

# 2019 Road safety performance overview

August 2021



# Road safety performance overview

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# Road safety performance overview

**At National Highways, safety is our first imperative. When we set out our plans for the first road period, we committed to reducing the number of road users killed or seriously injured (KSI) on our roads by 40% by 2020 (from a 2005-2009 baseline). This report provides an overview of our performance to 2019, drawing on data for casualty numbers, rates and perceptions of safety.**

The strategic road network (SRN) is a vital national asset, supporting economic growth, regional development, and employment opportunities across England and the rest of the UK. It connects families, communities and businesses, enriching the lives of many citizens. Billions of miles are travelled on the SRN each year. The vast majority of these are safe and reliable journeys. We have high levels of safety on our network; but more can be achieved. We are committed to create the safest roads in the world. Our approach, following the Safe Systems principle, is set out in our road user safety plans.

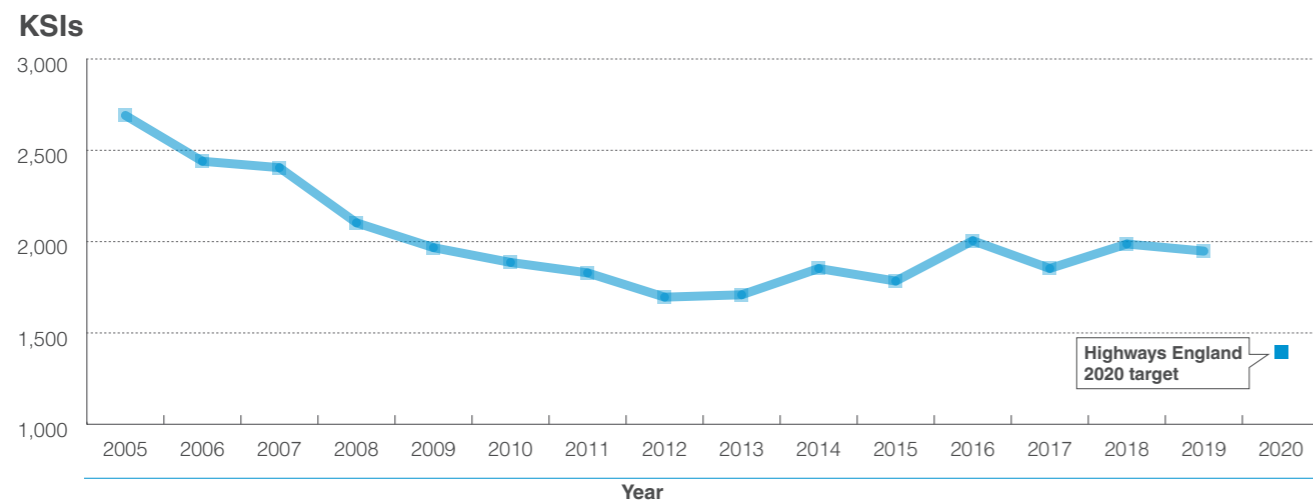
This report, which is based on the latest Stats19 data (2019), puts our safety performance into context, including how safety on our roads compares with those in other countries.

Every death or serious injury on our roads is a tragedy. Improving safety on our roads reduces physical, mental and emotional harm to individuals. A safer network also improves journey time reliability, providing economic benefits. The Department for Transport's (DfT) published 2019 value of prevention of a fatality is estimated to be £2 million while the value of prevention of a serious casualty is approximately £228 thousand.

# Casualty trends

Since 2012 the number of KSIs on the SRN has fluctuated following many years of falling numbers. This pattern has also been reflected on the rest of the road network in England.

**Figure 1 Killed or seriously injured reported road casualties on the SRN, 2005 to 2019**



Changes to the ways in which collisions are recorded by some police forces has increased the number of serious injuries identified (see box). This makes interpreting recent trends less certain.

The recording of fatalities is unaffected. The number of fatalities in 2019 was 210, two fifths lower than the 2005-2009 baseline. However, since 2012, the overall trend in fatalities has been fairly flat, ranging between 210 and 250 per year, with the highest in this period being in 2018.

Apart from the difference in reporting for the most recent years, there are wider factors affecting the number of casualties on the SRN.

People are travelling further, there are more vehicles on the road and a wider mix of vehicle types. Road casualty figures can vary from year to year because

of things like a single collision/multiple casualty incident or external factors such as the weather.

There are many factors that affect safety on our network, including vehicle safety and improvements to our roads.

We are committed to reducing all categories of casualties on the network. This will require a targeted approach with investments informed by evidence.

**Table 1 Reported road casualties and traffic on the SRN by severity for selected years**

	2005-2009 baseline	2018	2019	2019 percentage change from:	
				2018	2005-2009 baseline
Fatalities	357	250	210	-16.0%	-41.2%
Seriously injured	1,964	1,737	1,738	0.1%	-11.5%
<b>KSIs</b>	<b>2,321</b>	<b>1,987</b>	<b>1,948</b>	<b>-2.0%</b>	<b>-16.1%</b>
Slightly injured	19,382	11,393	10,399	-8.7%	-46.3%
<b>All casualties</b>	<b>21,703</b>	<b>13,380</b>	<b>12,347</b>	<b>-7.7%</b>	<b>-43.1%</b>
Traffic (billion vehicle miles)	83.4	94.7	96.9	2.3%	16.2%

## Reporting of road casualty data

CRASH is the DfT's collision and reporting and sharing system. It allows police officers to capture and upload collision data from the roadside in real time. Since it was introduced gradually in 2012, there has been an increase in recorded serious casualties in Great Britain. This system has introduced changes in how the severity of an incident is recorded and provides a more consistent basis to classify and report the level of injury severity. However, the change has meant that in some instances injuries previously classified as slight are now classified as serious. By 2019, the system was being used by 21 of the 38 police forces which cover the SRN. These represent approximately 55% of the network.

In addition, there were similar severity reporting changes for the Metropolitan Police who adopted the case overview preparation application (COPA) system. However, the number of collisions on the SRN are low compared to those on local authority or Transport for London roads.

The DfT commissioned the Office for National Statistics (ONS), to estimate adjustment factors for historic KSI data. This enables the production of consistent numbers over a time period which are independent of the reporting method being used. The work is complete and the methodology paper Estimating and adjusting for changes in the method of severity reporting for road accidents and casualty data: final report was published in July 2019. It is complemented by the *Annex: Update to severity adjustment methodology which was published in September 2019.*

The DfT is inviting users to adopt the methodology and to provide feedback on it and the way in which the statistics are being used, including any challenges faced. The model is likely to be updated annually and as experienced in 2019, there may be a resulting uplift in the adjusted serious injuries. This is at least in part due to new forces joining CRASH in 2019 and not having a full year of CRASH data. Adjustments are likely to be needed until all forces have adopted the injury based reporting system.

**210** fatalities on the SRN in 2019

fatalities on the SRN in 2019



# Across the network

Compared to the amount of traffic they carry, collisions on England’s motorways result in proportionately **lower fatal and serious injuries than other types of roads**.

In 2019, motorways carried 64% of the SRN’s traffic, and accounted for 38% of KSIs. For an in depth analysis of safety on smart motorways specifically, see the progress report<sup>1</sup>, published in April 2021. In terms of KSIs, single carriageway A-roads on the SRN have more than 6.5 times the KSI rate (79.3 KSI casualties per billion vehicle miles) of motorways (12.1). Single carriageway A-roads account for just 5.5% of traffic on the SRN but 25% of fatalities.

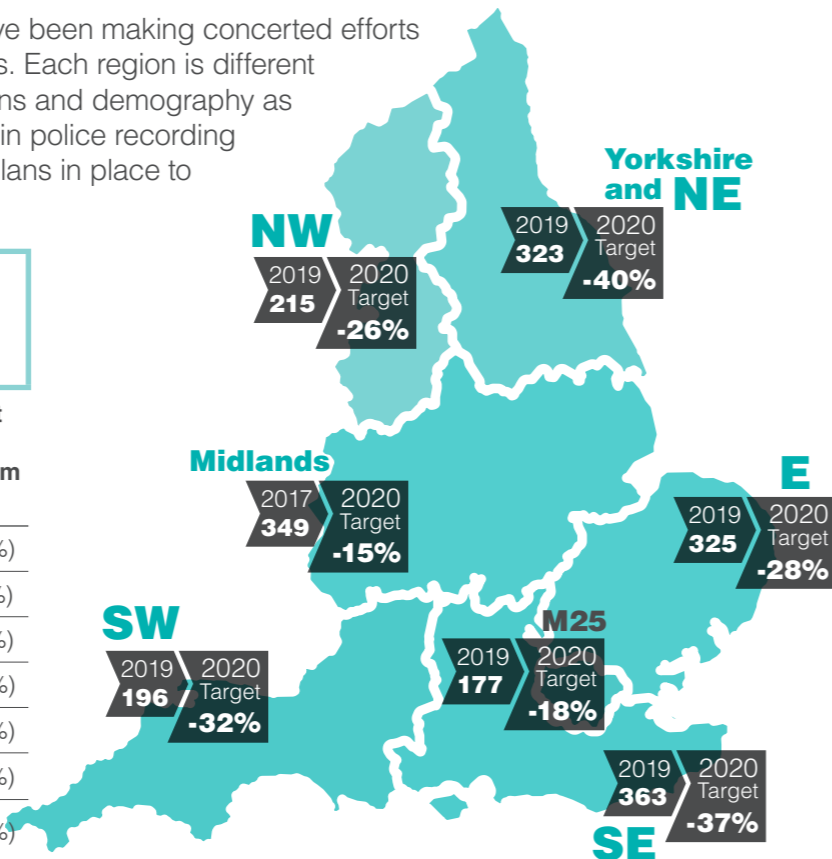
**Table 2**  
Reported road casualties and rates by road type and severity on the SRN, 2019

	Number of casualties				Rates (casualties per billion vehicle miles)		
	Fatalities	Serious injuries	KSIs	Traffic (billion vehicle miles)	Fatalities	Serious injuries	KSIs
<b>Motorways</b>	85	664	749	62.1	1.4	10.7	12.1
<b>All A-roads of which</b>	125	1,074	1,199	34.8	3.6	30.9	34.5
Dual carriageway A-roads	72	705	777	29.4	2.4	23.9	26.4
Single carriageway A-roads	53	369	422	5.3	10.0	69.3	79.3
<b>Whole SRN</b>	<b>210</b>	<b>1,738</b>	<b>1,948</b>	<b>96.9</b>	<b>2.2</b>	<b>17.9</b>	<b>20.1</b>

Across every National Highways region we have been making concerted efforts to further reduce KSIs to meet our 2020 targets. Each region is different because of the mix of road types, traffic patterns and demography as well differences in the introduction of changes in police recording practices. We have regional road user safety plans in place to support action at a regional level.

**Table 3**  
Killed or seriously injured reported road casualties on the SRN by region

Region	2019	2005-2009 baseline to 2019	To meet 2020 target from 2019
East	325	-17%	236 (-28%)
M25	177	-27%	146 (-18%)
Midlands	349	-29%	296 (-15%)
South East	363	-5%	230 (-37%)
South West	196	-12%	134 (-32%)
North West	215	-19%	159 (-26%)
Yorkshire and North East	323	0%	193 (-40%)



# Casualty groups

**KSI rates on the SRN** can also be examined by road user type, using traffic survey data to standardise for distance travelled.

Occupants of HGVs and LGVs have the lowest risk rate; 7.0 and 8.8 KSI casualties per billion vehicle miles respectively. However, this does not take into consideration people using other modes injured in collisions with goods vehicles. KSI rates for car occupants are higher at 17.7 KSI casualties per billion vehicle miles; the KSI rate for motorcyclists is higher at 881.4 KSI casualties per billion vehicle miles.

all roads in Great Britain, which is 1,813 KSI casualties per billion vehicle miles. The number of cyclists on the SRN is subject to some uncertainty and rates for pedestrians are not available. However, the 37 pedestrian fatalities reported in 2019 do represent a significant proportion of fatalities (18%).

Pedestrian casualties include casualties who were travelling in a vehicle on the network and were outside their vehicle at the time of the collision for example, on the hard shoulder.

The SRN motorcycle rate is still considerably lower (881.4) than the reported national average for motorcyclists (including passengers) on



**Table 4**  
Reported road casualties by severity and KSI rates on the SRN, 2019

	Number of casualties			KSI rate (per vehicle billion miles)
	Fatalities	Serious injuries	KSIs <sup>2</sup>	
<b>Vulnerable Users</b>	<b>70</b>	<b>400</b>	<b>470</b>	
Pedestrians	37	53	90	– <sup>1</sup>
Pedal cyclists	3	42	45	– <sup>1</sup>
Motorcyclists	30	305	335	881.4
<b>Other road users</b>	<b>138</b>	<b>1,319</b>	<b>1,457</b>	
Car occupants	106	1,147	1,253	17.7
LGV (up to 3.5 tonnes gvw) occupants	22	110	132	8.8
HGV (over 3.5 tonnes gvw) occupants	10	62	72	7.0

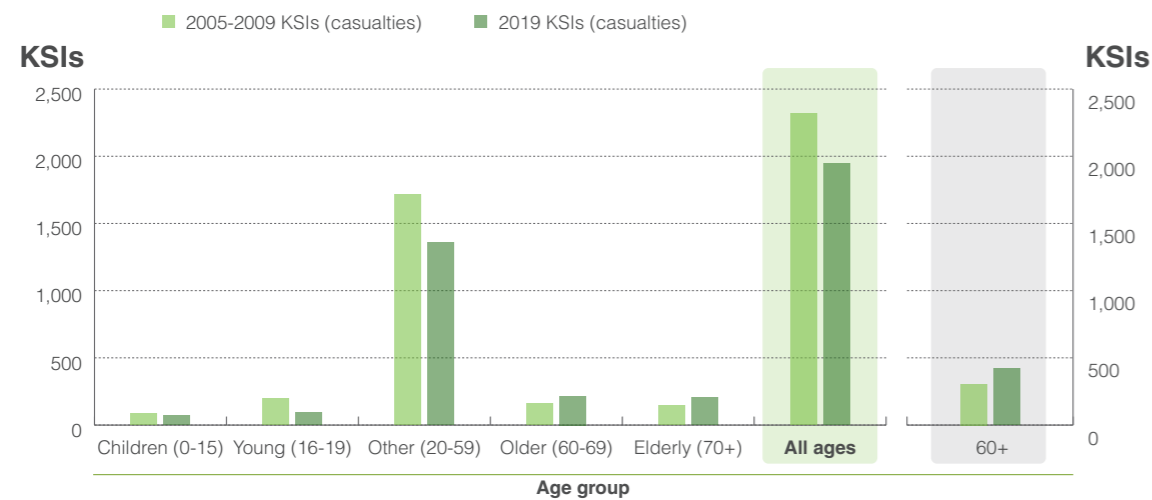
<sup>1</sup> It is not possible to calculate a rate for pedestrians and measurement of the distance travelled by cyclists on the SRN is subject to considerable uncertainty.

<sup>2</sup> Excludes 21 KSIs relating to other or unknown road user types.

<sup>1</sup><https://highwaysengland.co.uk/media/bb4lpkcp/smart-motorways-stocktake-first-year-progress-report-2021.pdf>

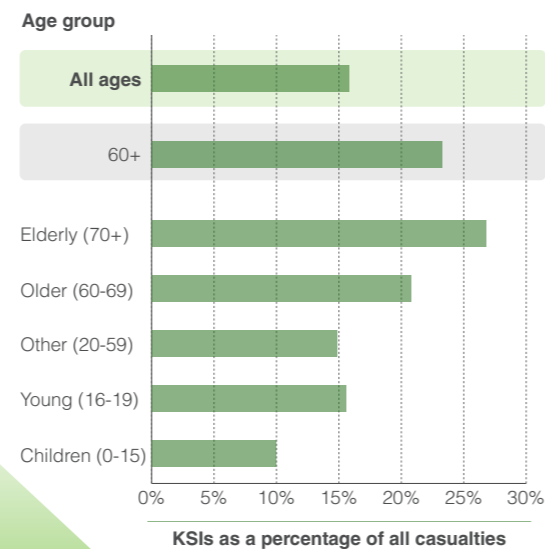
Child casualties (aged 15 or under) represent a much lower number on the SRN (compared to the whole of Great Britain) with the vast majority injured as vehicle occupants. On the SRN in 2019, child casualties accounted for 3.5% of all KSIs with 97% being vehicle occupants. This differs to the overall Great Britain picture, with child casualties accounting for 8% of all KSIs of which 56% were pedestrians, 27% vehicle occupants and 17% were cyclists.

**Figure 2**  
Reported road KSIs by age group on the SRN, baseline (2005 to 2009) and 2019



Severity of injuries among casualties increases noticeably with age. In 2019, for the SRN 23% of casualties aged 60 or older were classified as KSIs, compared to 16% for all age of casualties. Within the 60 and older population, the risk increases notably beyond the age of 70.

**Figure 3**  
KSIs as a share of all casualties by age group on SRN, 2019



**Analysing KSIs by age groups**

Analysis of KSIs on the SRN by age groups only allows for a reflection on the numbers rather than a rate. This is because there is no information available about the number of vehicle miles travelled by age of users. The age profile of SRN users is likely to differ from the national picture due to the mode mix, with lower levels of non-motorised travel on non-SRN roads.

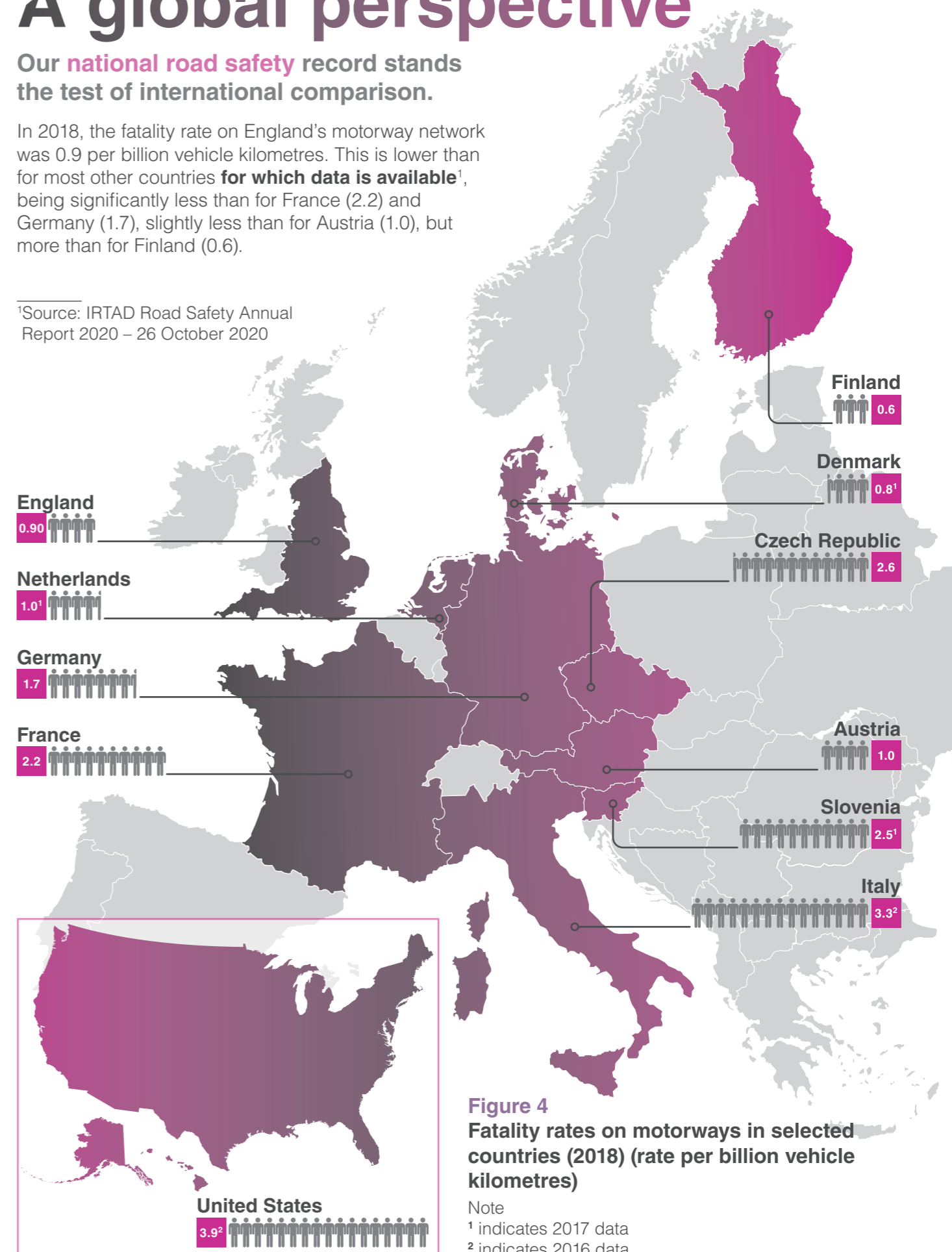
Although KSIs for those aged below 60 have decreased by 24% since the baseline, KSIs for older road users (aged 60 to 69) and elderly road users (aged 70+) have increased markedly; up 35% for 60-69 year olds and 40% for those aged 70+. In 2019, 22% of all KSIs on the SRN were aged 60 or older, compared to 13% in 2005-2009. This may well reflect the ageing population and the more active older population.

# A global perspective

**Our national road safety record stands the test of international comparison.**

In 2018, the fatality rate on England's motorway network was 0.9 per billion vehicle kilometres. This is lower than for most other countries **for which data is available**<sup>1</sup>, being significantly less than for France (2.2) and Germany (1.7), slightly less than for Austria (1.0), but more than for Finland (0.6).

<sup>1</sup>Source: IRTAD Road Safety Annual Report 2020 – 26 October 2020



**Figure 4**  
Fatality rates on motorways in selected countries (2018) (rate per billion vehicle kilometres)

Note  
<sup>1</sup> indicates 2017 data  
<sup>2</sup> indicates 2016 data

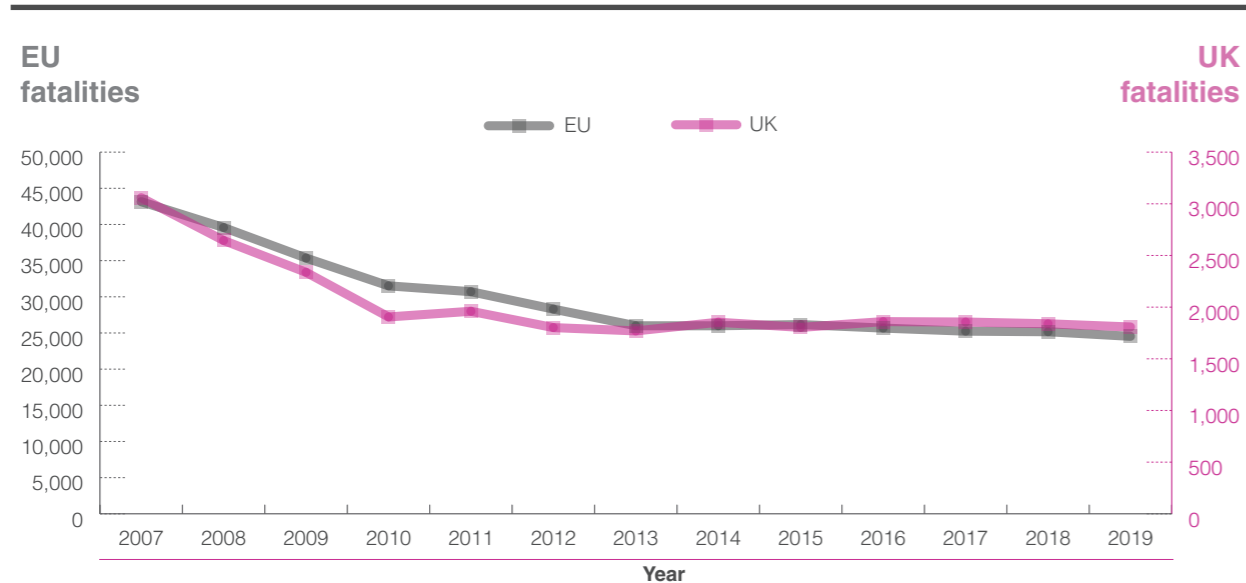
**0.9** SRN motorway fatality rate per billion vehicle kilometres



Throughout the EU there have been significant reductions in road deaths since the 2005-2009 baseline period. The reduction across the EU (excluding UK roads) from 2007 to 2019 was approximately 43%. Over the same period, the UK reduction was approximately 41%. However, the corresponding reduction from 2010 to 2019 for EU and UK were 23% and 5% respectively.

This indicates that following a significant reduction initially, the UK's rate of reduction is subsequently lower to that of the EU. However, the EU also has a stalling pattern which occurs later than the UK (from 2013) due partially to the notable reductions in countries with previously poor road safety records.

**Figure 5**  
Road casualty fatalities in the UK compared to the EU



Source: European Road Safety Observatory – Road Safety Targets Monitoring Report, November 2020; and European Commission Annual Accident Report 2018

# Customer experience and behaviour

The SRN is a shared space, and enabling road users to **interact in a safe and positive way on our network is one of our top priorities.**

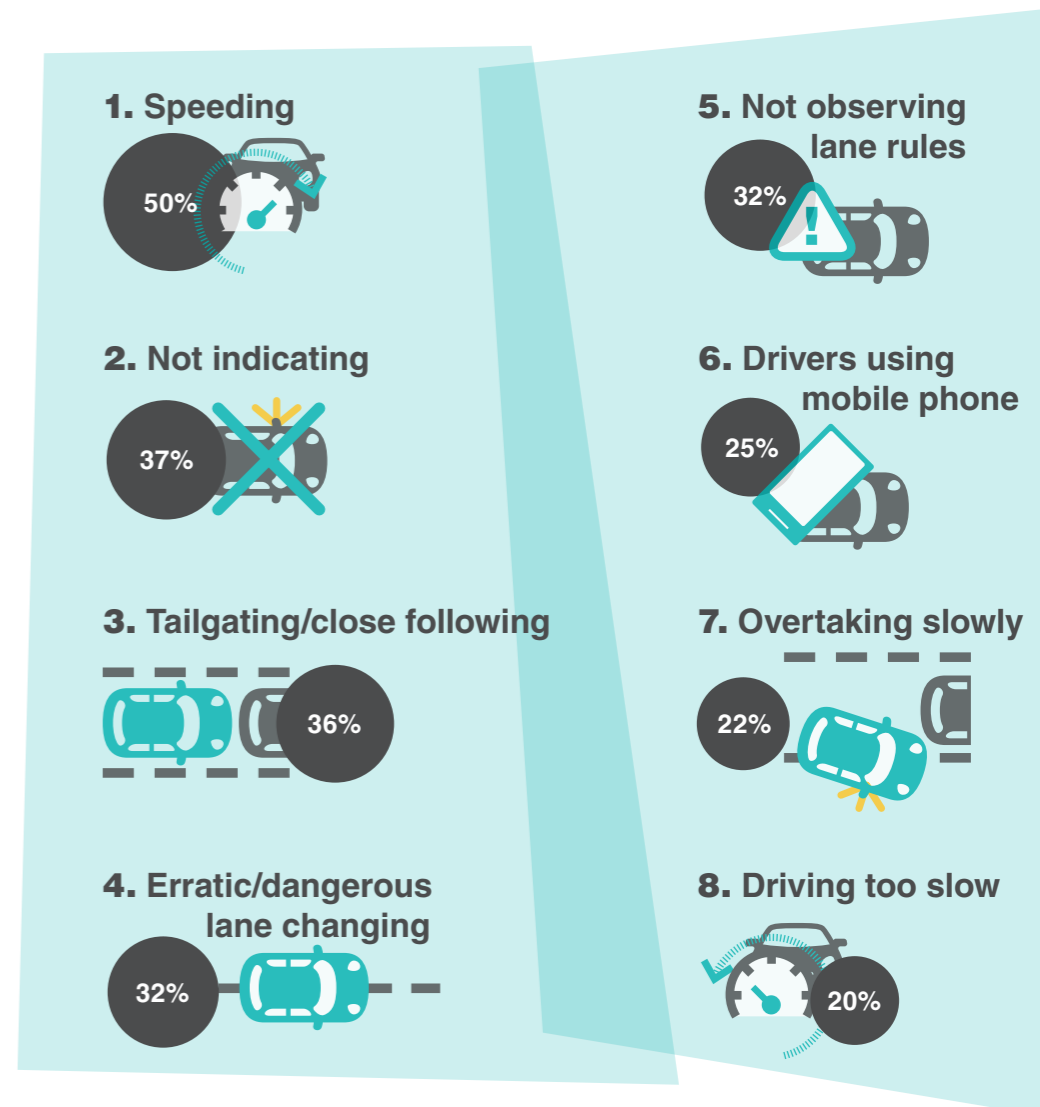
How drivers feel and behave towards each other and other road users is complex. One unsafe behaviour could trigger another in response, and the cumulative interaction of a number of unsafe behaviours may create a situation that results in an incident. Through our customer service strategy and compliance strategy we are engaging with road users to encourage and enable them to behave more safely – making them aware of expected behaviours and working in partnership to ensure any enforcement activity is timely and proportionate.

The chances of being injured on the SRN are low for all user groups, and most users say they feel safe.

The 2019-2020 national road users' satisfaction survey (NRUSS)<sup>1</sup> reported that 89% of respondents said that they felt very or fairly safe when making journeys on motorways and major A-roads. However, some users feel less safe, and others may choose not to use the network because of concerns about safety. The perceptions of users, on the behaviour of others are captured through our own Highview surveys.

<sup>1</sup>National road users' satisfaction survey 2019-20  
<https://www.transportfocus.org.uk/publication/national-road-users-satisfaction-survey-2019-20/>

**Figure 6**  
Percentage of respondents who observed behaviours of other people during last journey on the SRN (Highview survey, 2019)



Sample size 21,479.

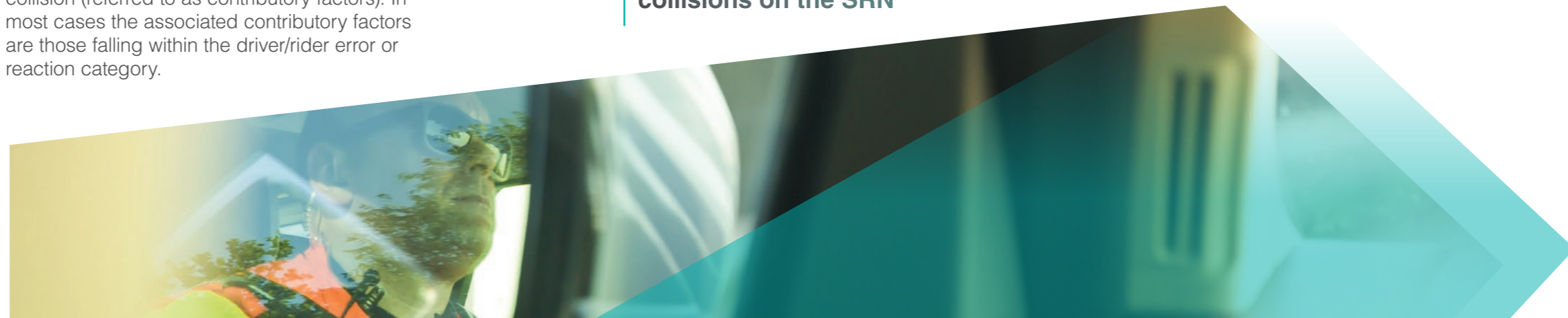
A range of factors will influence perceptions of safety in general, including other drivers' behaviour. This is not to say they felt unsafe for their entire journey, but that there were instances where the behaviours of other drivers concerned them.

The most commonly observed driver behaviour on the last trip was speeding, followed by not indicating, close following, erratic/dangerous lane changes and poor lane use. These behaviours can impact on feelings of safety and their journey experience.

For the majority of casualty collisions that happen on the SRN, the police report on the factors that they believe could have contributed to the collision (referred to as contributory factors). In most cases the associated contributory factors are those falling within the driver/rider error or reaction category.

**Driver/rider error is the associated contributing factor recorded in the most casualty collisions on the SRN**

**83%**



**Table 5 Share of all collisions where a contributory factor (CF) is reported – selected contributory factors only**

Contributory factor category	Description	Motorways			A-roads		
		2005-2009 baseline (%)	2019 (%)	2019 percentage points change from baseline (%)	2005-2009 baseline (%)	2019 (%)	2019 percentage points change from baseline (%)
Driver/rider error or reaction	Failed to look properly	25.7	32.9	7.2	30.1	34.8	4.8
	Failed to judge other person's path or speed	24.6	29.6	4.9	25.4	29.0	3.6
	Loss of control	21.3	14.6	-6.8	19.3	15.1	-4.2
	Sudden braking	12.3	10.2	-2.1	12.4	9.9	-2.5
	Poor turn or manoeuvre	11.2	7.4	-3.8	13.3	11.3	-2.0
Injudicious action	Following too close	16.6	14.0	-2.6	12.6	11.7	-0.9
Behaviour or inexperience	Careless, reckless or in a hurry	9.8	12.3	2.5	13.3	15.6	2.3
Impairment or distraction	Fatigue	6.2	6.8	0.7	4.0	5.1	1.1
	Distraction in vehicle	3.0	4.6	1.6	3.1	5.0	1.8
	Impaired by alcohol	3.8	4.2	0.5	4.2	4.9	0.7
	Illness or disability, mental or physical	1.7	3.4	1.7	1.6	3.4	1.8

Failed to look properly and failure to judge a person's path or speed are by far the most commonly reported contributory factors. For the baseline period (2005-2009), each of these contributory factors were reported in around one in four collisions. For 2019, a failure to look properly was reported for more than one in three collisions with slightly less in the reporting of failure to judge other person's path or speed.

Contributory factors within the impairment or distraction category are relatively less frequent, however they are being reported on an increased basis in 2019 compared to the baseline period. The main ones reported are fatigue, distraction in vehicle, impaired by alcohol and illness or disability, mental or physical. The latter was reported twice as often in 2019 than in the baseline period.

**Contributory factors**

Contributory factors are reported for most but not all collisions where a police officer attended. Up to six contributory factors can be reported per collision drawing from a list of 78 available factors. It is important to note that the contributory factor(s) assigned to a collision represent the initial opinion of the attending officer relating to possible factors leading to the collision, and are not intended to be a definitive representation of actual cause.

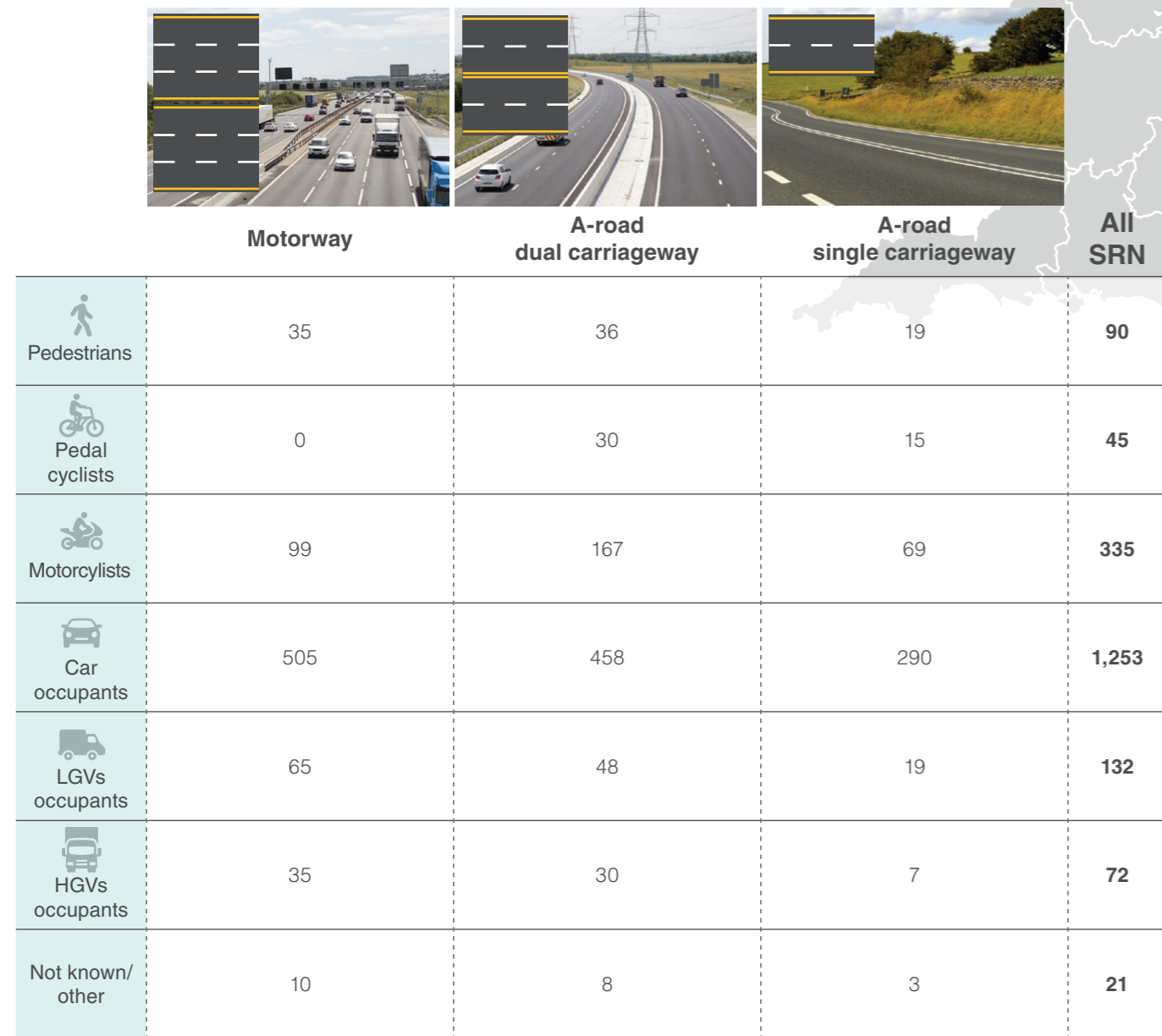


NB. Because up to six contributory factors can be reported for an individual collision, the percentages summed across all contributory factors will exceed 100%.

Contributory factors are not reported for all collisions. In 2019, they were reported for 77.5% of all reported casualty collisions on the SRN.



**Figure 7**  
Distribution of KSIs on the SRN by mode and road type, 2019



Most of our customers generally feel safe on our network, though observing certain driver behaviours can impact negatively on feelings, including safety. Human factors also continue to feature strongly as contributing to many collisions. While modifying driver behaviour comes with its own challenges, new frameworks and approaches

are emerging that create significant opportunity to reduce the risks associated with poor compliance. We are demonstrating leadership in this area, exploring the role for improvements in driver behaviour alongside developments in infrastructure design, vehicle safety and speed management.

# Summary

Safety is our top priority and we are committed to creating a safe and reliable network for our customers. **We have made significant progress in reducing the number of casualties on the SRN and our roads are some of the safest in the world.** We still have much work to do to reach our goal of no one being killed or seriously injured on our roads.

The rate of reduction in casualties across all road types has slowed in recent years not just in the UK, but also across Europe. Falling numbers require us to renew our focus on the areas where we can affect the most benefit.

As the report shows approximately 60% of KSIs occur on A-roads where the biggest opportunities exist for reducing the number of overall casualties on the SRN, particularly with an emphasis on key groups such as car users and motorcyclists.



## Key definitions

**Casualty** – A person killed or injured in a reported collision on a public road. Casualties are sub-divided into fatal, seriously injured and slightly injured.

**Fatal injury** – Human casualties are recorded as fatal where injuries were sustained which caused death less than 30 days after a road collision. Confirmed suicides and death from natural causes are excluded.

**GVW** – Gross vehicle weight.

**Highview survey** – National Highways’ monthly on-line quantitative survey run by Insites consulting (formerly Join the Dots). The survey is made up of c22,000 responses per year split equally across each of National Highways’ regions and split again according to age and gender. The sample is approximately 1,750 customers per month or 300 per region each month. There is a 2-month lockout period meaning respondents will not be invited back to take part until 2 months have passed. Respondents are sourced from a third party, “Dynata” who are an independent company with a reach of over 1 million UK consumers and business professionals.

**KSI** – Killed or seriously injured.

**Road User Safety Plans** – Sets out our approach with interventions being delivered through safer roads, safer vehicles and safer people. They are produced nationally and for each of our regions. They summarise safety performance, the evidence and intelligence led actions that have been carried out and planned interventions to realise safety improvements. The plans and associated activities support the government's key priorities for road safety.

**Serious injury** – An injury for which a person suffers any of the following injuries: 1) broken neck or back 2) severe head injury, unconscious 3) severe chest injury, any difficulty breathing 4) internal injuries 5) loss of arm or leg (or part of) 6) fractured pelvis, leg, ankle, foot, collarbone, arm, hand 7) other chest injury (not bruising) 8) deep penetrating wound 9) multiple severe injuries (both conscious and unconscious) 10) deep cuts or lacerations 11) other head injury.

**Slight injury** – An injury of a minor character such as a sprain (including neck), shallow cuts, bruising, shock.

**Strategic road network** – The road network in England managed by National Highways. It is made up of motorways and the most significant A-roads and is around 4,500 miles long.

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