



TŪPUNA PONO
BEING GOOD
ANCESTORS

A TRANSPORT
NETWORK FOR
FUTURE GENERATIONS
WHAKATŪ/NELSON
9-12 JUNE 2024

Building an age- friendly future

Jared Thomas
Bill Frith
Francene Thomas

WSP Research
and Innovation



Building an age-friendly future



What is the need for age-friendly streets?



When are older drivers most at risk?



How comfortable are our older drivers?



What infrastructure changes are most needed to support our older drivers?

Building an age-friendly future



What is the need for age-friendly streets?



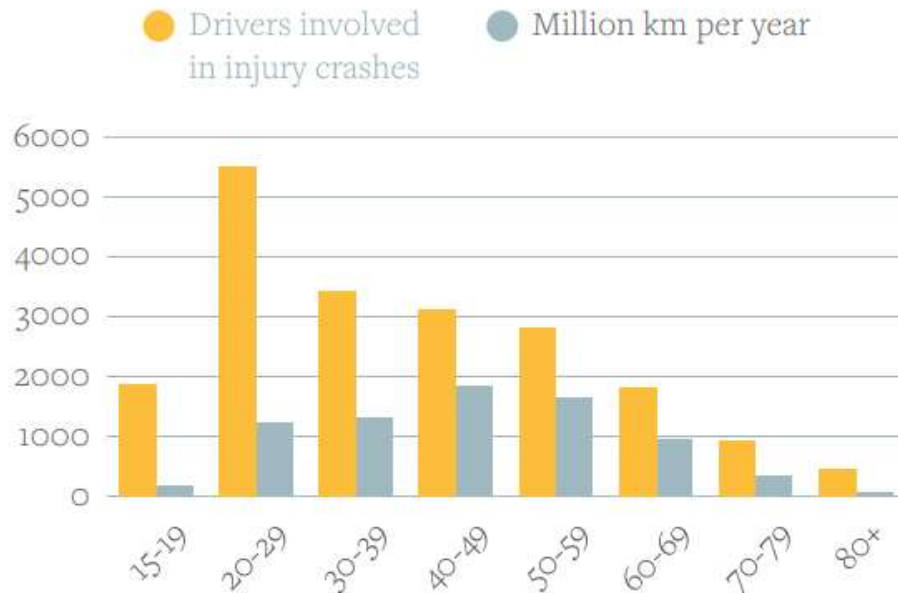
As our population ages, crashes per person go down, but severity of crash increases (due to fragility)

33% increase in fatal and serious driver injuries by 2063 if preventative measures are not taken

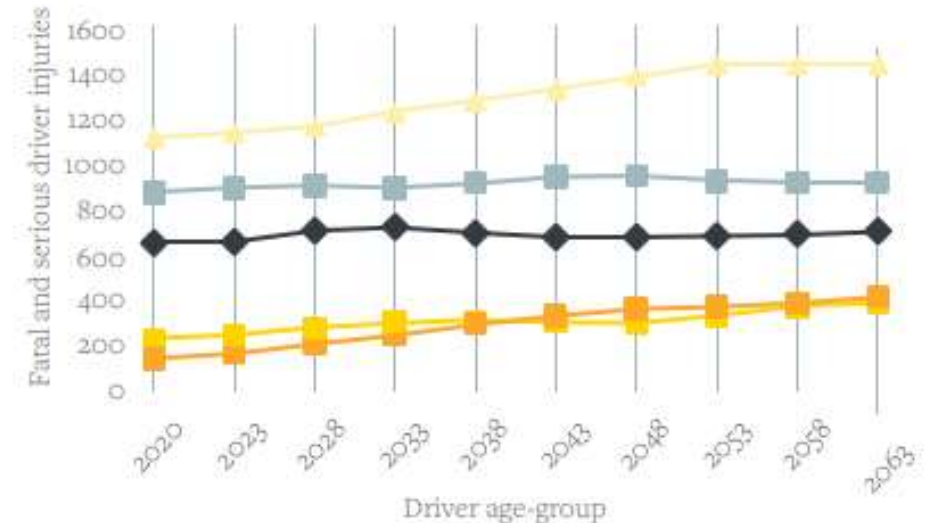
Drivers involved in injury crashes



Annual average drivers involved in injury crashes and their annual distance driven



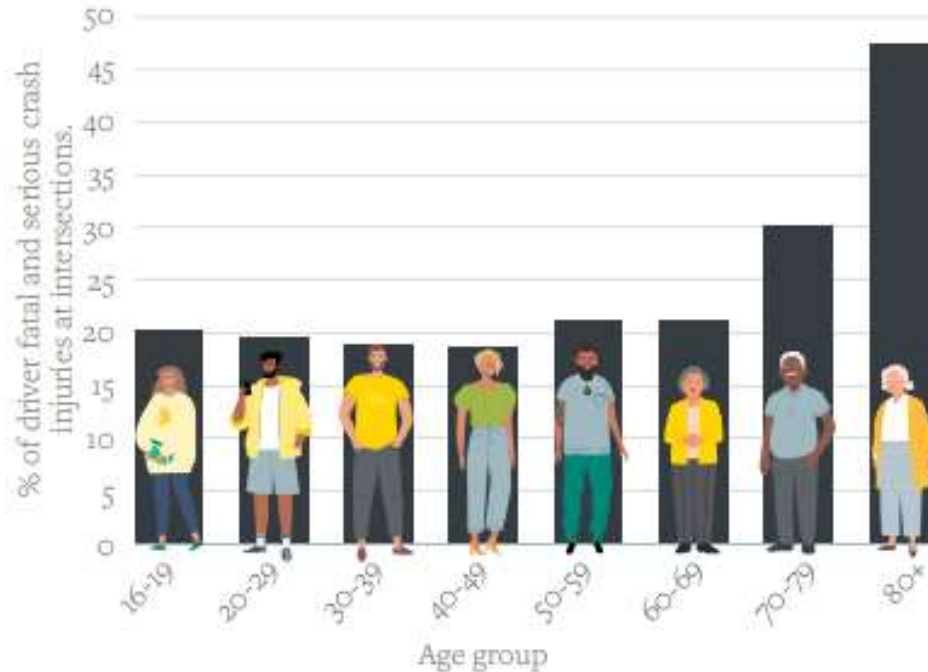
Projected driver fatal and serious injuries (baseline 2020) for various age-groups



When are older drivers most at risk?



Older drivers are 1.5 – 2.5 times more likely to have a fatal or serious crash at an **intersection**



Exposure to different conditions



Driving becomes more urban focussed with age

reaching around 50% urban (excluding urban motorways) by age 75+.



Motorways, which are our safest roads for all ages represent only 6.1 % of distance driven in the 75+ age-group.




As they age, drivers become more involved in daytime (bright sun and overcast conditions) crashes and less involved in night-time crashes. This is related to a tendency to drive less at night and more during the day.


How comfortable are our older drivers?



Building an age-friendly future

56% of drivers  **55+** yrs drivers
HAVE SOME LEVEL OF DRIVING ANXIETY

 **ANXIETY** appears to have **INCREASED** over the last decade – with about **30% MORE** **OLDER DRIVERS WITH ANXIETY**


● Anxious 2008 ● Anxious 2022

MOST OLDER DRIVER ANXIETY IS LINKED TO OTHER DRIVERS making them nervous



“I am very aware of how fast things can change on the road and that other drivers are as much in control of my destiny as I am.”

“I think drivers have become impatient and discourteous to others.”

“It’s the unpredictability of other drivers that makes me nervous.”

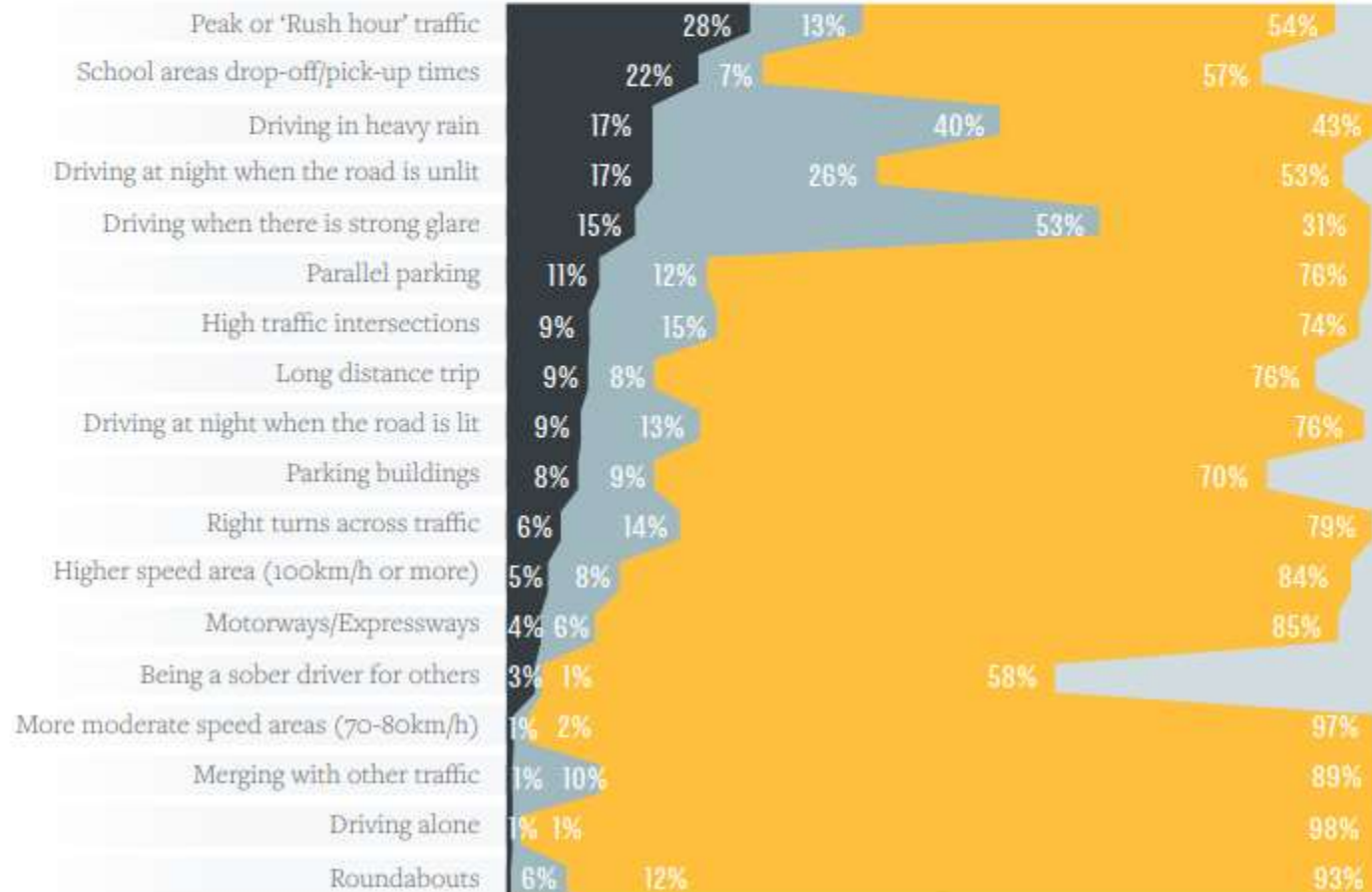
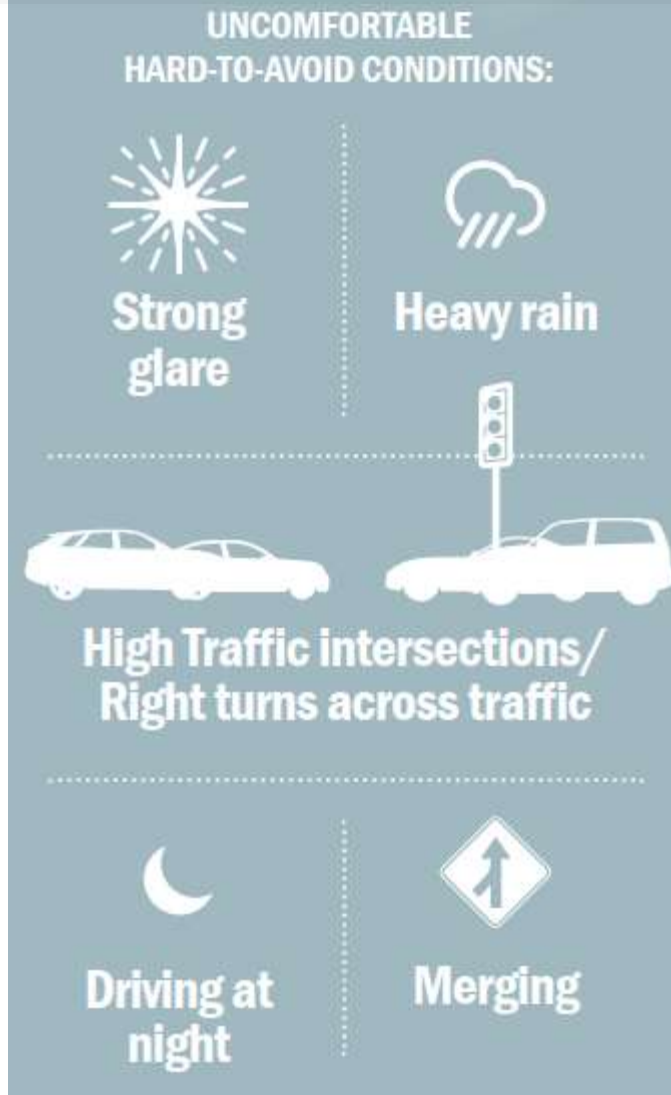


THIS MEANS THAT DRIVER ANXIETY COULD WORSEN as our population grows (with more driver interactions)



Conditions where older drivers need more support

TOP 5 AREAS OF SUPPORT





What infrastructure changes are most needed to support our older drivers?



Building an
age-friendly
future

Infrastructure improvements and visibility



LIGHTING INFRASTRUCTURE

- Be aware of deteriorating eyesight with age
- Recalibrate road lighting for older drivers
- Use adaptive LED Street lighting

DELINEATION

- Use & maintain reflectorised markings
- Use a minimum of 150mm-wide reflectorised edgelines
- Use high beam headlights whenever legal
- Adopt profiled road markings for all weather conditions

SIGNAGE

- Use more of symbolic signs
- Use as large text size as possible for non-symbolic signs

- ✓ Use more 60+ year-old Reflectivity assessors
- ✓ Always use 2-second preview times

Van Bommel, W. (2015). Road Lighting: Fundamentals, Technology and Application, In: Springer International Publishing Switzerland



Building an
age-friendly
future



Well-designed roundabouts with their slower entry speeds (are better than signals or stop/give way control)

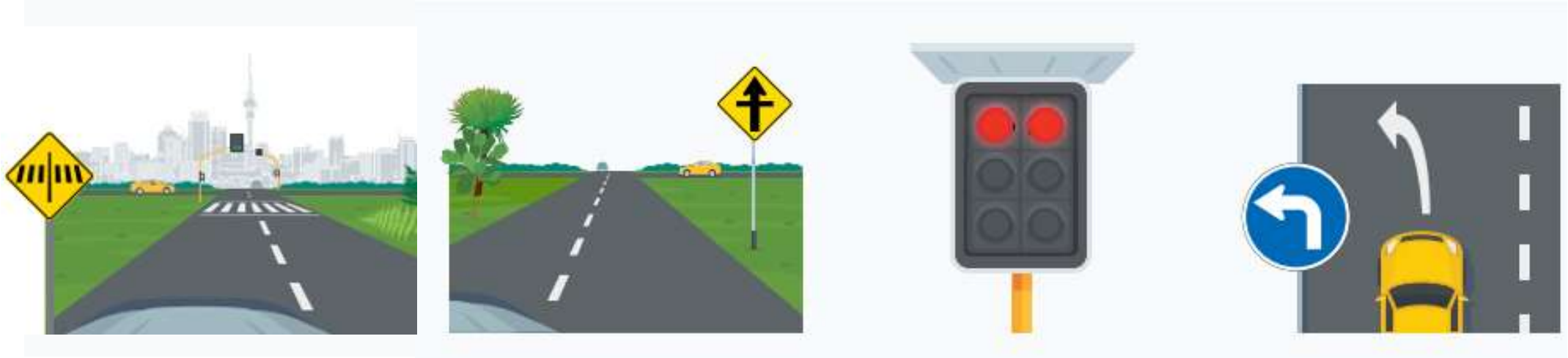


Separate right turn phase (green arrow)



More T-junctions, fewer crossroads – to reduce decision making complexity (e.g. going from one crossroad intersection to 2 off-set T-junctions)

Intersection improvements – Visibility



Older driver appropriate entry sight distances at intersections

Upstream symbolic 'intersection ahead' signage (showing the layout)

Larger / brighter traffic signal lanterns

Lane markings and signage to support correct lane decisions



How things are now...



Older drivers are changing when, where and how they drive



Older drivers are less likely to crash but more fragile when they do



Older driver fragility means they are over-represented in injury crash statistics, including at urban intersections



Older drivers become more anxious with age, and anxiety levels have increased over the last decade



Older drivers are not well supported when they do decide to stop driving

Report link for more detailed information:

<https://www.aa.co.nz/about/aa-research-foundation/programmes/older-drivers/>

Building an age-friendly future

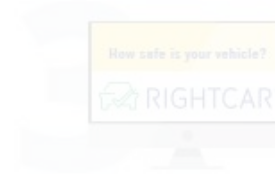
How things could be better...



Think about when, where and how you drive and plan now for the future



Make use of advanced driving systems, especially lane control, but also headway and auto-beam.



Use the Rightcar website when making your next purchase



Improve visual infrastructure (includes lighting, delineation, and signage) to support how older drivers see and enable more time to make decisions.

Implement age-friendly intersections