

*Welcome*

**STEVE GOODING**

Director, RAC Foundation

# JONATHON PASSMORE

Program Manager – Violence and Injury Prevention – WHO

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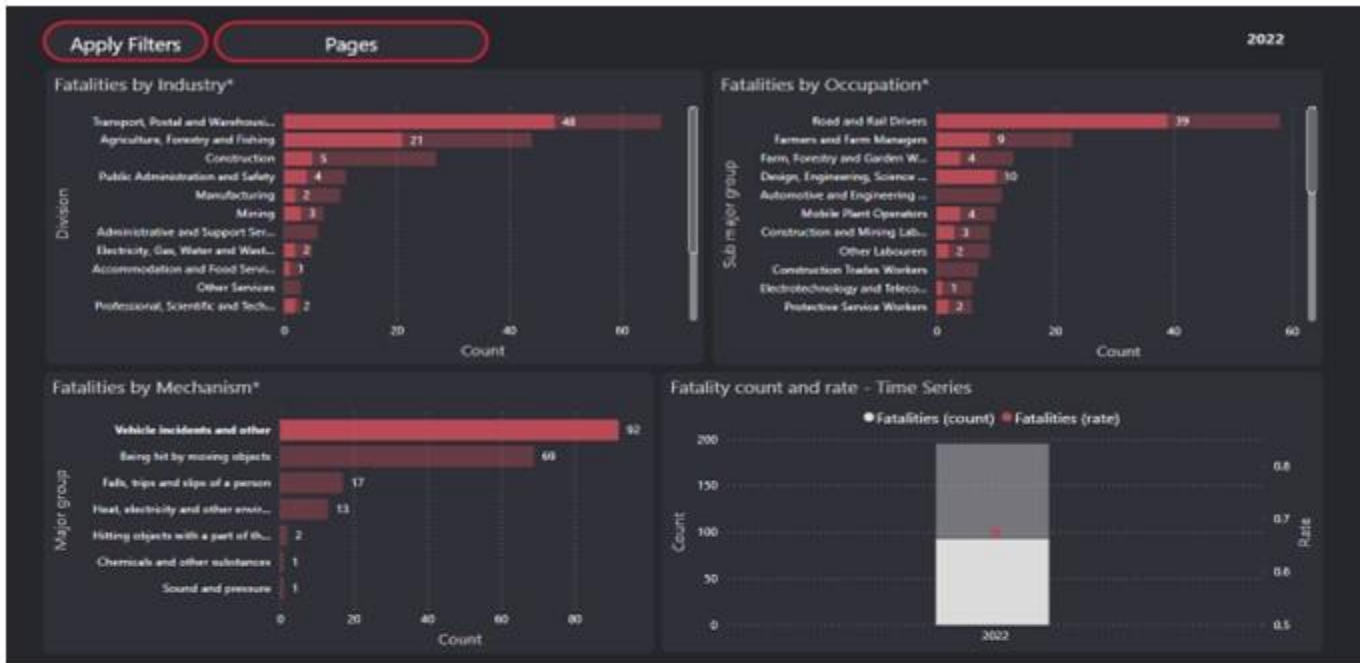
# Safe Systems for Occupational Road Safety

Opportunities for making an already regulated environment safer



Someone is killed on the world roads, every 26 seconds,

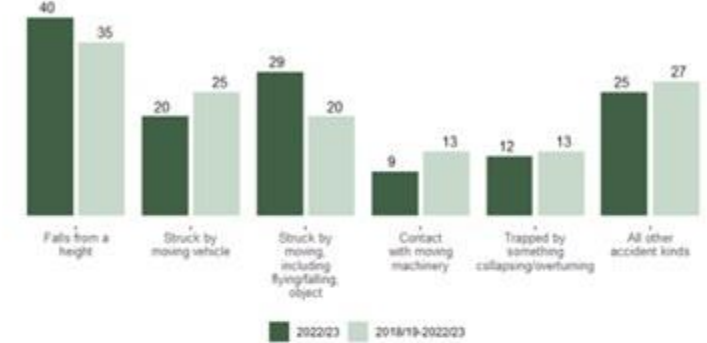




## Injuries by accident kind

80% of all fatal injuries were accounted for by just 5 different accident kinds in the combined five-year period 2018/19-2022/23 (see Figure 4 below).

Figure 4: Number of fatal injuries to workers by accident kind, 2022/23p and annual average for 2018/19-2022/23p.



1.2% UK road fatalities reported as occupational

## US Census of Fatal Occupational Injuries "Roadway fatalities involving motorized land vehicle"



3.2% US road fatalities reported as occupational

HSE Health and Safety Executive

## Reporting accidents and incidents at work

A brief guide to the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR)

**What is RIDDOR?**

RIDDOR is the law that requires employers, and other people in control of work premises, to report and keep records of:

- work-related accidents which cause death;
- work-related accidents which cause certain serious injuries (reportable injuries);
- diagnosed cases of certain industrial diseases; and
- certain "dangerous occurrences" (incidents with the potential to cause harm).

There are also special requirements for gas incidents (see 'Reportable gas incidents').

This leaflet aims to help employers and others with reporting duties under RIDDOR, to comply with RIDDOR and to understand reporting requirements.

This is a web-friendly version.

Deaths in crashes involving large trucks, 1975-2021

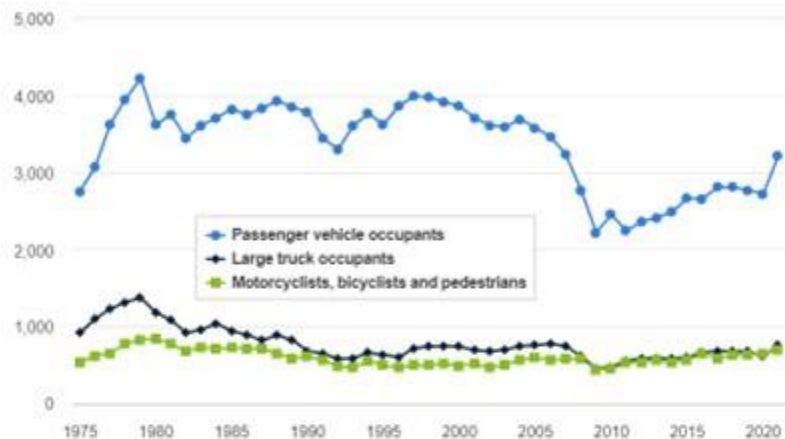
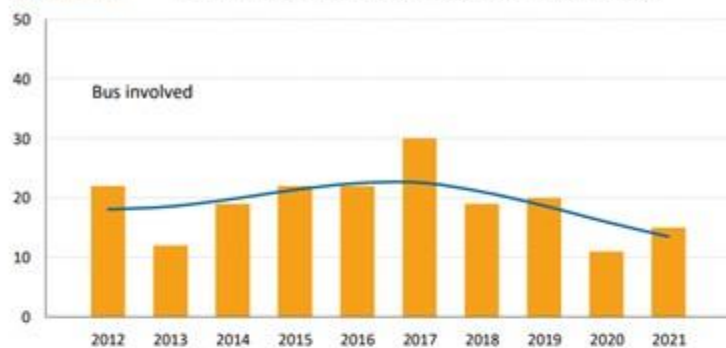


Figure 2.1 Deaths in crashes involving a bus – with trend



Annual counts of fatalities in crashes involving heavy trucks, 2012–2021

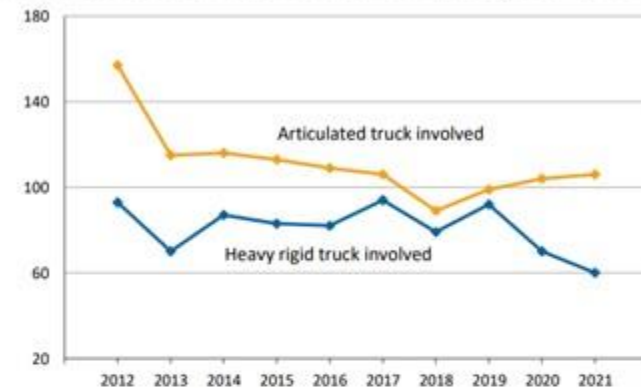


FIGURE 10 Who is killed by HGVs?

In every 100 crashes those who were killed by an HGV were travelling by



2% occupant in other mode of transport

- Car drivers/passengers were the road user type most often killed in collisions involving HGVs
- Pedestrians are the second largest group who are killed in collisions with HGVs
- Far more pedestrians, motorcycle riders and car drivers/passenger are killed in collisions with HGVs than cyclists

Number of deaths in 2019



Source: Road deaths in Great Britain in 2019 (DfT, 2020)

FIGURE 10a Who is killed by vans?

In every 100 crashes those who were killed by a van were travelling by



2% occupant in other mode of transport

- More pedestrians were killed in collisions with vans than any other road user group
- Nearly two thirds (64%) of those killed by vans were vulnerable road users

Number of deaths in 2019



Source: Road deaths in Great Britain in 2019 (DfT, 2020)



International  
Labour  
Organization

Occupational Health and Safety Convention 1981

80 ratifications

Protocol 2002

19 ratifications



**Commuting “accident”:** An accident resulting in death or personal injury occurring on the direct way between the place of work and (i) the worker’s principal or secondary residence; or (ii) the place where the worker usually takes a meal; or (iii) the place where the worker usually receives his or her remuneration.

The ILO considers commuting safety an aspect of Occupational Safety and Health (OSH). Protocol 155 of 2002 (to Occupational Safety and Health Convention, 1981 (No. 155)) defines commuting accidents and places them on par with other occupational accidents, occupational diseases and dangerous occurrences in systems for recording and notification. It also clarifies the employers’ responsibility regarding the recording and notification of such “accidents”



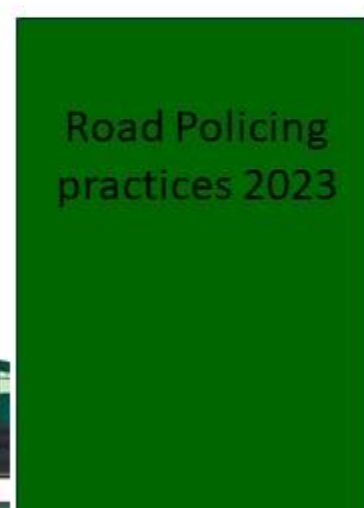
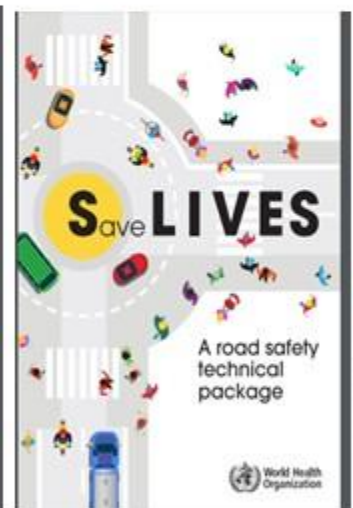
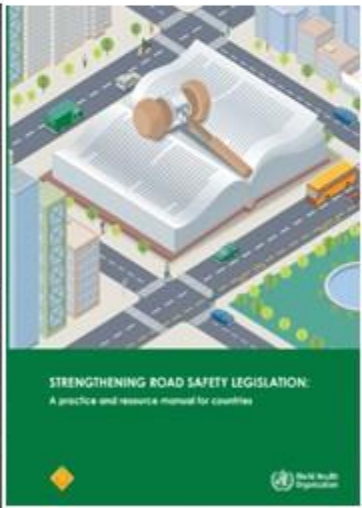
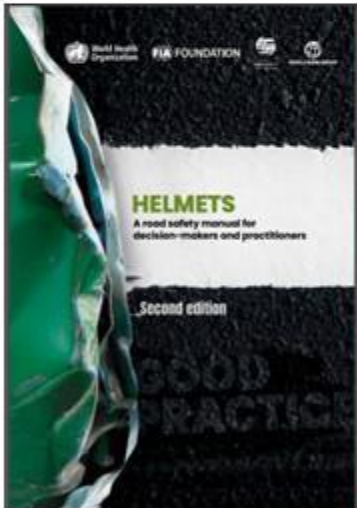
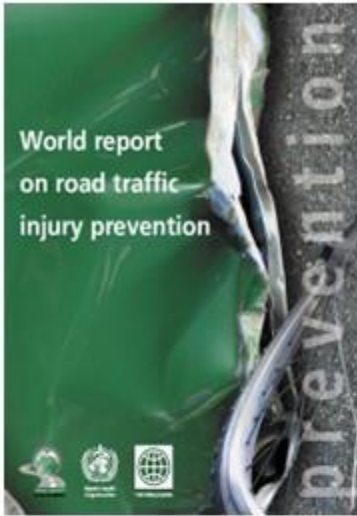
# VEHICLES AS A WORKPLACE

Work Health & Safety Guide



NATIONAL GUIDE





[http://www.who.int/violence\\_injury\\_prevention/publications/en/](http://www.who.int/violence_injury_prevention/publications/en/)



# GLOBAL PLAN

DECADE OF ACTION FOR ROAD SAFETY  
2021-2030



# GLOBAL PLAN

DECADE OF ACTION FOR ROAD SAFETY  
2021-2030

The **Global Plan** describes what is needed to achieve that target, and calls on governments & partners to implement an integrated **SAFE SYSTEM APPROACH**



UN General Assembly Resolution 74/299 declared a **Decade of Action for Road Safety 2021-2030**, with the target to reduce road traffic deaths & injuries

**BY AT LEAST 50%** during that period



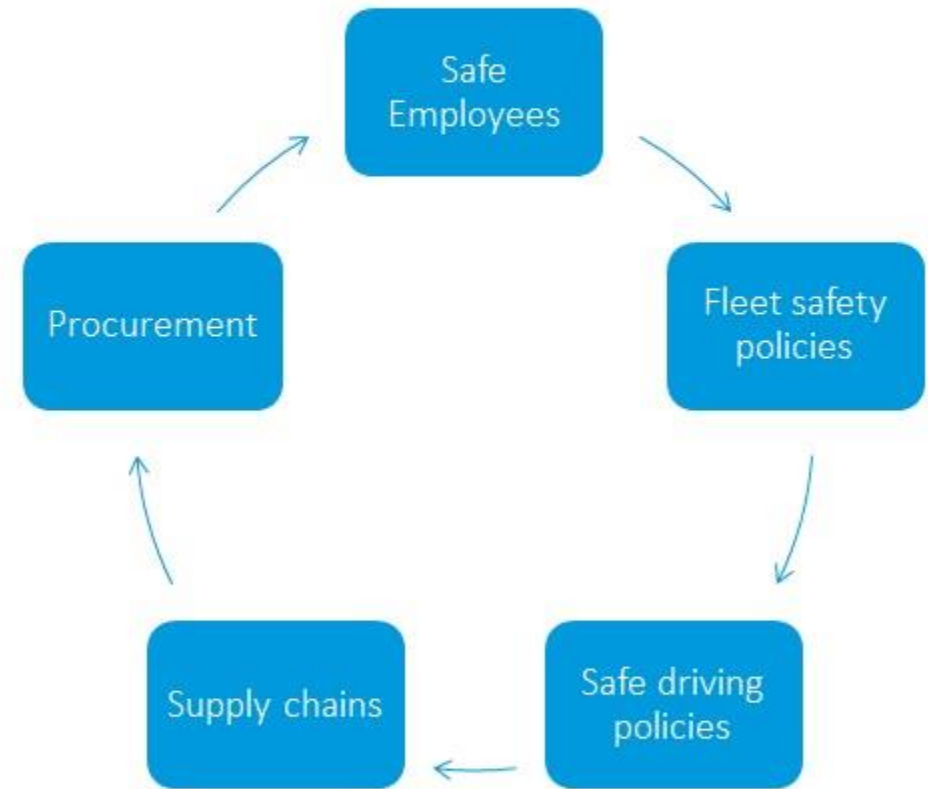
# Economic Influence – leveraging private sector

## How the 10 biggest corporations compare to economies

Based on a ranking from Global Justice Now. Compares government and corporate revenues. Overall ranking in brackets

1. Walmart (10)
2. State Grid (14)
3. China National Petroleum (15)
4. Sinopec Group (16)
5. Royal Dutch Shell (18)
6. Exxon Mobil (21)
7. Volkswagen (22)
8. Toyota Motor (23)
9. Apple (25)
10. BP (27)

Source: Global Justice Now, CIA World Factbook and Fortune



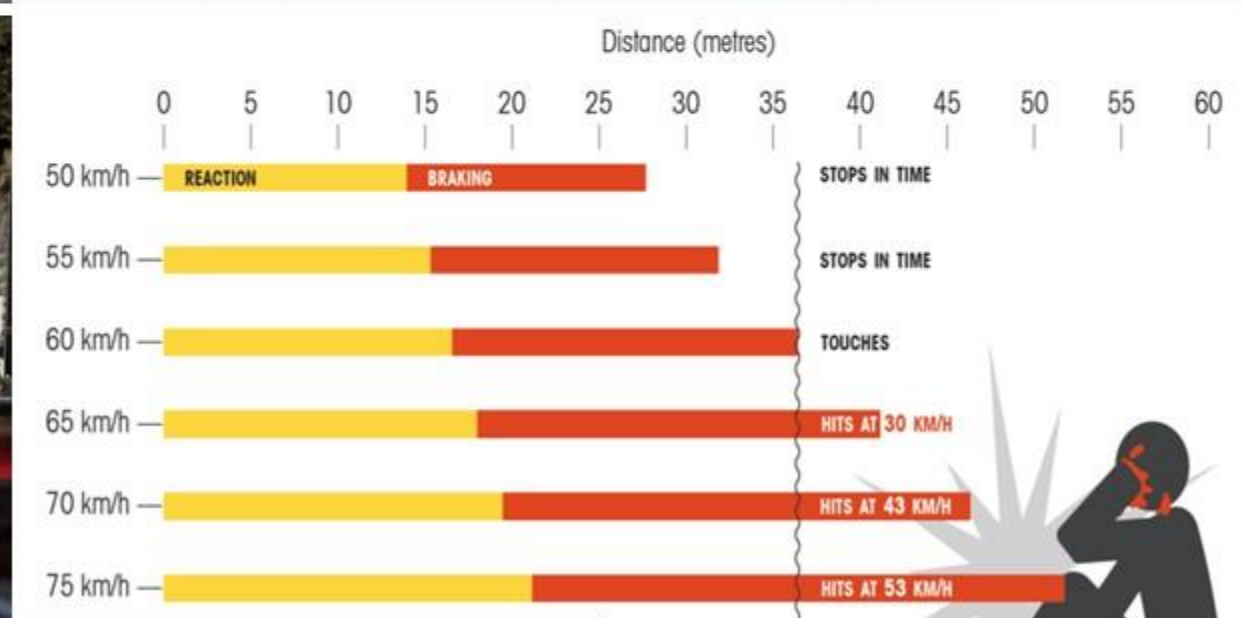
# Safe Systems Approach to Road Safety



SAFE SYSTEMS



VISION ZERO



**HUMAN LIFE IS PARAMOUNT**



Humans make mistakes but those mistakes shouldn't result in a death or serious injury



# MEET GRAHAM

THE ONLY PERSON DESIGNED TO SURVIVE ON OUR ROADS

As much as we like to think we're invincible, we're not. But what if we were to change? What if our bodies were built to survive a low impact crash? What might we look like? The result of these questions is Graham, a reminder of just how vulnerable our bodies really are.

TELL ME MORE

VIEW GRAHAM IN 360°

SOUND

SHARE



Human have a finite tolerance before serious or fatal injuries or sustained





ROAD USERS



GOVERNMENT & LEGISLATIVE BODIES



MEDIA



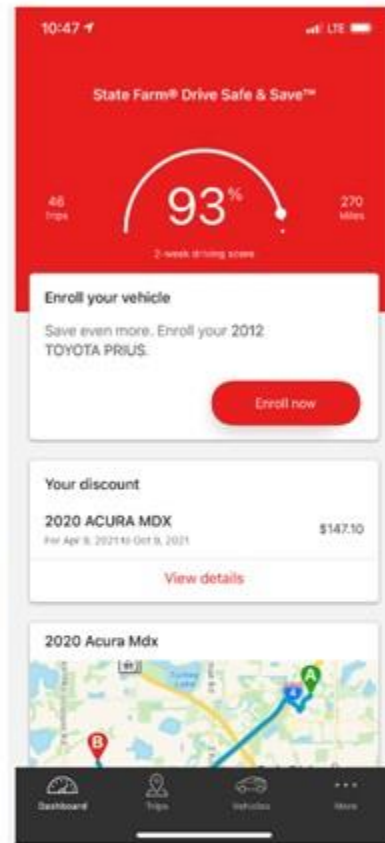
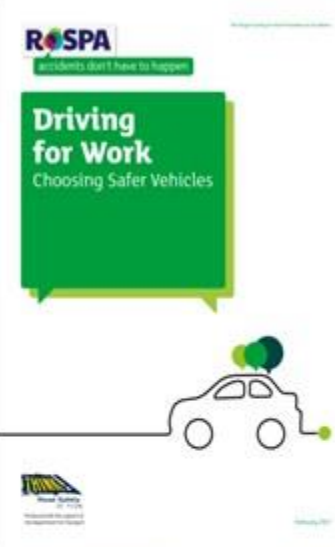
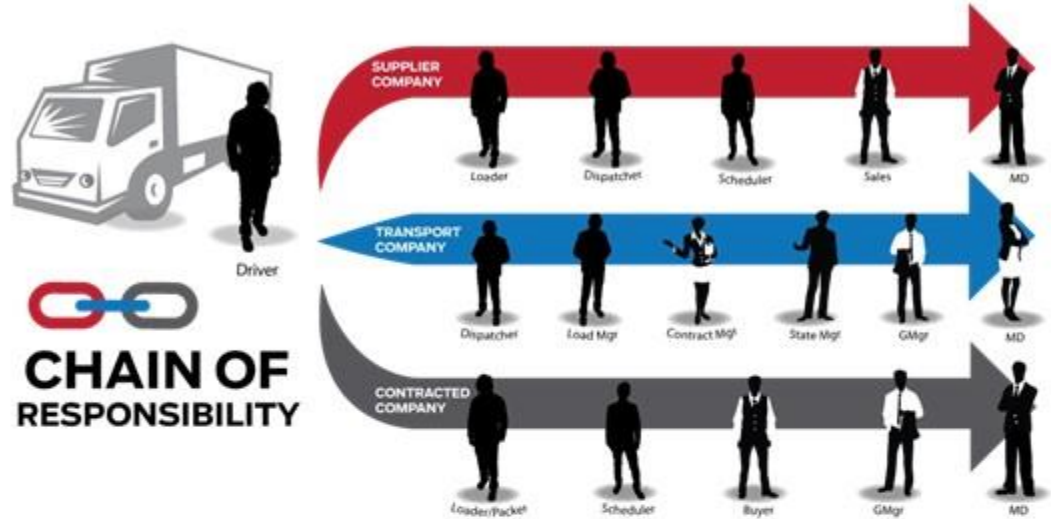
INDUSTRY



POLICE



NGOs, CIVIL SOCIETY



# Road Safety Management



# Assessing fitness to drive

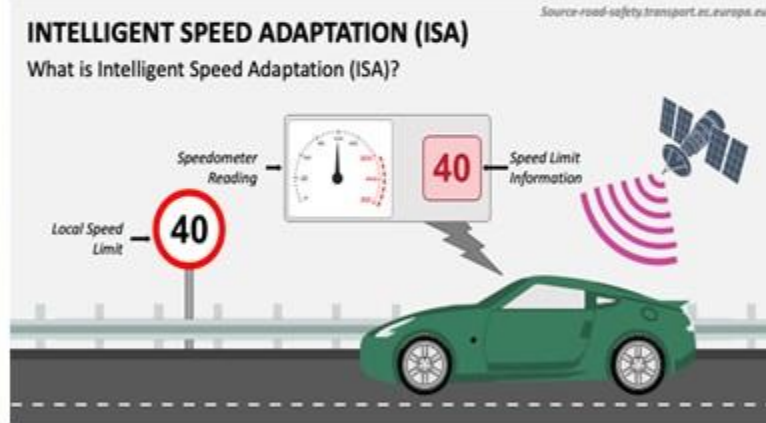
for commercial and private vehicle drivers

2022 EDITION

Medical standards for licensing and clinical management guidelines

Austroads National Transport Commission ntc

# Safer Road Users



Safer Speeds





Post crash  
response



# Safer journeys begin with us!



*“The need for the United Nations Road Safety Strategy is clear: **road crashes** are a **leading cause of death and serious injury** to United Nations personnel, just as it is for people across the world. In line with the Decade of Action for Road Safety 2011-2020, established by the General Assembly, this strategy aims to guide United Nations bodies in working together to change old thinking and develop a **new approach towards safer journeys**. The United Nations must be led by example as the international community strives to meet the road safety targets in the **Sustainable Development Goals**. I look forward to working with all to implement this strategy, mobilize investments in road safety, and, most of all, to save lives.”*

António Guterres  
Secretary-General, United Nations  
January 2018



**1** Driverless HGV convoys transfer goods down motorways



**2** 24 hour self-driven vans deliver goods to shops



The European Parliament's position on revised rules for driver licences in the EU, agreed in Strasbourg today, will have severe negative consequences for road safety according to the European Transport Safety Council (ETSC).

ETSC is most concerned about the proposal to require all EU Member States to introduce an accompanied driving scheme for 17-year-old lorry drivers. The current recommended minimum age for this category of vehicle in the EU is 21, though several countries allow 18-year-olds to drive HGVs under certain conditions. Research by the German Insurance Association (GDV) shows that HGV drivers aged 18-20 caused a much higher proportion of collisions resulting in personal injury than older HGV driver age groups.

The Parliament also backed the concept of allowing 16-year-olds to drive speed-limited cars, including large SUVs, when fitted with a speed limiter. The European Commission's [impact assessment](#) on the proposal said "the measure may pose an additional road safety risk, notably for vulnerable road users".

Antonio Avenoso, Executive Director of ETSC commented:  
*"Having thousands more teenagers driving lorries and cars is an affront to everything we know about road safety risk. If we need more lorry drivers, then the answer is to vastly improve working conditions in the*



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# Thank you

For more information, please contact:

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Regional Advisor for Road Safety

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European Region

# HEATHER WARD

Honorary Senior Research Associate, UCL

# Work related road traffic collisions

The size of the problem

Heather Ward

*“It is widely accepted that for most workers driving is one of the riskiest activities undertaken as part of work. In Great Britain it is estimated that at least a fifth of road injuries are sustained in a collision in which someone was driving for work at the time”<sup>1</sup>*

About 1 in 3 road deaths, 1 in 5 seriously injured casualties and 1 in 4 casualties of all severities are sustained when someone is driving for work

We have estimated that 39 percent of killed pedestrians were hit by a working driver<sup>2</sup>

1. Helman, S., Christie, N., Ward, H., Grayson, G., Delmonte, E., & Hutchins, R. (2014). A strategic review of the management of occupational road risk.
2. Ward, H., Christie, N., & Walton B. (2020) Driving for work: A strategic review of risks associated with cars and light vans and implications for policy and practice

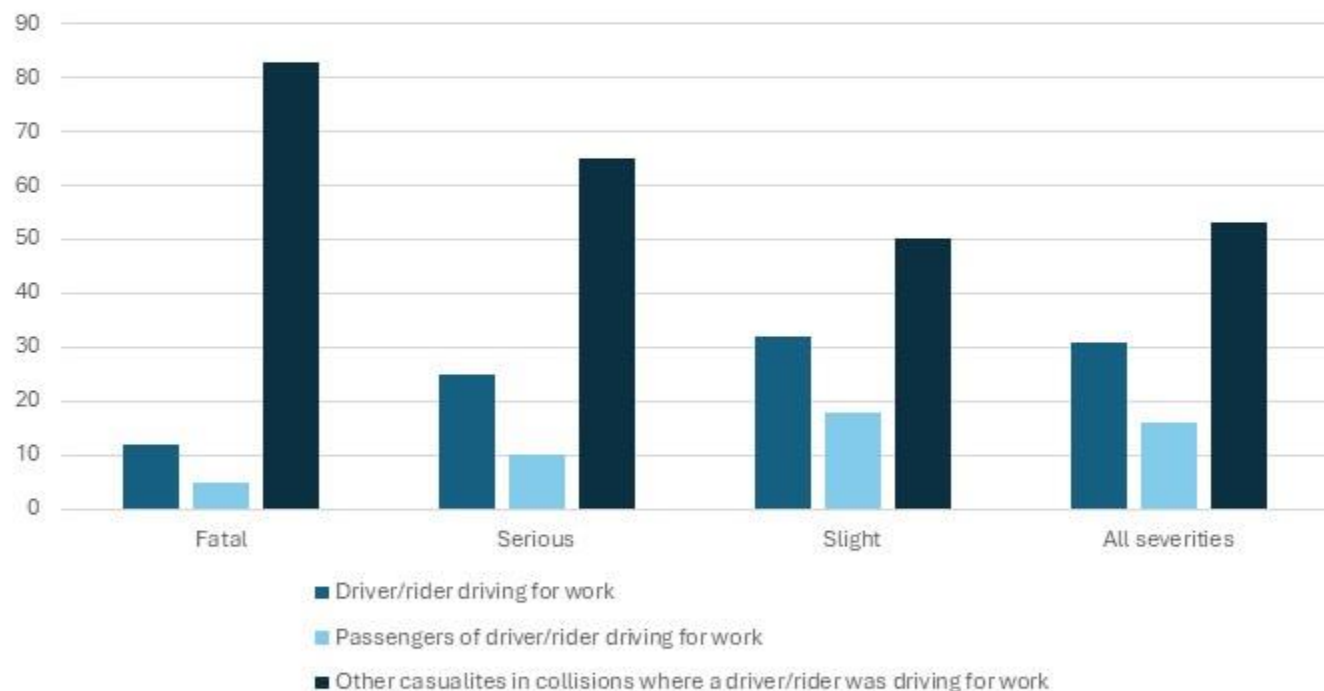
## A high level of risk associated with occupational driving.

- In 2017/18 there were 144 people killed in the workplace during the course of work.
- In addition, 100 members of the public died at workplaces (excluding rail suicides and deaths in health and social care) (HSE 2018).
- In 2018, 63 working drivers/riders were killed together with 25 passengers.
- 432 other non-working road users were killed in collisions where at least one driver was working (DfT 2019).
- It is clear that working drivers/riders pose a greater risk of death to members of the public than do workers in other occupations

[DfT have discontinued publishing Table RAS20010 which gives this information.]

# Percentage of casualties by injury severity relating to drivers driving for work, their passengers and other non-working road users.

Source: DfT 2019 RAS30037



# What is a work-related journey

A work-related journey is where a driver uses a vehicle in the course of their work.

- Can be made in/on any type of vehicle (or by pedal cycle)
- Vehicle could be corporately or privately owned or leased.
- **“Working”** refers to the driver, not the passengers
  - bus passengers,
  - taxi and private hire passengers
  - lifts to work, school or college.
- **Not** the same as commuting
  - Commuting means from home to and from a driver’s normal place of work.

# What do they drive

## Goods vehicles

- Up to 3.5 tonnes can be driven on category B (car ) licence
- Larger vehicles require different categories of licence
- Seldom privately owned

## Public transport vehicles

- Different categories for over 8 and over 16 seats

## Private hire vehicles - taxis of all types

## Vehicles designed to serve a particular purpose

- Emergency vehicles, heavy plant, refuse disposal

## Agricultural vehicles

## Mopeds and motorcycles for delivery and couriers

## Privately owned vehicles -cars and vans



# Working vans (light goods vehicles) are an increasing group on our roads

In 2022 there were 3.82m light goods vehicles registered in GB (gross vehicle weight less than 3.5 tonnes) compared with 2.79m in 2012. This represents a 37% increase over this period.

About half the vans are registered to private individuals with men outnumbering women by 10:1.

Large rise in self employment over last decade the vast majority of these private registrations is to SMEs and sole traders

The other half are registered to companies

By far the biggest user of vans is the construction industry. About 1m of all vans (about 24%) are used by drivers in this sector which includes all the building trades and road maintenance.

Light vans influenced by the growth in internet shopping and home deliveries

- 87% of the UK population shopped on- line in 2019 compared with the EU (27) average of 60% (Eurostat 2020) This accounts for about 9% of registered LCVs

# Traffic levels pre Covid, during Covid and now

- Large reductions in traffic during the Covid-19 lock down in March, April, May, and June 2020
- During the lockdown phase all construction, accommodation, food services and many others were affected
- Van travel in April 2020 dropped to 35%-40% of its February levels. It crept up during May and as the construction sector started to work again the levels rose steadily through May and June until by mid-July 2020 van traffic was back to its pre Covid-19 levels.
- Now in Feb 2024 it is at 114% of its pre Covid levels
- HGV traffic dropped to about 60% of its pre Covid level and has recovered to about 102%
- During this period, car travel dropped off faster than van travel, was consistently below that of vans and has recovered more slowly to about 93% of its pre Covid-19 levels (Feb 2024)

# Where do these vehicles drive

Percentage of miles driven on different types of road by vehicle type (2022)

	<b>Car and taxi Percentage of total miles driven</b>	<b>Light van Percentage of total miles driven</b>	<b>HGV Percentage of total miles driven</b>
Motorway	19	22	47
Rural A roads	29	30	36
Urban A roads	15	12	9
Minor rural	15	18	5
Minor urban	22	17	3

# Can we estimate better the number of collisions involving working drivers?

- Journey Purpose has been included as a vehicle field in STATS19 since 2005
  - Distinguishes working journeys from commuting and school runs
- Challenging for police to record consistently
- This field is useful, not realistic to rely on it alone.
  - Under a third of collisions involved vehicle have a journey purpose recorded – 68% recorded as unknown
- Need to use other methods to understand true extent of risk associated with driving for work

# Suggestions for better interpretation of the journey purpose field

- Large vehicles are designed for work purposes
  - HGVs, buses and agricultural vehicles are unlikely to be used for personal journeys or commuting
  - Assume all large vehicles are driven for work.
- Taxis and private hire
  - Many taxi journeys recorded as commuting refer to the passengers and not the drivers
  - Assume all taxis recorded as commuting are working
- Small vans (<3.5 t)
  - Most used by trades or for deliveries
  - Rarely used for commuting - privately owned vans can commute but numbers are small
  - Assume vans do not commute and are driven for work

# The true extent of driving for work? What we still don't know

1. We need to understand who is working, what they are driving/riding, how much and on what types of road. We need to know who is injured.
2. We know nothing about the numbers of gig workers in the transport area who deliver food and parcels in particular.
3. We do not have an accurate estimate of the number of cars in the grey fleet and how this is changing over time
4. We do not know the current percentage of van mileage that is work related and that which is private.
5. The journey purpose field in STATS19 is poorly completed by the police. It needs to be improved.
6. There is no data on the numbers of motorcycles and mopeds being used for work.

# Why do working drivers matter?

- It matters to employers
  - Safeguarding staff , clients and the public
  - Health and Safety obligations
  - Protecting corporate assets such as vehicles and goods
  - Insurance considerations
  - Possible legal liability for consequences of collisions
- It matters to drivers
  - Unfamiliar vehicles
  - Time pressure
  - Limited or no control over journey choices e.g. route and timing
  - Professional responsibility for passengers and goods
  - Collisions could result in threat to livelihood

# Acknowledgments

I would like to acknowledge that this work was undertaken by Heather Ward with Nicola Christie from UCL and Bruce Walton from Agilysis.

We would like to thank Adrian Walsh from RoadSafe, and National Highways for their support and for funding this research.

We would also like to thank all the stakeholders who took part in the research.



# MARK CARTWRIGHT

Head of Commercial Vehicle Incident Prevention – National Highways



**Mark Cartwright**  
**Head of Commercial Vehicle Incident Prevention**  
**National Highways**

Driving Change: Safe System Strategies for eliminating work-related road deaths

March 2024

## What we know...

- Ambitious targets to reduce harm on our roads...
- We need 'different' ...
- 'At work drivers' are key
  - Direct effect [numbers]
  - Indirect effect [osmosis]



*with*



**Drivingchange...**  
*it's personal*

# Key points

- 'Our' superpower to influence choices and behaviours of @workdrivers
- Acceptance of poor driving behaviours
  - Slobodan speed
  - Gina distraction
- RIDDOR
- It's a Health & Safety issue

## What we need...

- Recognition of risk
- Recognition of legal and moral duties
- Recognition of our superpower



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[drivingchange.info](http://drivingchange.info)

[drivingforbetterbusiness.com](http://drivingforbetterbusiness.com)

# PANEL

*Road safety vs. other modes: Examining legislation and best practice to address work-related incidents (will the introduction of AVs change things?)*

Chair



**STEVE GOODING**  
Director,  
RAC Foundation



**DAVID DOBSON**

Lead SMS  
Specialist,  
RSSB



**ALEX  
GLASSBROOK**

Barrister,  
Temple Garden  
Chambers



**JONATHON PASSMORE**

Regional Advisor (Road  
Safety Violence & Injury  
Prevention), WHO



# *Reflections on session learning*

# RICHARD CUERDEN

Academy Director - TRL

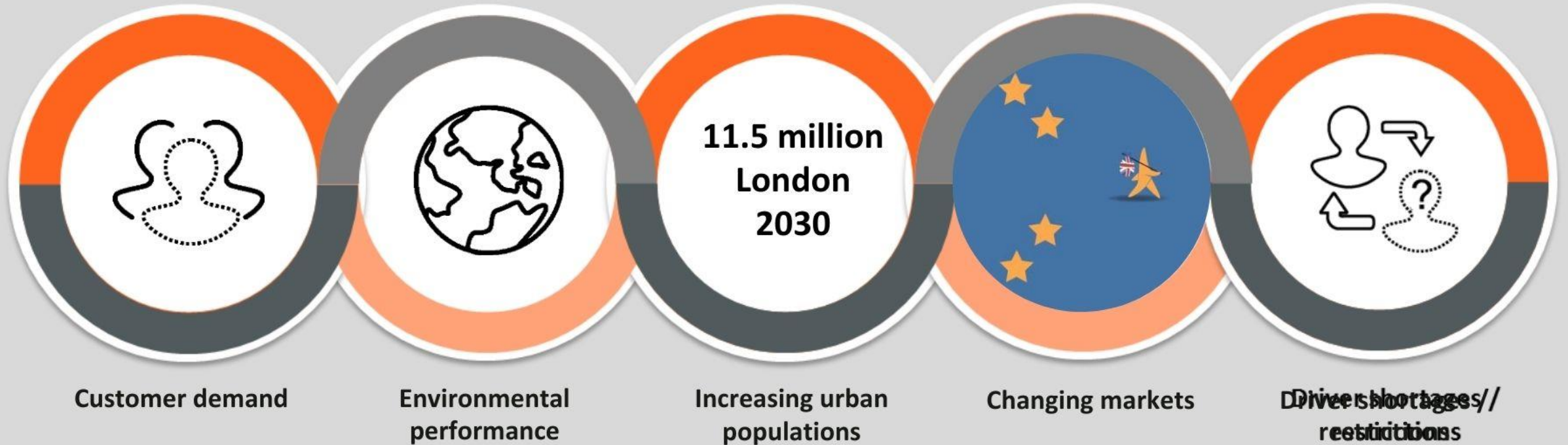
**Driving safety forward:  
Enhancing business vehicle safety  
through industry innovation and  
collaboration**



**Richard Cuerden**  
Director, TRL Academy

# Enhancing business vehicle safety through industry innovation and collaboration

## Market Forces



# Enhancing business vehicle safety through industry innovation and collaboration

## We have more than one crisis...

Climate emergency



Congestion



Air quality



Health and wellbeing



## Innovation metrics for success must be:

Lowers carbon (and safer)

Decreases unnecessary motorised trips (and safer)

Increases health and wellbeing (and safer)

Increases active travel (and safer)

# Enhancing business vehicle safety through industry innovation and collaboration

## A new order of things...



Niccolò  
Machiavelli (1469 –  
1572),  
The Prince

“

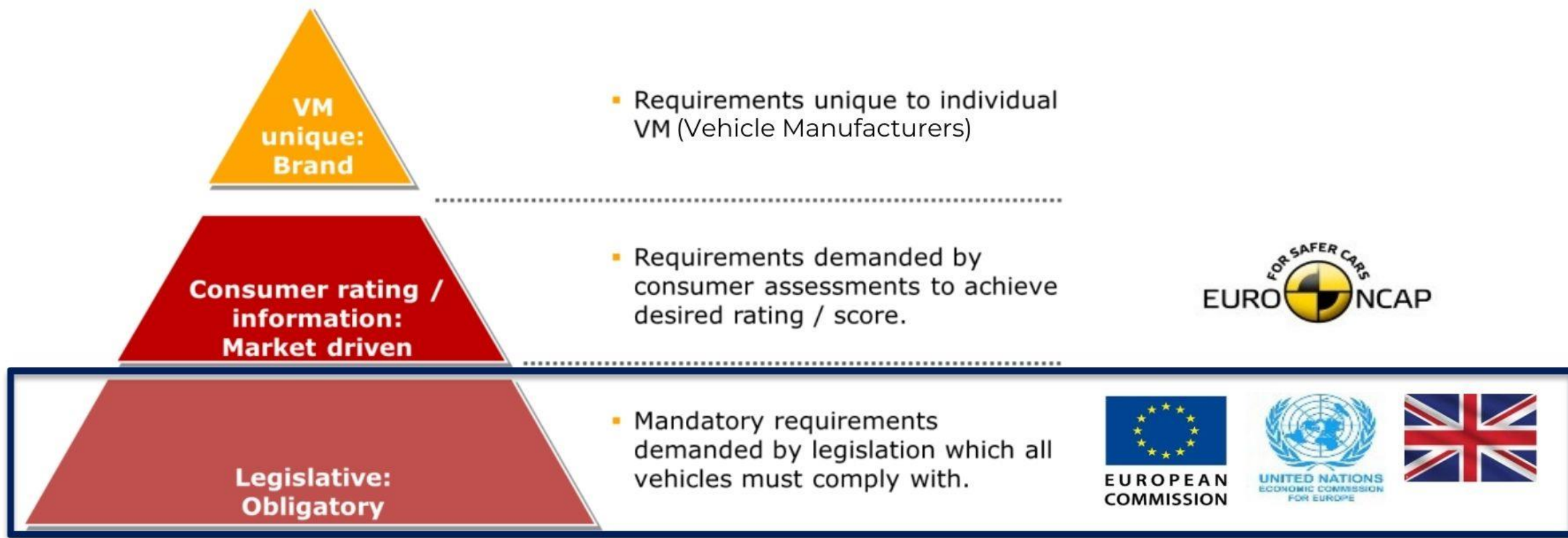
*It ought to be remembered that there is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things. Because the innovator has for enemies all those who have done well under the old conditions, and lukewarm defenders in those who may do well under the new. This coolness arises partly from fear of the opponents, who have the laws on their side, and partly from the incredulity of men, who do not readily believe in new things until they have had a long experience of them.*

”

# Vehicle Safety Design








## European Union & Great Britain

EU: General Safety Regulation and Pedestrian Safety Regulation (GSR & PSR), 2022



# Vehicle types

M, N categories all included in GSR & PSR. L categories covered by separate EU TA

L Category	M	N Category
Motorcycles 	Category  M1 Cars	N1 Vans / Light Goods Vehicle 
Others (Quads, trikes etc)	M2 Minibuses 	N2 [Medium] Goods Vehicle 
	M3 Bus & coach 	N3 Heavy Goods Vehicle 

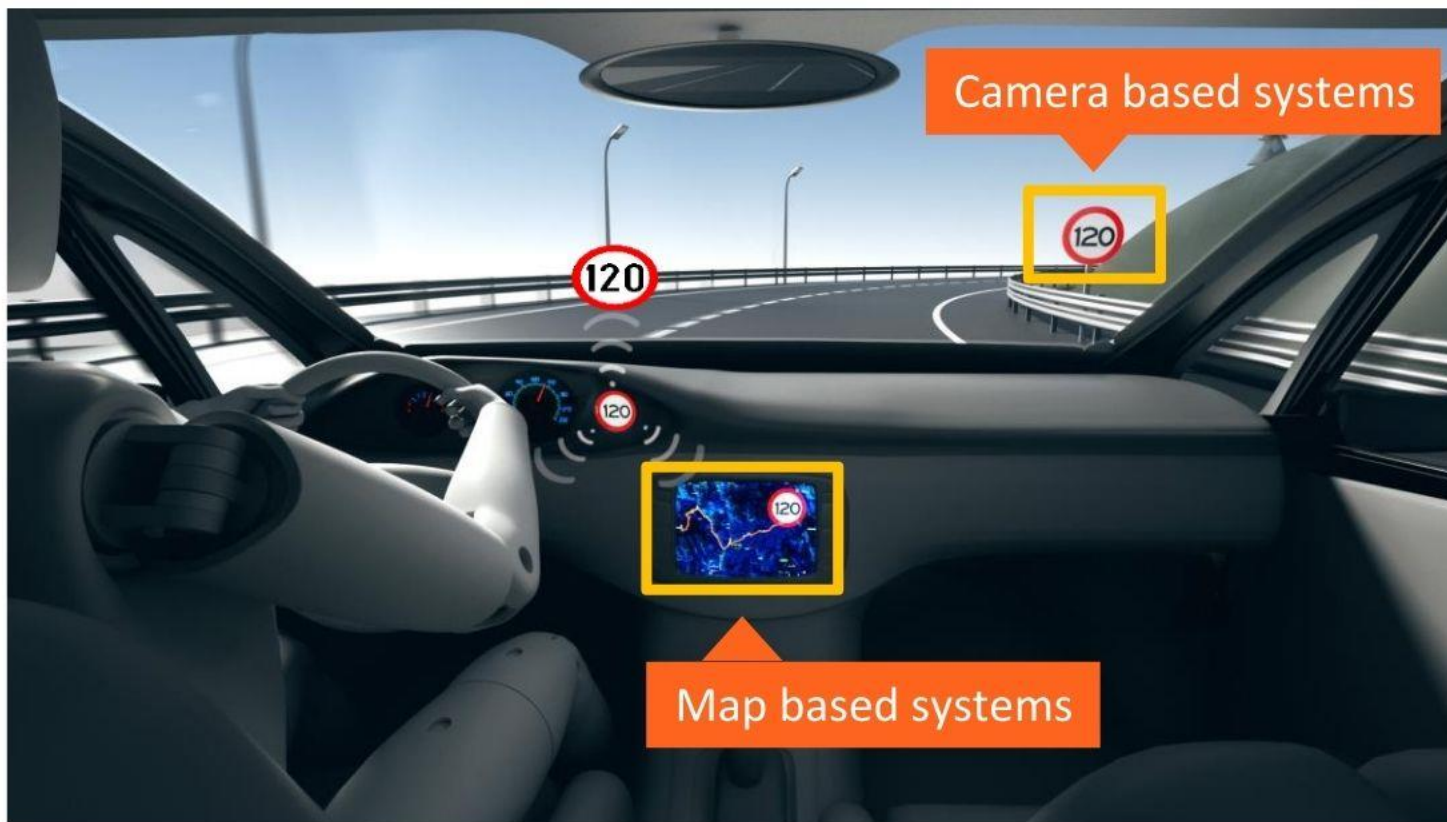


# Vehicle Safety Design –Example of TA Innovation

Code	GSR and PSR Measure name (2022)	Vehicle categories
AEB	Advanced Emergency Braking (light duty, vehicles and	M1, N1
DDR	pedestrians/cyclists) Driver Drowsiness and Attention Monitoring (DDAM), Advanced Distraction Recognition (ADR), and Driver Readiness Monitoring for Automated Driving (DRMAD)	M1, M2, M3, N1, N2, N3
EDR	Event Data Recorder	M1, M2, M3, N1, N2, N3
ELK	Emergency Lane Keeping	M1, N1
FFW	Frontal Full-Width Impact	M1, N1
HED	Pedestrian and Cyclist Enlarged Head Impact Zone	M1, N1
ISA	Intelligent Speed Assistance	M1, M2, M3, N1, N2, N3
REV	Reversing Safety	M1, M2, M3, N1, N2,
TPM	Tyre Pressure Monitoring (heavy duty)	N3 M2, M3, N2, N3, O3,
VIS	Direct Vision & Pedestrian and Cyclist detection (heavy duty)	O4 M2, M3, N2, N3
ALC	Alcohol interlock installation document	M1, M2, M3, N1, N2, N3
ES	Emergency stop signal	M1, M2, M3, N1, N2,
S	Roll over side impact occupant protection	N3 M1, N1

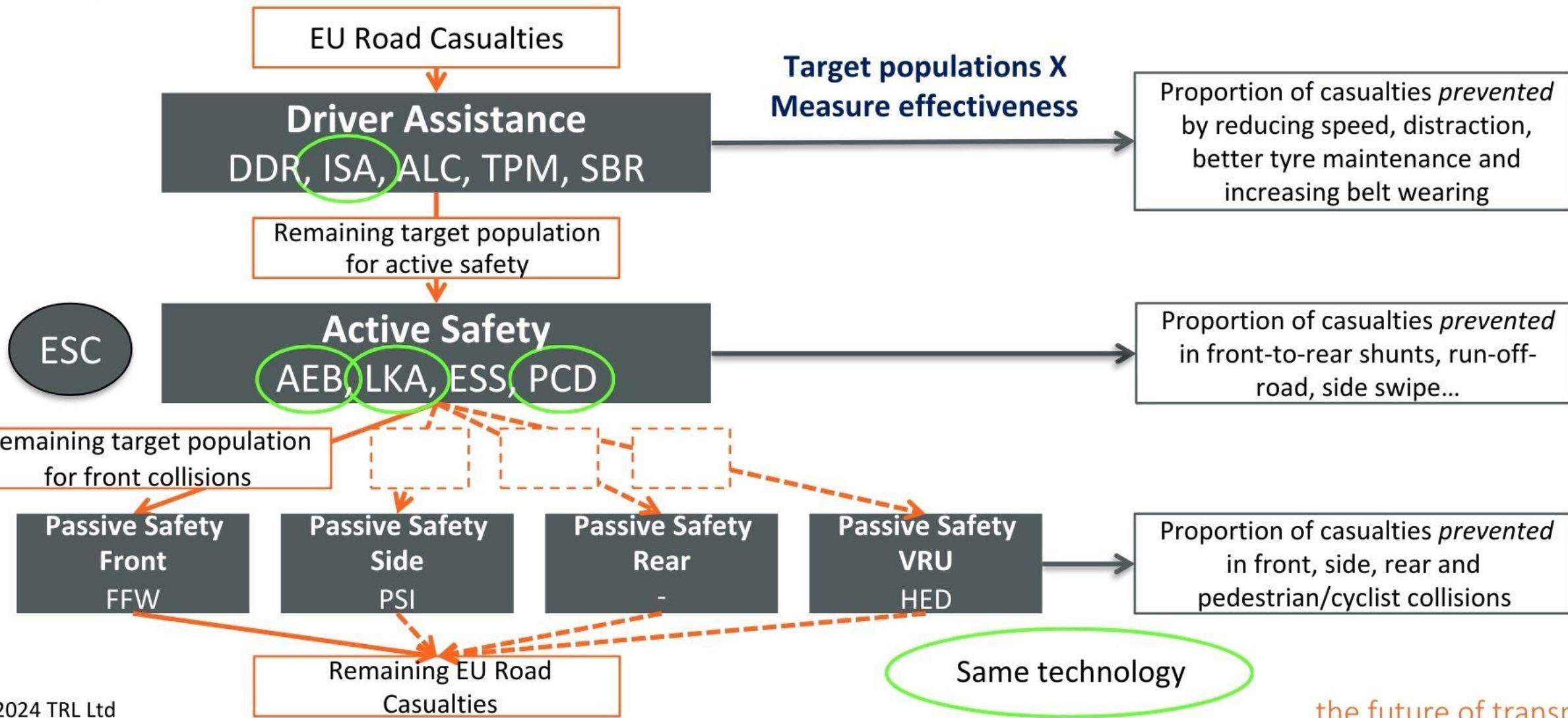
# Vehicle Safety Design –Example of TA Innovation

## Intelligent Speed Assistance (ISA)



# Vehicle Safety Design – Example of Innovative Cost Assessment

GSR & PSR: TRL 'vehicle safe system' approach for preventing casualties (example for cars)



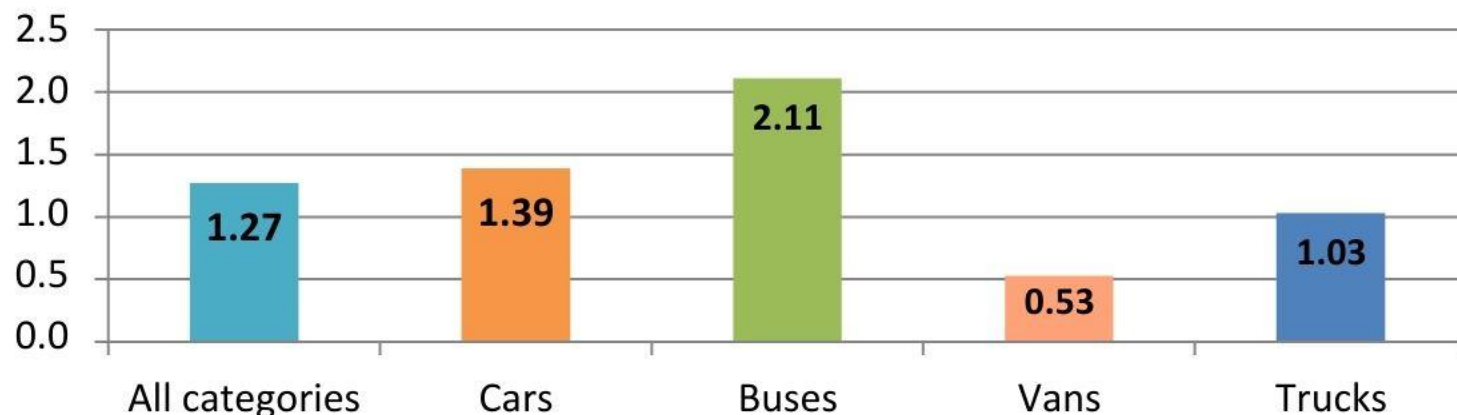
# Vehicle Safety Design –Example of TA Innovation

## Casualty savings & cost-effectiveness evaluation of revisions to GSR & PSR

- Savings of **700,000 casualties**(25,000 fatalities, 141,000 serious casualties prevented)
- Cost-effective –**Benefits to society exceed the costs**
- The **GSR proposal is technologically advanced** –helping the **EU Industry to remain competitive** with regard to the **challenges of developing automated vehicles**

### Cost-effectiveness

Benefit-to-cost ratios (BCR) of the Commission Proposal



- Years: 2021–
- 2037 EU-28
- Compared to the baseline scenario

**Values greater than 1 indicate that the benefits are greater than the costs**

# Vehicle Safety Design – Example of TA Innovation

## UK (GB) Position on GSR and PSR

- Updates will **not be applied automatically** –adopt in full, partially or not at all?
- Cost-effective benefits are **best** achieved through **full package of measures**

## EU Type Approval is comprised of EC Directives and UN regulations

- Significantly higher level of minimum safety requirements than UN Regs alone

- Without action the **UK now has lower minimum safety standards than EU27**

■ EU is preparing for next GSR updates (GSR3)



# Vehicle Safety Design – Procurement Requirements

Code	GSR and PSR Measure name	Vehicle categories
AEB	Advanced Emergency Braking (light duty, vehicles and	M1, N1
DDR	pedestrians/cyclists) Driver Drowsiness and Attention Monitoring (DDAM), Advanced Distraction Recognition (ADR), and Driver Readiness Monitoring for Automated Driving (DRMAD)	M1, M2, M3, N1, N2, N3
EDR	Event Data Recorder	M1, M2, M3, N1, N2, N3
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ES	Emergency stop signal	M1, M2, M3, N1, N2,
S	Roll over side impact occupant protection	N3 M1, N1

# Vehicle Safety Design –Example of TfL Innovation



TRANSPORT  
FOR LONDON



## Driver Assist

Helping the driver to avoid or mitigate the severity of incidents

- Automated Emergency Braking (AEB)
- Intelligent Speed Assistance (ISA)
- Improved Direct and Indirect Vision
- Pedal Application Error
- Runaway Bus Prevention

## Partner Assist

Helping other involved road users –the collision partners –to avoid the collision

- Acoustic Conspicuity
- Visual Conspicuity

## Bus Safety Standard

## Partner Protection

Reducing severity of injuries for road users outside the bus in a collision

- Vulnerable Road User (VRU) Frontal Crashworthiness

## Occupant Protection

Reducing severity of injuries for people on board the bus

- Occupant Friendly Interiors
- Slip Protection

# Enhancing business vehicle safety through industry innovation and collaboration

## Who needs to innovate?



- Vehicle manufacturers & supply chain
- After-market suppliers, incl. telematics
- Vehicle owners and operators
- Transport industry organisations
- Insurance industry
- National & Local Government, incl. DVLA HSE
- Drivers
- PACTS
- .....



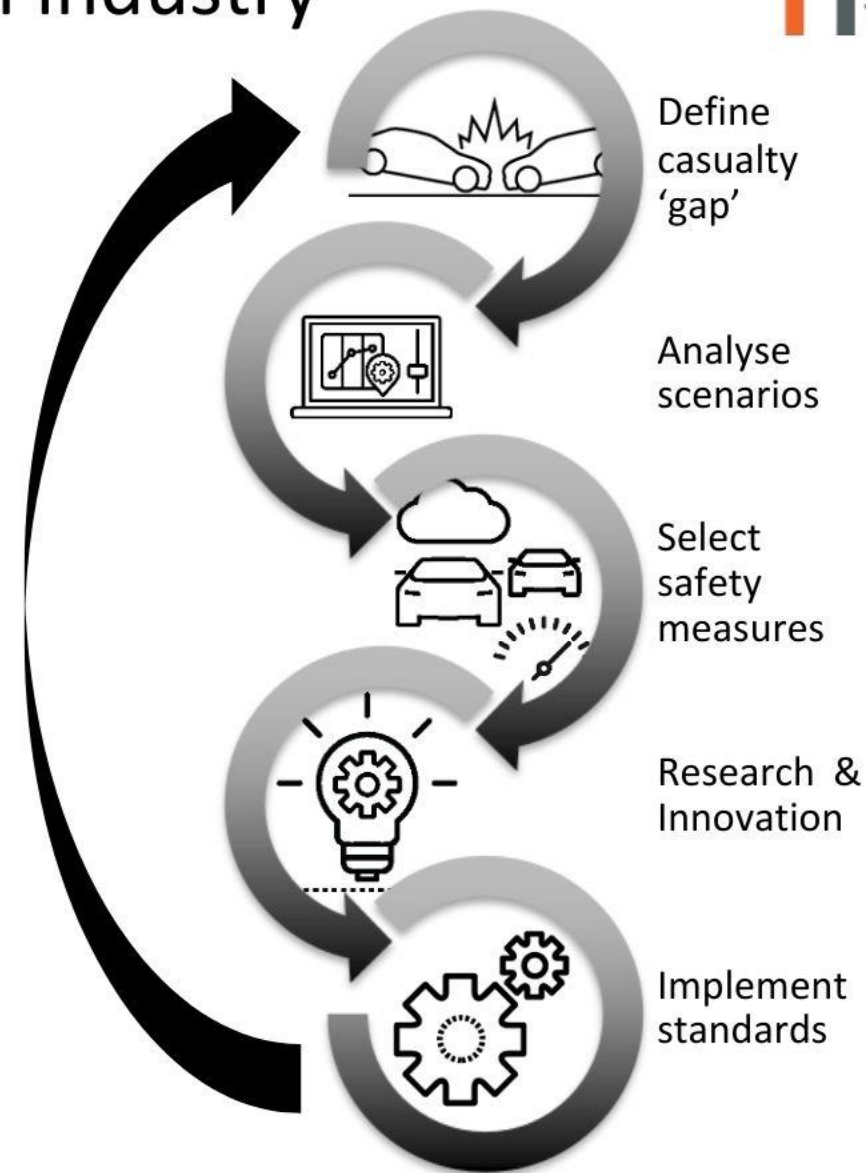


# Enhancing business vehicle safety through industry innovation and collaboration

## Research, innovation and implementation cycle

### Recommendations

- Link enhanced vehicle safety to decarbonisation of transport in a new **National Industrial Strategy**
- Publish a **National Road Safety Framework – Safe Systems**
- **Level-up safety at work requirements** so driving for work is equivalent to operating machinery
- Manage Research and Innovation programmes to prevent silos, **capture lessons learned**, and **maximise ROI – M&E**
- Develop **relevant economic assessment tools**
- Reward **adoption** of innovation – technological, operational and behaviour
- Always ask **how can it be achieved?**



## Enhancing business vehicle safety through industry innovation and collaboration



Richard Cuerden

[rwcuerden@trl.co.uk](mailto:rwcuerden@trl.co.uk)

# KATE CARPENTER

Director of Operational Road Safety – People and Places  
Solutions – Jacobs

# Occupational road risk

## How policy and practice reduce worker and road user risk

11<sup>th</sup> March 2024

PACTS Spring Conference: Driving Change

Kate Carpenter, Director of Operational Road Safety, Jacobs

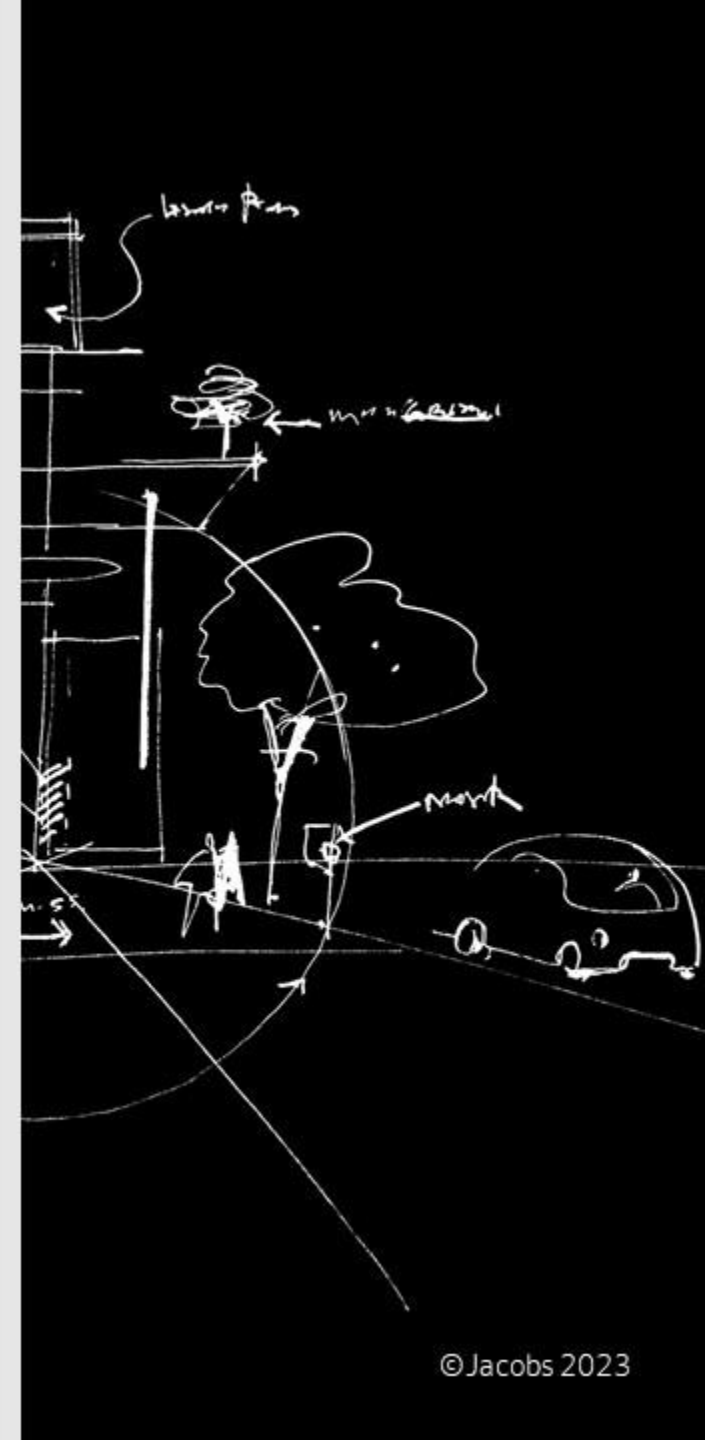
# Scope

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Layers of safety governance together create a 'safety net'

## Context

1. Culture
2. Policy
3. Data
4. Car hire
5. Training
6. Task-specific travel planning



# Context: Demonstrating the Value of Safety Through Human Capital

Value accounting seeks to put the value of nature and people at the heart of decision making in business by framing them as 'capitals'.

Let's take business travel as an example. Our safety systems have always been driven by reduction of risk. But imagine the impact if we change the narrative to highlight the benefits to the **business**, the **individual**, and the **community**.



**“The safest journey is the journey not taken” >>> “The most valuable journey is the journey wholly considered”**

1. People who drive for more than 2 hours per day are more likely to have poor physical and mental health outcomes

2. Transport accounts for a 20% net increase in greenhouse-gas emissions over the past decade

3. Every hour spent in a car increases the odds of obesity by 6%

4. Every 24 seconds someone is killed in a road traffic incident – 8<sup>th</sup> highest cause of death

We need to demonstrate our culture of caring by prioritising not only the safety of our people but adding value to their wider health and wellbeing, as well as that of the community through the impact of our actions. We all have a role to play in changing this narrative.



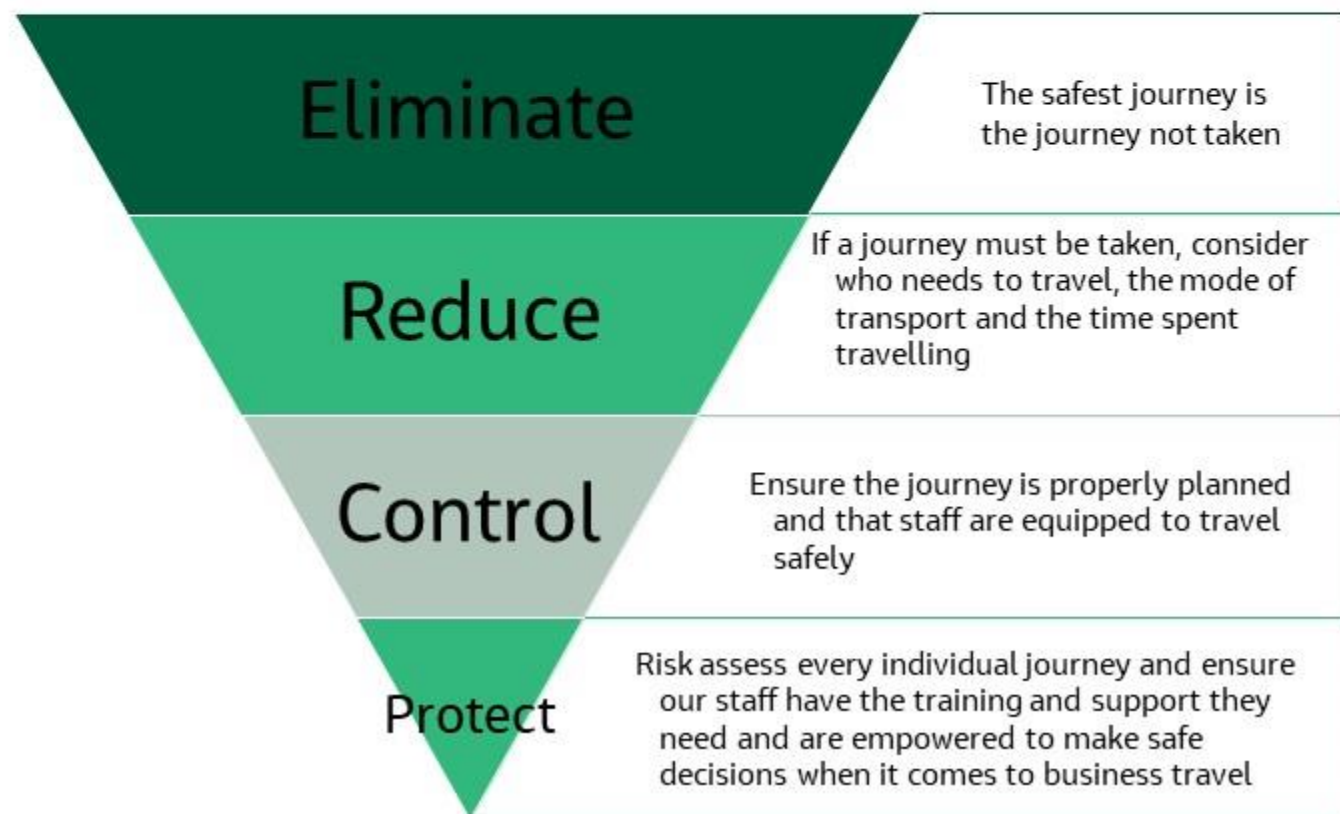
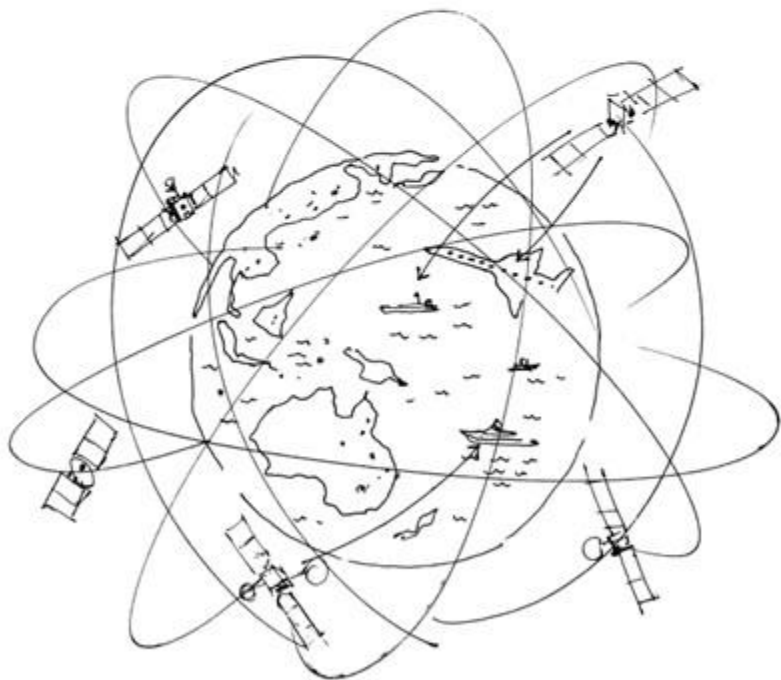
Data Sources;

1. Office for National Statistics, 2. Statista, 3. National Institutes for Health, 4. World Health Organisation

# Travel Risk Management

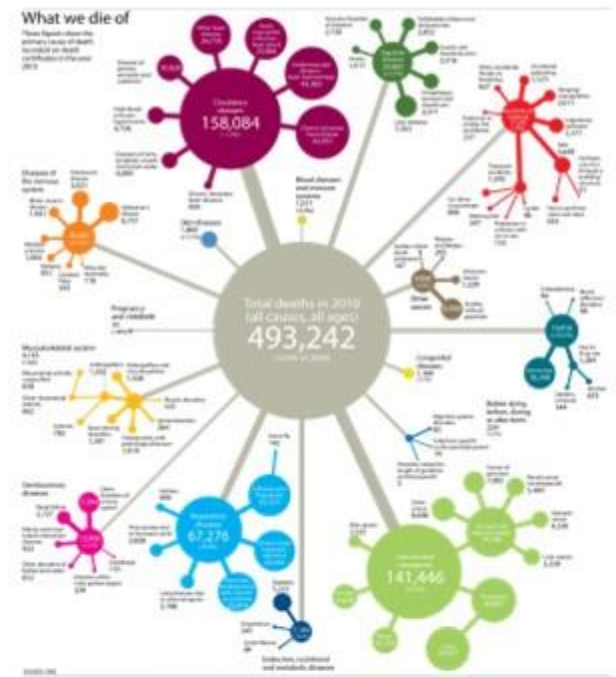
Jacobs considers the health and safety of its employees to be paramount. Business travel represents one of the most hazardous activities in which we are engaged.

We apply the hierarchy of control to all travel to ensure our journeys are both safe and sustainable.



# 1. Culture - leadership in behavioural safety

1. At all levels through leadership, policy, messaging, behaviour
2. Capture and celebrate both positive and negative safety shares
3. Visibly challenge unsafe behaviours in constructive blame-free way
4. Start all meetings with 'safety/wellbeing moment' – evidence-based
  - Tyre tread – replacing tyres at 3mm not 1.6mm
  - Not over-filling diesel tanks esp late night – expansion spill on junctions/bends
  - Health benefits of active travel – and behaviours to keep people safe
  - Tiredness – e.g. sleep-deprived; circadian rhythms
  - Effect of low/high blood sugar on driving
  - Journey preparedness/planning



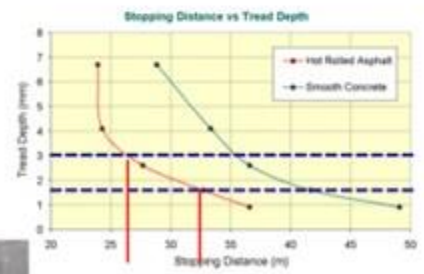
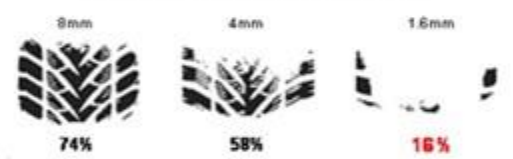
## Tyre tread safety moment

- In 2019, 5 fatal and 136 serious injury crashes in UK were caused by illegal, defective or under-inflated tyres
- Legal minimum tread = 1.6mm. Waiting to that point means one or more tyres likely illegal: insurance risk, prosecution risk, crash risk. Penalty £2500 plus 3 points \*per tyre\*
- As tread reduces, less of the tyre is in contact on a wet road, a film of water 'lifts' the car so under braking it takes longer to stop.
- At 50mph 3mm gives much better stopping performance. Most surfacing has less texture depth than HRA, so differences will be even greater.
- Changing tyres at 3mm brings much benefit at little cost, almost all the miles of wear are already used.

### Other essentials:

- Check tyre age, especially on trailers and caravans; rubber may perish before they wear out. If stored, protect from sunlight.
- Try to replace in pairs, especially front tyres, never mix patterns/tyre type
- Check pressure manually, don't rely on automatic detection. If you have children, they should see you do this, to be their 'norm' when driving.
- Consider winter tyres especially for remote locations, performance is much better in low temperatures (not just snow) – insurers may need to be told.
- Run-flat tyres can be useful but well-maintained regular tyres are a better priority for most users

Contact area comparison with various groove depths of a summer tyre. 3 mm of water on the road, driving speed 75 km/h



Max speed symbol: V = 149mph (also better at lower speeds)  
 Production date (1915 = week 19 of 2015).

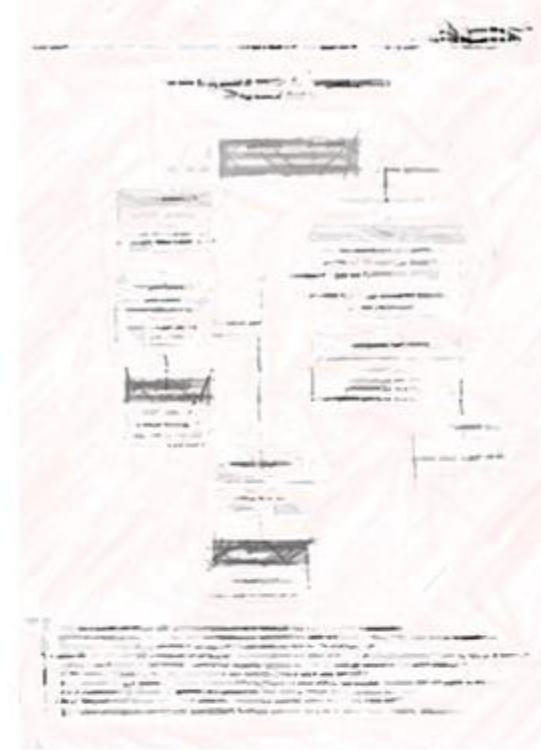


## 2. Policy (all travel not just driving)

1. **Clear chain of command** for approvals and reporting
2. **All modes**, risk-based approach
3. **Prohibition of motorcycling** due to risk profile and alternatives being available
4. **Cycling permitted and managed** to ensure suitable planning; route; experience; cycle and equipment (cycling as a journey and a design or audit tool – LTN 1/20 Cycle infrastructure design and Gear Change)
5. **Hire contracts** – collect & return; home/office/other; dashcams; satnav; EuroNCAP
6. **Priority:**
  - minimise aggregate miles travelled, and by individual and by day
  - control long journeys and/or driving when tired  
(link to expenses policy/approvals)
  - build in resilience e.g. hire car with two drivers

Summary: clear evidence-based approach for:

- **Reduced workers' risk of injury**
- **Reduced risk to the public from our travel**



 BeyondZero.

**Jacobs** Challenging today.  
Reinventing tomorrow.

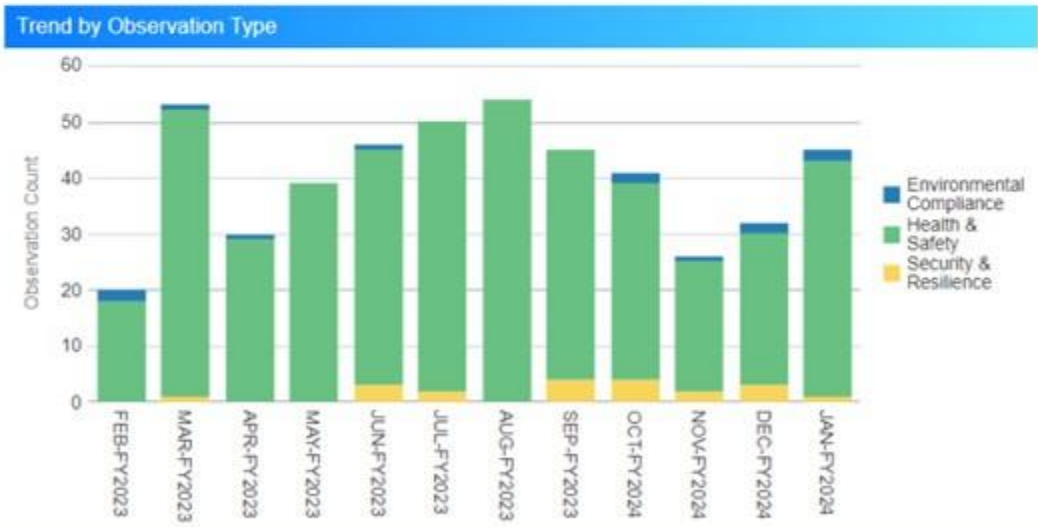
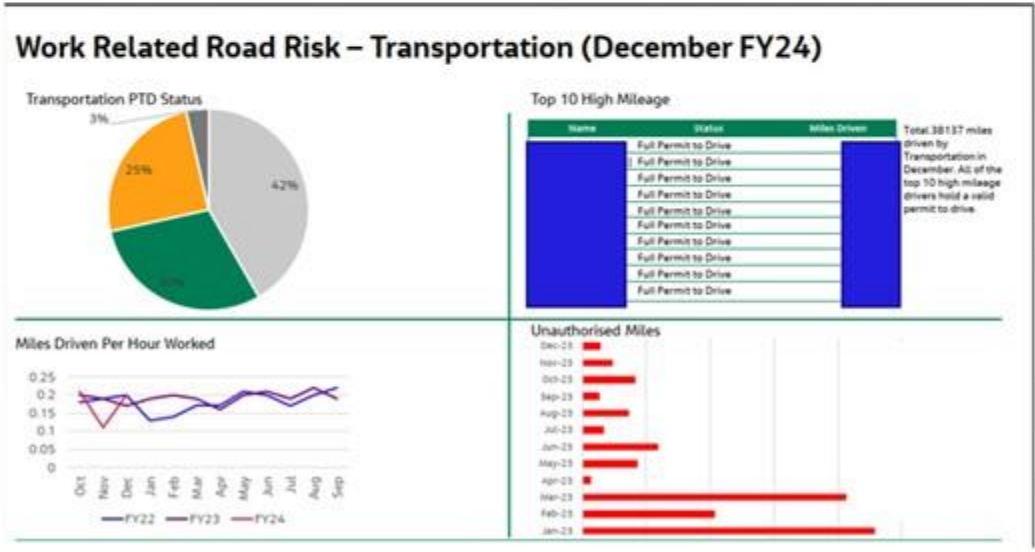
**Transportation HSE  
Performance Update**

Jan 2024



# 3. Data

1. Who drives: own vehicle/hire vehicle; all require **Permit to Drive**
2. Licence – all drivers; **Tax and insurance** - own car
3. **Travel** by individual and business unit
4. **Unauthorised driving** (driving without permit to drive)
5. **Unauthorised travel** (driving or other travel without TSPA)
6. **Incident records** - injury/damage-only; near miss - reporting for blame-free transparency
7. **Miles travelled** by individual; business unit: identify reasons for disparity
8. **Beyond Zero Observations (BZO)** – positive and negative safety shares; /incidents/good ideas
9. **Automate** records/notifications



## 4. Car hire: alternative resources to maintain safe mobility

1. Make it easy for cost and time efficiency, and minimise own-car use
2. Single provider for clarity and consistency
3. Include pick up/drop off; home delivery or office delivery for ease and flexibility
4. EuroNCAP awareness so staff in most-protective vehicles
5. Make checking the hire car part of routine: tyre condition, tread, inflation; controls
6. Understand unfamiliar controls/features eg adaptive cruise control; lane keep assist
7. Record keeping

### Safety moment – risks associated with intelligent or adaptive cruise control

- In some fatal collisions on smart motorways a stopped vehicle has been struck by a vehicle which, immediately prior to the collision, had been closely following the vehicle ahead of it
- If the driver of the lead vehicle moves to the offside to avoid the stopped vehicle when very close to it, the following driver may have insufficient time to react and the ability of an Autonomous Emergency Braking (AEB) system – if present - to avoid a fatal level collision may be exceeded
- If the vehicle concerned is fitted with 'intelligent' or 'adaptive' cruise control (ACC) the situation can be **exacerbated** by the fact that, rather than slowing, the vehicle **will actually accelerate** into the gap that has been created ahead of it
- A number of collisions involving Tesla cars have occurred in the USA in exactly this scenario
- Note that the human driver may react more slowly because increased driver-assist technology can enhance confidence and delay human response when an emergency occurs, while the 'driver assistance' aggravates rather than reduces risk.



## 5. Training

1. Range of training resources
2. Cover high-risk activities
  - high severity vs high-frequency eg speed vs parking
3. All staff who drive are auto-enrolled
4. Monitor completion – line managers informed
5. Feedback on content for future improvement
6. Informed by any incidents sharing lessons learned



Driver E-Learning System

Welcome, Kate Carpenter from Jacobs UK Ltd

My Training Modules

Welcome to the Driver E-Learning System from Applied Driving Techniques! The training modules include sound so you'll need to have speakers or head phones to hand with the sound turned on.

When you are ready, simply select from one of the course modules on the right to begin your learning. If you are part way through a module then you will start from the last section you completed.

Each module is comprised of a series of videos and questions. You'll need to get at least 3 out of the 5 questions correct to proceed to the next section in the module.

Alcohol Awareness  
25 minutes Completed

Hazard Awareness  
10 minutes Completed

Applied driving techniques

### Proper Lane Changes and Mirrors



### Avoiding the Worst Collisions at Junctions



### Anticipating the Other Motorist



# 6. Task-specific travel planning

1. Quantify carbon and safety in one place
2. Whole journey/route; contingency; resilience; safety risk
3. Manager approval (PM or line manager)
4. Includes buddy and contact information
5. Attach to Outlook calendar for easy finding details

**JACOBS** PERMIT TO DRIVE **BeyondZero**

Personal Details		ADT LBN: 34576	
Name:	Katherine Carpenter	Employee no:	B00006126
Line Manager:	Nigel Baskerville		
Risk Assessment Completion Date:	22/02/2023	Assessment Result:	Low
Permit Expiry Date:	22/02/2024		

RECORD OF CHECKS - 12 months all drivers	
License Verified Date:	22/02/2023
License Expiration Date:	09/10/2031
Vehicle Classification:	Own Vehicle Driver
Registration No:	LD6*****

**Authorisation (ADT will hold the electronic master)**

I am authorised to drive Lease, Pool, Rental / Hire and (if indicated at the beginning of the process and shown in the Vehicle classification field above) Personal vehicles on company business.

I have read, understood and confirm the information on this Permit to Drive is correct. I agree to drive in accordance with local traffic laws.

I fully understand the standards expected of me while driving a company vehicle or driving on behalf of Jacobs, with particular regard to driver distraction risks including cell/mobile phones, fitness to drive risks, including the requirement to not be impaired through the use of drugs or alcohol.

I am fully aware that while driving on behalf of Jacobs, I should act as an ambassador ensuring the company's positive image is protected at all times.

I will immediately notify my manager and Applied Driving of any road traffic incident, endorsement/disqualification or any change which may affect my ability to drive safely (i.e. health/eyeight).

I confirm that I will consider all other options to eliminate or reduce risk before driving on Jacobs Company Business.

**I read and I will abide by the rules as set out in the Jacobs Driver Policy.**

**Failure to do so may result in the Permit to Drive being revoked and removal of authority to drive on company business.**

Driver signature:  Date: 27 April 2023

For further information or advice, contact Jacobs Drive Support on your local number:  
 Tel USA: +1(415)384-6770 Australia: +61(2)4384 3433 UK: +44(1)4646 7377 Japan: +1(202)498 1666 India: +91(11)226 4078  
 Or Email: [jacobsdriverupport@jacobs.com](mailto:jacobsdriverupport@jacobs.com)

TSPA Submission

Travel Plan #275123 for Carpenter, Katherine Mary (Kate) Status: **Approved** [Create Copy](#)

### Travel Safe Plan of Action (TSPA)

#### 1. General Information

Performance Unit: PU-TRANSPORTATION UK

\* TSPA Name - use your full name to be recognised when displayed in a list: BTND power supply OGD client meeting \* Contact Number: \_\_\_\_\_

\* Trip Justification: need to undertake complex review of documents not readily done remotely by multiple people. multiple meetings likely typically 1 day/week max during OGD period (to december end)

Departure Point: 121 Hoxbury Street, Bedford, Bedford, MK40 3DF, United Kingdom (United Kingdom) Final Destination: Suffolk House Lower Saxon Street, Bury St Edmunds, Suffolk, IP33 1ET, United Kingdom

Date From: 05-Oct-2023 Date To: 05-Oct-2023

\* Journey Start Time: 07:00 \* Required Arrival Time: 08:15:00

### 3. Contacts and Schedule

Name	Type	Phone	Relationship
MARGARET CARPENTER	Emergency Contact		Family
Sally Standley	Emergency Contact		Family
Kate Yeo	Emergency Contact		Coworker
Yeo, Katrina (Kate) (Office: UK London - Cottons Lane)	Work Contact		

Date	Time	Work Contact	Comment
05-Oct-2023	07:00:00	Yeo, Katrina (Kate) (Office: UK London - Cottons Lane)	leaving home
05-Oct-2023	08:15:00	Yeo, Katrina (Kate) (Office: UK London - Cottons Lane)	arriving Bury
05-Oct-2023	17:00:00	Yeo, Katrina (Kate) (Office: UK London - Cottons Lane)	leaving Bury
05-Oct-2023	18:15:00	Yeo, Katrina (Kate) (Office: UK London - Cottons Lane)	arriving home (worst case) or sister (best case)



# Summary

1. **Comprehensive** set of components – underpinned by culture
2. **Automate** notifications (training, approvals)
3. **Meaningful training** to all drivers
4. **Resilience**: Include buddy and contact information for emergencies
5. Make it **easy and engaging** for high compliance
6. **Benefits**: good systems protect:
  - **Our staff**
  - **Other people at work** including:
    - Clients
    - Contractors
    - Emergency services
    - Breakdown recovery operators
    - Litter pickers
  - **Road users**  
(on foot, cycle, micro-mobility, cars; goods vehicles, bus etc)



Don't put your feet on the dashboard in a moving car

Something You Need to Know  
While traveling this weekend, I noticed many passengers had their feet on the dashboard of their car. Airbags deploy between 100 & 220 MPH. If you ride with your feet on the dash and you're involved in an accident, the airbag may send your knees through your eye sockets. This post was shared thousands of times last year, but it's worth repeating. And yes, the driver and passenger should also be wearing seat belts too! #Fun Twitter post from Shane O'Connor @oconnorshane \* Originally posted by Cole Bennett in the United Kingdom

Airbags inflate at between 160 and 350km/h.

The Fire Department says this passenger 'got off easy':  
"If you ride with your feet on the dash and you're involved in an accident, the airbag may send your knees through your eye sockets,"

Prepared by: Kate Carpenter, Director of Operational Road Safety [kate.carpenter@jacobs.com](mailto:kate.carpenter@jacobs.com)

thank you

[kate.carpenter@jacobs.com](mailto:kate.carpenter@jacobs.com)

# DAVID CRUNDALL

Professor of Psychology – Nottingham Trent University

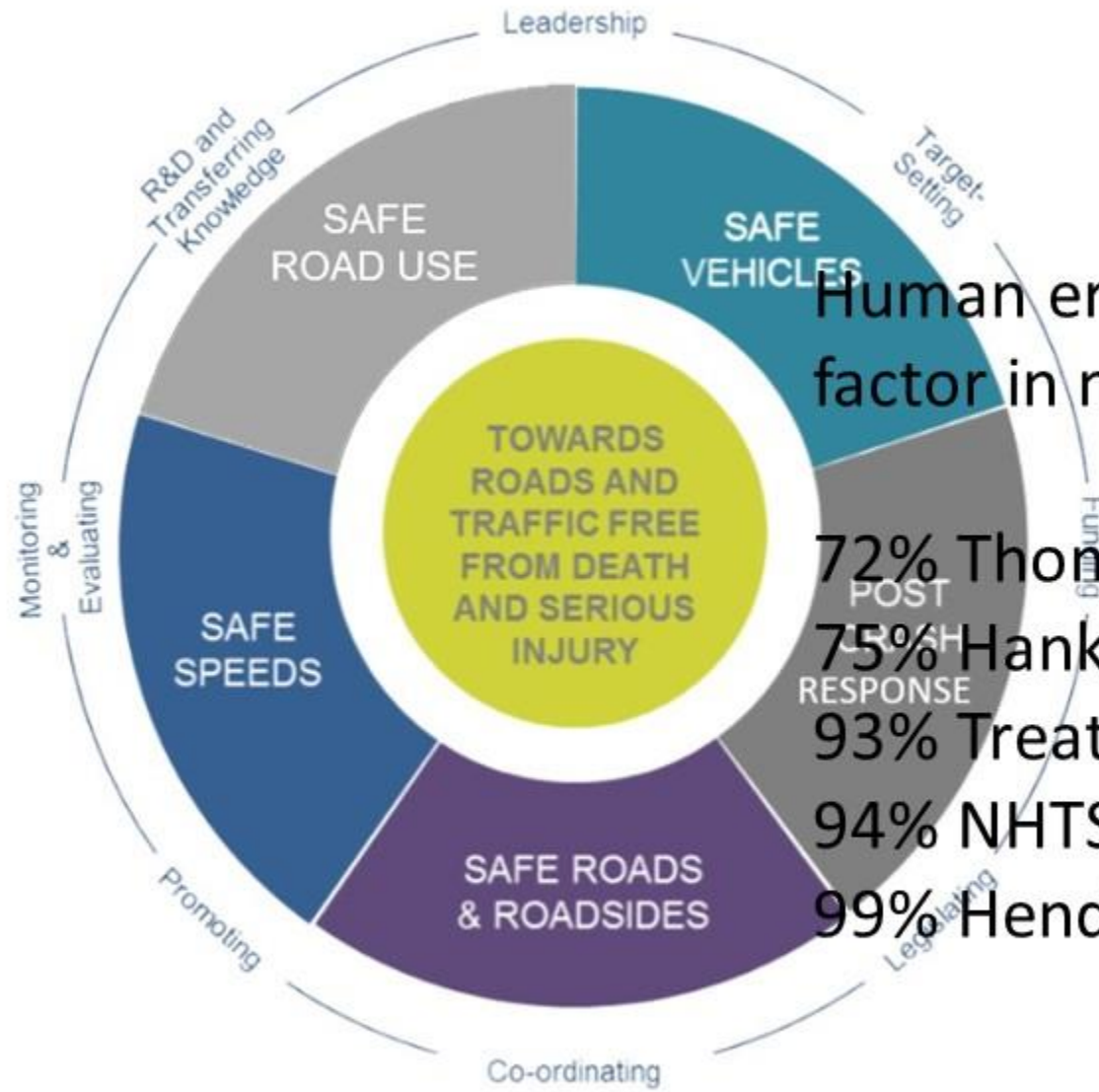


# Navigating the road to safety: Identifying and mitigating high-risk driver behaviours in work-related crashes

David Crundall  
PACTS Spring Conference  
2024



Nottingham Trent  
University



Human error is a causal factor in most collisions:

72% Thomas et al. (2013)

75% Hankey et al. (1999)

93% Treat et al. (1979)

94% NHTSA (2015)

99% Hendricks et al. (1999)

# High risk behaviours

Fatal and serious collisions:

FSCs	Contributory Factor
3677	Speeding or inappropriate speed
1311	Tailgating
1292	Distraction
515	Fatigue
488	Traffic light violations
312	Too close to VRUs

# Causes of fleet road safety problems

## Individual:

- Knowledge
- Attitudes to risk
- Transitory states
- Skills

## Organisational:

- Culture
- Demands on drivers
- Lack of rewards & sanctions

# 1. Lack of Knowledge

What is the speed limit?



# Improving knowledge

- Assessing knowledge is easy to do
- Training knowledge is straight forward
- But it is the problem?



Before pulling out of an Emergency Refuge Area you should:

- Contact National Highways and wait for them to close Lane 1
- Wait for a big enough gap to pull out
- Pull out with your hazard lights on
- Only pull out in front of larger vehicles such as HGVs, as they will be travelling more slowly

- 130 drivers took a Smart Motorway knowledge test
- They scored worse than a group of NDORS trainers
- But their knowledge did not predict their behaviour (compliance) on SMs
- Only driving experience impacted on compliance!

## 2. 'Bad' Attitudes

Violators over-estimate their skills (Forward et al., 2006)

Violators have greater optimism bias (Criado del Valle and Scharifi, 2021)

Violators are at higher risk of a crash (Kauer et al., 2023)



# Monitor violations

- Telematics
- In-cab monitoring
  
- Only useful if managers use the data
- Still retrospective





# Spotting violators

Many companies use risk-profilers.

How many of you sometimes speed up when you see an amber light ahead?



# A better way to identify risk-takers?

Would you go through this amber light?



What headway would you prefer to drive at in this instance?



When is it safe to pull out?





- 15 clips, each shown twice

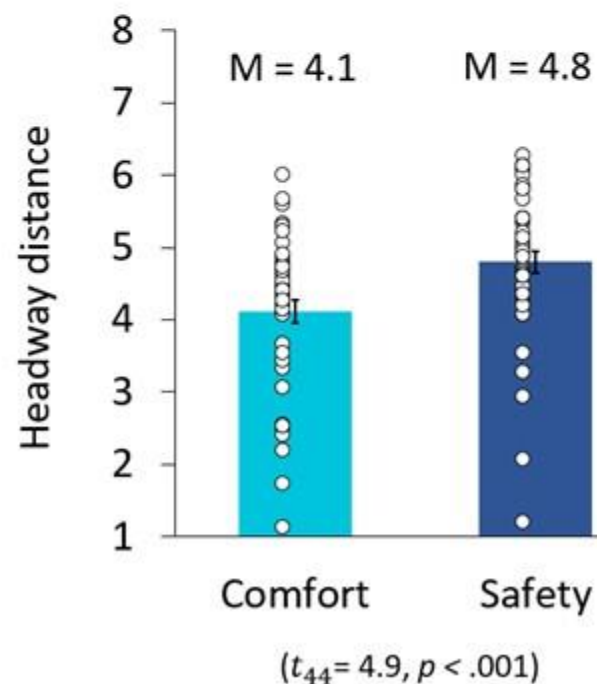
*What is the minimum distance from the car ahead that you feel **comfortable** driving at?*

*What is the minimum distance from the car to stop **safely** in an emergency?*

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**Safety** scores are predicted by self-reported errors and ordinary violations

**Comfort** scores are predicted by self-reported ordinary violations and aggressive violations



### 3. Transitory states

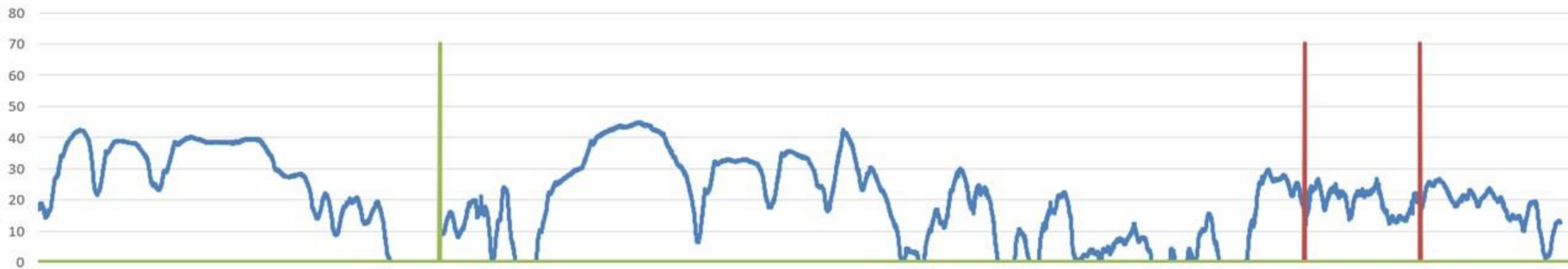
- Drink, drugs, fatigue
- Emotions
- Distraction



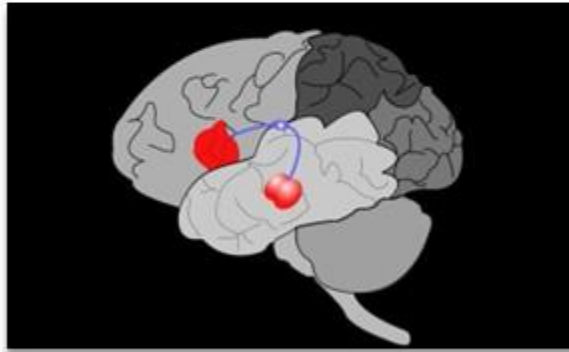
# Training emotional control

- Mindfulness training provides
  - Greater anger control
  - More sensitivity to hazards
  - Fewer instances of harsh acceleration when driving on real roads

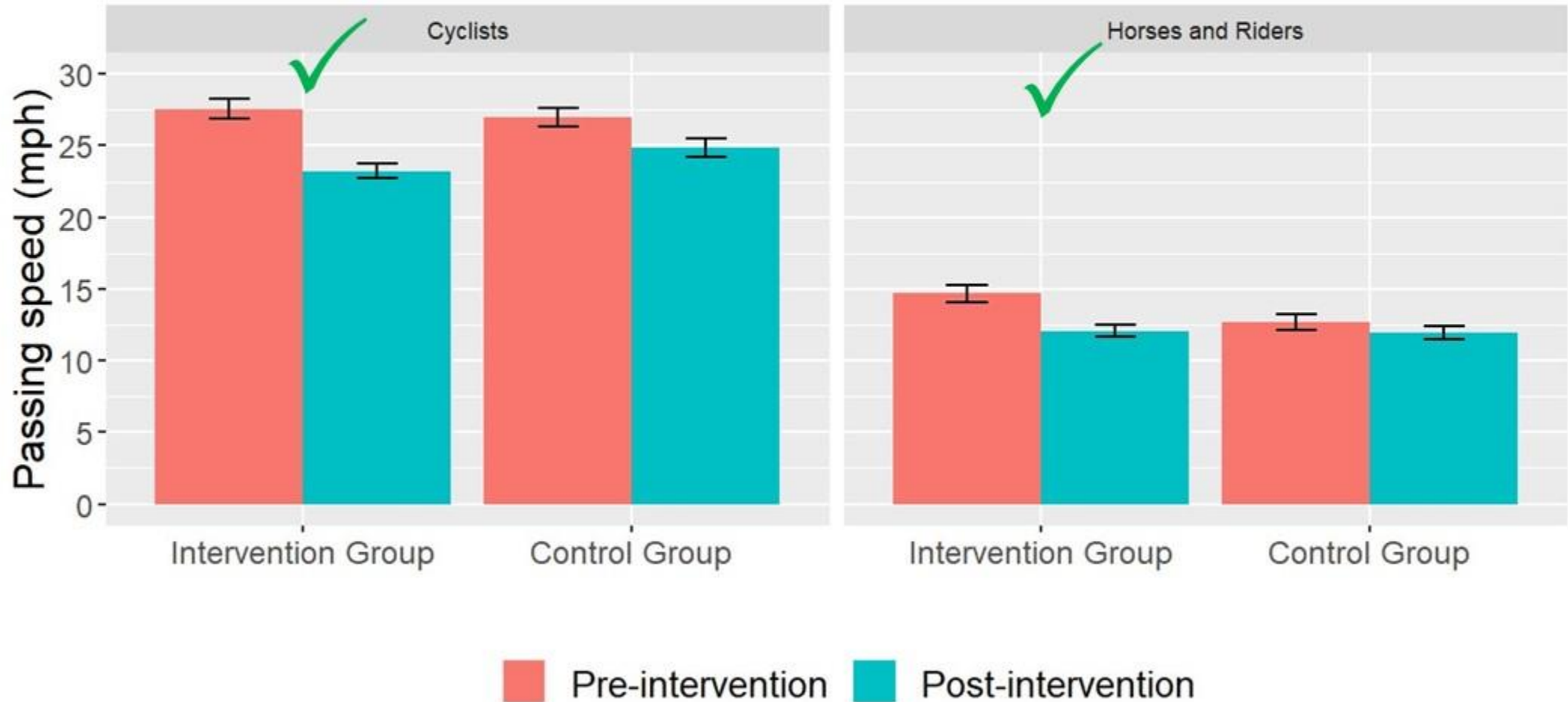
Crundall et al. (2019)



# Mindfulness techniques for drivers



# Mindfulness techniques for drivers

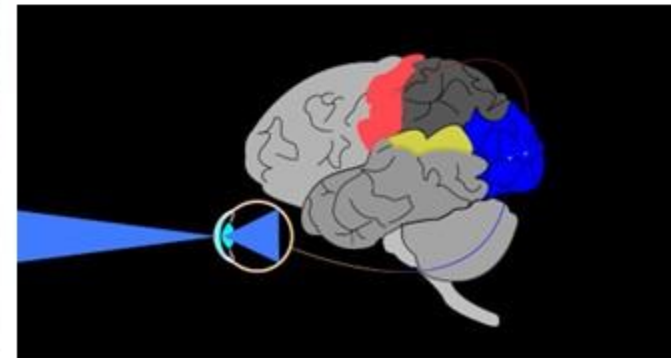






# Myth busting hands-free phones

- Van drivers still use hands-free phones even though company policy forbids it
- A survey of 500 van drivers identified 5 key 'excuses' that drivers use to justify hands-free use



## 4. Skills

- Concentration
- Visual scanning
- Hazard Perception
- Decision making



# Benefits of hazard perception assessment and training

- Identify drivers with poor hazard skills
- Even experienced drivers can improve
- Trained drivers are less likely to engage in distracting activities

Krishnan et al. (2019)



# Conclusions

- Humans have idiosyncratic 'safe' systems that dictate their behaviour
- You must analyse collisions, monitor performance and assess drivers
- The underlying reason for unsafe behaviour provides the key to changing that behaviour

# Thank you

[david.crundall@ntu.ac.uk](mailto:david.crundall@ntu.ac.uk)

[david@esitusolutions.com](mailto:david@esitusolutions.com)



# *Reflections on session learning*

# SCOTT WILDING

Principal City Planner – TfL

# TfL: The Direct Vision Standard and HGV Safety Permit Scheme

Scott Wilding & Joseph Duggan

18 March 2024





## Background

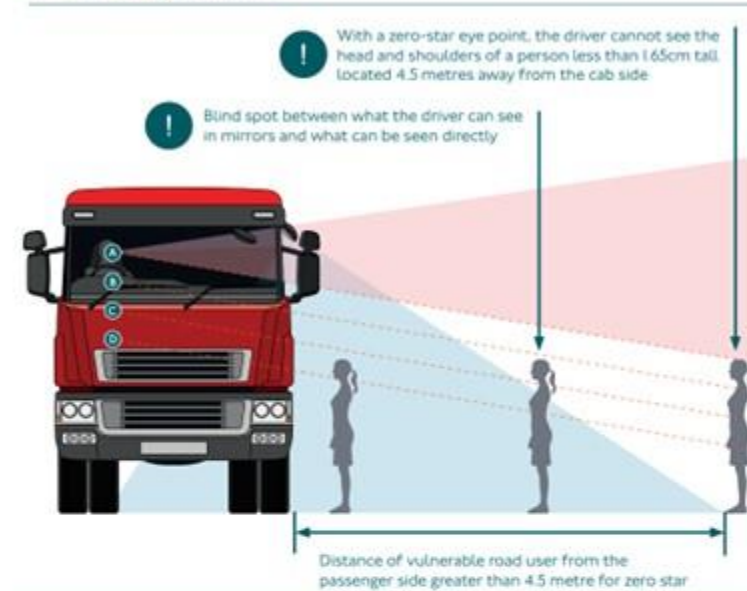
- The Mayor has adopted Vision Zero for road danger in London, with the aim of eliminating all deaths and serious injuries from London's streets by 2041
- HGVs historically pose a disproportionate risk to vulnerable road users. To reduce the risk that HGVs over 12 tonnes present to vulnerable road users, we developed the world's first Direct Vision Standard (DVS) and the HGV Safety Permit Scheme in October 2019, with enforcement starting in March 2021
- The scheme requires that operators of HGVs (>12t) must hold a safety permit to operate in London, and where vehicles do not meet the minimum standard (currently 1\*), operators need to make them safer by fitting a 'Safe System'. This is a series of vehicle safety measures which are designed to reduce the risks that HGVs present to vulnerable road users
- We set out our intention that this standard will tighten from October 2024 so that all 0-2\* rated HGVs will need to fit a 'Progressive Safe System' (PSS) to operate in London. This commitment was made in the Mayor's Transport Strategy and re-affirmed in the Vision Zero Action Plan (2018) and Freight and Servicing Action Plan (2019)



## The Direct Vision Standard (DVS)

- The DVS is designed to minimise the risk to vulnerable road users from limited driver vision from the cab
- Restrictions in the HGV driver's field of vision, or 'blind spots', are a significant contributing factor in collisions between HGVs and vulnerable road users
- The level of vision from the cab is calculated using CAD modelling and given a star rating from zero to five, with 'zero star' being the lowest and 'five stars' the highest
- The star rating of a vehicle is therefore dependent on the vehicle design and is fixed – it does not change but additional safety measures can help to improve the driver's indirect vision from the cab (but not change the star rating)

HGV star rating boundaries



The DVS star rating scale

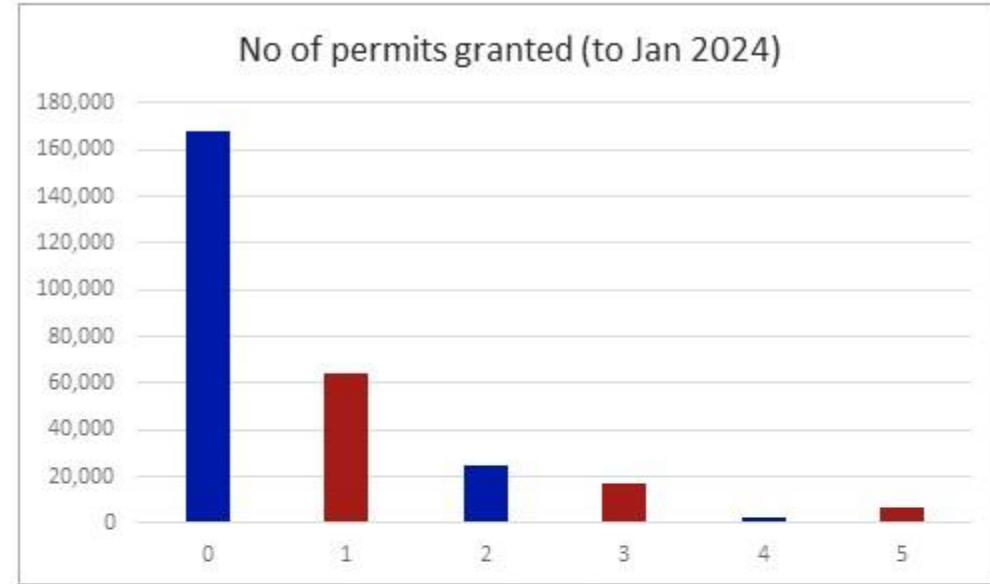
0	★ ★ ★ ★ ★	Limited direct vision
1	★ ★ ★ ★ ★	
2	★ ★ ★ ★ ★	
3	★ ★ ★ ★ ★	Minimum from October 2024
4	★ ★ ★ ★ ★	
5	★ ★ ★ ★ ★	Good direct vision



## 4 Why is DVS important?

- **Contributing to reducing fatal and serious collisions:** Fatal collisions have reduced by half since 2018, and serious injuries from 48 in 2018 to 17 in 2021.
- Using a baseline of 2017-2019 (averaged), there has been a 49 per cent reduction in the number of vulnerable road users killed by a Heavy Goods Vehicle, and 30 per cent decrease in vulnerable road users seriously injured in collisions with HGVs. **That's why we're strengthening the standard from this year.**

\*HGV traffic had returned to 88% of pre-pandemic levels in 2022, suggesting 2021-22 was only a slight decline in overall HGV traffic.



## 5 The need to tighten the standard

- **Policy commitment:** Review the existing Safe System and increase the minimum required DVS rating from 1\* to 3\* from October 2024; consultation on the proposed Progressive Safe System Feb-April '23
- **More to do:** 0\* vehicles accounted for four of the six fatal collisions in 2021 where vision was cited as a contributing factor. In 2022, all of the three vehicles involved in fatal collisions where vision was a contributing factor were 0-2\* rated.
- **Our learned experience:** The existing Safe System was developed in 2018-19. The new Progressive Safe System takes into account improvements to technology since and our experience operating DVS to date.
- **Safe System review:** Loughborough University was commissioned to review the existing Safe System and provide recommendations for the next stage of its development (Jan-Sept 2022).

Existing safe system developed in 2018 for 0\* HGVs (~100,000 HGVs)

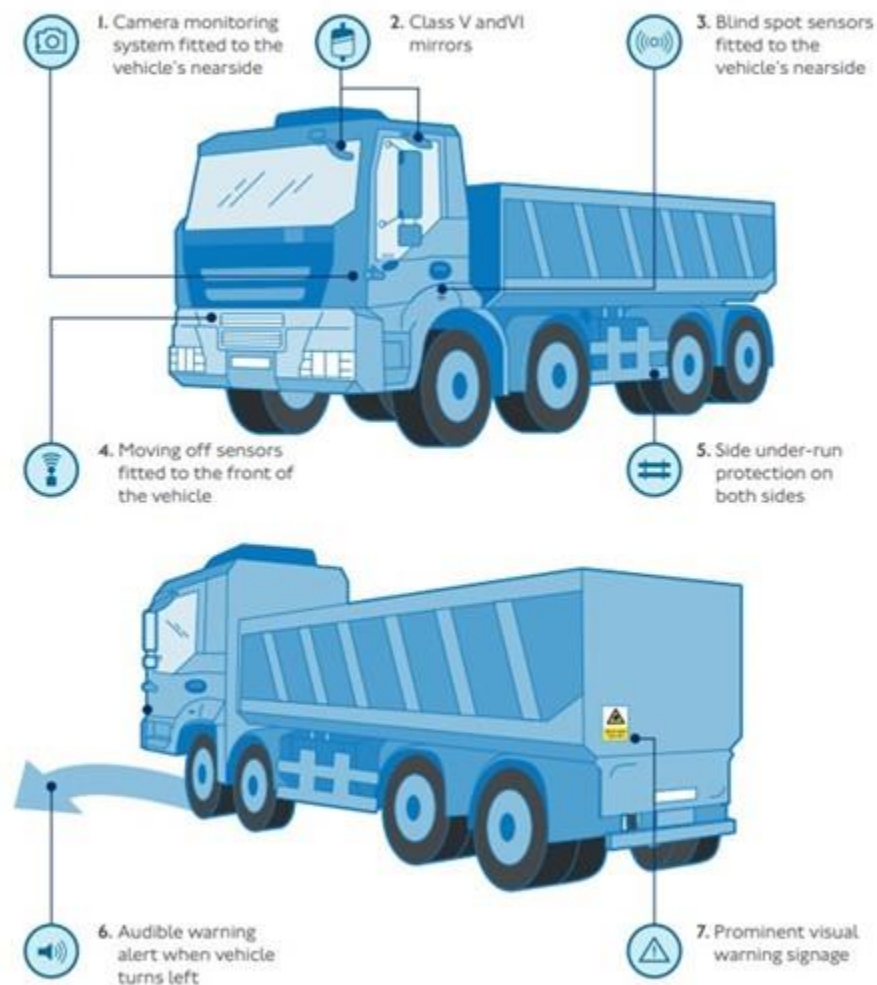
New PSS will be applied to all 0-2\* (~250,000 HGVs)

Existing safe system



## The new Progressive Safe System

- The new requirements for the safety measures HGV operators are known as the "**Progressive Safe System**". Operators of HGVs below our minimum standard for direct vision will be required to fit this standard from 28 October 2024 onwards
- There are 7 equipment requirements, some of which are included within the existing Safe System, and some of which are new requirements such as the Moving Off Information Sensors.
- We consulted on the form and content of the PSS in spring this year, and are working with industry to make sure that operators, equipment suppliers and hauliers are ready for launch in 2024.



# The evolution of HGV design: Impact of DVS



## Support for the progressive safe system

- We have published operator's guidance setting out the equipment requirements for the Progressive Safe System, including technical specifications: these are available on our website
- We are working closely with the freight industry to help HGV operators **make their vehicles ready** for the PSS, as up to c. 250,000 HGVs could be affected by the higher star rating threshold
- This includes a survey of operators and extensive close work with the industry to understand how operators are preparing for the changes in the law
- Further information is available on the TfL website, and the team are always happy to help answer any queries about the PSS



For help with the PSS, visit:

- DVS Operator's guidance
- Technical specifications
- The TfL website



## Next steps for DVS

- The new **Progressive Safe System** and enhanced star rating requirements become enforceable from 28 October 2024
- There is a short grace period from 28 October to allow operators who can demonstrate they need more time to procure, fit and test equipment for the progressive safe system
- We are committed to review the DVS and HGV Safety Permit Scheme in 2028. This will take into account any **advances in technology** and where **safety equipment** has become more widely available in the market





## Questions, comments, thoughts....



[scottwilding@tfl.gov.uk](mailto:scottwilding@tfl.gov.uk)  
[josephduggan@tfl.gov.uk](mailto:josephduggan@tfl.gov.uk)



# TAVID DOBSON

Lead SMS Specialist – Rail Safety Standards Board

# Enhancing road safety data: Strategies and plans for capturing work-related road collisions

Presented by:  
Tavid Dobson  
Lead SMS Specialist  
Road Risk Technical Lead

# Enhancing road safety data: Strategies and plans for capturing work-related road collisions

1. Raising awareness of the need to report RTC collisions
  - *The lack of effective RTC data*
  - *The rail industry collaboration arrangements*
2. The benefits of effective investigation of RTCs
  - *The RSSB RTC investigation toolkit*
  - *Using a Road Risk BowTie to support the RTC investigation process*
3. Using activity data to monitor and change behaviours
  - *The move towards activity data*
  - *Development of rail industry road risk scorecard*

# Enhancing road safety data: Strategies and plans for capturing work-related road collisions

*'Raising awareness from the significant harm caused by the use of road vehicles for work purposes'*

**50%** of all workforce fatalities on the road

**25%** of all workforce fatalities on the road



Year	RTA fatalities	Other workforce fatalities	Total fatalities	% RTA
<b>During COVID</b>				
2019/20	0	3	3	0%
2020/21	0	5	5	0%
<b>Post COVID</b>				
2021/22	1	1	2	50%
2022/23	2	0	2	100%
<b>Total</b>	<b>3</b>	<b>9</b>	<b>12</b>	<b>25%</b>

## 1. Raising awareness of the need to report RTC collisions

### Factors relating to poor RTC data

- Under reporting
- Inconsistent reporting standards
- Data collection methods
- Cultural and social factors
- Incomplete data fields
- Data silos

# Enhancing road safety data: Strategies and plans for capturing work-related road collisions

# The rail industry road risk collaboration arrangements

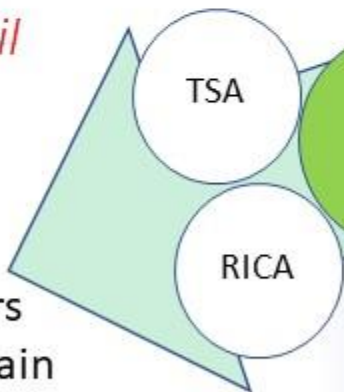


External Members & Strategic Partners

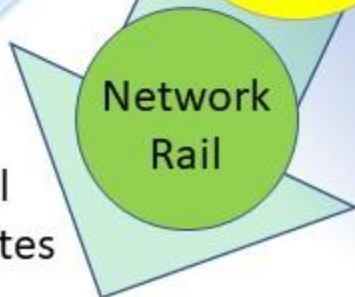


*'sharing, learning and working together to deliver effective ORRM outcomes for the benefit of those working in the rail industry'*

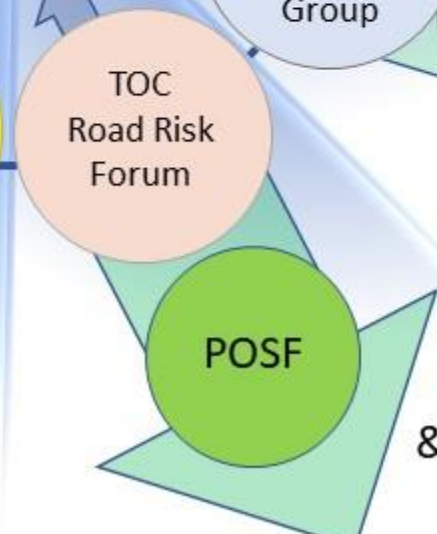
Principle Contractors & Supply Chain



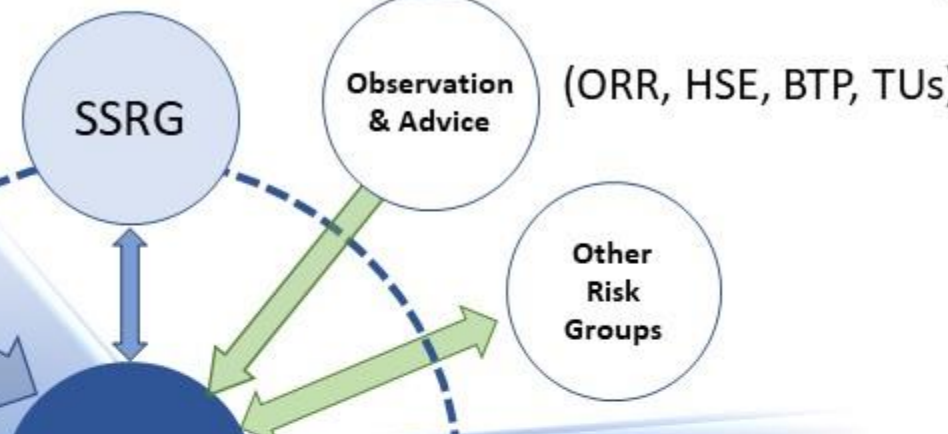
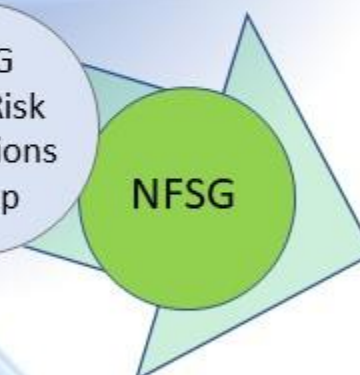
Network Rail Regions & Routes



Owning Groups & Train Operating Companies



Freight Operating Companies



# The rail industry collaboration arrangements

## *Occupational Road Risk Management*

*'The industry working together to reduce work related road risk exposure to the workforce, passengers and the public'*



## Occupational Road Risk Management Strategic Collaboration Partnership

*RSSB together with support from the National Highways DfBB team provide a comprehensive occupational road risk management resource to enable the rail industry to:*

- harness and share collective good practice*
- work together on collaborative improvement programmes*

Driving for Better Business is a government-backed National Highways programme to help employers in both the private and public sectors reduce work-related road risk, control the associated costs and improve compliance with current legislation and guidance.

It is free to access and contains useful online tools and resources to help you:

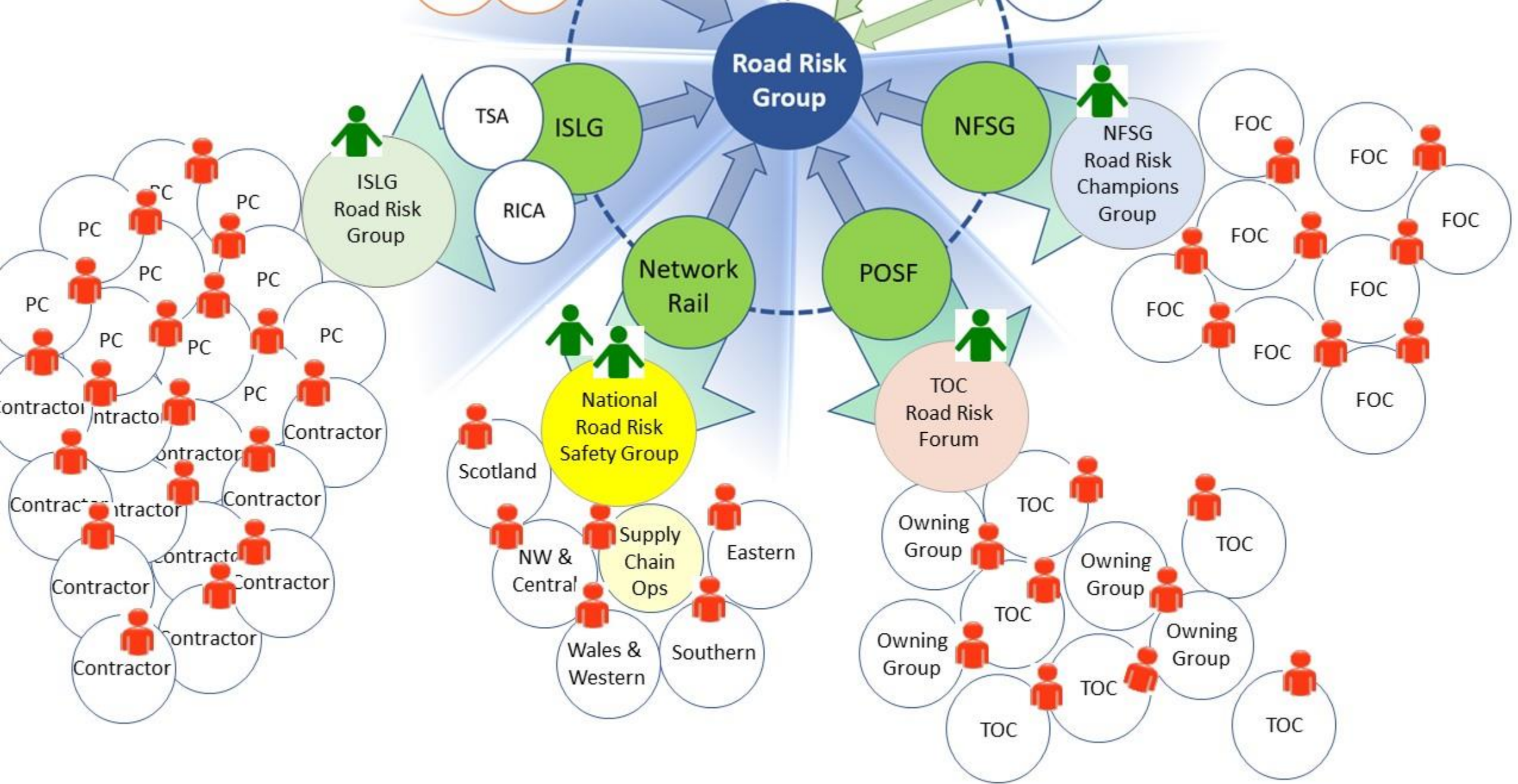
- evaluate practices,
- strengthen culture,
- enhance performance and demonstrate leadership in the management of work-related road risk.

<https://www.drivingforbetterbusiness.com/rail-sector/>









# The rail industry collaboration arrangements



A Better,  
Safer  
Railway



Rail Industry  
Company Road Risk Champion



- Your Company Road Risk representative:
  - ✓ Member of your rail sector Road Risk Group
  - ✓ Attendance RSSB Road Risk group
  - ✓ RSSB Road Risk Resource Centre

<https://www.rssb.co.uk/safety-and-health/guidance-and-good-practice/managing-occupational-road-risk>
- The opportunity to collaborate:
  - ✓ Networking with other company road risk champions in your industry sector
  - ✓ Sharing good practice and learnings
  - ✓ Working together on solutions
  - ✓ Delivering improvement/change management programmes






- Your Company DfBB representative:
  - ✓ Register with the DfBB programme

<https://www.drivingforbetterbusiness.com/rail-sector/>
- Activate your company DfBB portal
  - ✓ Access to information, tools & guidance
  - ✓ Access to DfBB/RSSB Off-line Gap Analysis Tool
- Company Road Risk Champion training
- Forum to share and learn
- Opportunity to develop professional knowledge, skills and experience
- Access to Podcast programmes & latest WRRR updates

Enhancing road safety data:  
Strategies and plans for capturing work-related road collisions

## 2. The benefits of effective investigation of RTCs



 Premium 

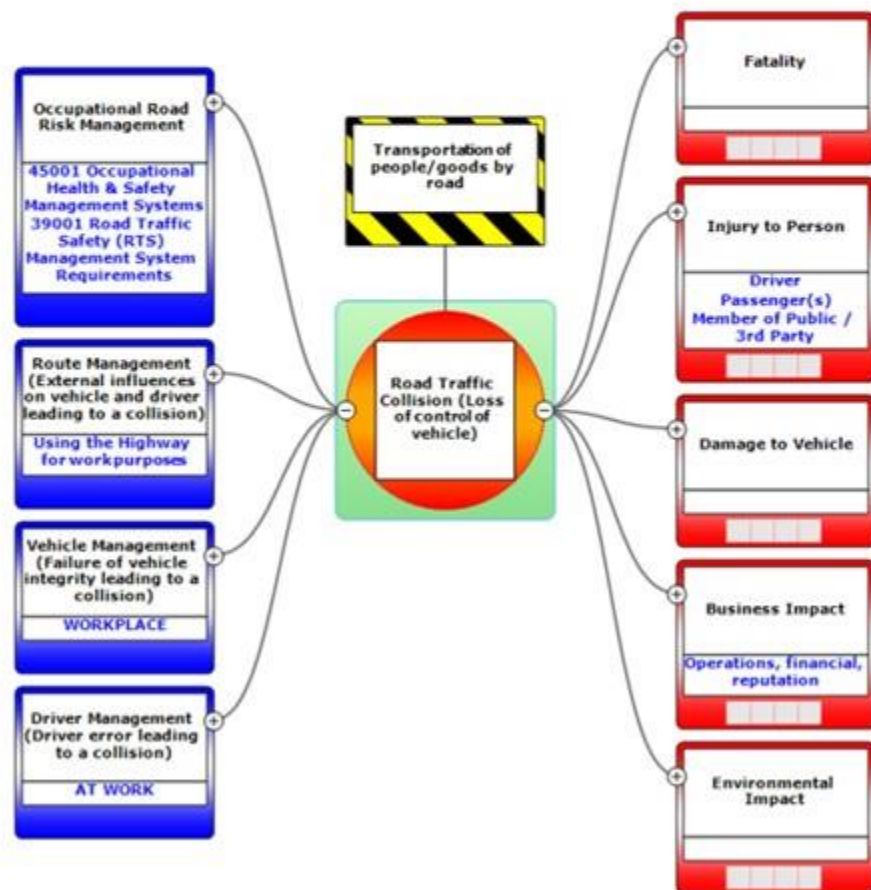
### Road Traffic Collision Investigation Toolkit

This toolkit provides a range of resources, to support trained investigators to complete an effective RTC investigation and report, including a RTC Investigation template with guidance, and a series of podcasts and presentations.

[Read more >](#)

*The RSSB RTC investigation toolkit*

*Using a Road Risk BowTie to support the RTC investigation process*



Enhancing road safety data:  
Strategies and plans for capturing work-related road collisions

## The RSSB RTC Investigation Toolkit



 Premium 

### Road Traffic Collision Investigation Toolkit

This toolkit provides a range of resources, to support trained investigators to complete an effective RTC investigation and report, including a RTC Investigation template with guidance, and a series of podcasts and presentations.

[Read more >](#)

### RTC Investigation Templates



#### RTC Investigation Toolkit - Introduction and background

Find out why the RTC Investigation Toolkit has been produced, who it is aimed at, and what the toolkit contains to help you to complete an effective RTC investigation and report.

[Watch >](#)



#### RTC Investigation Toolkit - using the RTC template

Find out how to use the RTC Investigation Template. A step by step guide to completing an effective RTC investigation and report.

[Watch >](#)



#### RTC Investigation - Template

Access to the RTC Investigation Template publication.

[Download >](#)

### Accident Investigation Training Courses



#### Accident Investigation Training

Improve the practical skills and knowledge needed to carry out accident investigations.

[Find out more >](#)



#### Human Factors Awareness

This course will explain the factors that can affect human performance at work with regards to the individual, job or workplace and organisation.

[Find out more >](#)

### RTC Investigation Podcasts



#### Road Driving for a Safer Railway - Effective RTC Investigations

Only when we investigate can we understand. Incidents while driving for work can have fatal or life-changing results, so we need to investigate to find ways to stop incidents repeating. Here's what's needed for an effective investigation.

[Listen >](#)



#### Road Driving for a Safer Railway - Road Traffic Collisions and Legal Privilege

The HSE is increasing its interest in work-related road traffic collisions. Investigations help avoid more serious incidents, but the police won't help - unless...

[Listen >](#)



#### Road Driving for a Safer Railway - Driving and riding safety for work

Driving and riding for work fall under the HSAW Act 1974. New HSE guidance covers responsibilities for employers and employees - whatever the vehicle.

[Listen >](#)



#### Collision and Incident Investigation: Stress Testing your brand protection!

Andrew Drewery - Consultant Road Safety & Collision Investigator discusses stress testing your brand protection when the police investigate a road traffic collision at the scene

[Watch >](#)

### RTC Investigation Presentations



#### Robust Investigation of Road Traffic Collisions to Prevent Recurrence

Gill Mihner - AVIVA Risk Management Solutions discusses the importance of an effective road traffic collision investigation.

[Watch >](#)



#### Driving and riding safety for work

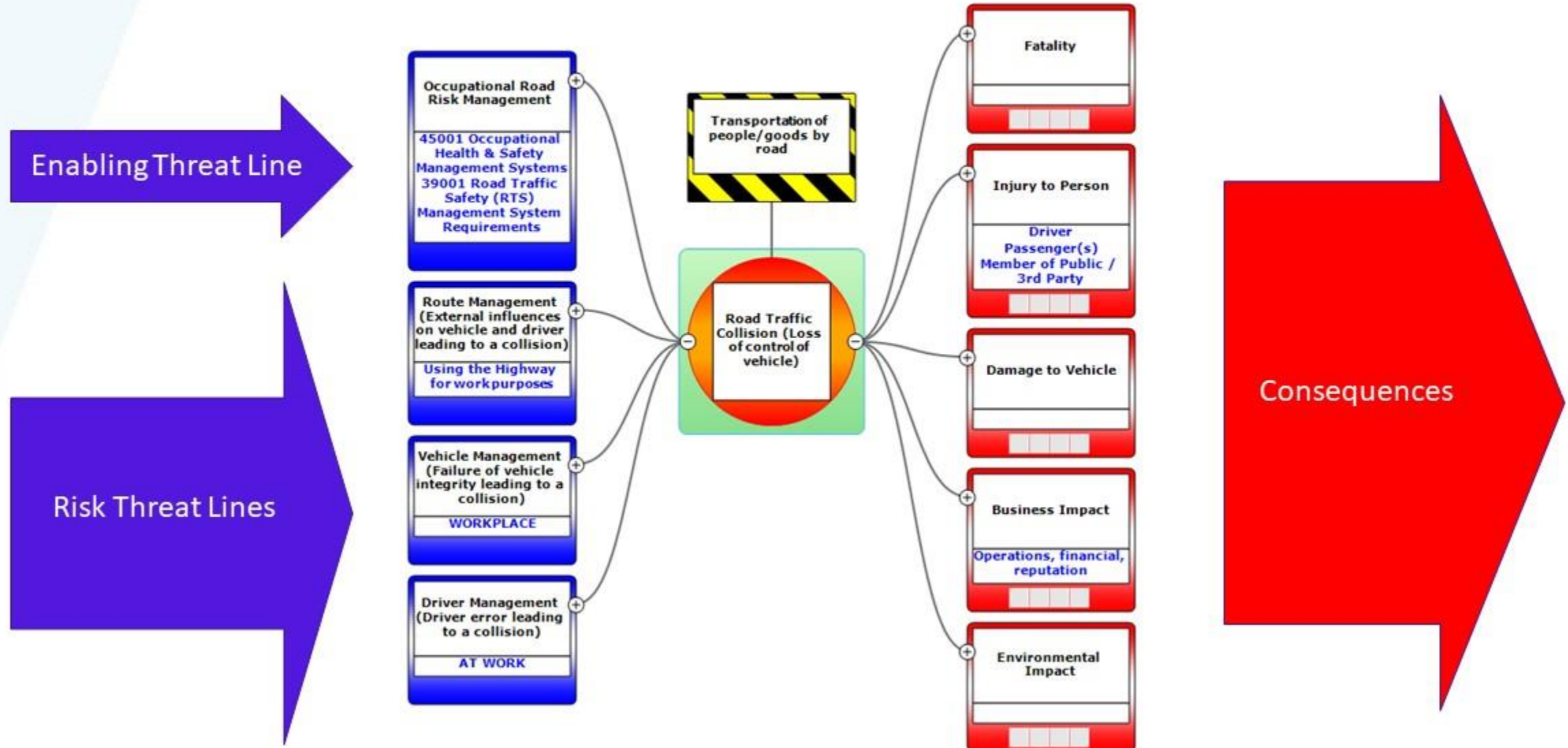
Nicola Jaynes - Health & Safety Executive gives an overview of driving and riding safety for work and explains why RTC investigations are important.

[Watch >](#)

<https://www.rssb.co.uk/safety-and-health/guidance-and-good-practice/managing-occupational-road-risk/road-traffic-collision-investigation-toolkit>

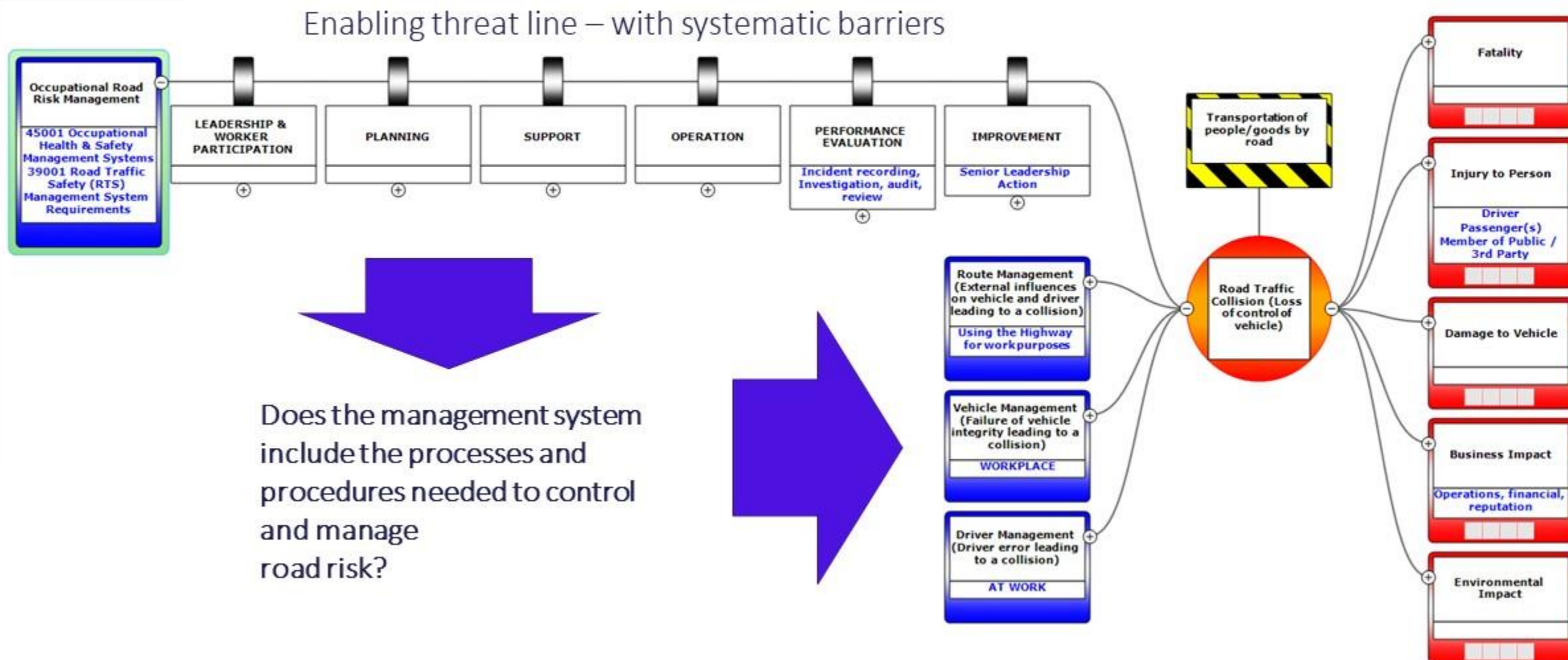
Enhancing road safety data:  
Strategies and plans for capturing work-related road collisions

## Using a Road Risk BowTie to support the RTC investigation process



# Enhancing road safety data: Strategies and plans for capturing work-related road collisions

## Road Risk BowTie



Enhancing road safety data:  
Strategies and plans for capturing work-related road collisions

# Road Risk BowTie



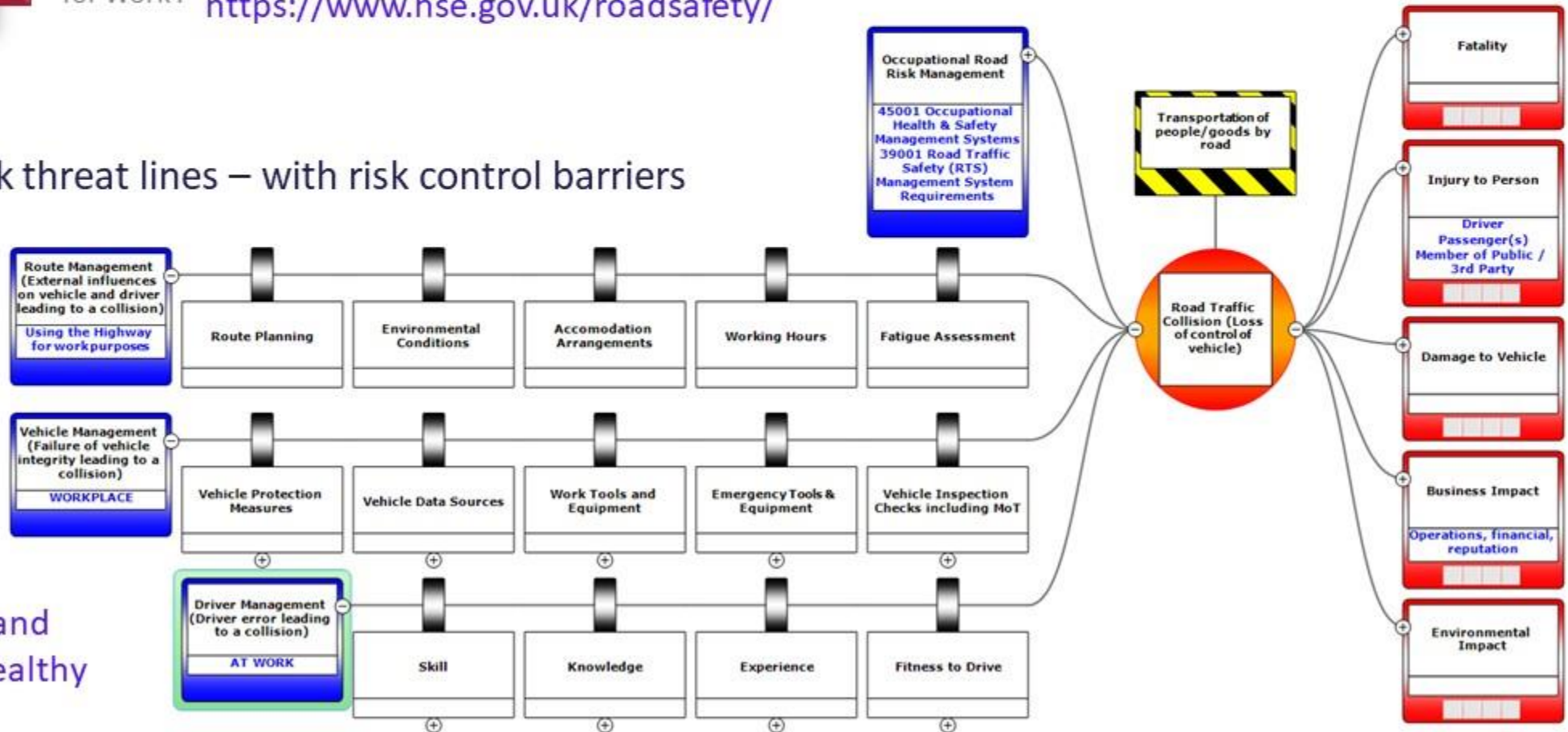
Guidance on how to eliminate hazards and minimize occupational road risk using effective preventive and protective control measure is set out in HSE guidance Driving and Riding safely for Work. <https://www.hse.gov.uk/roadsafety/>

Risk threat lines – with risk control barriers

Plan and manage journeys

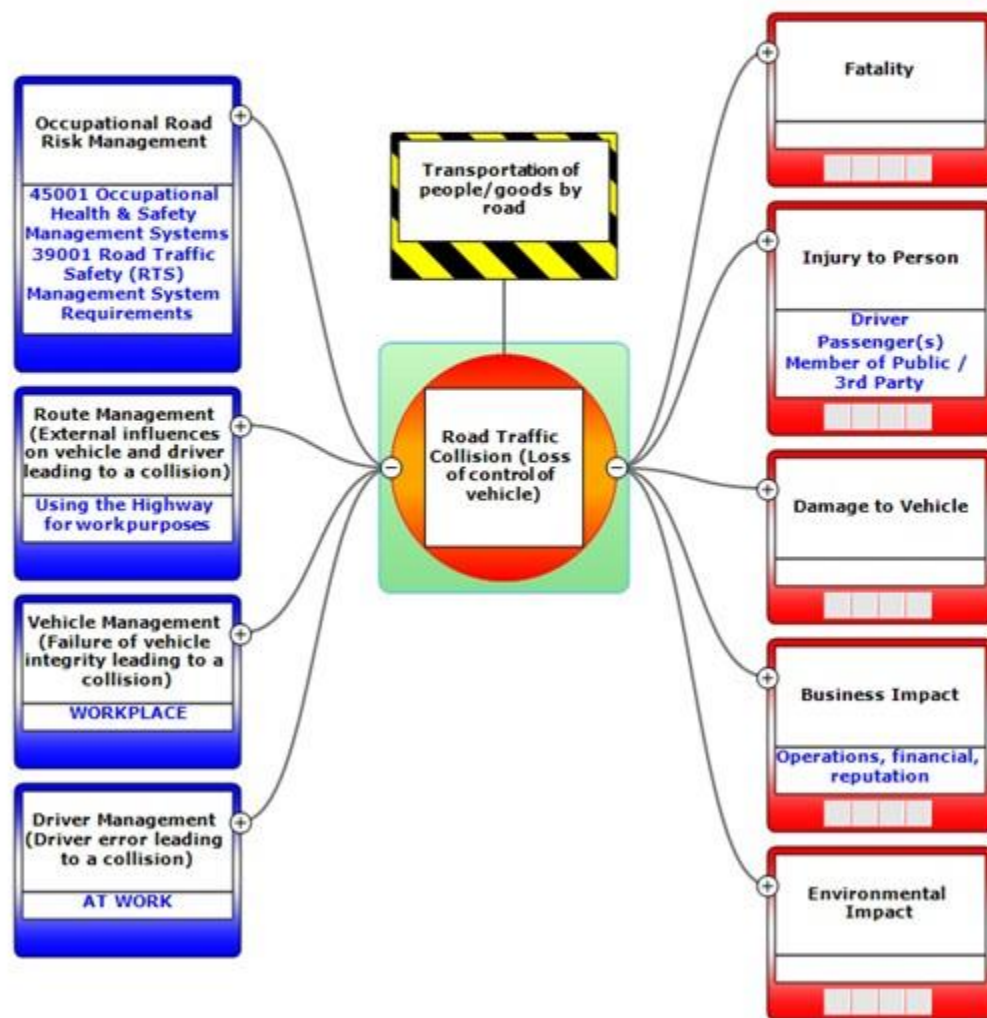
Make sure vehicles used to drive or ride for work are safe

Make sure drivers and riders are safe & healthy





## Road Risk BowTie



To help determine the appropriate proportionality of the investigation, evaluate the consequential impacts of the event.

Enhancing road safety data:  
Strategies and plans for capturing work-related road collisions

## RTC Investigation Reports

### How to measure the effectiveness of your processes



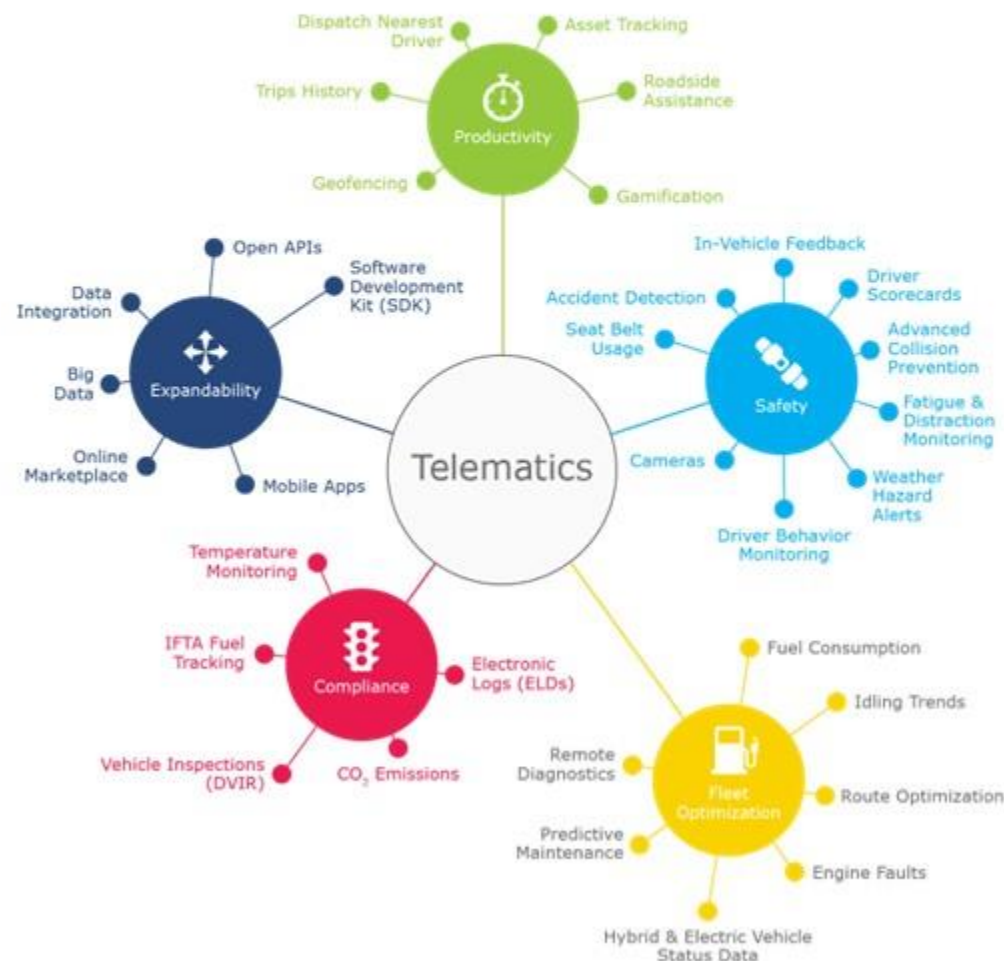
### 3. Using activity data to monitor and change behaviours

#### The move towards activity data

As an industry we are beginning to understand that the only way we will create the necessary step change needed to improve occupational road risk management is through the effective change in behaviours

- Not just Drivers
- Managers and senior leaders alike

Vehicle telematic data is not the holy grail but it has opened a door into providing new methods of monitoring and measuring behaviours



# Enhancing road safety data: Strategies and plans for capturing work-related road collisions

## 3. Using activity data to monitor and change behaviours

Changing an organisation's behaviour involves implementing strategies that prioritize road safety. Here are some key steps:

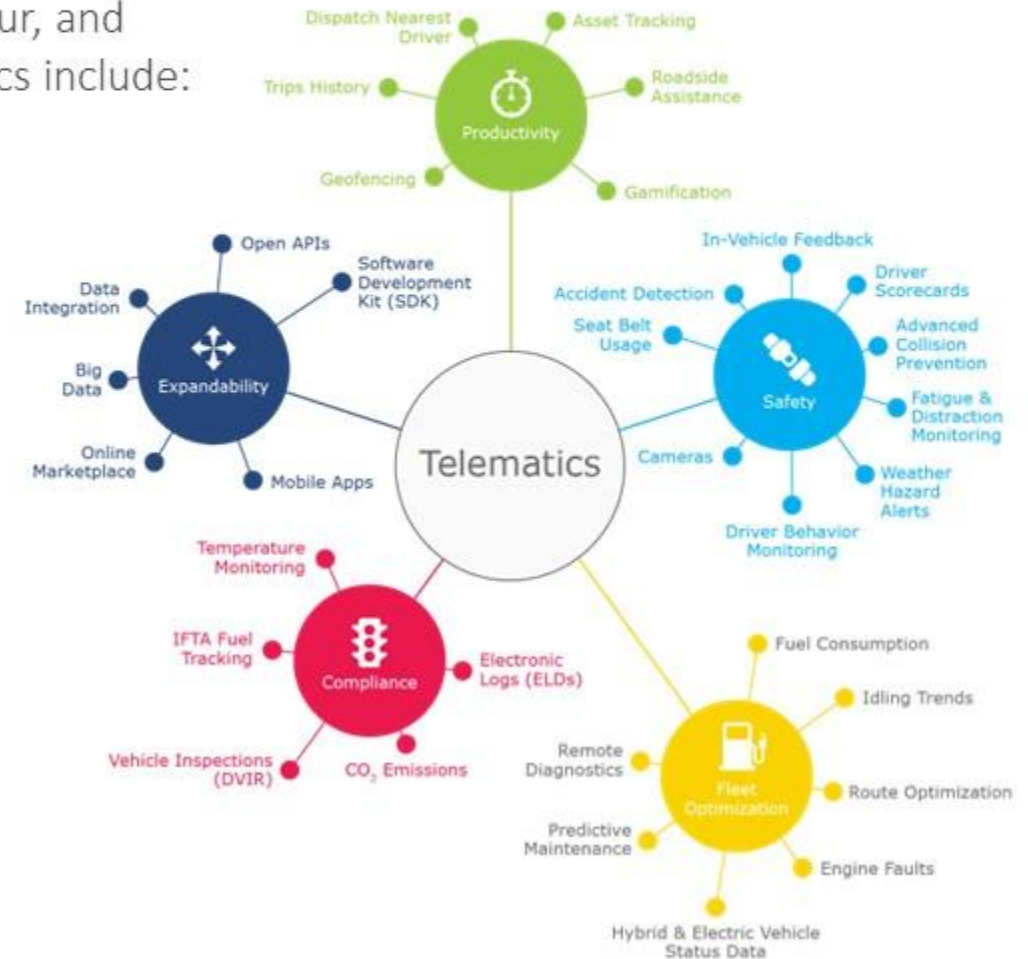
1. Leadership Commitment
2. Policy Development
3. Risk Assessment
4. Training and Education
5. Monitoring and Measurement
6. Behavioural Coaching
7. Incentives and Recognition
8. Integration with Business Processes
9. Collaboration and Engagement
10. Continuous Improvement



### 3. Using activity data to monitor and change behaviours

Vehicle telematics systems provide a wide range of data points that offer insights into various aspects of vehicle performance, driver behaviour, and fleet operations. Some key data points provided by vehicle telematics include:

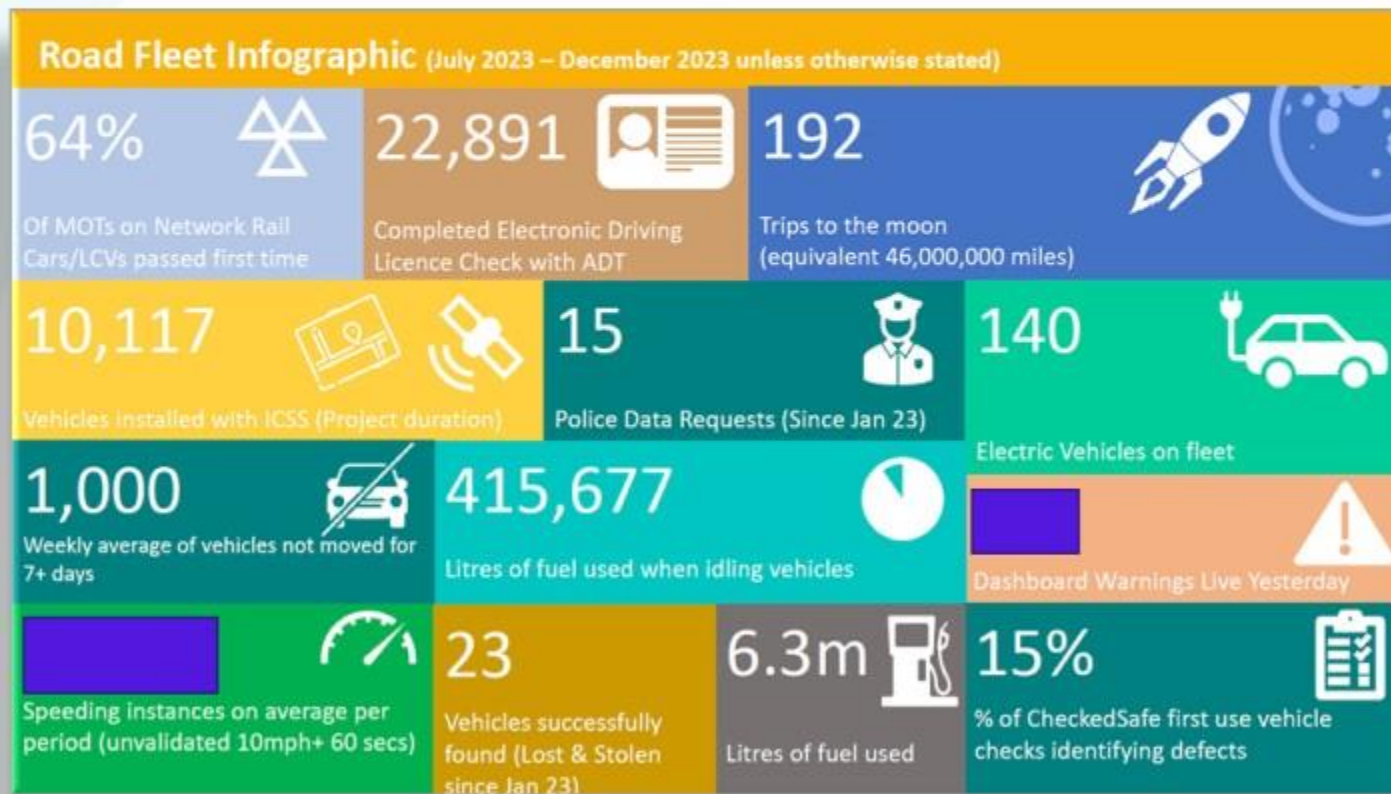
1. Vehicle Location
2. Driving Behaviour
3. Fuel Consumption
4. Vehicle Health
5. Idle Time
6. Route History
7. Geofencing
8. Driver Identification
9. Vehicle Usage
10. Safety Events
11. Environmental Impact
12. Maintenance Records



Enhancing road safety data:  
Strategies and plans for capturing work-related road collisions

### 3. Using activity data to monitor and change behaviours

#### Example of road risk scorecard



Our aim is to produce road risk performance reports that capture all road vehicles in use supporting the rail industry

A survey conducted last year identified multiple different types of vehicle telematic systems (10+) in use across the industry

Our challenge is to find away to normalize, collect and then process this data from all of them

## Key learnings from the presentation

- Reporting of RTC events are vital to fully understanding the risk to your workforce and public
- Collaboration is the key to sharing good practice and learnings together
- Effective RTC Investigations provide the basis of effective continuous improvement
- Using activity data is the future to unlocking the opportunities for changing attitudes and behaviours

**THE END**



# HANNAH CORDTS VON LOWIS OF MENAR

Safety Strategy Manager – TfL

# Meal & Grocery Delivery Company Motorcycle Road Safety Charter

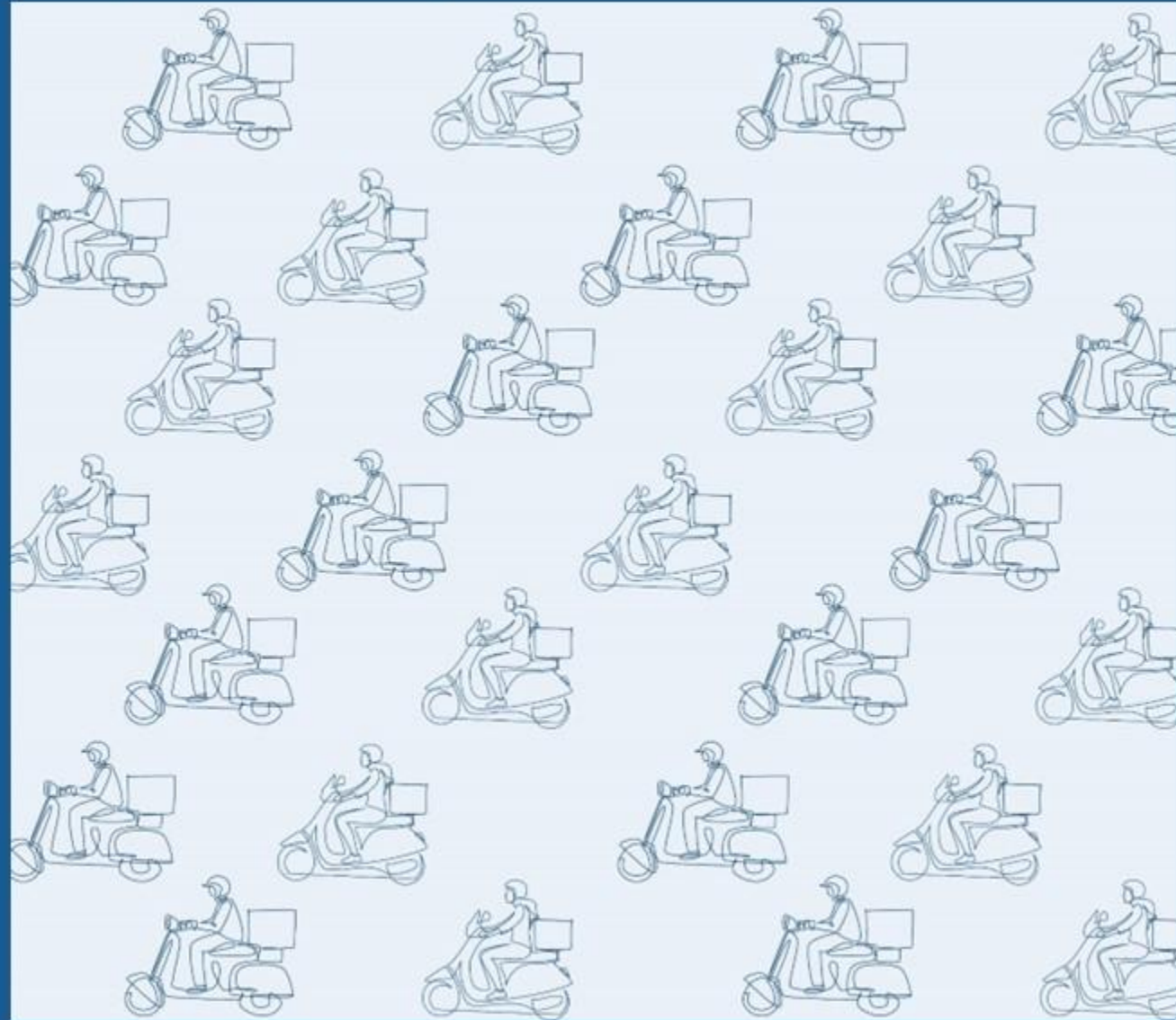
An overview of our work to date with the meal and grocery delivery industry: context, purpose and journey

Hannah CordtsVonLowisOfMenar  
Safety Strategy Manager, Road Risk



**TRANSPORT  
FOR LONDON**

SHE INSIGHTS & DIRECTION



## Purpose

Outline the purpose and work we have led to date with the meal and grocery delivery industry: why it's important, how we approached it and the outputs.

## Contents

1. Policy Context: Vision Zero
2. Why focus on motorcycles and the meal and grocery delivery industry
3. Road safety in the meal and grocery delivery industry
4. Our engagement journey
5. The Meal and Grocery Delivery Company Motorcycle Road Safety Charter
6. Next steps
7. Discussion & questions
8. Appendix: Compulsory Basic Training

# 1). Vision Zero is an internationally acclaimed approach

London is leading the UK and world cities with an ambitious 2041 Vision Zero (Roads) target. We will achieve it working with Boroughs and stakeholders



## Vision Zero is hugely ambitious and morally imperative

**Accommodate human error**

People make mistakes, so our transport system needs to **accommodate human error and unpredictability**

**Forgiving system**

There are physical limits to the kinetic energy that the human body can tolerate. Our transport system needs to be forgiving, so that the **forces involved in a collision** are not sufficient to cause fatal or serious injury

**Collective responsibility**

All those with a role in designing, building, operating, managing, enforcing and using our streets have a **responsibility to reduce danger**

## The five pillars of the Safe System approach



**Safe Speeds**

**Safe Streets**

**Safe Vehicles**

**Safe Behaviours**

**Post-collision learning and criminal justice**

By focusing on the five pillars, we can achieve Vision Zero

## 2). Why focus on motorcycles and the meal and grocery delivery industry

**We cannot achieve Vision Zero alone.** In order to help reduce the number of people being killed and seriously injured in motorcycle collisions, we must work with the meal and grocery delivery industry.

### Motorcycles

Motorcycles are the **highest risk mode of transport on the road**. They account for **2.6% of the distance travelled by vehicles** in London (2017- 2021), but represented c. 27% of those killed or serious injured in collisions.

People riding motorcycles are c. **80 times** more likely to get killed or seriously injured than someone in a car.

Motorcycles are also **disproportionally involved in collisions that kill or seriously injure another road user (6.9%)**.

We need to protect vulnerable road users



### Low powered motorcycles

Low-powered motorbikes, that can be ridden on a Compulsory Basic Train (CBT) licence, account for approx. 60% of all motorcycle-related KSIs.

These **low-powered bikes, with low training requirements are frequently used by couriers in the meal and grocery delivery industry**. We estimate there are up to 40,000 motorcycle couriers operating in London.



### Delivery sector

The meal and grocery delivery industry has grown exponentially over the course of the pandemic, and is predicted to grow more.



### 3). Managing road safety in the meal & grocery delivery industry

Meal & Grocery Delivery is a relatively new, fast growing and fiercely competitive industry

#### Two main business models

The business models determines how road safety is managed in the industry.  
*(Some companies operate a hybrid of the two models)*

##### Platform companies

Self-employed couriers

No company fleet

Less control over self-employed workers & less responsibility for their health & safety; **onus on the worker to manage**

Sensitivities after **court case** – fear ‘mandating’ can lead to having business model over-turned

##### Employing companies

Employed couriers

Company fleet

**Direct control** over employees & their fleet.

Clear cut legal responsibilities under Health & Safety Law for employees

#### Health & Safety

- Legal status for working & riding
- Competency & training
- Behaviour/Code of Conduct
- Schedules & shifts
- Reporting
- Vehicle maintenance
- PPE & Equipment
- Distraction
- Route planning



## 4). Our engagement Journey

We are working collaboratively with industry to improve Road Safety outcomes

The Meal & Grocery Delivery is a growing industry and as the number of motorcycle couriers increases, so must our efforts to ensure their safety and the safety of those they share the road with.



# 5). Meal & Grocery Delivery Motorcycle Road Safety Charter

Voluntary Commitment to Road Safety



## Aims

- Raising awareness
- Subscription to a common minimum standard to keep riders safe.
- Improve road safety culture & leadership in the industry
- Clarify cooperate responsibility in the industry re business model

## Platform and Employing companies

In order to make the charter applicable to everyone in the industry, the charter makes reference to both employed and self-employed couriers, with slightly different expectations reflecting different legal responsibilities.



Signatories to date



## 10 Road Safety Principles

Based on Safe Systems Approach  
Aligned with HSE Guidance

1. Vision Zero
2. Legal Requirements for Riding and Working in the UK
3. Riding safely
4. Green modes of transport
5. Personal Protective Equipment (PPE)
6. Collision reporting
7. Dangerous riding
8. Vehicle Standards
9. Apps and work equipment
10. Delivery schedules



## 6). Next Steps

Next Steps	
<b>Regular forum</b>	Lessons Learnt, Share Best Practice, Share Info & Guidance & Standards
<b>Encourage others</b>	Encourage other delivery companies to sign up to the charter
<b>Supply Chain</b>	Explore influencing through the supply chain
<b>Data</b>	Explore ways to improve data for riding/driving for work
<b>Other modes</b>	Explore expansion of remit to other modes, e.g. E-Bikes
<b>Other industries</b>	Explore expansion of remit to other industries, e.g. parcel delivery



## 7). Discussion and questions



**VISION  
ZERO**  
Travel Safe. Save Lives

#VisionZeroLDN



SHE INSIGHTS & DIRECTION

# 8. Appendix: Compulsory Basic Training

We have worked with the Motorcycle Industry Association, and the National Motorcyclists Council, other transport authorities and road safety charities to call on the Government to consider making changes to Compulsory Basic Training (CBT) for motorcycles to reduce danger on roads in a **letter to the Secretary of State for Transport**.

## Vision Zero Action

Work with the DfT to identify improvements to the CBT course as set out in the 'Improving Moped and Motorcycle training' consultation of 2016/17.

### Current CBT

- 1-day training course, no pass or fail, no theory
- Riders as young as 17 allowed on motorcycles under 125cc, up to 80mph, with L-Plate
- Valid for two years, **must progress to full licence**

### Issue

Riders on low-powered motorcycles (up to 125cc) have high rates of serious injuries and fatalities in London collisions.

**1/3**

of P2W fatalities riding **on learner licences**

### DfT proposed changes

- In 2016/17 the DfT ran a consultation, and proposed improvements to CBT
- All Industry stakeholders agree (rare in this sector)
- **Changes proposed have not been implemented**
- Working with stakeholders across the industry we're pushing for implementation

## Our public letter

Letter sent to the Secretary of State

18 July 2023



# KIEREN TICKNER

Occupational Road Risk & Musculoskeletal Risk Safety Manager -  
Openreach



Ensuring compliance and safety across such a large and diverse fleet

# Openreach

The numbers:

- 🚚 Circa **30k** vehicles
- 🚚 Over **34k** drivers
- 🚚 **260 Million** Miles travelled per year (that's 10,441 laps of the earth)
- 🚚 Over 15,000 New Recruit in vehicle training sessions delivered



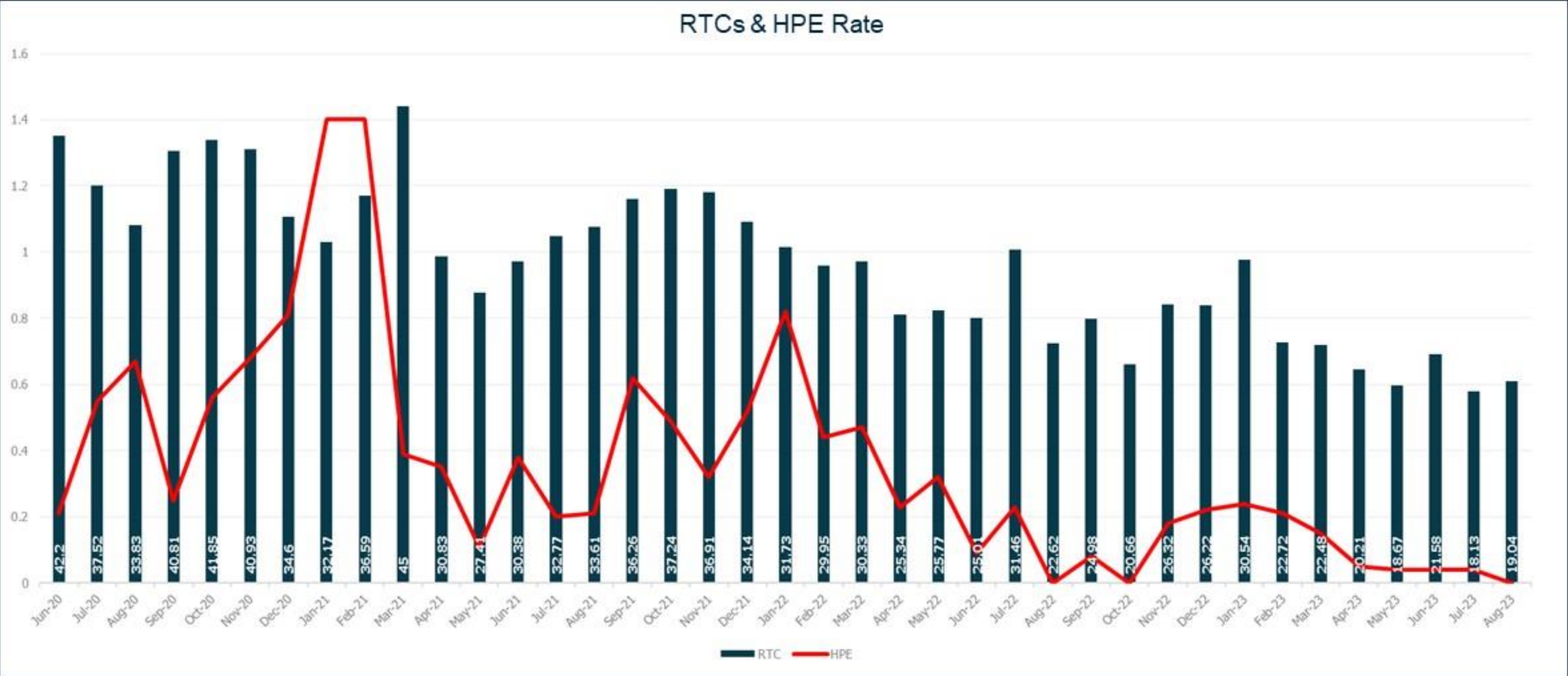
# Openreach Road Risk Safe System





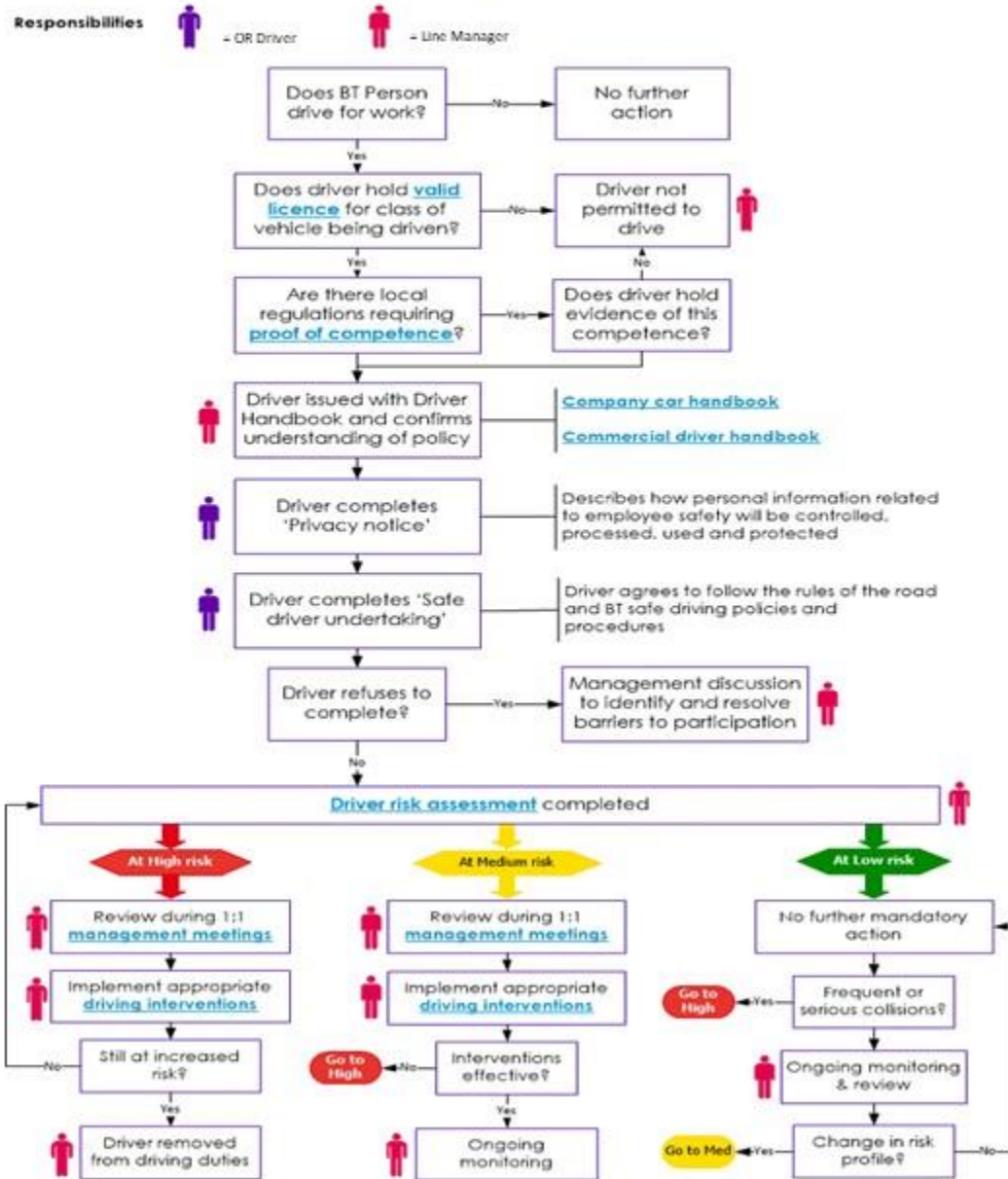


# Openreach Data



\* Rates calculated per million miles

## Openreach Road Risk Safety Framework



We are committed to preventing potential harm to our people, their families and the wider community through effective road risk management.

### What needs to happen?

The flowchart outlines the steps that need to be taken if you drive on Openreach business. Promote healthy and safe behaviours

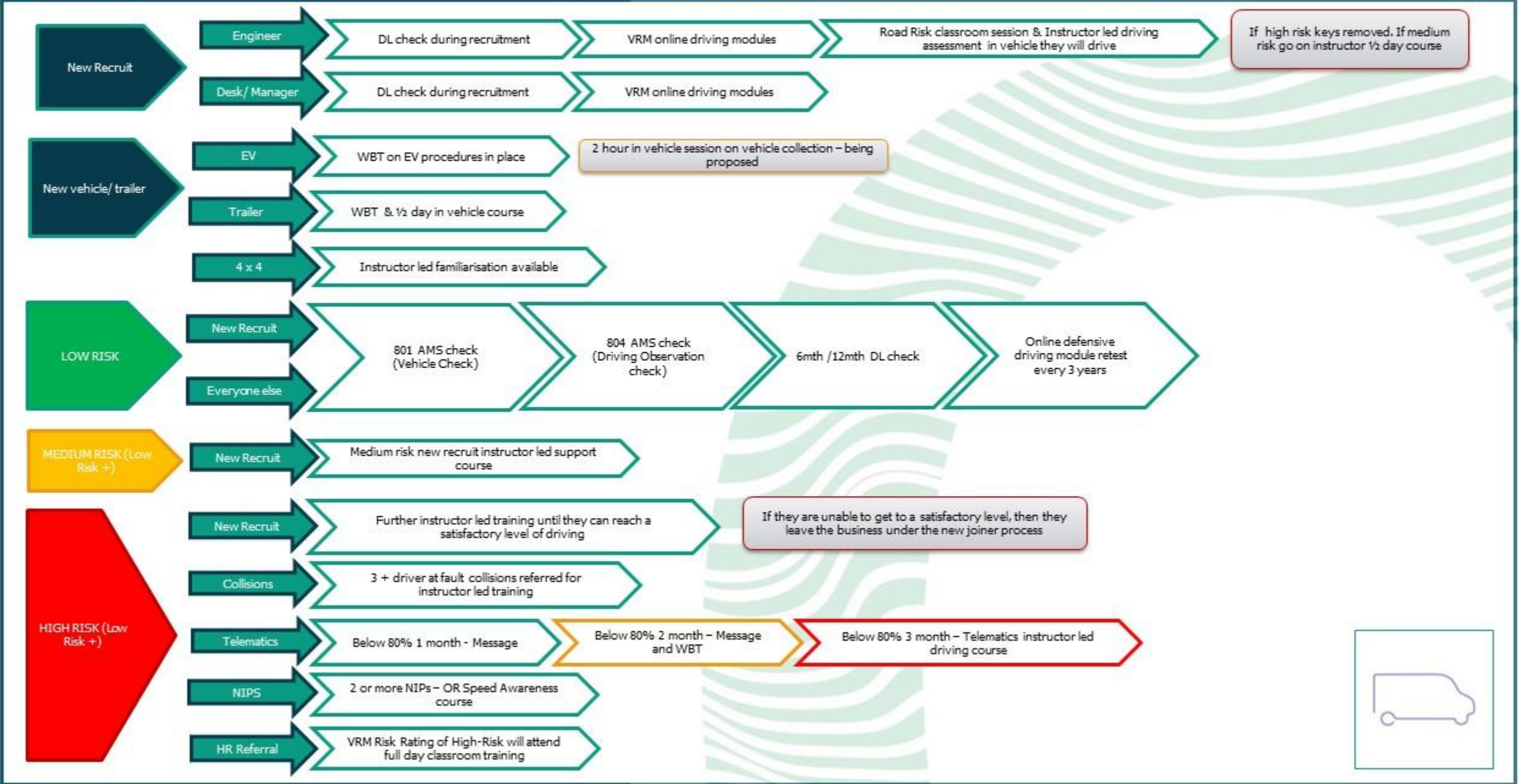
### Make sure our people:

- drive according to the rules of the road
- don't drive if medically unfit for any reason
- ensure to the best of their ability that any vehicle driven is roadworthy, taxed and within the conditions of its insurance

### Encourage our people to:

- always drive with courtesy and consideration
- adopt safe and more fuel-efficient travel practices
- Plan long journeys to allow for sufficient breaks – you should not drive for more than two hours, even in good conditions, without taking a 15-minute break

# Openreach Road Risk Interventions



## Openreach Road Risk Driver Support Available

As the 2<sup>nd</sup> largest fleet in the UK, Openreach provides industry leading and award-winning driver training/support for our drivers to ensure we do everything possible to reduce risk and harm to our drivers and other road users ensuring everybody goes home safe every day.



### New Recruits

Every new recruit engineer receives a full day of driver training made up of 2 half day sessions ORXDRVT01 which is Driving Behaviours Theory & ORDRVP001 Practical Session/Assessment both delivered by Business Driver



### New Recruits Extra

Any new recruit that passes their practical assessment that had 3 or more areas of improvement is given extra driving support delivered locally by Business Driver in their patch which is funded by Group Insurance & Central Safety



### 3 + Collisions

Any driver that records 3 collisions within a rolling 6 months will receive half day in vehicle training delivered locally by Business Driver ORDRV012A which is funded by Group Insurance



### Telematics

Any driver that records 3 months below the Openreach driver safety score threshold of 80 within a rolling 6 months will receive half day in vehicle training delivered locally by Business Driver ORDRV012 which is funded by the driver's line of business



### Ergonomic & Health Assessment

Sometimes driving can be a pain and we may need to help with your driving position or is it the right vehicle for you. Business Driver will come out spend time looking at position and MSD risk and provide options to help reduce harm. We would also recommend physio support and occupational health involvement



### Openreach Internal Speed Awareness

Any driver that records 2 NIPs (Notice of Intended Prosecution) within a rolling 12 months will attend a virtual half day session run internally by the OR Road Risk team



### Openreach High Risk Driver Trial

Full Day course using VR technology to enhance driver hazard perception and look at driver behaviour for any drivers that are scored high risk on the Virtual Risk Manager System



### Openreach Trailer Training

Any driver that has never towed for Openreach will need to attend the new trailer towing course ORLDR0561 which is funded by the driver's line of business and delivered by Business Driver



### Openreach 4x4 Training

Any driver that requires an Openreach 4x4 needs to attend external training ORDRV003 which is funded by the driver's line of business



### Post Collision Support Training

Being involved in an RTC can be very traumatic so we provide in vehicle support to help build confidence behind the wheel delivered by Business Driver and cognitive therapy delivered by EAP



**everyone home**  
safe & well

openreach

# *Reflections on session learning*

# PANEL

*Insights to actions: What's next on the road to securing improved work-related road safety?*

Chair



**JAMIE HASSALL**  
Executive Director,  
PACTS



**STEVE GOODING**  
Director,  
RAC Foundation



**HEATHER WARD**  
Honorary Senior  
Research  
Associate, Centre  
for Transport  
Studies, UCL



**HANNAH  
CORDTS VON  
LOWIS OF  
MENAR**  
Safety Strategy  
Manager, TfL



**NICK FLEMING**  
Associate  
Director,  
Transport and  
Mobility, BSI



**KIEREN TICKNER**  
Occupational  
Road Risk &  
Musculoskeletal  
Risk Safety  
Manager -  
Openreach

# Questions?



**JAMIE HASSALL**

**JAMIE.HASSALL@PACTS.ORG.UK.**