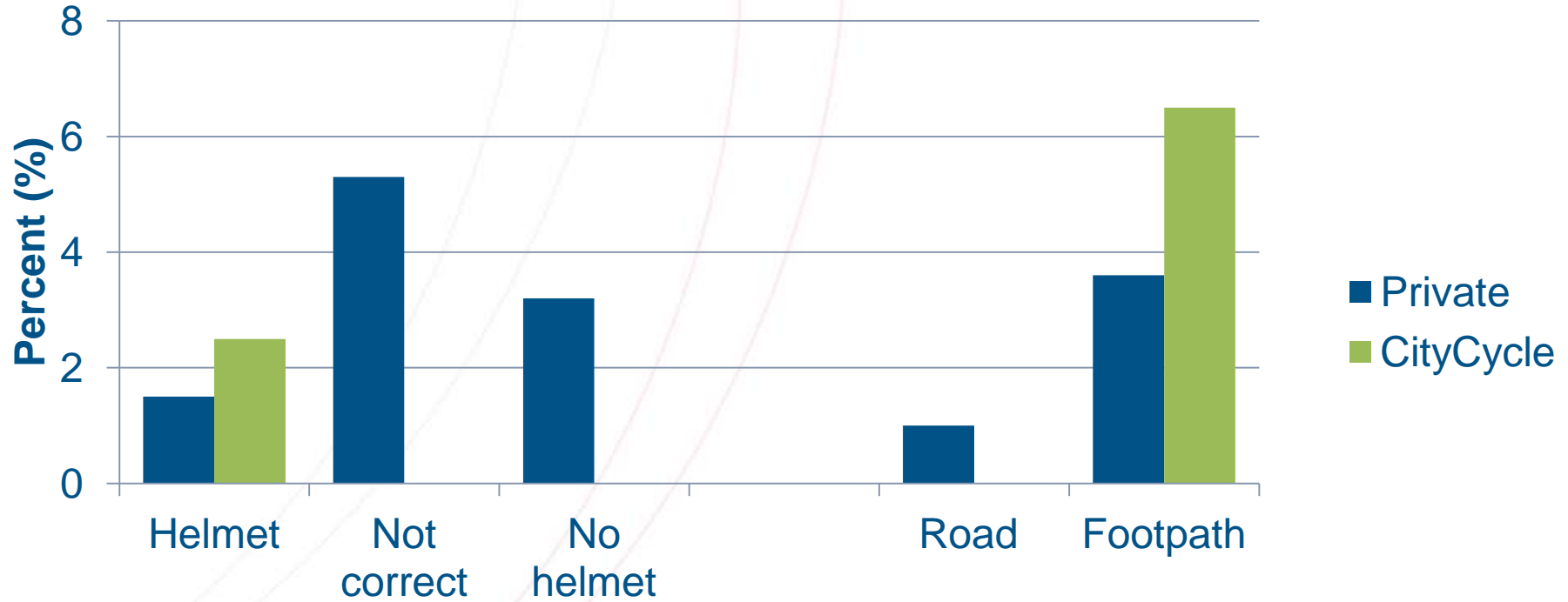


# Conflict – Private vs Citycycle





# Conflict – Private vs Citycycle





# Discussion

- Increase in cycling participation
  - Both private and public bicycles
  - A little way off until equal use by both gender
  - Greatest increase during commuter times
  - Changes not uniform across locations
- No change in helmet wearing rates
- Few conflicts with pedestrians & vehicles

# Future Work

- Continue collecting data
- Possibly extend to other time periods (school holidays); locations outside the CBD

# Questions?

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## Mark your Diaries!

International Council on Alcohol, Drugs and  
Traffic Safety Conference (2013)  
25-28 August 2013, Brisbane  
<http://t2013.com>

