

# Work-related MVTC fatalities in New Zealand: occupational risks & opportunities

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UNIVERSITY  
of  
**OTAGO**  
*Te Whare Wānanga o Otāgo*  
NEW ZEALAND

# Work-related road safety

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- Driving a common occupational activity
- Rarely captured in national work or road safety figures
- Important contributor to overall burden of WRFI 1985-94:
  - Adds 106 fatalities annually
  - Contributing to 29% of worker fatalities



# WRFIS Fatal data series

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WRFIS: Road

1985-98

1999-04

2005-14

Purpose to:

- i) enumerating the burden; and
- ii) identifying high risk groups and circumstances.

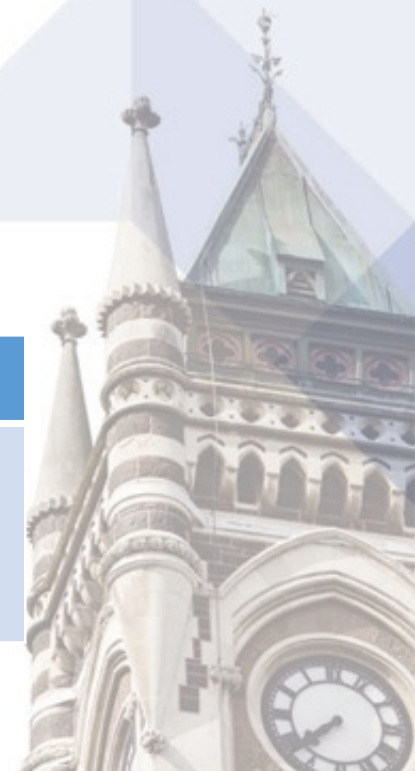


# Design & eligibility

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- Mortality review of cases with external underlying cause of death
- Full case audit of Coronial records

Includes	Excludes
Workers, commuters & bystanders Death up to 1 yr following injury event Occurred on public road	People doing home duties Deaths due to suicide Aged <15 yrs & >85 yrs



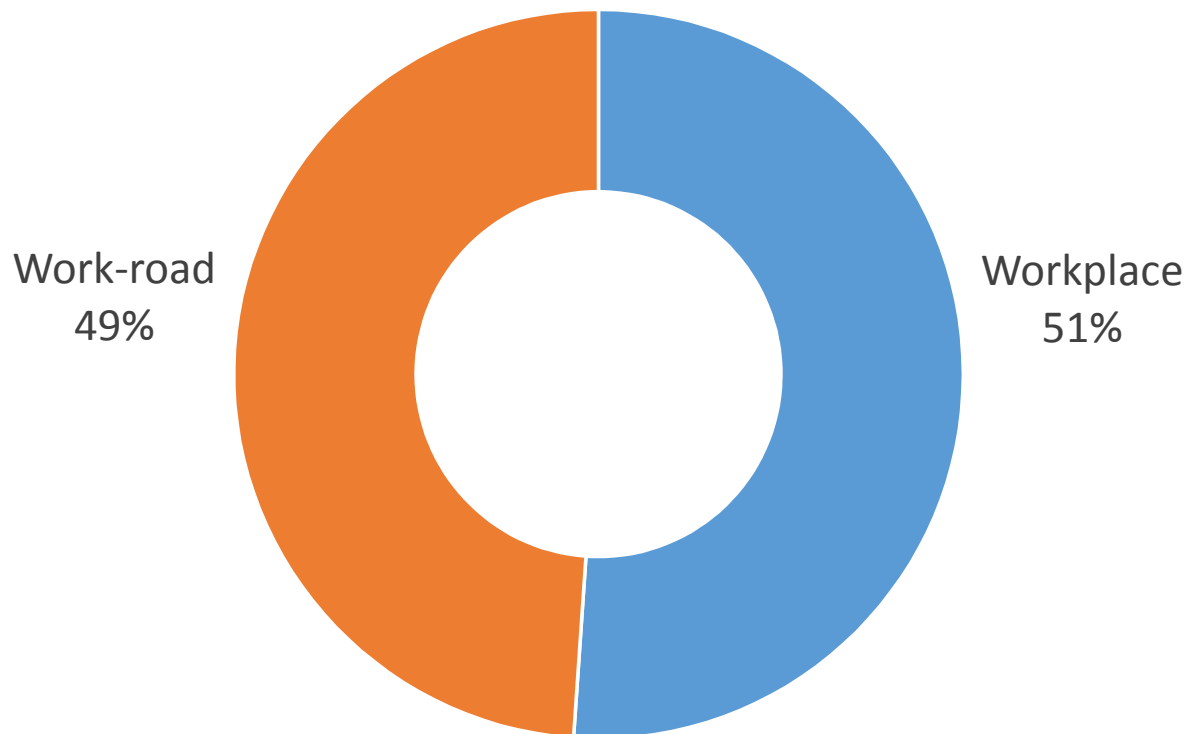
# Burden: work-road

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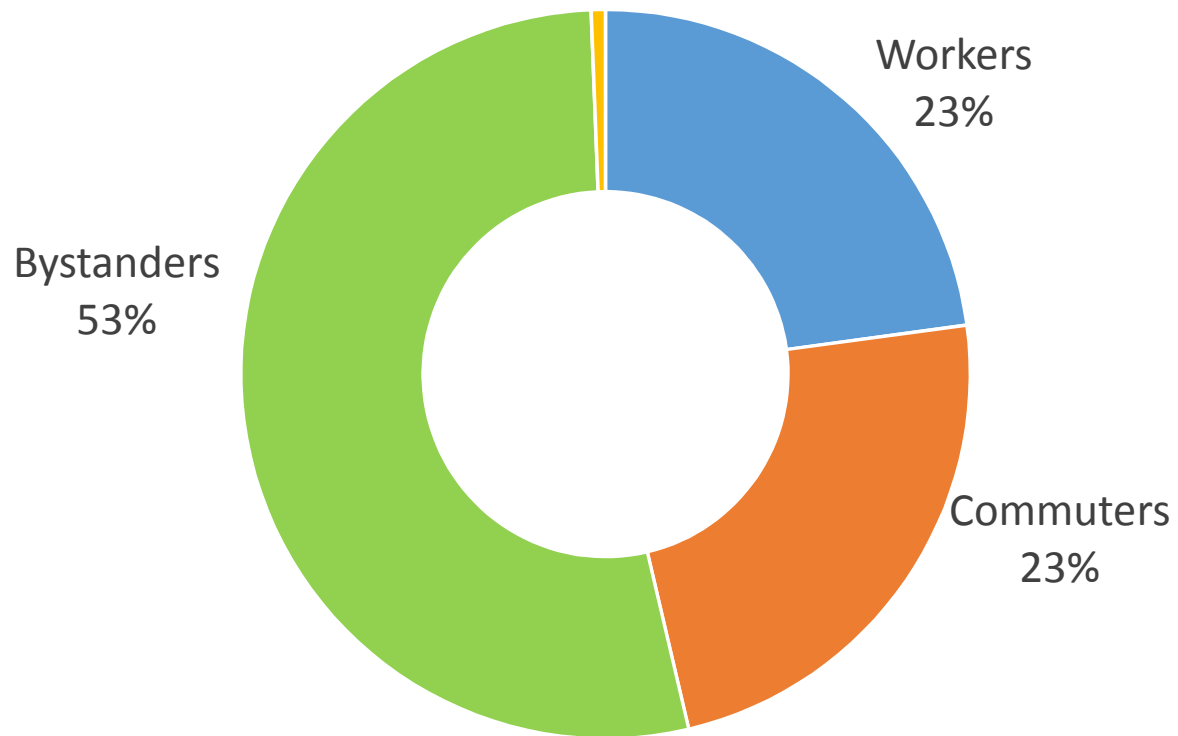
Aim: To enumerate the burden of work-road fatalities



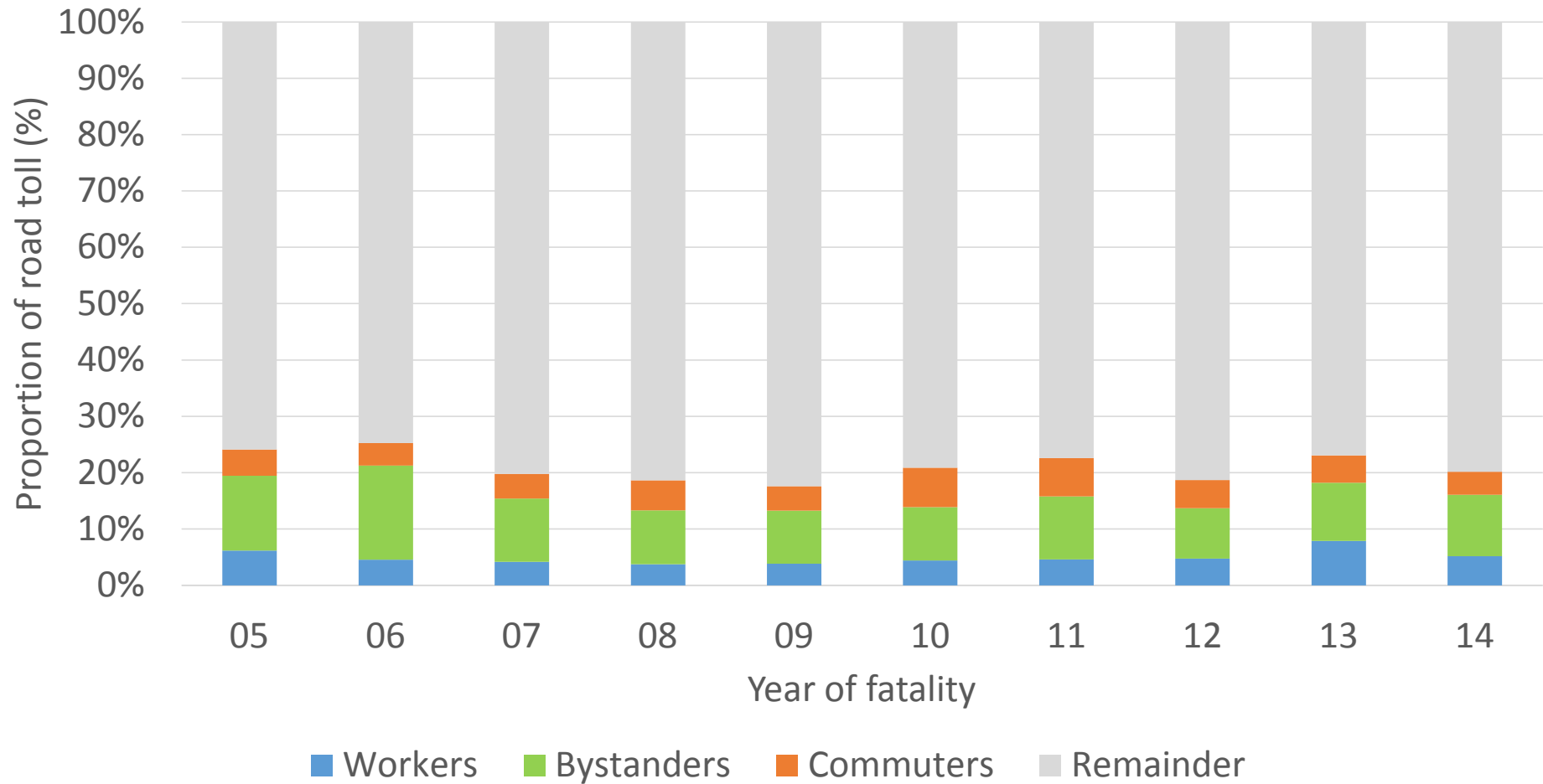
# WRFI by work setting, 2005-14



# Work-context: work-road WRFI, 2005-14



# Contribution of work-road WRFI to road toll, 2005-14





# Workers, aged 15-84 yrs, 2005-14

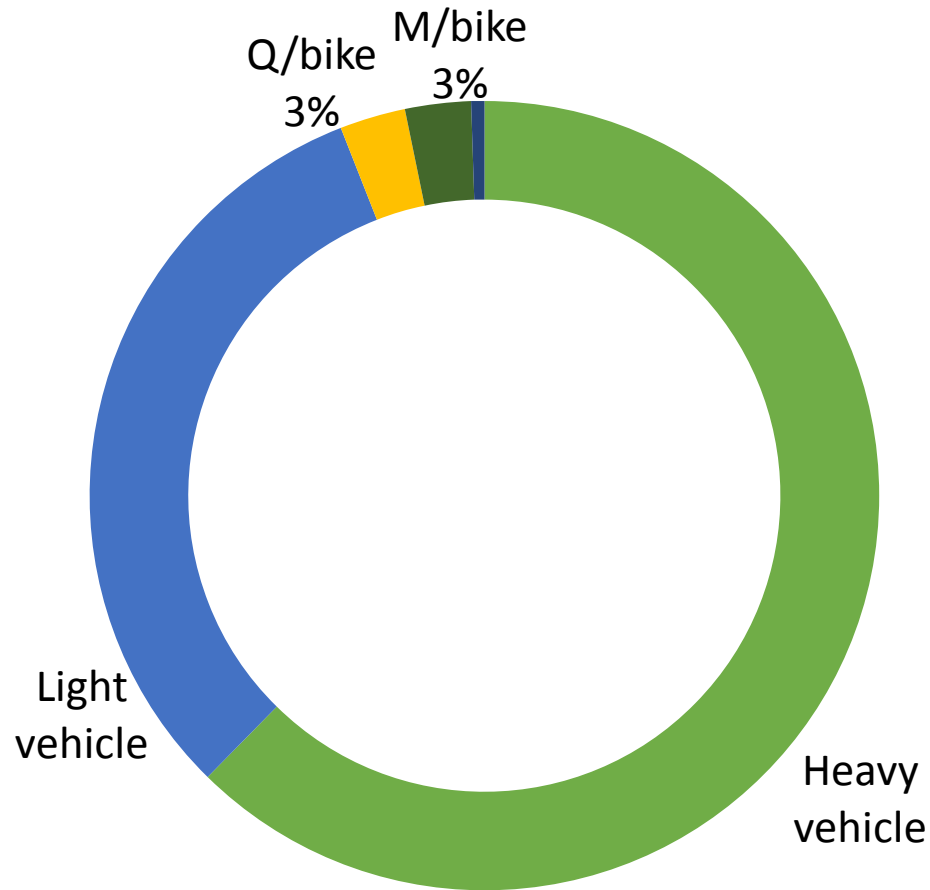
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Workers: 215 work-road deaths

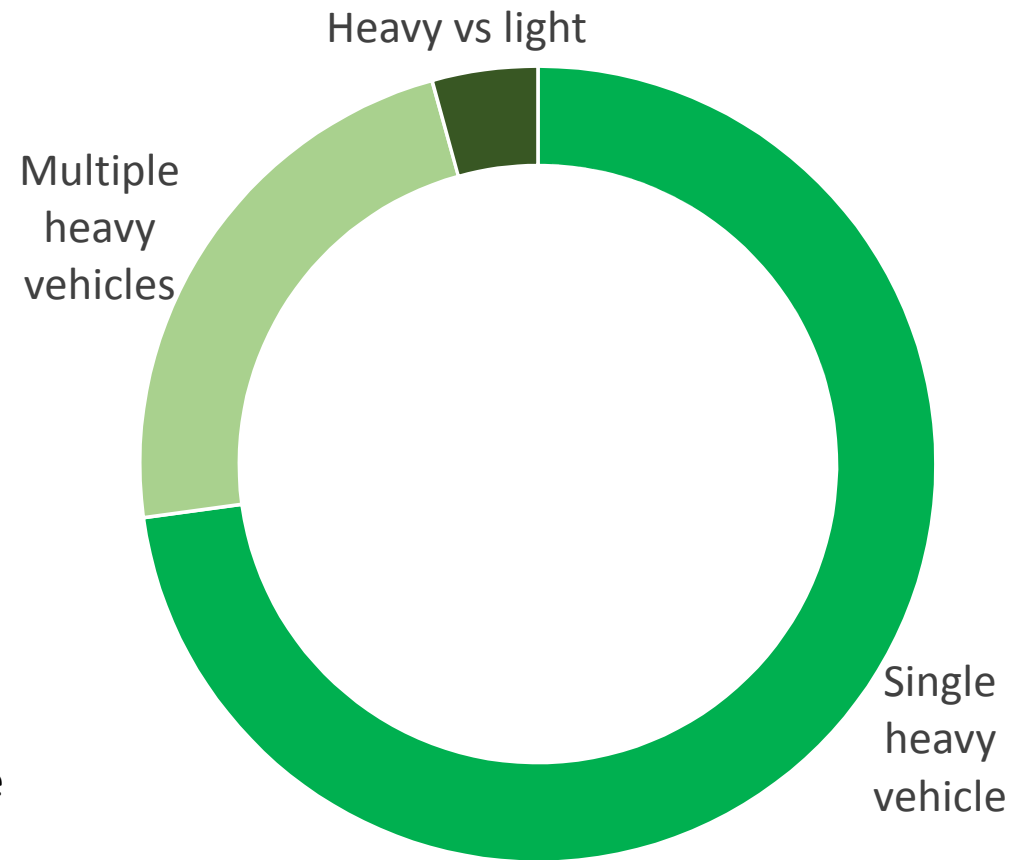


# Vehicle types involved

## Light vehicles



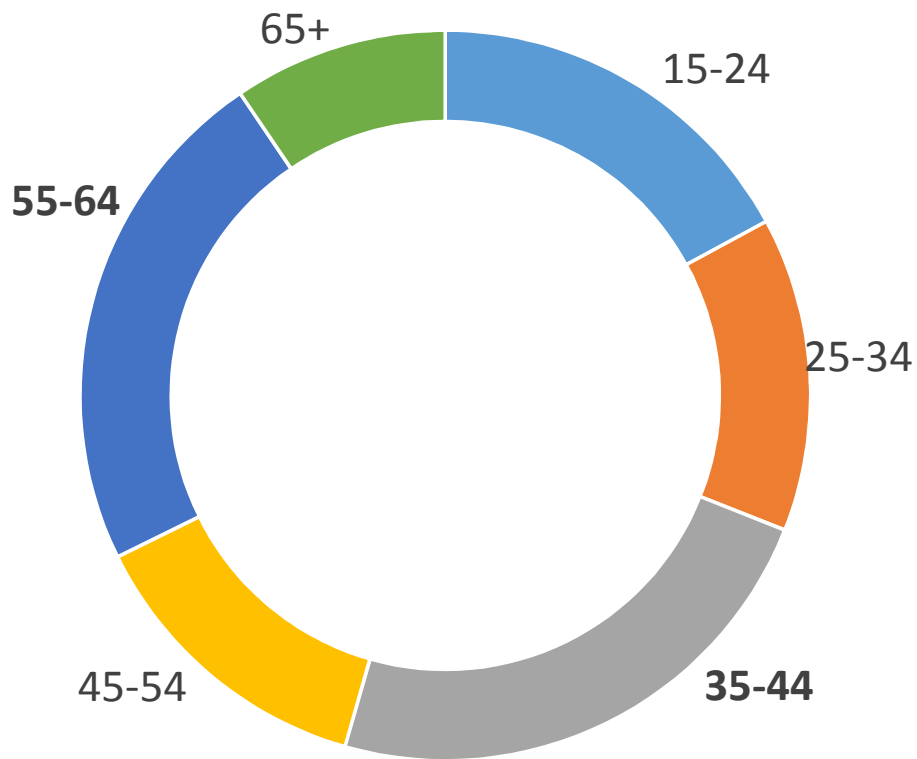
## Heavy vehicles



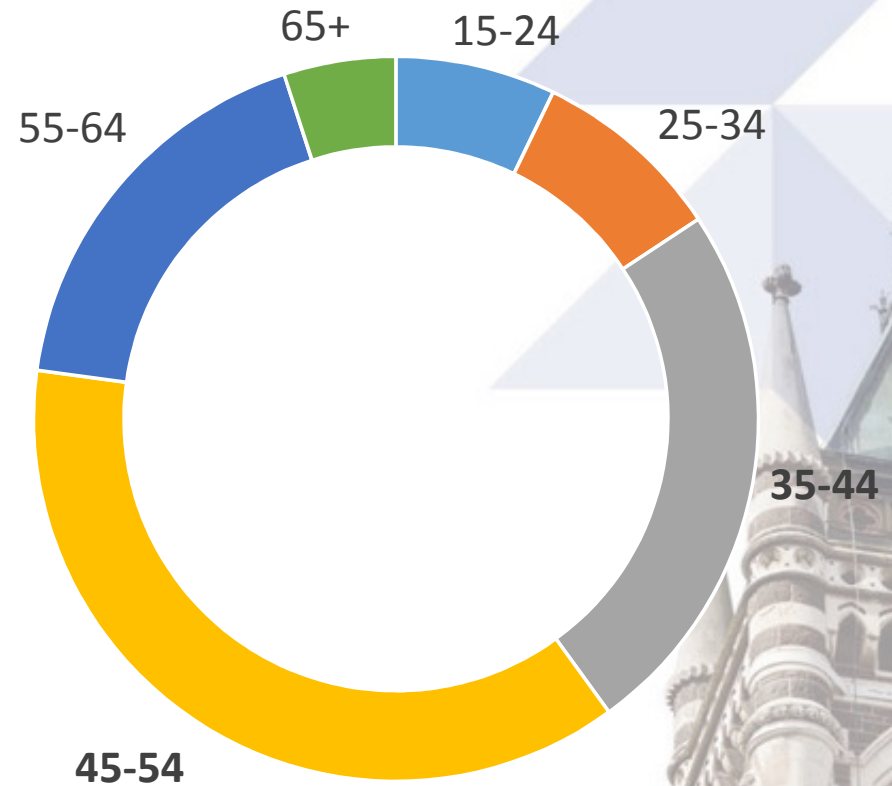
# Age

## Light vehicles

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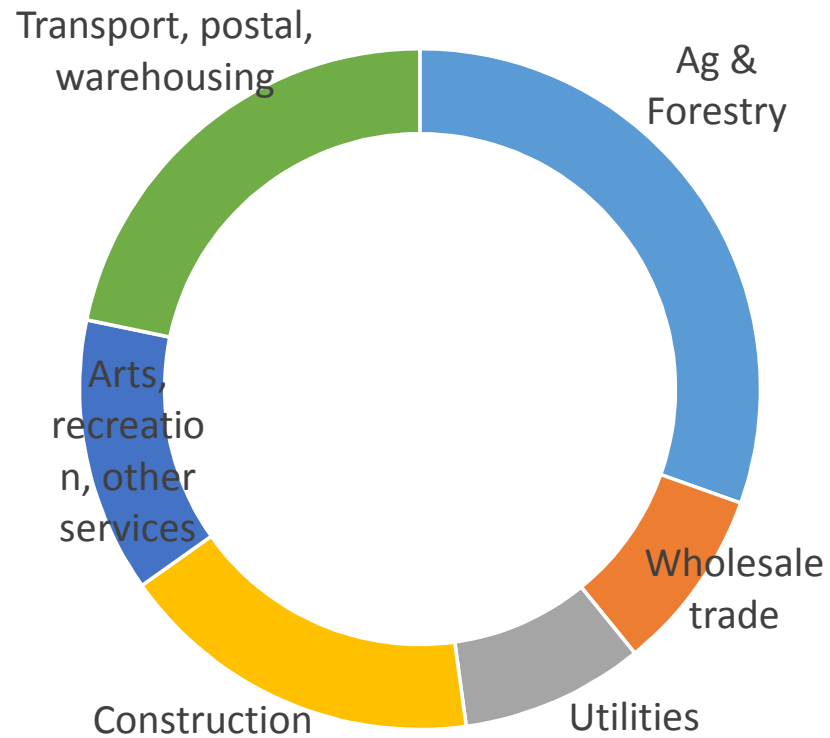


## Heavy vehicles

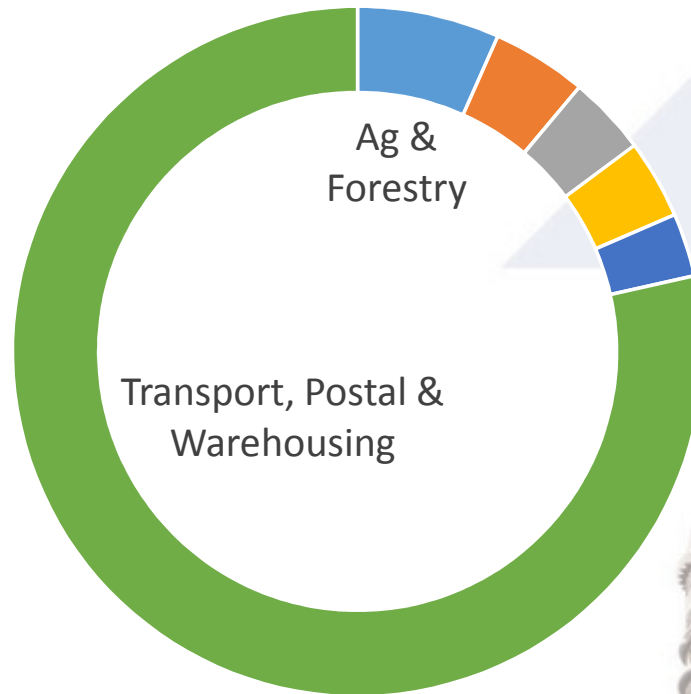


# Industry

## Light vehicles

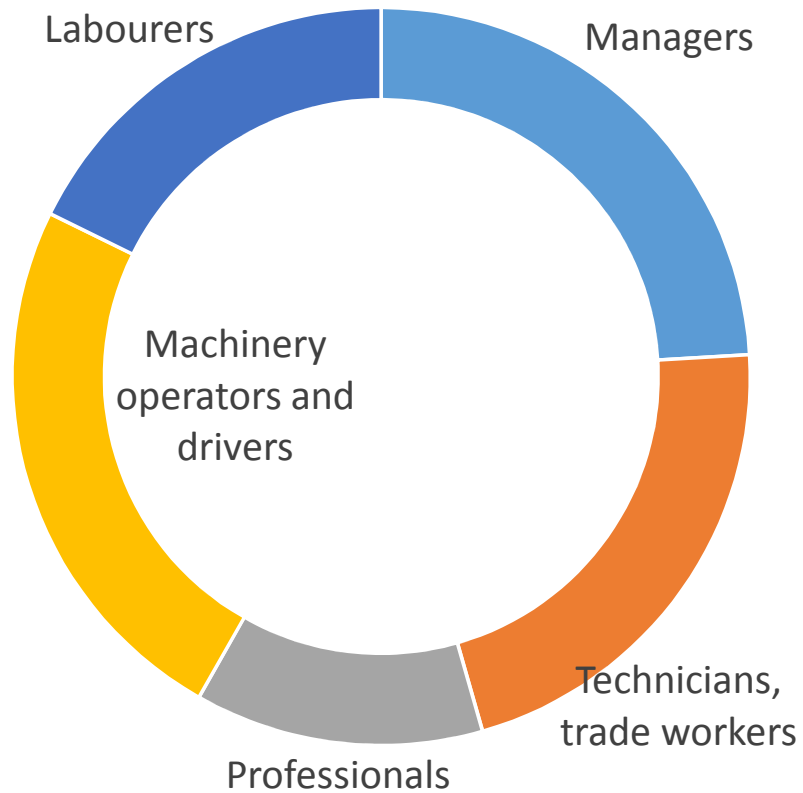


## Heavy vehicles

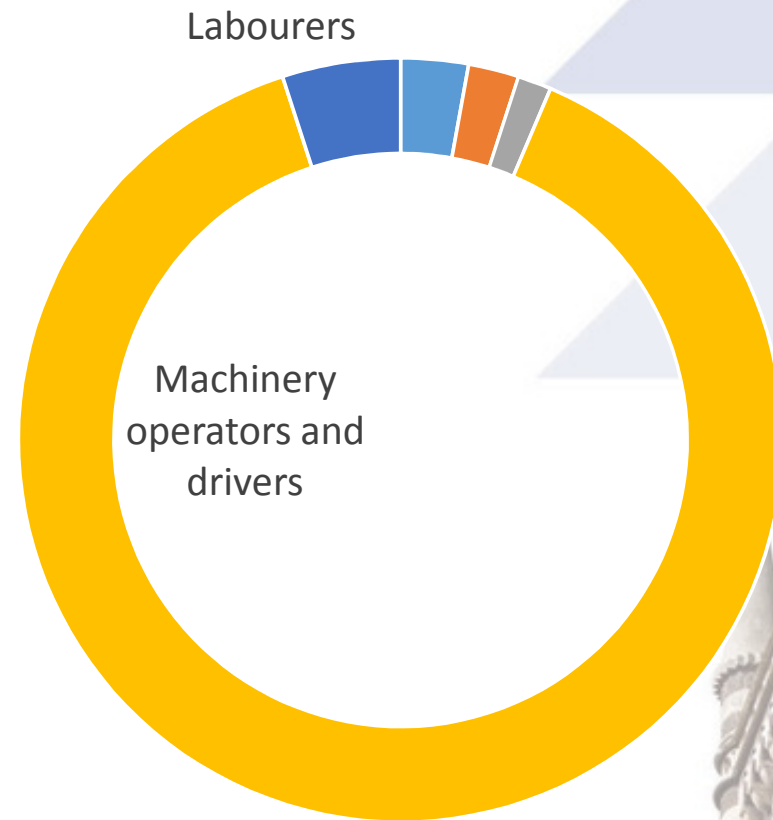


# Occupation

## Light vehicles

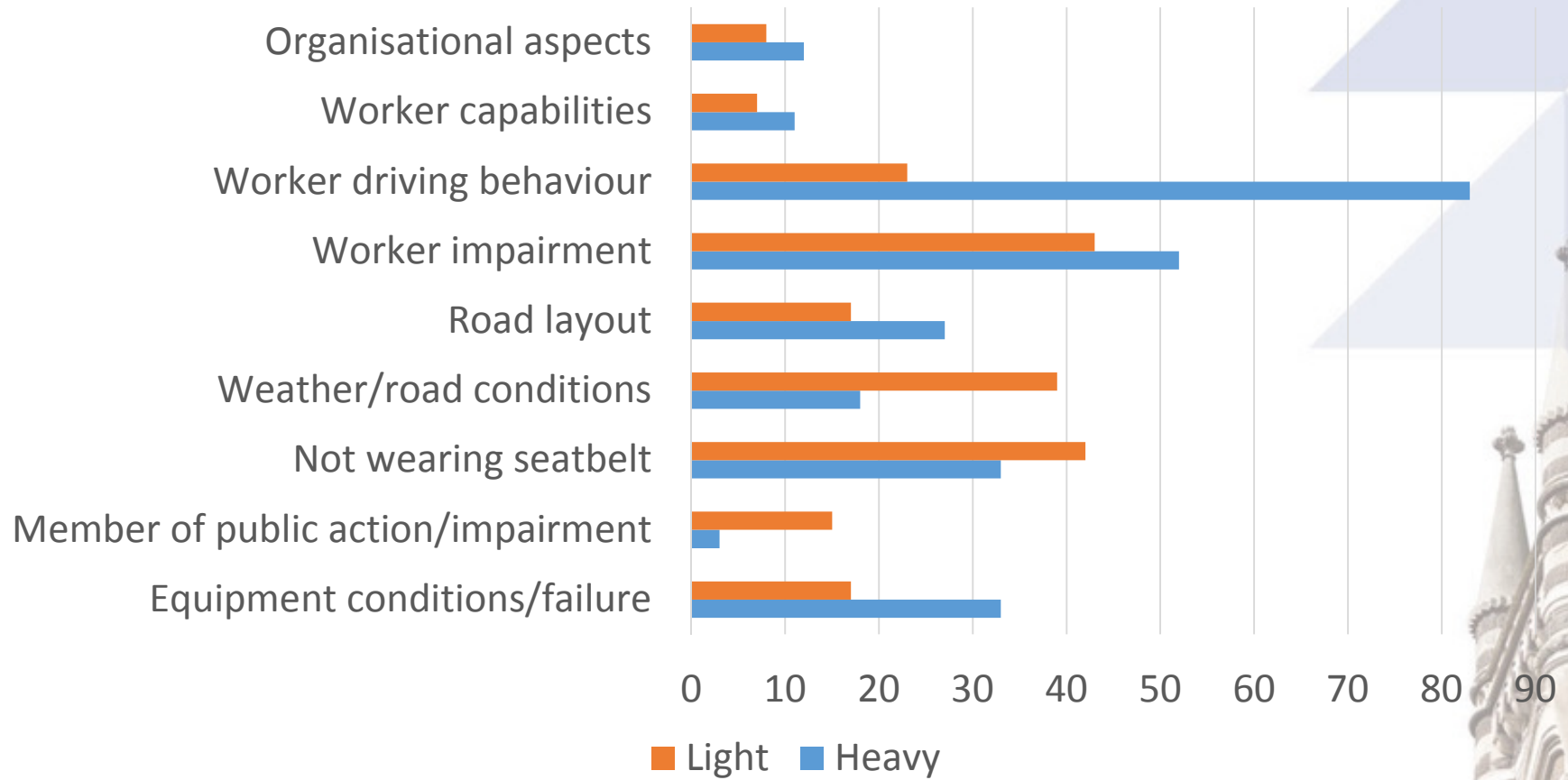


## Heavy vehicles

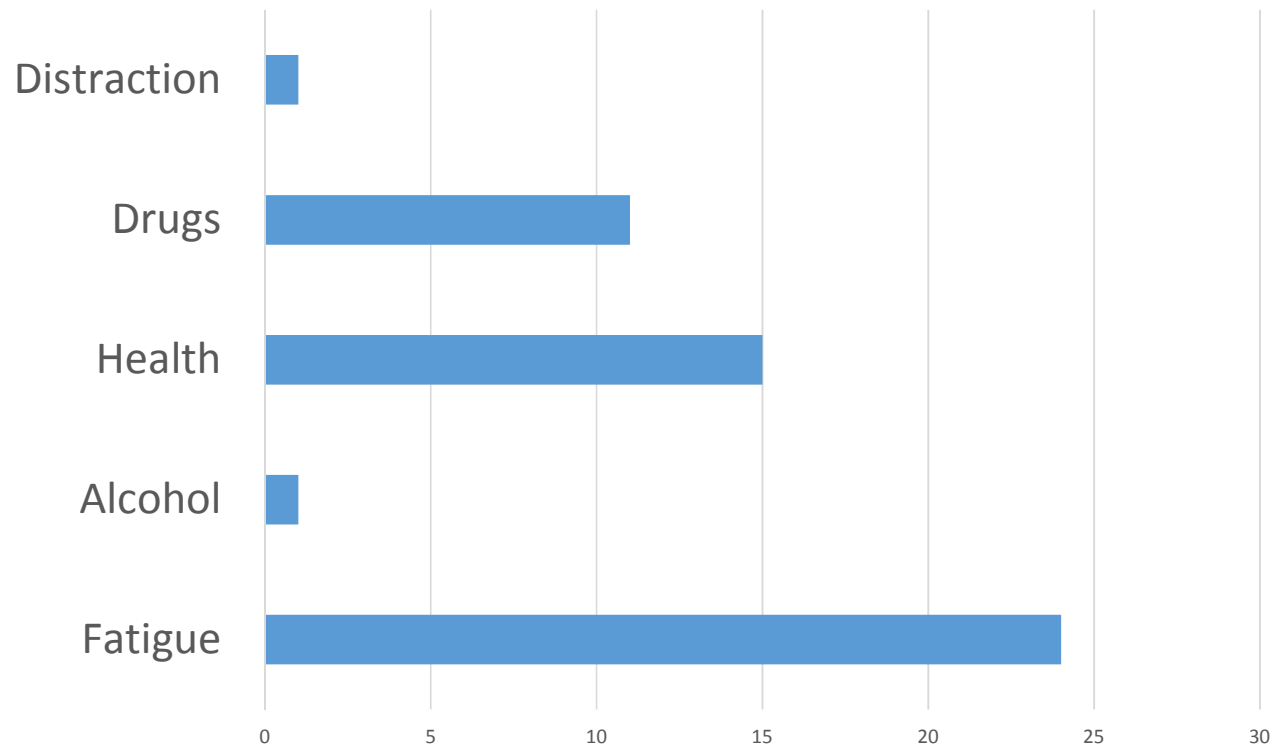


# Contributing factors

Note: organizational aspects rarely examined by Coroners. Consider a very conservative estimate.



# Contributing factors: Worker impairment (heavy vehicles)



# Common causes

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## Light vehicles

- Not wearing seatbelts
- Work-related fatigue
- Risky driver behaviours
- Driver impairment
- Road & weather conditions
- Lack of system resilience when driver makes a mistake

## Heavy vehicles

- Lack of driver protection during crash (cabin + seatbelt)
- Work-related fatigue
- Speed (+ fatigue) on corners
- Shifting load on corners
- Driver impairment
- Road-side ditches, bridge abutments, road shoulders
- Lack of system resilience when driver makes a mistake





# Reoccurring circumstances

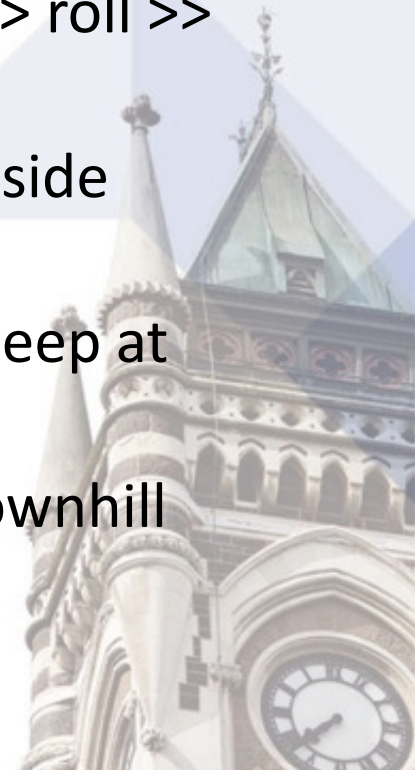
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## Light vehicles

- Lost control on corner >> rolled down bank
- Fatigued worker falls asleep at wheel at end of work day
- Farm quad bike/ute crossing road to access farm >> into path of oncoming vehicle
- Overtaking on highway >> collide with oncoming vehicle

## Heavy vehicles

- Lost control on corner >> roll >> hit fixed obstacle
- Lost control >> hit road-side ditch >> roll
- Fatigued worker falls asleep at wheel
- Equipment failure on downhill descent >> roll



# Take aways .....

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Important contributor to national road toll - up to 1 in 4 deaths

Fatalities to bystanders more common than to workers

Many cross-cutting issues to address:

- Worker impairment
- Driver behaviours
- Organisational influences



# Acknowledgements

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Funder:



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**Coders:** *Alexia Moore, Wendy Aitken*

