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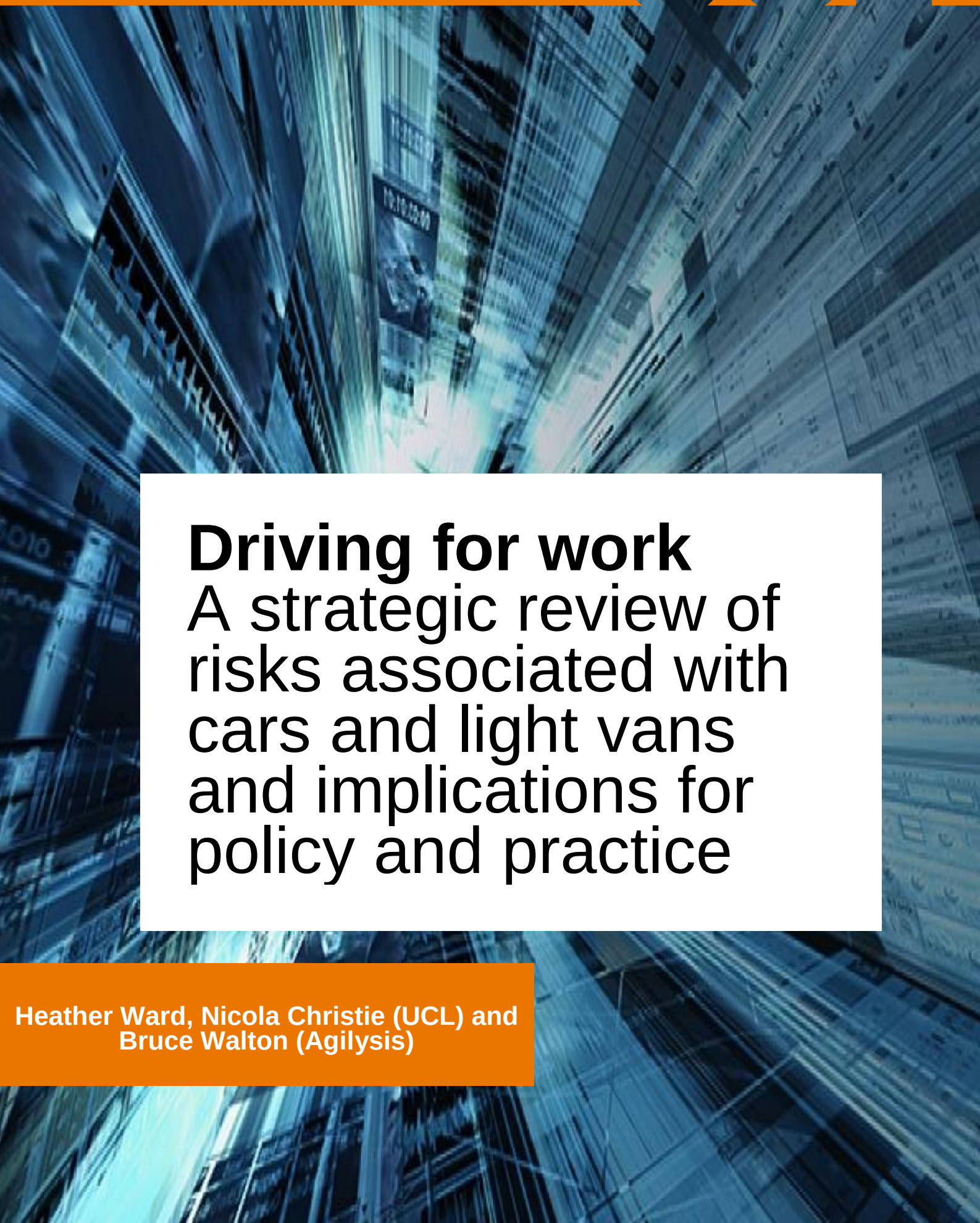

Driving for work

A strategic review of risks associated with cars and light vans and implications for policy and practice

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Highlights

- More deaths occur from road travel whilst working than at the workplace
- 88 working drivers/riders and their passengers died in 2018 but 432 other road users were killed in collisions where at least one driver was working
- 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
- The economy is changing, and associated with this is a rapid increase in vans and people working in the gig economy
- Vans and their drivers are not subject to the same strict regulations as HGV, bus, and coach occupational drivers.
- On average, vans drive 12,800 miles a year, which is 15.4% of all vehicle mileage. 20% of these miles is on minor urban roads
- Gaps in our knowledge partly stem from the lack of attention to work-related road safety by policymakers who are custodians of casualty data
- More needs to be done to strengthen casualty data to identify work-related collisions
- Strategic stakeholders recognise the emerging safety issues associated with the changing economy and its impact on occupational road risk and they need to work in partnership to manage this risk

1. Introduction

1.1 Aim of report

This review updates Helman et al's (2014) strategic review of the management of occupational road risk and its aim is to identify new trends, gaps, and risks for occupational drivers themselves and other road users they collide with and injure. In this report we have described the vehicles driven for work and on which types of road they travel, undertaken an analysis of casualties and interviewed key strategic stakeholders to gain their understanding of the problem and what they see as the way forward for policies and interventions for safer driving.

Understanding risk of driving for work is important and it matters to employers, employees, policy makers, industry groups, trades unions, and the public. Key stakeholders include:

- Institute of Directors
- Chambers of commerce
- Business Employers Confederation
- Department for Transport GB
- Road Safety Authority Ireland
- Driver and Vehicle Standards Agency (DVSA)
- Police
- Highways England as the network operator
- Construction Industry Federation
- Trade unions
- Institute of Couriers
- Insurers
- Road Haulage Association.
- Freight Transport Association
- Chartered Institute of Logistics and Transport Facilitators

Given the expected change in work and commuting patterns arising from Covid-19 this report provides a baseline from 2020 of occupational road risk. Over the last ten years or so there has been a change in the composition of the vehicle fleet used for work purposes. Examples of areas which have seen increased activity are in the use of:

- light vans partly influenced by the growth in internet shopping and home deliveries
- privately owned cars, vans and powered two wheeled motor vehicles (TWMVS) for work related journeys on employers business (large companies and small and medium enterprises (SMEs)). These are known as the grey fleet.
- vans, cars, TWMVS, and bicycles by the self employed
- vans, cars, TWMVS, and bicycles by those engaged in the lifestyle or gig economy (where a few hours are worked around other commitments e.g. taxis, food deliveries, internet shopping home deliveries)

This review concentrates on the van, company car and grey fleet transport sectors because apart from a focus within the Driving for Better Business programme most fleet operator engagement programmes such as those offered by Transport for London and European Transport Safety

Council (through its PRAISE work) aim primarily at those with HGVs and vans.

By contrast, the working van, car, and grey fleet drivers and riders are recently emerging as an increasing group on our roads, but little is known about them. Many drive or ride for public sector employers such as NHS, social services, or other local authority departments but many more are employed by SMEs or are self-employed.

According to the Health and Safety Executive (HSE 2014)

"Managing the risks to employees who drive at work requires more than just compliance with road traffic legislation.

The Health and Safety at Work etc Act 1974 requires employers to take appropriate steps to ensure the health and safety of their employees and others who may be affected by their activities when at work. This includes the time when they are driving or riding at work, whether this is in a company or hired vehicle, or in the employee's own vehicle.

There will always be risks associated with driving. Although these cannot be completely controlled, an employer has a responsibility to take all reasonable steps to manage these risks and do everything reasonably practicable to protect people from harm in the same way as they would in the workplace".

The UK definition of a work-related journey is where a driver uses a vehicle in the course of their work. The journey may be in any type of vehicle (or by pedal cycle) which could be corporately or privately owned or leased. "Working" refers to the driver, not the passengers so bus passengers, taxi and private hire passengers are excluded so are people being given lifts to work, school, or college. A work trip excludes commuting but includes those where the driver travels from their home to a work location which is not their normal place of work. A commuting trip is from home to and from a drivers' normal place of work.

There is a high level of risk associated with occupational driving. Helman et al's (2014) strategic review of the management of occupational road risk stated that:

"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"

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). By contrast in 2018, 63 working drivers/riders were killed together with 25 passengers. But 432 other non-working road users were killed in collisions where at least one driver was working (DfT 2019a). It is clear that working drivers/riders pose a greater risk of death to members of the public than do workers in other occupations[1]

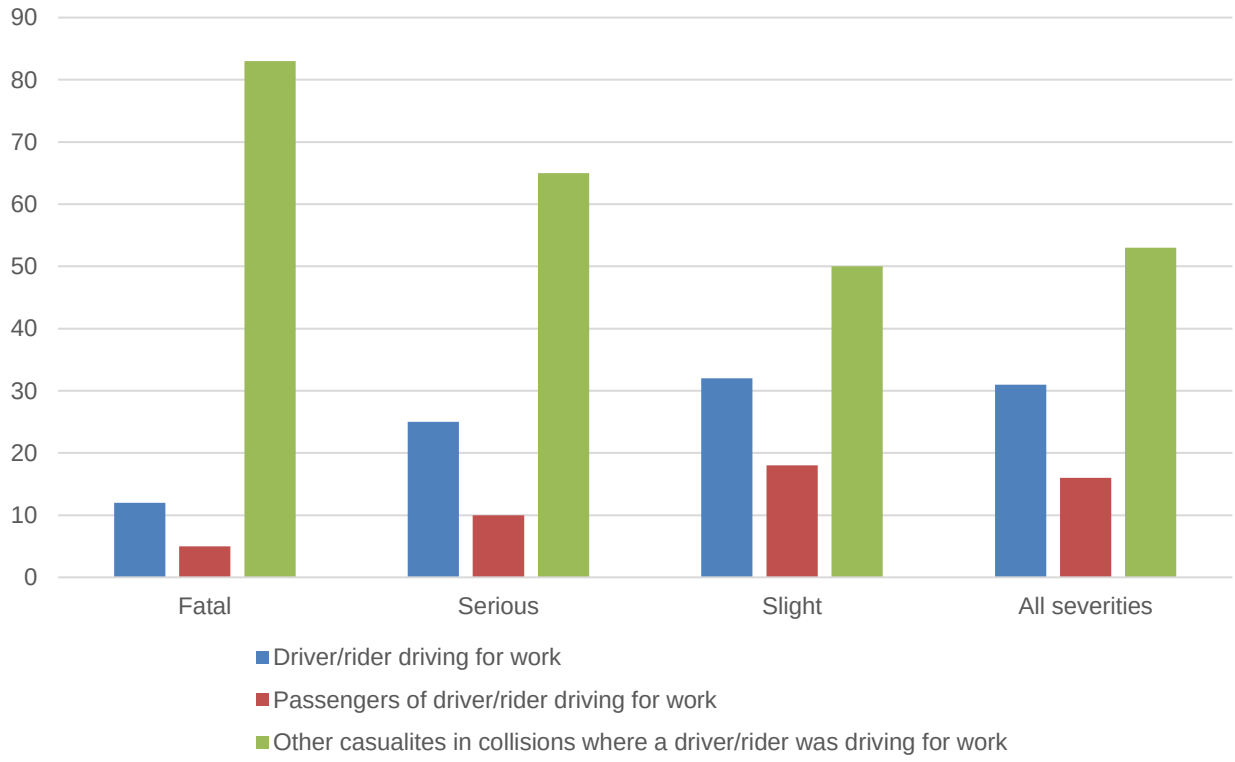
The casualty data on journey purpose is collected by the police and it is generally recognised that there is a degree of incorrect recording. This is discussed further in Section 2.2. However, the 2018 data (as published

[1] Such as agriculture 7 fatalities, construction 5 fatalities, mining 0 fatalities, transportation and storage 51 fatalities

in DfT 2019a) records a total of 520 fatalities in collisions involving a driver/rider driving for work. Of these 12 percent are working drivers, 5 percent are passengers (of a driver driving for work) and 83 percent are other road users. This is shown in Figure 1.

employers should be encouraged by the HSE to adopt and implement procedures for developing road safety management systems which would help ensure these injuries are managed and investigated in a commensurate manner to those injuries sustained in a fixed workplace.

Figure 1: Percentage of casualties by injury severity relating to drivers driving for work, their passengers and other non-working road users (source: DfT RAS30037)



There were 11,777 working drivers/riders and a further 20,276 other casualties of all severities injured in collisions where a driver/rider was recorded as driving for work.

Twenty-nine percent of all fatalities, 24 percent of the seriously injured, and 21 percent of all casualties are sustained when someone involved in an injury collision is driving for work. These percentages have changed very little over recent years.

The Transport Safety Commission (PACTS 2015) recommended that

The Department for Transport's (2019b) Road Safety Statement includes a section on driving for work:

"The need to improve road safety does not end with the driving test nor does it exclude those who drive professionally. Employers have a major potential role to play in improving safety on the roads through ensuring that their staff are properly prepared and motivated to drive and ride safely and that they are using safe vehicles. Around one in three of all injury collisions on the road involve

people 'at work' at the time which underlines to scope for improvement".

1.2 Changing context

1.2.1 Vans used for work journeys

The number and mix of vehicles registered for use on GB roads is changing and there has been a rapid increase in the number of vans. This is against a backdrop of a slowly rising number of British registered HGVs as businesses change their last mile deliveries and become more flexible in their operation. Vans and drivers are not subject to the same strict regulation of driver training, drivers' hours restrictions and roadworthiness testing as HGVs and buses/coaches.

- In 2019 there were 4.12m light goods vehicles registered in Great Britain (gross vehicle weight less than 3.5 tonnes) compared with 3.24m in 2011 (DfT 2019c).
- This represents a 27% increase over this period.
- By far the biggest user of vans is the construction industry and the Society of Motor Manufacturers and Traders report (BearingPoint 2019) estimates that about 1m of all vans (about 24%) are used by drivers in this sector which includes all the building trades and road maintenance.
- Given that we in Britain are amongst the biggest online shoppers in Europe[2] we may think that the percentage of vans involved in home deliveries is commensurably large. However, the SMMT report estimates that it accounts for about 9% of registered LCVs
- By contrast, between 2011 and 2019 the number of HGVs registered rose by about 10% (465,500 to 501,500. DfT 2019d).
- Cars registered in GB increased by 11% over the same period (28.5 m to 31.9m) (DfT 2019e).

About half the vans are registered to private individuals with men outnumbering women by 10:1. The other half are registered to companies which include fleets and the rental/leasing sector (DfT 2020c). The SMMT report suggests that with the large increase in self-employment over the last decade the vast majority of these private registrations is to SMEs and sole traders.

An estimate of annual mileage is about 12,800 miles per van and this accounts for 15.4% of all vehicle mileage but we do not have an estimate of mileage for the different business sectors such as home deliveries.

In 2011, 86% of company van journeys and 78% of privately-owned van journeys were made for work purposes (Clarke et al., 2014). It is quite common for privately registered vans to double up as the family car

[2] 87% of the UK population shopped on-line in 2019 compared with the EU(27) average of 60% (Eurostat 2020)

and even some company vans are used for private journeys.

The distribution over the road network of a billion miles driven by light vans and cars/taxis is quite similar with HGVs being different. In the context of working drivers the 20% of total van miles driven on minor urban roads is of note and represents home deliveries plumbers electricians, roofers builders

Table 1: Percentage of miles driven on different types of roads by people driving for work in different vehicles (DfT-2019f)

Road type	Light goods vehicles Percentage of total miles driven	Heavy goods vehicles Percentage of total miles driven	Cars and taxis Percentage of total miles driven
Motorways	21%	47%	20%
Rural A roads	30%	37%	30%
Minor rural roads	16%	4%	14%
Urban[3] A roads	13%	9%	15%
Minor urban roads	20%	3%	21%

[3] The definition of urban in this context is a settlement of 10,000 people or over

The large proportion of vans involved in the construction sector may go some way to explaining the reductions in van traffic during the Covid-19 lock down in March, April, May, and June 2020. DfT estimates that in the immediate pre Covid-19 phase in March van traffic was about 110% of its February 2020 levels. During the lockdown phase when all construction, accommodation, food services and many others were affected then van travel in April dropped to 35 to 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. During this period, car travel dropped off faster than van travel, was consistently below that of vans and recovered more slowly to about 90% of its pre Covid-19 levels (DfT 2020).

1.3 Cars used for work journeys

Company cars were first introduced to individuals in the 1970s as way of increasing benefits to circumvent the wage freeze. Over time since then various changes in government taxation policy have had dramatic effects on the numbers of such vehicles registered. In the 2009/10 tax year 970,000 UK tax payers paid tax for the use of a company car compared with 1.65m in 1995/96 (Le Vine et al, 2013). In 2016/17 this had fallen further to 940,000 (HMRC 2018)

In the 1990s just over 10% of cars were company registered peaking at 10.5% in 1997 (2.4 million cars out of a total registered of 23.3 million). From then until 2019 the percentage dropped steadily to 8.6% (2.7 million company registered cars out of 31.9million cars (DfT 2019e). More than 85% of these are registered to fleets which are defined as those companies having more than 25 vehicles.

A pool car is also a company registered car as it used for work and is owned and run by the company who is also the keeper since these cars are not assigned to individuals. The business might have only one pool car, or several of them. Because they are not available for use to any one employee pool cars do not attract tax as benefit in kind for the employee nor is it an employment related benefit for the employer.

The car is not for personal use and should not be kept at or near an employee's home overnight nor is it for the exclusive use of any one employee.

The term **Grey Fleet** refers to vehicles[4] that are owned by employees but used for business purposes.

One of the effects of the changes in taxation was for employees to forgo the company car in exchange for an increase in salary with which they could purchase and run their own car for use on company business and be reimbursed for these miles, but not for commuting miles, at the prevailing rate. This is common in the public sector where it is estimated that they account for 57% of the estimated 1.4 billion miles/year total public sector road mileage. The mileage allowance payments which are not liable for tax are 45 pence per mile for the first 10,000 miles and 25p per mile thereafter for cars. These rates were

[4] In the main these are cars but can include vans, TWMV and pedal cycles,

set in 2011/12 tax year and are still current in 2019 (HMRC 2019).

Reimbursement for miles driven has the perverse effect of acting as a disincentive to reduce mileage. Most drivers see the cost of a business journey in terms of fuel which accounts for about half of the pence per mile payment. The rest is seen as tax free cash income and this financially assists the driver in the running of their own car. It is relatively common for mileage to be rounded up by a mile or two per journey claim. The upshot is that companies who do not keep a close eye on the expenses ended up paying too much to run their grey fleets (Energy Saving Trust, 2015). Within this type of scheme many employers do not collect data on cars driven by employees for work purposes (BVRLA and Energy Saving Trust 2016).

We do not know how many cars there are in the grey fleet. Estimates range from 4**m** (Energy Saving Trust, 2012), to 14m (Lex Autolease 2015). This latter figure seems high as it represents almost 40% of all cars registered in 2016. According to the 2011 census there were 23,366,044 households in England and Wales which between them had access to 27,081,066 cars or vans. 5,989,770 households had no cars. It is unlikely that almost 50% of this 27m are used for work related trips in the grey fleet.[5]

We do not have an updated estimate of the numbers of cars in the grey fleet for 2019/20 but more of the larger companies and organisations have recognised the safety and economic benefits of leasing cars for employees to use or hiring for shorter trips. This may have led to a stabilisation in the number of grey fleet cars.

1.4 The 'gig' economy and lifestyle couriers

There has been a large increase in the number of gig workers who use their own cars and vans for their delivery work but these are not part of the grey fleet because the drivers are not employees and are responsible for their own operating costs. The gig economy involves people who do not get paid a salary but get paid per gig - similar to a 'piece rate' whereby service providers are linked to service users via an app. Examples of this type of employment are taxi services, food and parcel delivery (Christie and Ward 2018).

From current statistical series, it is not possible to estimate how many such workers there are and whether they drive vans or cars nor how many hours they work or miles they drive. An independent survey would be required to assist in the estimation of their travel patterns.

Privately owned cars (whether or not used for business purposes) are on average about 7 years old whilst company cars are, on average, less than 2 years old. Privately owned vans predominantly used by sole traders and SMEs are on average 8 years old compared with company fleets at two to three years.

In 2019 (DVSA 2020) more than 32 percent of cars and light vans, and 41 percent of vans 3-3.5 tonnes failed the MOT test at the first examination. The age of privately owned vehicles has implications for the speed at which new technologies and safety features

[5] In this report we have not estimated grey fleet numbers but have estimated grey fleet mileage (see Appendix 1).

permeate into privately owned grey fleet cars and vans.

1.5 Mileage of cars

The miles driven by all cars has fallen since 2002. Of the 20,500 miles per year in 2002 for company cars the business mileage was 9,000, commuting 5,700 and private 5,700. By 2016 this had reduced to 18,900 (7100 business, 6700 commuting and 5100 private). A similar picture emerges for privately owned cars which do fewer miles in each category, Overall, the annual mileage has dropped from 8400 to 7500 with business mileage halving from 800 to 400. People are commuting further 2,500 to 2600 miles per year, but private mileage has also dropped from 5100 to 4400 (DfT 2019e). Reduction in company car mileage is key factor in explaining the overall reduction in distance travelled by car for 30+ year olds living outside London.

2. Understanding risk of driving for work

We do not have estimates for the numbers of people who drive for work which means it is difficult to estimate fatality rates per 100,000 workers or working drivers. The Transport Safety Commission report (Transport Safety Commission 2015) highlighted that the risk of driving a heavy goods vehicle for work is comparable to other high-risk occupations:

"The HSE have estimated the fatality rate for drivers of heavy goods vehicles (HGVs) over 7.5 tonnes to be 4.4/100,000 HGV Drivers (based on 5 year average 2006/07–20210/11 with a 5 year average of 12 fatalities a year) which is second only to agriculture with a death rate of 10.3 per 100,000 workers over the same period"

2.1 How we compare to other countries

Currently, we do not have comparative data on work-related driving risk to compare our performance with that of other countries such as the Netherlands or Germany. In 2017, the European Transport Safety Council published How to improve the safety of goods vehicles in the EU under its Safety Performance Index Programme (PIN) This enabled good practice across Europe to be identified. One major challenge is lack of consistent definition of a road death arising from a work-related journey because some countries include commuting and very few include third parties killed or injured by a working driver or rider. Few countries link coroner's data, occupational health data and road death data so the extent of work-related road deaths is under-reported. An exception to this is in employee deaths and injuries in Germany where the road death and injury data reported by employers is complete as injury reports are an integral part of the statutory accident insurance system which covers employer's liability for compensation to employees if they are injured whilst at work.

We do not have statutory employer accident insurance in the UK. Employers in the UK report an at work accident where there is more than four days absence to RIDDOR (HSE Reporting of Injuries, Diseases and Dangerous Occurrences). However, this excludes the reporting of injuries on the road which are collected by the police and not the HSE (see Section 2.4)

2.2 Working drivers: estimating the true picture

There are few sources of information about number and type of collisions involving injury where at least one of the drivers has been driving for work at

the time. One such source is the casualty statistics reported to the police (STATS19a) and published annually by the DfT in Reported Road Casualties Great Britain.

Using STATS19 records from 2011 to 2018-19:

- **16.0** % of all collision-involved drivers were recorded under the *heading journey as part of work.* This is generally assumed to be an underestimation (a further 10.2% were recorded as commuting). This does not mean that these drivers were injured. They represent the journey purpose of drivers of vehicles involved in injury collisions.
- We have assumed that heavy good vehicles, buses, other vehicles, taxis, and a proportion of vans do not commute. This assumption alone increases the estimate to **17.7%** of all collision-involved drivers (and reduces the percentage commuting to 9.6%).
- Using data on grey fleet, business mileage of private cars and vans, and business mileage of company cars and vans this note brings forward an aggregate estimate of **21.6%** of all collision involved drivers were working drivers.
  - working car drivers are under-recorded in STATS19 by approximately 40%
- working van drivers are under-recorded by approximately 47% over the adjusted working driver figures *this includes journeys to and from places of work*
- There are no independent estimates of fleet size or business mileage for motorcycles and pedal cycles therefore the raw STATS19 records of 6.4% working pedal cycles and 9.6% working motorcycles has been taken.

2.2.1 Assumptions made in reallocating journey purpose of vehicles

Where vehicles are categorised as **HGV** (3.5t and over), **Bus**, or **Other** (including tractors and trams), the journey purpose is **always assumed to be Working** even if not so coded in STATS19. This means that these larger vehicles are assumed not to commute, not to be used on a school journey, not to be used as 'other' (i.e. personal business)

Large vehicles are unlikely to be used for personal journeys. However, 3% of known journey purposes are recorded as "commuting" or "other" and 20% are recorded as "unknown" journey purpose. **Assumption: All large vehicles were driven for work**. This is *less wrong* than assuming that 23% were not driven for work

Taxis are assumed to be working if coded as **working or commuting.** They can be used for other journeys because many taxis are used as

private cars when not working. They are assumed not to commute as they do not go to the same place of work each day. Many taxi journeys are recorded as “commuting” this refers to passengers. 3% of known purposes are recorded as “commuting”. **Assumption: all taxis recorded as “commuting” were working**. This is *less wrong* than assuming 3% were genuinely commuting. The problem is that 27% are recorded as “unknown” journey purpose. Data to estimate the true purpose of these journeys is hard to find

Where vehicles are categorised as **Van** (under 3.5t, including goods vehicles of unknown weight) the journey purpose is assumed to be **Working** if coded in STATS19 as **Working or Commuting**. Vans are similar to taxis in that many vans act as the ‘family car’ when not being used for work. In Appendix 1 we describe the method we have used to estimate this split between working and non-working van use. Within this categorisation of working vans we have assumed that they do not commute. These vans are classed as ‘working’ as they do not go to the same place of work each day (the definition of commuting) – such as trades (electricians, builders, plumbers etc).

Cars used for work provide a unique challenge. We have not estimated the size of the working car fleet but we do have estimates of mileage driven for work. By using our assumptions we estimate that the grey fleet and company cars account for 12.6% of all car mileage. Based on the assumptions listed in Appendix 1, the estimated proportion of total light goods vehicle mileage driven for business purposes in 2018 was 81.9%.

2.3 Estimates of pedestrians killed or injured by working drivers

Using the adjustments to recording of working drivers described above we have estimated the numbers of pedestrians killed or injured by working drivers (Figure 2).

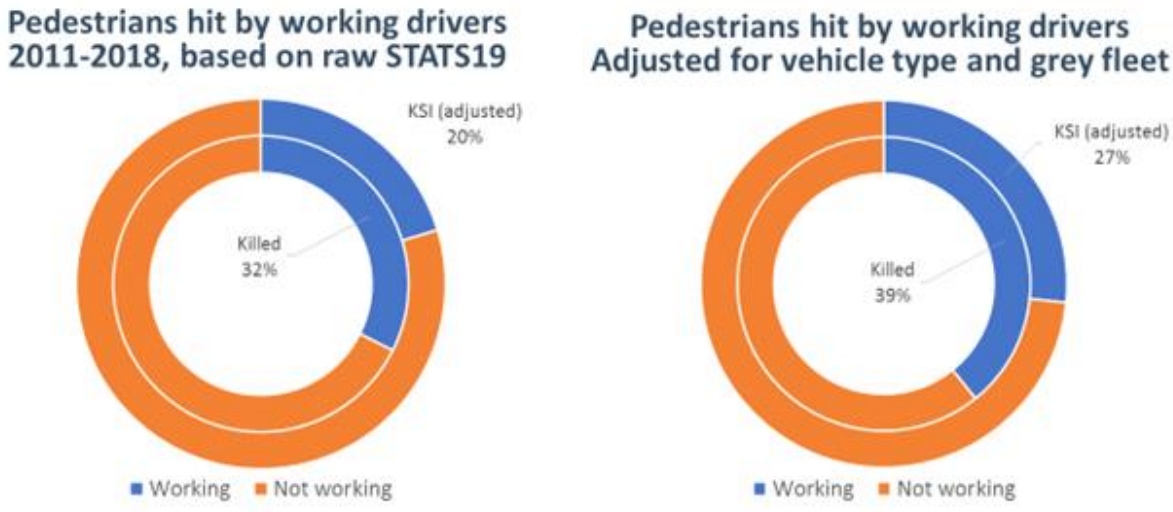


Figure 2

Based on STATS19 Journey Purpose field alone, over 8 years:

- 974 pedestrians were recorded as killed by a working driver
- 7,880 pedestrians were recorded as seriously injured
- If injury-based reporting had been in place, serious injuries would be around 9,675
- **20% of KSI pedestrians were hit by a working driver**
- 32% of killed pedestrians
- Equivalent to over 9 deaths a month

If adjustments are made based on vehicle type where large vehicles are always used for work and van and taxi drivers do not "commute":

- 1,070 pedestrians recorded as killed by a working vehicle over 8 years
- 8,808 pedestrians were recorded as seriously injured
- If injury-based reporting had been in place, serious injuries would be around 10,796
- **23% of KSI pedestrians were hit by a working driver**
- 36% of killed pedestrians

Estimate of grey fleet in STATS19 based on vehicle usage:

- Car grey fleet: nearly 5% of cars recorded as "Unknown" (52,178 vehicles in 8 years) were probably working
- Van grey fleet: about 62% of vans recorded as "Unknown" (28,219 vehicles in 8 years) were probably working
- It is not possible to identify individual "Unknown" journey purposes to change

Adding these grey fleet estimates to our vehicle type assumptions:

- *About* 1,179 pedestrians were killed by a working vehicle
- *About* 10,356 pedestrians were recorded as seriously injured
- If injury-based reporting had been in place, serious injuries would be around 12,794
- **27% of KSI pedestrians were hit by a working driver**
- 39% of killed pedestrians
- Equivalent to about two extra deaths a month

From further analysis it can be estimated that:

- In single vehicle collisions where a working van driver was involved - in 69% of the records a pedestrian was injured (over 8 years 4863 van drivers hit a pedestrian and 2194 did not) compared with 76% of collisions involving non-working van drivers (4387 hit pedestrian and 1381 did not).
- For working cars the numbers are larger but the percentages are very similar at 57.7% single vehicle working driver in collision with a pedestrian compared with

56.7% for non-working car drivers.

- The number of single vehicle working cars injuring a pedestrian is only twice that of single vehicle working vans.
- DfT figures indicate that the fatality rate for vans is about 3.4 per billion vehicle miles compared with cars at about 7.3 fatalities per billion vehicle miles but these figures do not take into account working drivers but our analysis indicated that a higher percentage of vans are working than cars.
- For comparison, the rate for HGVs is about 16 fatalities per billion vehicle miles.

2.4 Background to inclusion in STATS19 of journey purpose

In 2000 the government and the Health and Safety Commission (HSC) set up an independent Work-related Road Safety Task Group (WRRSTG) under the chairmanship of Richard Dykes to promote a national debate on the issue of employers' management of occupational road risks as part of health and safety management. Their report *Reducing at-work road traffic incidents* was published in 2001.

In its response to the Dykes report the HSE's main concern was that it did not want to be subject to any enforcement or investigative activity relating to road traffic incidents but there was recognition that something needed to be done to improve at-work road safety in co-operation with others. The position of HSE with regards to road related injuries is that these are covered by Road Traffic Acts which protect public and worker safety and therefore occupational road risk is not an area for HSE. Of the 18 Dykes recommendations which were accepted was the inclusion of journey purpose in STATS19.

2.4.1 Support for the inclusion of journey purpose in STATS19

The collection of data on *pupil on a school journey* is a long standing item and has been included in STATS19 since 1979 but as a result of the Dykes recommendation a new item called *journey purpose* was introduced in 2005 to include commuting, journey as part of work, unknown, and other. The pupil on a school journey was changed to *Taking pupil to/from school* and *Pupil riding to/from school*. Between 2005 and 2011 *unknown* and *other* were treated together.

The collection and recording of this data is challenging for police officers to record consistently. Data analysis shows that in general there is considerable room for improvement in the way in which journey purpose is collected. While this field is useful, it is not realistic to rely on it alone because under a third of collision involved vehicles have a journey purpose recorded as opposed to unknown or other. Therefore, we need to use other methods to understand the true extent of driving for work.

We are unable to say anything about under-reporting as we cannot know the journey purpose of unreported drivers of involved vehicles. We can, however, roughly estimate the journey purpose of those reported

drivers/vehicles where there has been obvious miscoding or where we can use other data sources to provide estimates of fleet size and whether a driver/vehicle is at work.

3. What strategic stakeholders told us

3.1 What we did

We interviewed eight national strategic stakeholders who have an interest in road safety or role in the management of occupational road risk. The names of the participants and organisations have been anonymised. The interviews were semi structured based on a topic guide shown in Appendix 2. All participants were asked the same questions. Framework analysis was used to understand the key themes in the data, an approach which is often used in applied policy research (Ritchie & Spencer, 1994). After all the interviews were completed the data were sorted in accordance with key issues and themes. In this case the thematic framework was informed by the areas of questioning provided by the topic guide but was also adapted to include new themes emerging from participants responses. Finally, a thematic map was developed to show the inter relationships between themes (Braun and Clarke, 2006). Verbatim quotes are provided to illustrate themes and are attributed to according to the participants as shown in Table 2.

Table 2: Code and description for participants in interview survey

Participants	Organization
A	Union
B	National government
C	Health and safety regulator (Ireland)
D	Emergency services
E	Health and safety regulator (England)
F	Charity - Injury prevention
G	Highways Operator
H	Charity road safety

3.2 What we found

3.2.1 New employment models and risk

Participants felt that the new models of employment such as for those hired in the gig economy meant that all corporate risks were passed to the individuals. It was felt that this model of employment was 'shrouded in confusion' and 'disguise' and there was a general lack of acceptance that there was a growing problem in this area. For these reasons, it was felt to

be difficult to identify and regulate this area of work because the employment status of workers was unclear, and this had implications for public safety.

3.2.2 Disregard for health and safety

One participant argued that these new models of employment were being adopted by companies that had a total disregard for the health and safety of their workers. It was felt that this created risks for these workers, especially for those using motorcycles being vulnerable to vehicle theft and gang attacks. From a union perspective, it was acknowledged that it was good for people to be employed but they felt that questions needed to be asked about whether workers were being exploited and were conditions of work fair.

It was felt that the onus should be shifted to companies to prove that these people are self-employed, not the individuals. It was felt that it would take a 'political sea change' to ensure that health and safety was not dismissed as an argument about 'red tape' and 'burdens'. The 'bogus' employment status of gig workers meant that they were a hard to reach group 'like finding a needle in a haystack' and increasingly difficult to identify due to a major growth in this type of work. One participant (Participant E- Health and safety regulator) suggested that gig workers should be regarded as employees because 'they're told where to go and how long they have to do their work, they get paid per delivery or hourly rates' arguing that there should be a change in employment laws to bring them into scope.

Participants felt that it was questionable whether gig workers had the correct insurance and were also concerned that they were paid below the minimum wage, were not trained or not given the correct safety equipment and were not working within driving hours guidelines for commercial drivers. The growth in gig services was linked to an increase in vans in city centres and a feeling of being 'surrounded by vans' with one participant describing it as a '*free-for-all' and 'posing a real problem'.* One participant had clear concerns about delivery drivers because of their unclear employment status because their 'managers' would not know if they were working for multiple companies and driving long hours as result.

3.2.3 Data on risk associated with gig workers and the grey fleet

Participants also felt that there was little data to help understand the road safety risk associated with these new ways of working. STATS19 (police reported casualty data) was not regarded as a reliable source of data about worker related collisions because under a third of collision involved vehicles have a journey purpose recorded as opposed to unknown or other. One participant argued that more should be done to address this lack of intelligence by encouraging the police to fill in journey purpose and going further to make it 'a mandatory field'(Participant G- Highways operator). However, the government department official felt that they had 'not seen that data and analysis suggesting there's something to be really concerned about' (Participant B, National Government).

It was felt that there was a genuine problem with the way data are collected about collisions and that the police should be asking more probing questions about whether the journey was work related. (Participant E- Health and safety regulator). Moreover, it was felt that '*There was no data on size of the problem and*

that 'nobody really understands what's happening'.

Whilst many of the participants said that vans were a real and growing safety concern it was felt more data was needed that 'drills into collisions involving vans and really build up a profile of what the issues are, you know, really, really look into it ' (Participant C, Health and Safety Regulator). One participant reported that in their free speed survey that lack of speed compliance was a greater problem among trucks and vans compared to other vehicles.

One of the participants, based in Ireland, reported that their legislation was changed so that road crashes were reportable to Health and Safety Authority. This participant also said that they were now contributing to a Eurostat indicator on the number work-related road collisions.

3.2.4 Grey fleet risks

The risks associated with the grey fleet were regarded as 'hidden'. Initiatives such as *Driving for Better Business* were raising awareness that that the grey fleet was a problem that was not being tackled by businesses even though they can reduce costs by managing the risks. It was felt there was a need to link coroner's data and crash data and develop a protocol for analysing work-related collisions.

3.2.5 Lack of awareness and acceptance of risk by national stakeholders

Because of the lack of data it was felt that key national stakeholders such as the Health and Safety Executive, Department for Transport, Confederation of British Industry were 'very muted' around the issue of road safety risk because '*people come from a more traditional model of employment so don't understand the total implications around the gig economy'.*

The lack of awareness among stakeholders was seen as a major barrier to addressing safety because *'they don't see there is a problem, because it doesn't manifest itself because they don't measure it.'* It was felt that if they started to realise that the collisions had costs associated with them in terms of financial costs to the business as well as injury and deaths they may be more motivated to act.

3.2.6 Licensing

Participants felt that there should be more scrutiny of the licences of people who drive for work in the gig or grey fleet to ensure they are valid and check whether they were any endorsements. One participant said questions should be asked as whether people are covered to carry parcels or other goods or people. Participants were asked what role licensing could have but most felt it did not have a role to play because of the wide variety of types of licences needed and that it would be problematic to implement. It was noted that the type of licence required was clear when the vehicles are above 3.5 tonnes but much less clear for vans and cars driven for work though instituting a regulatory regime for all vehicles used for work, including bicycles, might be too onerous. One participant suggested that there was a need for an extra licencing module on driving for work though acknowledged there were implementation issues. It was also felt that there was a lack of awareness amongst employers about the licence requirements in order to be able to drive certain vehicles.

3.2.7 Newly qualified drivers

One participant acknowledged the particular vulnerability of newly qualified young drivers and that they needed extra training in order to deal

with the risks they face '*because 'you wouldn't give them a chainsaw next week and tell them to go and cut a tree down because he's now 18. You would train him'.*

3.2.8 A hard to reach group

People in the gig economy were considered to be a hard to reach group in terms of addressing occupational road risks because of their uncertain employment status. It was felt to be difficult for employers to understand who is working for them, what those drivers are doing, how to communicate with them or even perceive a need to communicate with them other than making sure that they know where they are delivering. It was felt that employers or owners of digital platforms that connect drivers to customers might say that they are not our employees, so they need to look after themselves. Similarly, people who drove their own cars and were reimbursed the mileage by their employer were regarded as hard to target because employees were present in many different sectors carrying out different types of work. It was felt that the challenge for managing occupational road risk for these workers was to understand how to get to them, how to engage with them, and how to change their behaviours.

3.2.9 Policy

Participants felt that the role of government and regulators should be strengthened to address the safety risks associated with occupational driving and riding. There was support for a road safety indicator in national policy to focus attention on the issue to enable measurement and monitoring and to support intervention efforts. Such metrics would demonstrate the importance of occupational road safety and encourage its management. It was felt that the HSE 'shunned' any responsibility of the management of occupational road risk and that this should change.

3.2.10 Interventions

Participants felt that there was a lack of evidence-based interventions for addressing work-related road safety but felt there was scope for tailored interventions supported by enforcement. Whilst it was felt that employers needed to implement interventions it was felt gathering evidence on good practice should be carried out by national and local government

3.2.11 Role of HSE

It was also felt that the role of the HSE should be strengthened and that occupational road risk should be fully brought under their remit.

3.2.12 Role of the employer

Participants felt that the management of occupational road risk by employers was not universally or consistently implemented with risk assessments or '*clear procedures for their staff, and instruction, information and training about their drivers or their personnel around driving for work risk'*. Engaging with employers was felt to be a key way to address occupational road risk and road safety in general so that they understand the business benefits they gain from managing occupational risks and the relationship between good management and safety. It was felt employers should be targeted and that the key lever was the commercial and corporate advantage they would get from managing risk by ensuring '*their staff and vehicles were compliant they could reduce the risks and costs of crashes [and] make the business more competitive'.*

For people driving for work as part of the grey fleet it was felt that interventions need to be directed at employers and the management of

occupational road risk strategically embedded as a health and safety priority at board level. Employers were seen as able to improve safety by making it clear to their staff that they expected them to abide by the rules with the expectation that if they break the rules this would be followed up and this would provide an opportunity for people to be educated and understand the consequences of taking risks.

One participant felt that there needed to be more focus on the grey fleet which should be seen as a 'company' asset' but it was difficult to identify *'someone to start a dialogue and raise awareness with'.* This was important because there was a '*duty of care from them and their organisation '.* Another participant argued that Directors of Public Services could take a leading role to raise awareness of insurance and staff using their private cars as grey fleet cars.

3.2.13 Responsibility

The participant from government commented that they felt it was a shared responsibility to address work related road safety and an opportunity for partnership working with the HSE and businesses *'because we care about reducing death, serious injury, on our roads, and employers have a responsibility, as an employer, to keep their employees safe'(Participant B, National Government).*

Participants felt that there was a lack of direct engagement with employer organisations, and there needed to be clearer understanding of the responsibility of companies and more investigation of the safety risks associated with this model of employment. Participants mentioned that a high-level strategic approach was needed involving key stakeholders such as:

- Institute of Directors
- Chambers of commerce
- Business Employers Confederation
- Department for Transport
- Road Safety Authority of Ireland
- DVSA
- Police
- Highways England as the network operator
- Construction Industry Federation
- Trade unions
- Insurers
- Road Haulage Association.
- Freight Transport Association.
- Chartered Institute of Logistics and Transport Facilitators

3.2.13 Enforcement

The police were seen as an essential partner who could engage with businesses and thereby influence a large number of employees. Participants felt that enforcement and fear of being detected were required to ensure that individuals and employers took occupational road risk seriously.

3.2.14 Interactive courses

In terms of training on health and safety there was some concern that small businesses might struggle to manage risk suggesting that some online interactive courses should be developed.

3.2.15 National media

Most participants felt that given the diverse target audience and the varied nature of work carried out under the

umbrella of ‘driving for work’ national media did not have a role to play other than very generic messages such as those on the strategic network e.g. Take a Break to combat fatigue related collisions. There was a perceived need for a more targeted and tailored approach for particular sectors, or types of employers, or types of drivers.

3.2.16 Managed fleet

One participant had been involved in a significant review of their own organisation’s grey fleet operations. They uncovered issues around vehicle use and insurance such as people using their own vehicles for business trips and not always declaring it to HMRC, some vehicles not being fit for purpose or people’s insurance not covering them for using the car for business. This led to a move to a managed fleet rather than grey fleet which gave them much more control over the vehicles, their servicing history, insurance standards and took away any personal liability around tax. This participant also commented on the role that technology had in supporting the management of the fleet such as 360-degree dash cams, speed limiters and telematics that helped to provide management information about behaviours such as speeding.

3.3 Summary

1. The strong narrative that came through the interviews was that there was new models of employment involving driving or riding for work that meant that there were emerging issues for the management of occupational road risk, but a lack of detailed data around risk and effective interventions.

2. Participants felt that conditions of employment were a key issue and employers or people who contract services should have a clear responsibility for managing risk and they were the most important conduit for engaging workers.

3. The nature of driving for work in the gig economy or as part of the grey fleet created barriers to managing occupational road risk of these workers (described in the thematic map in Figure 3).

4. A high-level strategic partnership approach was thought to be the best way forward with a clear focus on employers at board level and as a way to resource interventions.

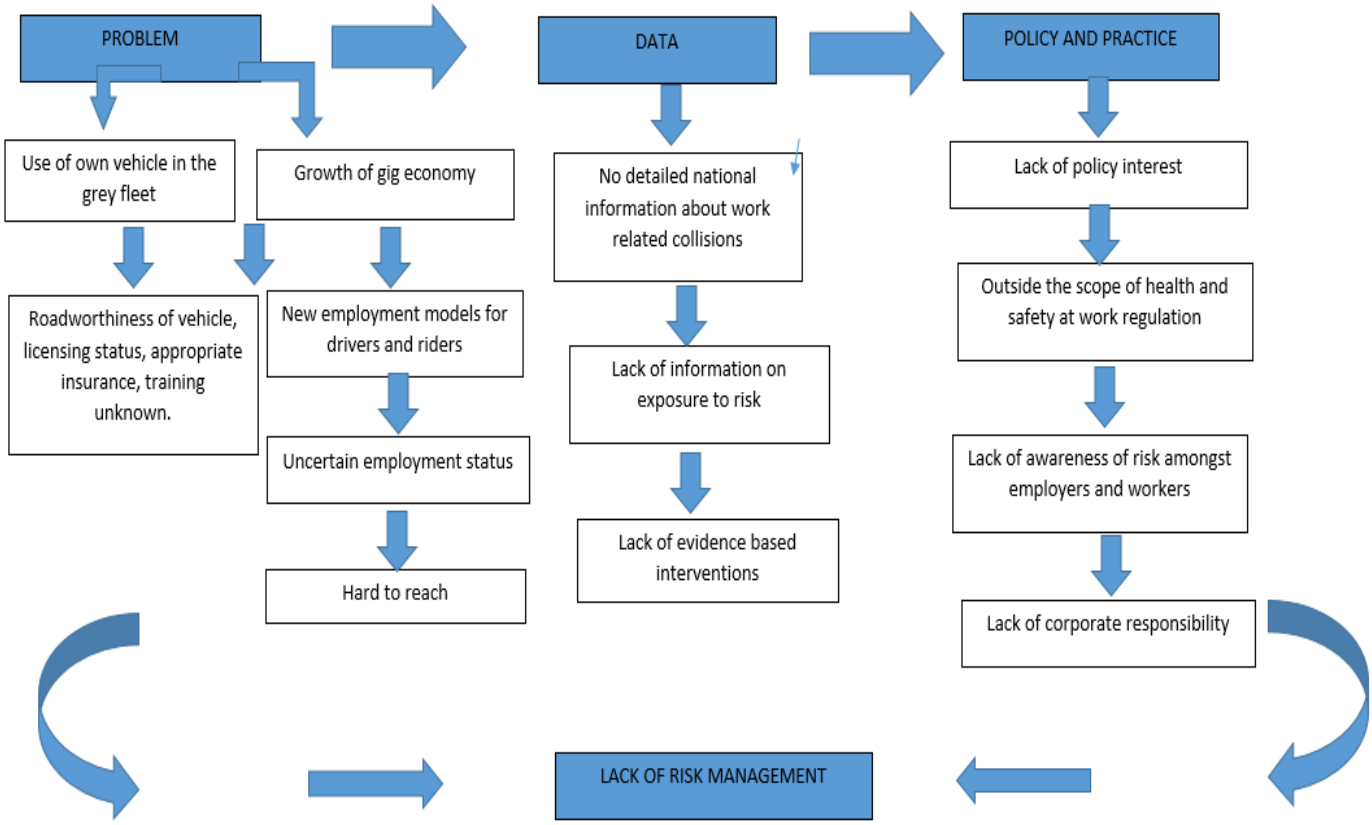
5. There was support for HSE to put occupational road risk within their scope and make injuries reportable.

6. There was support for a national indicator for work-related collisions as a way of measuring and monitoring risk.

7. It was felt that interventions should be directed at board level across all sectors of employers and this should involve holding people to account and raising awareness of the commercial advantage and corporate responsibility for managing occupational road risk.

8. For the grey fleets, a move to managed fleet was seen as desirable with technologies such as telematics to support the management of risk.

Figure 3: Thematic map showing the potential barriers to managing the occupational risk associated with diving or riding as part of the gig economy and grey fleet



4. Conclusions

Our strategic review has helped identify a number of gaps in our understanding of the nature of risk posed by people who drive for work using vans and cars.

1. In the first six months of 2020, we have seen changes in the amount of home deliveries and reductions in commuting and in driving for work. We do not know what the medium and long term is going to look like but to calculate how it differs from pre 2020 we need better data on who is working, what they are driving/riding, how much and on what types of road. We need to know who is injured and establish whether more pedestrians and cyclists are at risk of injury from more working miles being driven on local roads.
2. We know nothing about the numbers of gig workers in the transport area who, in particular, deliver food and parcels. Without this knowledge we cannot estimate their risk as working drivers nor develop interventions to improve their safety. We assume they are using their own cars, vans, and motorcycles/mopeds which we do know are generally older than company provided vehicles.
3. We do not have an accurate estimate of the number of cars in the grey fleet and how this is changing over time but we have provided estimates of the mileage of the grey fleet.
4. We do not know the current percentage of van mileage that is work related and that which is private. We do know that privately registered vans are often used for private mileage.
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. Whilst this report focusses on vans and cars, changing work patterns and incidence of home deliveries in a post Covid-19 world will be expected to affect the casualty and collision rates of all working drivers especially in regard to other road users who are not working.
7. There is a lack of detailed data around risk and effective interventions.
8. There is a lack of ownership, leadership, and management of the problem among some key stakeholders.

5. Actions required to address the gaps

Our strategic review has identified a number of gaps in the data and evidence that need to be filled. In Table 3 below, we identify the gaps and the stakeholders and action needed to help fill these gaps.

Table 3: Strategic gaps in our understanding of occupational road risk and proposed stakeholders and actions required to fill gaps.

Better Data	Responsible stakeholders/Action
Understand who is working what they are driving/riding, how much, on what types of road and who is injured	1. DfT/Highways England to commission a national survey of those who are employed and drive for work
Numbers of gig workers in the transport area who deliver food and parcels in particular	2. Contact owners of digital platforms that connect users - with support from DfT
Estimate number of cars in the grey fleet and how this is changing over time.	3. As in Action 1.
Percentage of van mileage that is work related and that which is private.	4. Previously the DfT conducted baseline surveys of van activity. We recommend that these surveys be restarted[6]
Greater completion of the journey purpose field in STATS19	5. DfT/ College of Policing– Underpin the importance of collecting journey purpose in updates about STATS19
Better Evidence	
Establish evidence on effective interventions	6. DfT/HSE - especially to inform how to best to advise owner/drivers and SMEs. This aligns with the Road Safety Statement (2019)[7] action point 39[8]
Better Leadership	
Form a strategic partnership	7. DfT should lead a strategic partnership involving HSE, Businesses, Police, Road Safety Charities, platform owners. This aligns with the Road Safety Statement (2019) action point 40[9]
Monitoring work-related road casualties	8. DfT create an outcome indicator as part of a strategic approach

[6] https://data.gov.uk/dataset/87d77547-a329-4291-a299-8ed14bfb8c55/van-activity-baseline-survey

[7] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/817695/road-safety-statement-2019.pdf

[8] Action 39 Work with commercial fleets, employers' organisations and drivers to identify and promote good practice in work related road safety, including supporting the Driving (and Riding) for Better Business

[9] Action 40 Work with the Health and Safety Executive to review work related road safety and the prevention of collisions at workplaces with a rural land focus

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Appendices

Appendix 1: Estimation of under-recording

This can be further adjusted in two ways, to account for under-recording of working car and van drivers:

- The size of the 'grey fleet', where private cars used for work purposes other than commuting
- The proportion of van mileage in working journeys mostly undertaken by SMEs and sole trader craftspeople

Grey Fleet

Based on the assumptions listed below, the estimated size of the grey fleet was 12.6% of total car mileage driven in 2016.

- 1,512 million car miles were driven by UK public sector staff, and 10,900 million car miles were driven by the UK's private sector grey fleet, based on estimates from the British Vehicle Rental & Leasing Association.
- GB car drivers represent 97.02% of all UK drivers, based on Vehicle Licensing Statistics.
30,245,896 vehicles were registered in GB excluding those between keepers (27,480,000 privately and 2,765,896 to a company), while 31,173,881 vehicles were so registered across the whole UK.
- Company cars were typically driven 7,100 miles per annum for business, based on the National Travel Survey.
- Total GB car traffic in 2016 was 251.6 billion vehicle miles, based on DfT statistics.

Table 3: GB Grey Fleet mileage 2016

		All figures given as million vehicle miles except where stated
Private car business mileage	12,042.52	*(1,512 + 10,900) * 97.02%*
Company car business mileage	19,637.86	*2,765,896 cars * 7,100 miles*
Total car business mileage	31,680.38	
Proportion of all car miles	**12.6%**	***31,680.38 out of 251,600***

Van mileage

Based on the assumptions listed below, the estimated proportion of total light goods vehicle mileage driven for business purposes in 2018 was 81.9%.

- 48.38% of light goods vehicles were registered to a company and 51.56% were privately registered, based on Vehicle Licensing Statistics.
3,940,294 light goods vehicles were privately registered excluding those between keepers, 2,034,063 privately and 1,906,231 to a company.

- 86% of company van journeys and 78% of privately-owned van journeys are made for work purposes as defined by HMRC, based on DfT research
Totalling journeys described as "Travelling to and from work", "Between Jobs" and "Collect or Deliver"

Table 4: Van mileage working journey estimate 2018

		All figures given as percentages of total mileage travelled
Privately owned LGV work mileage	40.27%	*78% of 51.56% of vehicles*
Company owned LGV work mileage	41.60%	*86% of 48.38% of vehicles*
Total LGV work mileage	**81.87%**	

Appendix 2: Topic guide

- What do you feel are the current policy issues around the safety of people who drive for work?
- Who do you think is most at risk and why?
- What data is helping you understand the size of the problem?
    - Where are the gaps?
    - What data would you need to fill the gaps?
    - (if a commissioner of research) Are you commissioning any research to fill these gaps?
- What activities are you currently undertaking to address occupational road risk for grey fleet/gig workers?
- Whose responsibility is it to raise awareness of the issues around managing occupational road risk?
- To what extent are the grey fleet and gig drivers a' hard to reach' group?
- What are your views on having an indicator in the road safety statement on driving for work?
- What evidence do you have of effective interventions for managing occupational road risk?
- Whose responsibility is it to implement interventions?
- What do you think is the role of the driver licensing system?
    - What are your views on a module on driving for work?
- What do you think is the role of public information campaigns?
    - Who should be funding these?
- What stakeholders are you consulting with to understand the risks associated with driving for work?
    - What other stakeholders do you feel need to be engaged with?
    - What challenges are there in engaging with stakeholders?
- What do you feel of the facilitators for addressing occupational road risk of the grey fleet/gig workers?
    - What are the barriers?
- Do you have anything else you would like to add?
- Who else should we be speaking to?