

Heavy Vehicle Safety, Technology, Innovation and the Human Element

NRSP
NATIONAL ROAD SAFETY

PARTNERSHIP
PROGRAM

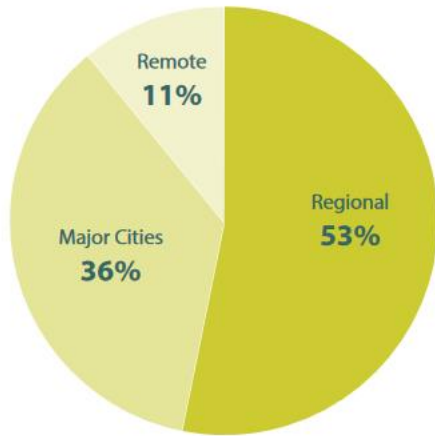
What are your major concerns when driving on the road?

What are the causes of a heavy vehicle rollover?

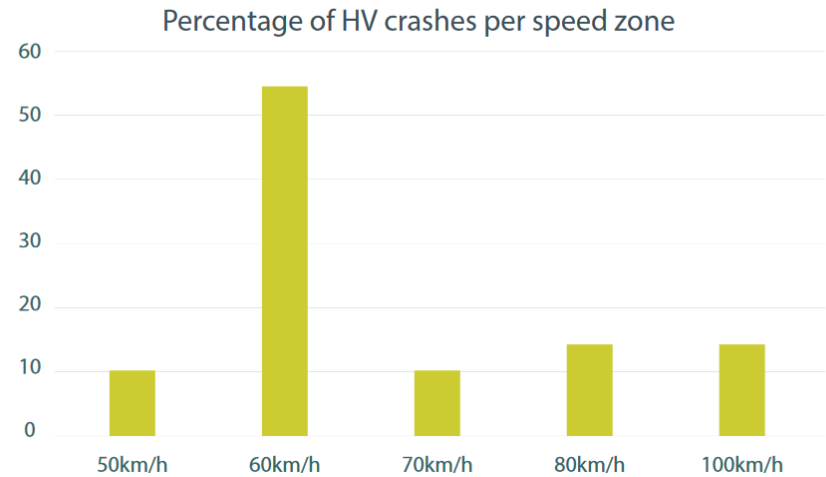
Interactions between HV & LV

Percentage of HV/LV crashes by location

HV/LV crashes are most common in regional areas



Speed zones where crashes involving HV are most likely to occur



▶ And then there is deliberate fatalities...

The driver could not see me!!!



What are the urban issues?

Greater Melb 2006-2013 HV related injuries

	Pedestrian	Motorbike	Cyclists	Total
Fatalities	23%	16%	8%	47%
FSIs	10%	7%	6%	23%

Cyclist killed after being hit by truck in Geelong

Mel Buttigieg
Yahoo7 News / November 16th, 2016



Cyclist killed after being struck by truck in Geelong

3 MAY 2019 - 12:28PM

Elderly woman killed by cement truck in 'traumatic' crash in Sydney

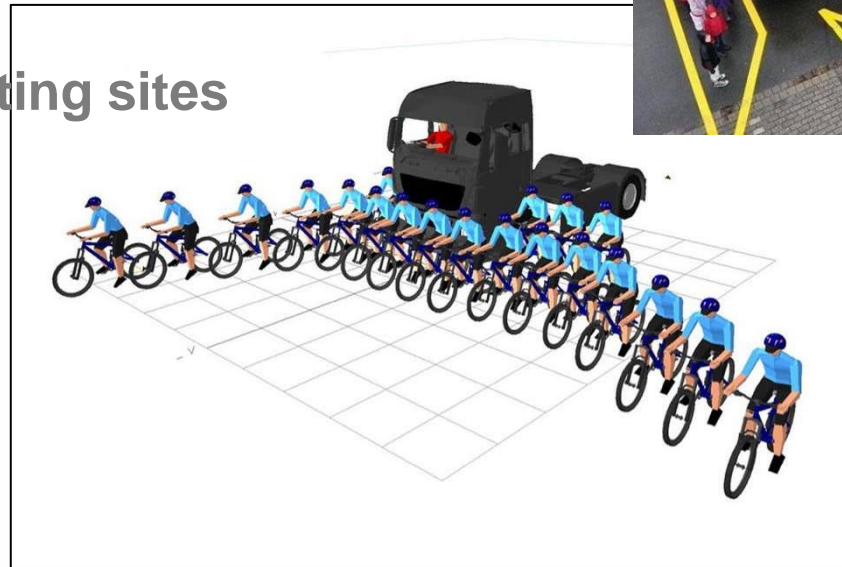


IMAGE | VIDEO | AUDIO

83-year-old Gangotri Maharaj was reportedly attempting to cross a road 'hand-in-hand' with her husband when she was hit by a truck in Sydney. The couple would have celebrated their 61st wedding anniversary this weekend.

What are the issues?

- Poor reporting of injuries / near misses
- Blind spots
- Lack of under run protection
- Multiple vehicles making deliveries
- Entering and exiting sites



What portion of your haulage relates to govt projects?

- ▶ No idea
- ▶ Can't say
- ▶ 1% to 25%
- ▶ 26% to 50%
- ▶ 51% to 75%
- ▶ 75% to 100%

The challenge in the UK-sharing the roads



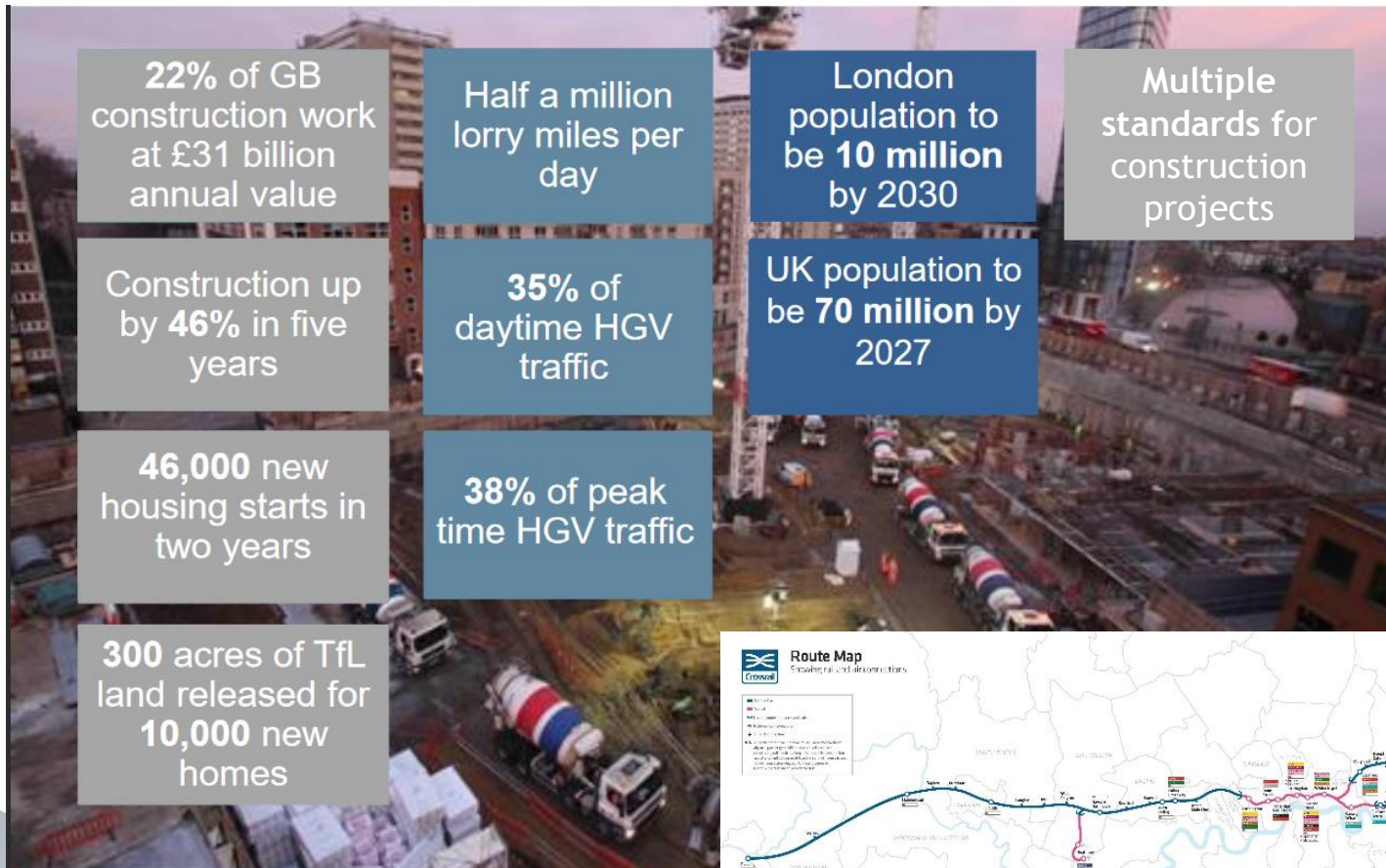
Why are HGV lorries so dangerous and how can the industry make London's streets safer for cyclists?

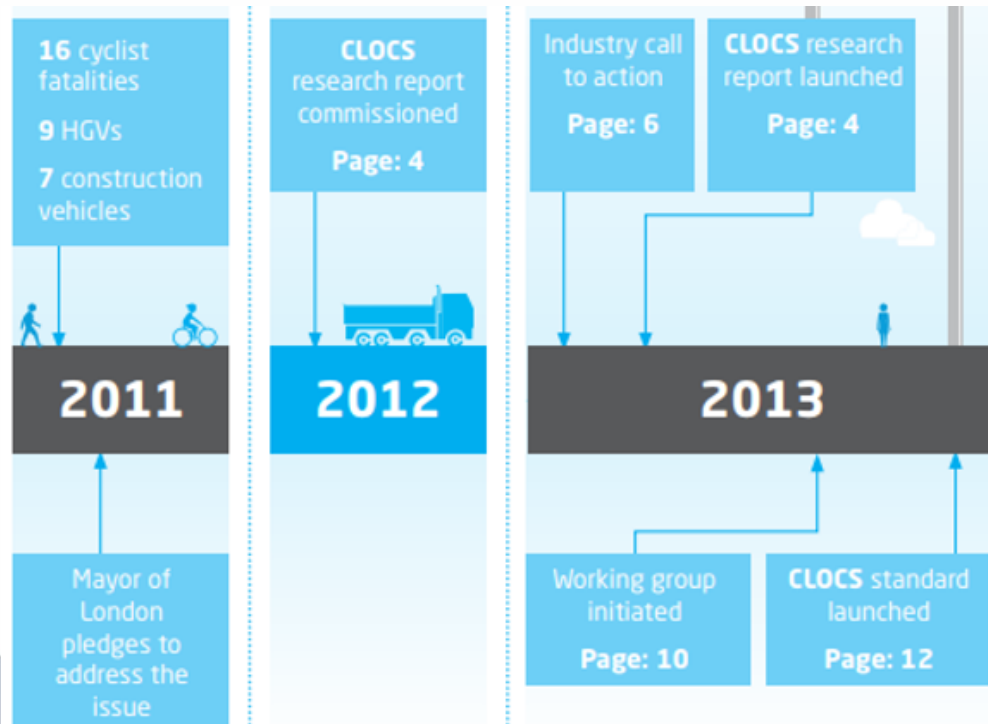
Lorry drivers have no more excuses when it comes to cycling blind spots

News > London
Sixth London cyclist dies in 13 days in lorry crash in Camberwell



Meeting the challenge - sound familiar?





*Leadership from TfL



The TfL position

TfL must employ, and must be seen to employ, the safest fleet operators in London

To mitigate the risk of a vulnerable road user being killed or seriously injured by one of our suppliers, in February 2012, we introduced Work Related Road Risk (WRRR) clauses into our new **and** existing contracts –
Mike Brown TfL Commissioner

Requirements

Logistic operations requirements

- Quality operation
- Collision reporting
- Traffic routing

Vehicle requirements

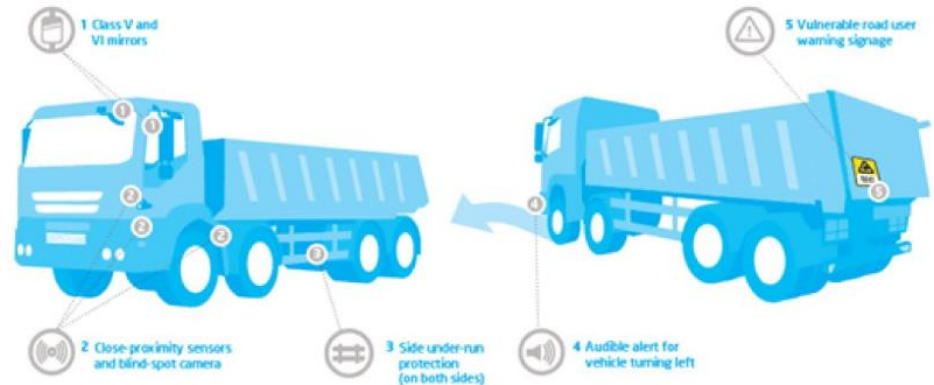
- Warning signage
- Side under-run protection
- Blind-spot minimisation
- Vehicle manoeuvring warnings

Driver requirements

- Training and development
- Driver licensing

Construction client requirements

- Construction Logistics Plan
- Suitability of site for vehicles fitted with safety equipment
- Site access and egress
- Vehicle loading and unloading
- Traffic routing
- Control of site traffic, particularly at peak hours
- Supply chain compliance



1. Vehicle Operator Check



Vehicle operator must be certified at minimum FORS bronze level. FORS is the Fleet Operator Recognition Scheme
www.fors-online.org.uk

2. Vehicle Check

Any vehicle over 3.5 tonne gvw shall have the following vulnerable road user safety kit fitted:

Blind-spot minimisation:

- 1 Class V and VI mirrors
- 2 A method of minimising the vehicle blind-spots eg camera system and/or sensor system and/or Fresnel lens (the system must be working)
- 3 Side under-run protection (both sides)
- 4 Audible alert for vehicle turning left
- 5 Vulnerable road user warning signage

3. Driver Check

- Driver must have a valid driving licence for the vehicle they are driving
- Driver must be able to prove they have undertaken approved vulnerable road user training



Refusal of access to site

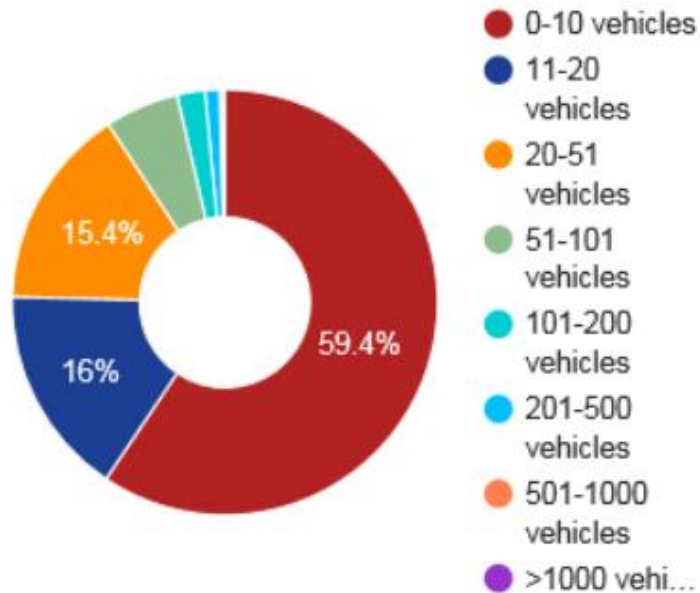
In the event of non-conformance the vehicle may be refused entry and a non-conformance report completed



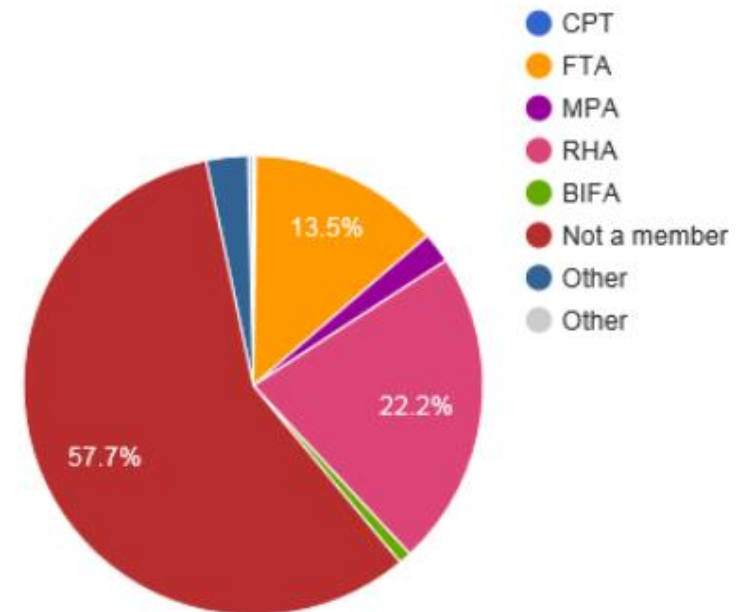
ALL OF INDUSTRY BENEFITS

Communicate and engage with hard to reach

Number of accredited companies by fleet size



Company trade associations affiliation



Success of CLOCS in UK

- ▶ Floor established for safety in contracts
- ▶ Industry led response
- ▶ Championed by TfL
- ▶ Breaking down of silos
- ▶ Sharing of knowledge
- ▶ 47% reduction in casualty rate when implementing CLOCS
- ▶ New cab design with greater visibility
- ▶ Ultra low emissions zone in London has had added impact



How will the Ultra Low Emission Zone or Low Emission Zone affect you?

Operating 24/7
ULEZ central London from 8 April 2019
in the same area as the Congestion Charge

ULEZ extension to inner London from 25 Oct 2021
up to North and South Circular roads, including existing central London zone (all vehicles)

ULEZ London-wide from 26 Oct 2020
barriers and other vehicles over 3.5T

Greater London Authority Boundary



For a full list of affected vehicles see tfl.gov.uk/Ulez

Adapting CLOCS to Australia

- ▶ Identified a safety issue and an appropriate solution
- ▶ Webinar / MoU with TfL
- ▶ Exchange of information between Australia and UK
- ▶ Sydney and Melbourne Metro contracts already include CLOCS clauses in contracts
 - ▶ Driver training
 - ▶ Vehicle safety equipment and signage
 - ▶ Route compliance
- ▶ Training for truck drivers (with Amy Gillett Foundation)
- ▶ Engagement with construction industry identified the need for one national standard for contracts
 - ▶ “Why is it we use so much incredibly expensive and high-tech equipment on building these projects and then the highest risk element is all the oldest?”

Sharing Roads Safely: online, workshop, on-road

Sharing	Module 1	Module 2	Module 3
Roads	An interactive introduction	In-depth, hands-on workshop with group activities	Practical on-road experiences, includes riding and walking
Safely			
Delivery	Online	Workshop	On-Road
Duration	30 mins	Half Day	
Training objectives			
Changing roads	✓ ✓	✓	✓
Vulnerable road users	✓	✓ ✓	✓ ✓ ✓
Sharing our roads	✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
Vehicle equipment	✓	✓ ✓ ✓	✓



NHVR seed Funding - Stage 1 for CLOCS-A

- ▶ Collation of information on existing initiatives
- ▶ Assess CLOCS for local relevance
- ▶ Development of a standard and implementation plan
- ▶ Dedicated website
- ▶ Outline of technical groups and governance structure

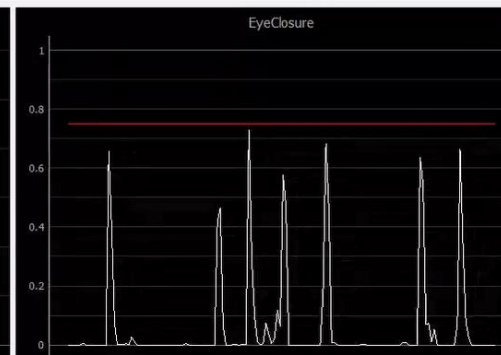
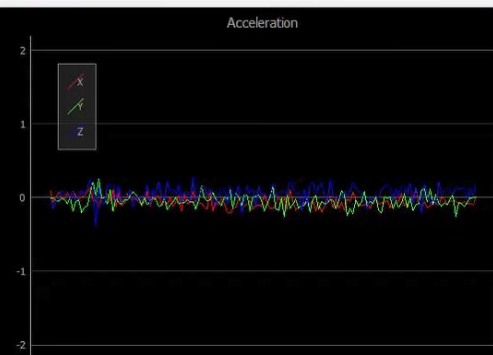
The issue with technology is we are still human



Source: NRSP Webinars: Toll Group Heavy Vehicle Safety 2015

Technology and humans

- ▶ What is the problem?
- ▶ What is fit-for-purpose?
 - ▶ Autonomous Emergency Braking (AEB)
 - ▶ High Visibility Tape



Audible turning alarm recent addition

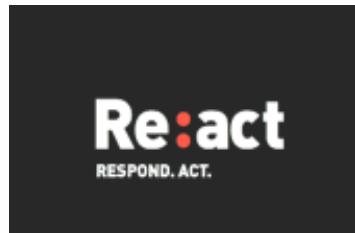
Sharing
Roads
Safely



Does your heavy vehicles have:

- ▶ Driver trained in VRU awareness and use of technology?
- ▶ Rear cameras
- ▶ Extended mirrors
- ▶ Door visibility window
- ▶ Side under run
- ▶ AEB
- ▶ IVMS
- ▶ IVCS
- ▶ Fatigue monitoring
- ▶ Reflective high visibility tape / markings
- ▶ Other

How can we change the narrative around trucks?



PROGRAM

DON'T CUT IN FRONT OF TRUCKS

QUICK FACTS

Tips for sharing the road with trucks

- Avoid blind spots** (see our fact sheet on "if you can't see my mirrors I can't see you")
- Pass trucks with caution** on the right hand side of a two lane road when safe to do so
- Do not linger** near a truck – following distance should be at least 4 seconds
- Do not cut in front of trucks** – trucks need a greater distance to stop than cars and will slow down well before traffic lights to avoid a complete stop

WVLT

Crashes and accidents

- 80% of fatal multiple vehicle crashes involving trucks are **NOT** caused by the truck
- 56% of fatalities in accidents involving trucks are the occupant of the light vehicle

Truck stopping distances

Trucks are bigger and heavier than cars so they take longer to stop safely, as can be seen from the graph (the bigger the truck, the more stopping distance it needs)

(Vertical axis: Speed, Horizontal Axis: Meters)

Vehicle Type	Wet Road (meters)	Dry Road (meters)
Truck	~250	~150
Car	~100	~60

Trucks can take up to **40%** longer to stop than cars

NATIONAL ROAD SAFETY

PARTNERSHIP PROGRAM

DO NOT OVERTAKE A TURNING VEHICLE

QUICK FACTS

Why shouldn't you overtake a turning vehicle?

Trucks or vehicles over 7.5 metres long displaying a Do Not Overtake Turning Vehicle sign are allowed to use more than one lane to turn. You are not allowed to overtake these vehicles while they are turning or you may enter the path of their bus, or enter their blind spot.

DO NOT OVERTAKE TURNING VEHICLE

The No-Go Zone while a truck is turning

- If you are on the truck's left, which is one of the driver's blind spots, it may need to turn left across your path, without the driver being aware that you are there.
- You must not overtake on the right of a vehicle that is turning right or making a U-turn from the centre of the road, and is signalling to turn right.
- You should stay behind a truck in a roundabout because it may need the entire road width to turn.

Statistics

- In 2012 in Melbourne, **2.1%** of all vehicle occupant fatalities occurred in an overtaking manoeuvring situation.
- Approximately **60%** of persons killed in heavy truck crashes are light vehicle
- 9/10** fatal or injury truck crashes involve passenger cars.

2018

Safe Interaction of 18-25 year old
road users with trucks

don't **truck**
around.



this project
will require
300 truck
movements
per day.

giveatruck.com

that means
twelve trucks
will drive by
you **each hour.**

giveatruck.com

didn't **notice**
them?

giveatruck.com

well **thank**
truck they
noticed you.

giveatruck.com

it's **time** to
give a **truck.**

giveatruck.com

...more **space**

giveatruck.com

...more **time**

giveatruck.com

...more **respect.**

giveatruck.com



Thank you

It is free to get involved, become a partner



For more information or to become a partner:

- Jerome.Carslake@arrb.com.au
- www.nrsp.org.au – register for newsletter
- [@NRSPAus](https://twitter.com/NRSPAus) - Twitter
- LinkedIn
- Facebook [@NRSP](https://www.facebook.com/NRSP)

