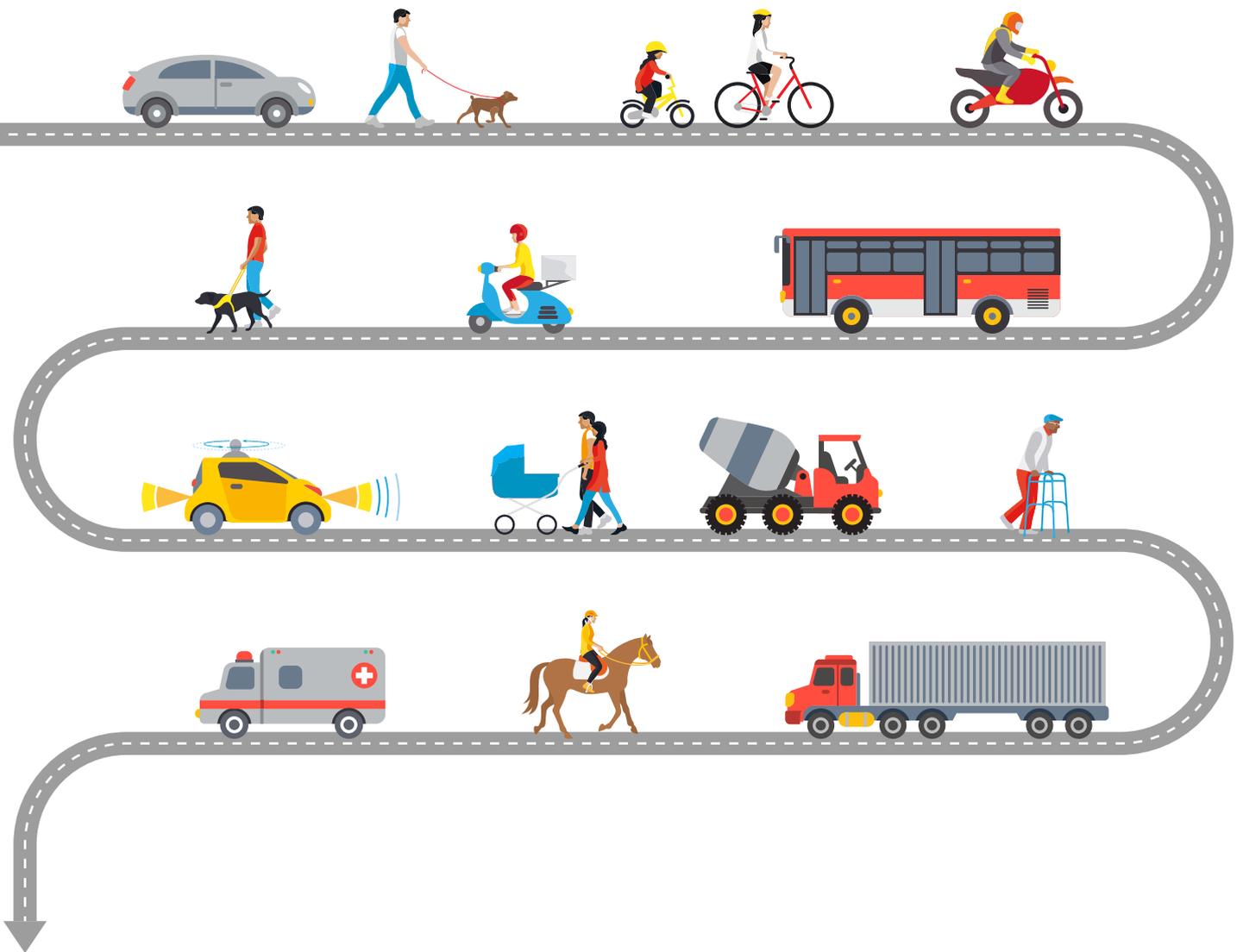




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Scotland's Road Safety Framework to 2030

Together, making Scotland's roads safer



Scotland to have the best road safety performance in the world

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Ministerial Foreword

I'm delighted to present to you a draft of Scotland's Road Safety Framework to 2030, which sets out an ambitious and compelling long-term goal for road safety where no-one dies or is seriously injured by 2050.

This draft, building on the strength of the 2020 Framework, advocates a vision for Scotland to have the best road safety performance in the world. To help achieve that vision, the Framework sets out five strategic outcomes which describe the road safety environment it aims to deliver; these outcomes align with the five pillars of the Safe System: Safe Road Use; Safe Vehicles; Safe Speeds; Safe Roads and Roadsides; and Post-crash Response. It also introduces a comprehensive performance management system which will help us gain a much clearer understanding of the different issues influencing overall safety performance, and monitor delivery of the Framework more effectively. In addition, and in order to improve communications between national and local level, the Framework creates a third tier in its governance structure - Local Partnership Forums.

The Road Safety Framework to 2020 brought forward a strong partnership approach to the delivery of many road safety strategies and initiatives, and has served us well. We could not have achieved this without the drive and determination of all our stakeholders working together to make a positive impact on casualty reduction, and we hope to build on that going forward to 2030 and beyond. As we go to print, provisional headline figures for road casualties reported to the police in Scotland in 2019¹ show the total number of casualties fell to 7,594, the lowest number since annual records began in 1950. In 2018, Scotland's overall road death rate of 30 per million population was the fifth lowest of 42 countries surveyed in international comparisons. However, one death is one too many and there is more we can do, and will do, to realise our vision.

The Scottish Government and our partners are committed to making Scotland's road travel safe for everybody. However, all road users have a



part to play in the success of the Framework by keeping our roads safe for themselves and others. Hence the motto "Together, making Scotland's roads safer". Embedding the Safe System approach at national, regional, local and even individual level will play a major part in achieving this. This requires political leadership, strategic clarity and decisive action, as well as ownership by all of us – elected officials, transport professionals and citizens. This Framework uses the words "we" and "our" to reflect that it is not just a strategy for Scottish Ministers or safety partners. It is a Framework for all road users and, therefore, its vision, outcomes, challenges, strategic actions and targets belong to each and every one of us.

Collectively, we must ensure the safety of every road user and, given the aspirations of our health and climate emergency policies, this includes protection for those who choose to walk, wheel and cycle. The Scottish Government is more committed than ever to its vision that communities are shaped around people, with walking and cycling the most popular choice for shorter, everyday journeys. This Framework is a great opportunity to demonstrate how road safety can contribute to cross-cutting national priorities.

I encourage you to analyse the document and I look forward to hearing your views on the draft Road Safety Framework to 2030.

Michael Matheson, MSP,
Cabinet Secretary for Transport, Infrastructure
and Connectivity

¹ <https://www.transport.gov.scot/media/47932/key-reported-road-casualties-scotland-2019.pdf>

Responding to the Consultation

About this Consultation

Consultation is an essential part of the policy making process. It gives us the opportunity to seek your opinions. This consultation details our proposed approach on the Road Safety Framework over the next decade and asks you questions about what we are proposing.

Responses to this consultation are analysed and, along with a range of other available information and evidence, will help to inform the development of road safety policy and delivery in Scotland.

Deadline

The consultation will be published on 8 September 2020 and closes at midnight on 1 December 2020.

How to respond

To encourage wide participation, the Scottish Government has created a number of ways for you to engage in the consultation. You can respond online, by email or by post.

The consultation will also be available in alternative formats on request, including Large Print, Braille and Easy Read. In addition to publishing this consultation document.

Respond Online

To respond online please use the Scottish Government's Consultation Hub, Citizen Space.² You can respond in English or British Sign Language (BSL) using this method. You can save and return to your response at any time while the consultation is open. But please ensure that your response is submitted before the consultation closes at midnight on 1 December 2020.

You will automatically be emailed a copy of your response after you submit it. If you choose this method, you will be directed to complete the Respondent Information Form. The Respondent Information Form lets us know how you wish your response to be handled, and in particular whether you are happy for your response to be made public. Alternatively you can respond by using one of the following methods as specified in the table 1 below.

Table 1: response methods

YouTube	Upload your videos and paste the URL into the Citizen Space consultation.
Email to roadsafetyframework@gov.scot	Send us an email with YouTube links to a video of your response. Please do not attach videos to the email as we cannot receive large files. Please include the Respondent Information Form.
Post	Send your responses in English to: The Road Safety Policy Team Roads Directorate Transport Scotland Buchanan House 5th Floor 58 Port Dundas Road GLASGOW G4 0HF Please include the Respondent Information Form

² <https://consult.gov.scot/transport-scotland/road-safety-framework-to-2030/>

With each of these methods you need to include your Respondent Information Form because this lets us know how you wish your response to be handled, and in particular whether you are happy for your response to be made public.

You can find this in Annex B in this document.

Next Steps

After the consultation has closed we will analyse all the responses received and use your feedback to help inform the development of the Road Safety Framework to 2030. Where permission has been given, we will make all responses available to the public at <https://consult.scotland.gov.uk/>. The responses to the consultation and analysis will be published in the winter of 2020.

Need assistance?

If you need support in answering this consultation or alternatively have a query about the consultation process, or a complaint about how this consultation has been conducted you can send your query by email to:

roadsafety@transport.gov.scot or by writing to:

The Road Safety Policy Team
Roads Directorate
Transport Scotland
Buchanan House, 5th Floor
58 Port Dundas Road
GLASGOW
G4 0HF

Overarching context

Scotland's new National Transport Strategy (NTS2) published in February 2020 sets out an ambitious and compelling vision for our transport system for the next 20 years, one that protects our climate and improves our lives.

The Strategy advocates a Vision for Scotland's transport system, that will help create great places – a sustainable, inclusive, safe and accessible transport system, helping deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors. It sets out Priorities to support that Vision: reduces inequalities; takes climate action; helps deliver inclusive economic growth; and improves our health and wellbeing. Within these Priorities there is greater focus on reducing inequalities and taking climate action to ensure we address the key challenges we face.

We are now in an environment where the move to low and zero carbon transport is essential to our future wellbeing. In response to the global climate emergency, the Scottish Government has made one of the most ambitious climate commitments in the world to achieve net-zero greenhouse gas emissions by 2045. Over the 20-year period of NTS2, the role of transport in achieving this target will be crucial and will require further development and use of low carbon technology. It will also require significant societal changes, including a reduction in the demand for unsustainable travel.

Importantly, NTS2 signals the future direction of transport and provides the context within which decisions, in and beyond government, will need to be made. From local and central governments and regional transport partnerships implementing policies, to businesses and individuals taking account of their actions and impacts when making travel decisions, we all have a responsibility for delivering the Strategy and making sure it is a success. These ambitions also extend into the strategic transport investment decisions that will be made a part of the second Strategic Transport Projects Review 2.

The draft Road Safety Framework to 2030 has taken into consideration the above-mentioned government's ambitions as well as the overarching context in which road safety operates (see figure 1 below).

Road safety policy and delivery will play a pivotal role in supporting policies and priorities and can help achieve outcomes across a number of Strategic Priorities:

- ✓ Addressing the Climate Emergency for a 'healthier society, and a diversified, resilient and sustainable economy'
- ✓ Active Travel Vision for Scotland
- ✓ Scotland's Public Health for 'a Scotland where we live in vibrant, healthy and safe places and communities'
- ✓ Justice Strategy for Scotland where 'We live in safe, cohesive and resilient communities'
- ✓ Education to assess and manage risk and understand the impact of risk-taking behaviour
- ✓ National Performance Framework where 'We live in communities that are inclusive, empowered, resilient and safe'
- ✓ National Planning Framework with 'A successful sustainable place – supporting economic growth, regeneration and the creation of well-designed places'

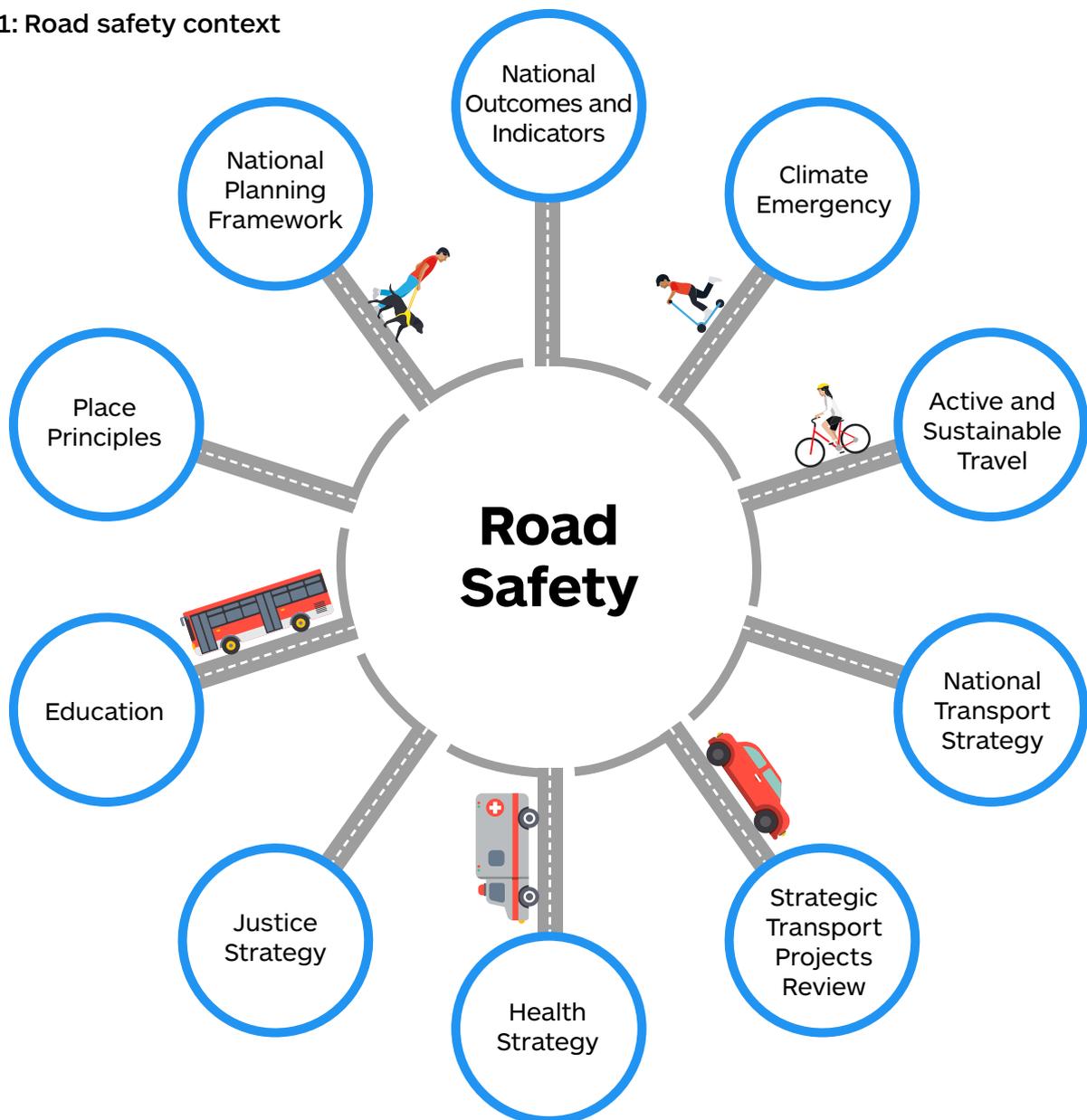
The place principle³ applies to road safety partners responsible for providing services and looking after assets through 'a place to work and plan together to support inclusive and sustainable economic growth and create more successful places'.

³ <https://www.gov.scot/publications/place-principle-introduction/>

The new Framework will sit within a wider UN/ EU/UK context; for example, our proposed road casualty reduction targets for 2030 is taking cognisance of the UN resolution A/74/L.86 “Improving global road safety”⁴ adopted on 30 August 2020 and the Stockholm Declaration⁵, agreed by UN Member States in February 2020, calling for a reduction in road traffic deaths and serious injuries by at least 50% from 2020 to 2030, a commitment to collect data on serious injuries, and providing targets to reduce fatalities and serious injuries among pedestrians,

cyclists, motorcyclists and other vehicle users. In June 2019, the European Commission published its [EU Road Safety Policy Framework 2021-2030](#) which contains the EU’s long-term strategic goal of “Vision Zero” - no deaths or serious injuries on European roads - by 2050. Road safety in Scotland is also governed by various pieces of legislation dealing with reserved issues such as motoring offences, vehicle standards and driving licencing or devolved such as national speed limits.

Figure 1: Road safety context



⁴ and proclaiming the Second Decade of Action for Road Safety 2021-2030 - <https://www.un.org/pga/74/wp-content/uploads/sites/99/2020/08/Draft-Resolution-Road-Safety.pdf>

⁵ <https://www.government.se/492199/contentassets/2b0b907242fc407da58757bf2b70370e/stockholm-declaration-english.pdf>

A Vision for Scotland

Our vision is for Scotland to have the best road safety performance in the world by 2030.

It is unacceptable that anyone is killed or seriously-injured on our roads and this Framework identifies the part everyone of us has to play in ensuring our long-term aspiration for that Vision Zero to become a reality. It builds on the approach and actions set out in the first Framework “Go Safe on Scotland’s Roads – It’s Everyone’s Responsibility”, published in 2009, and recognises the significant contribution made to meeting the 2020 casualty reduction targets. Drawing on the latest evidence, it reflects recent successes, highlights key challenges for the immediate and longer-term, and sets out new, ambitious targets, key performance indicators, and strategic actions for the next decade, to help shape our collective effort, inspire collaboration, and frame a shared vision for the future.

The Safe System approach to road safety delivery is international best practice (see Figure 2 below). It sets out an ambitious approach to road safety management based on well-established safety and organisational principles. It is a synthesis of current knowledge about how to effectively manage for better results, and builds on best practice, using innovative solutions and new technologies. The Safe System comprises both an explicit goal and a strategy by which it can be delivered.

- The explicit, longer-term goal of the Safe System is for a road traffic system which becomes free from death and serious injury through incremental, targeted improvements within a specified safety performance framework. It is backed up by interim, quantitative targets to reduce numbers of deaths and serious injuries - usually measured over a ten-year period. There is also a focus on targeting those intermediate outcomes which are causally-related to death and serious injury, such as: average speeds; seatbelt use; sober driving; the safety and quality of roads and vehicles; and emergency medical system response. It involves an important paradigm shift from trying to prevent all collisions towards preventing death, and mitigating serious injury in collisions, a problem which is largely achievable based on current knowledge.
- The strategy puts people at its centre, and aims for a more-forgiving road system that takes human vulnerability and fallibility into account; people are fragile and make mistakes that can lead to collisions. A Safe (road) System mitigates that with its five pillars - effectively layers of protection - in the form of: safe road use; safe roads and roadsides; safe vehicles; safe speeds; and better post-crash response; all working in harmony to prevent deaths and serious injuries.

Figure 2: Safe System approach to road safety

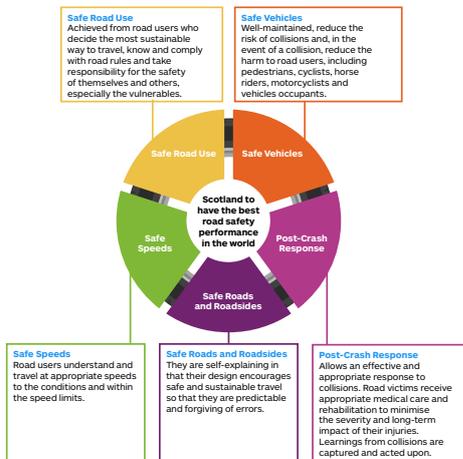


Is the vision set out for the next 10 years the right one?

Yes No

Please explain your answer

To help achieve our Vision, the Framework identifies five outcomes (Safe Road Use, Safe Roads & Roadsides, Safe Speeds, Safe Vehicles and Post-Crash Response) which describe road safety environment it aims to deliver – these outcomes align with the five pillars of the Safe System (see diagram below)



Safe Road Use

A Safe System involves those who manage and design the roads as well as those who use them; each is responsible for, and must contribute to, eradicating fatal and serious injuries. Ultimately, all road users are expected to use the roads safely and comply with the rules. Safe road users are competent at all levels, including: paying full attention to the road ahead and the task in hand; adapting to the conditions (weather, the presence of other users, etc.); travelling at lower speeds; not driving while impaired through drink, drugs (including medicines) or fatigue; not being

distracted by in-vehicle technology (mobile phones, entertainment systems, sat navs, etc.); and giving sufficient room to all other road users, no matter what their mode of travel. Safe road users respect other road users at all times and assume responsibility for others' safety as well as their own.

Measures to encourage safe road use also include working together to reduce car-based traffic, inspiring people to use active modes, such as walking and cycling, or to use public transport rather than their own vehicles. Education interventions are also important, to ensure road users are risk-aware, can develop coping strategies for high-risk situations, and act appropriately to keep themselves and others safe on the road.

Safe Roads and Roadsides

In a Safe System, roads are designed to reduce the risk of collisions, and to mitigate the severity of injury should a collision occur. A combination of design and maintenance of roads and roadsides supported by the implementation of a range of strategies to ensure that roads and roadsides can be as safe as possible can reduce casualties on our roads. One way in which this can be achieved is to segregate different kinds of road users and to segregate traffic moving in different directions or at different speeds. If this is not possible, a speed limit to protect the most vulnerable road users can be implemented.

Safe Speeds

Speed limits in a Safe System are based on aiding crash-avoidance and reducing the speed at which impacts occur, to ensure the body's limit for physical trauma is not reached or exceeded. The Safe System aims to establish appropriate speed limits according to the features of the road, the function it serves, and the physical tolerance of those who use it.

The setting of speed limits should also be determined by the road environment and the vehicles in use rather than the behaviour of road users. The Safe System seeks to enforce existing speed limits and ensure road users understand and comply with them.

Safe Vehicles

Vehicles are designed and regulated to minimise the occurrence and consequences of collisions to road users, including the occupants themselves, but also to pedestrians, cyclists, horse-riders and motorcyclists. Making vehicles safer involves both 'active' safety measures, such as autonomous emergency braking, which can prevent collisions occurring in the first place, and 'passive' safety measures, such as seatbelts and airbags, which

protect occupants (and other road users) if a collision does occur. It is also vital to ensure vehicle roadworthiness is regulated to the highest standards. Technology within vehicles, such as feedback from the speedometer and seatbelt reminders can also educate road users about safe road use.

Increasingly, roads and vehicles will be managed within an intelligent transport system, relying on ever-more autonomous vehicles and smart infrastructure. As safety becomes hardwired into vehicle technology and road design, there is potential to further reduce road casualties and deaths through this route.

Post-crash response

It is vital to work with the emergency services and the National Health Service (NHS) to enable the best possible response to collisions, ensure victims are effectively cared for, and facilitate meaningful investigations into the causes and potential solutions for the future. Health outcomes for victims rely on the ability of the system to quickly locate and provide emergency first responder care, in order to stabilise victims and transport them to hospital for further specialist treatment.

Are the outcomes of Safe Road Use, Safe Speeds, Safe Vehicles, Safe Roads & Roadsides and Post-Crash Response to deliver the vision the right ones?

Yes No

Please explain your answer

Do you agree that the Safe System Approach is fundamental to the success of the Framework?

Yes No

Please explain your answer

Road Safety in Scotland and Beyond

Scotland's Roads are safer than they were in 2010

Scotland has a long-standing commitment to road safety delivery based on strong partnership working. This has led to a consistent reduction in casualties. Provisional headline figures for road casualties reported to the police in Scotland in 2019⁶ show the total number of casualties fell to 7,594, the lowest number since annual records began in 1950. However, there has been an increase in the number of people who have died on our roads in 2019⁷. This fact provides no comfort to the friends and family of those who have sadly lost their lives and proves that Scotland needs to do more work. Scotland's overall road death rate of 29 per million population was the fifth lowest of 42 countries surveyed in international comparisons in 2018. Our aim is for it to be the lowest.

Progress towards the 2020 Casualty Reduction Targets

The current Framework to 2020 contains five challenging targets that all road safety partners are responsible for delivering, including the Scottish Government.

With Vision Zero in mind, achieving the targets is crucial to a Scotland which aspires to have the best road safety performance in the world. Not only is there a moral imperative to prevent casualties on our roads, given the pain, loss and suffering experienced by immediate families and the ripple effect on the wider communities, but road casualties also has a high economic cost including: damage to vehicles and property; loss of output/productivity⁸; demands on the emergency services; as well as ongoing medical and insurance costs.

Currently available data allows us to measure progress against three targets; progress against all targets will be published in October 2020 (see Table 2 and Figures 3 to 7 below).

- 168 people were killed in 2019, a reduction of 42% since the baseline (performance currently exceeding the 2020 target of a 40% reduction).
- 2,001 people were seriously injured in 2019. Due to the changes in the recording of casualty severities, following Police Scotland's use from around June/July 2019 of a new accident and casualty data recording system called CRaSH (Collision Reporting and Sharing), progress against this target is measured on the basis of adjusted figures, which show a reduction of 33% from the baseline (performance not currently on track to meet the 2020 target of a 55% reduction).
- On average, there were two children killed each year between 2017 and 2019: a reduction of 85% from the baseline (performance currently exceeding the 2020 target of a 50% reduction).

⁶ <https://www.transport.gov.scot/media/47932/key-reported-road-casualties-scotland-2019.pdf>

⁷ One hundred and sixty eight people were killed in Key reported road collisions in Scotland in 2019, seven more than in 2018.

⁸ Due to sick leave and road congestion following road closures for emergency services operations and police road investigations. The total cost of collisions to Scotland was £1 billion in 2018 compared to a GDP of £180 billion.

2020 Target (adjusted* 2004-08 baseline)	Progress towards targets in 2019**
175 = 40% reduction in people killed (292)	168 = 42% reduction
1,313 adjusted = 55% reduction in people seriously injured (2,919 adjusted baseline)	2,001 (non-adjusted figure) 1,965 adjusted = 33% reduction
8 = 50% reduction in children killed (15)	2 = 85% reduction
114 (still needs to be adjusted) = 65% reduction in children seriously injured (325 - still needs to be adjusted)	% reduction based on adjusted figure for 2019 will be available end of September but 56% reduction was reported in 2018
29.22 (still needs to be adjusted) = 10% reduction in the slight casualty rate (32.47 casualties per 100 million vehicle kilometres - (still needs to be adjusted))	% reduction based on adjusted figure for 2019 will be available end of September but 57% reduction was reported in 2018

Table 2 - Progress against the national casualty reduction targets for 2020 (adjusted 2004-2008 baseline)

*adjusted figures if they had been recorded using the injury-based reporting system CRaSH

**provisional statistics from Key Reported Road Casualties Scotland 2019

Figure 3: Progress to casualty reduction target: killed

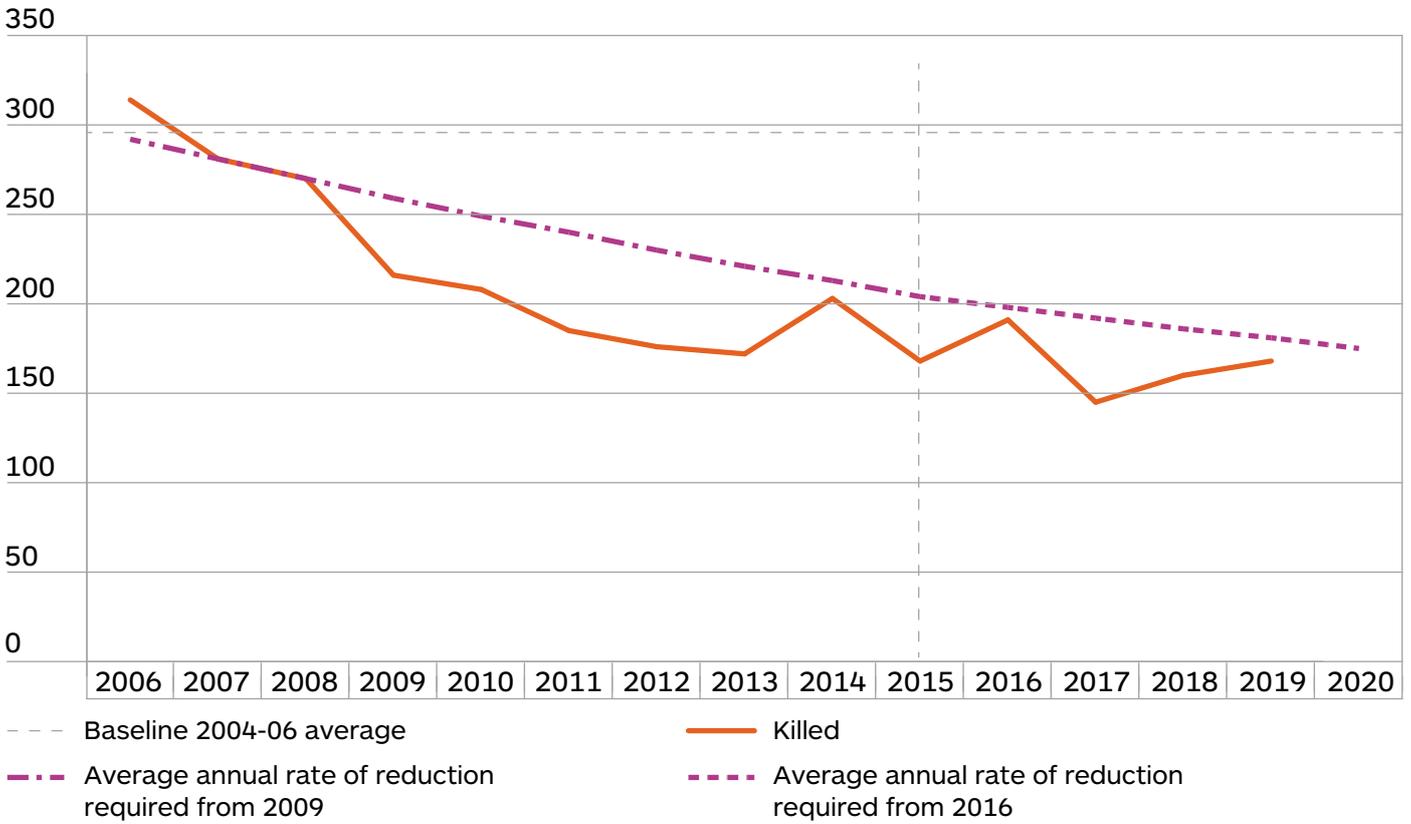
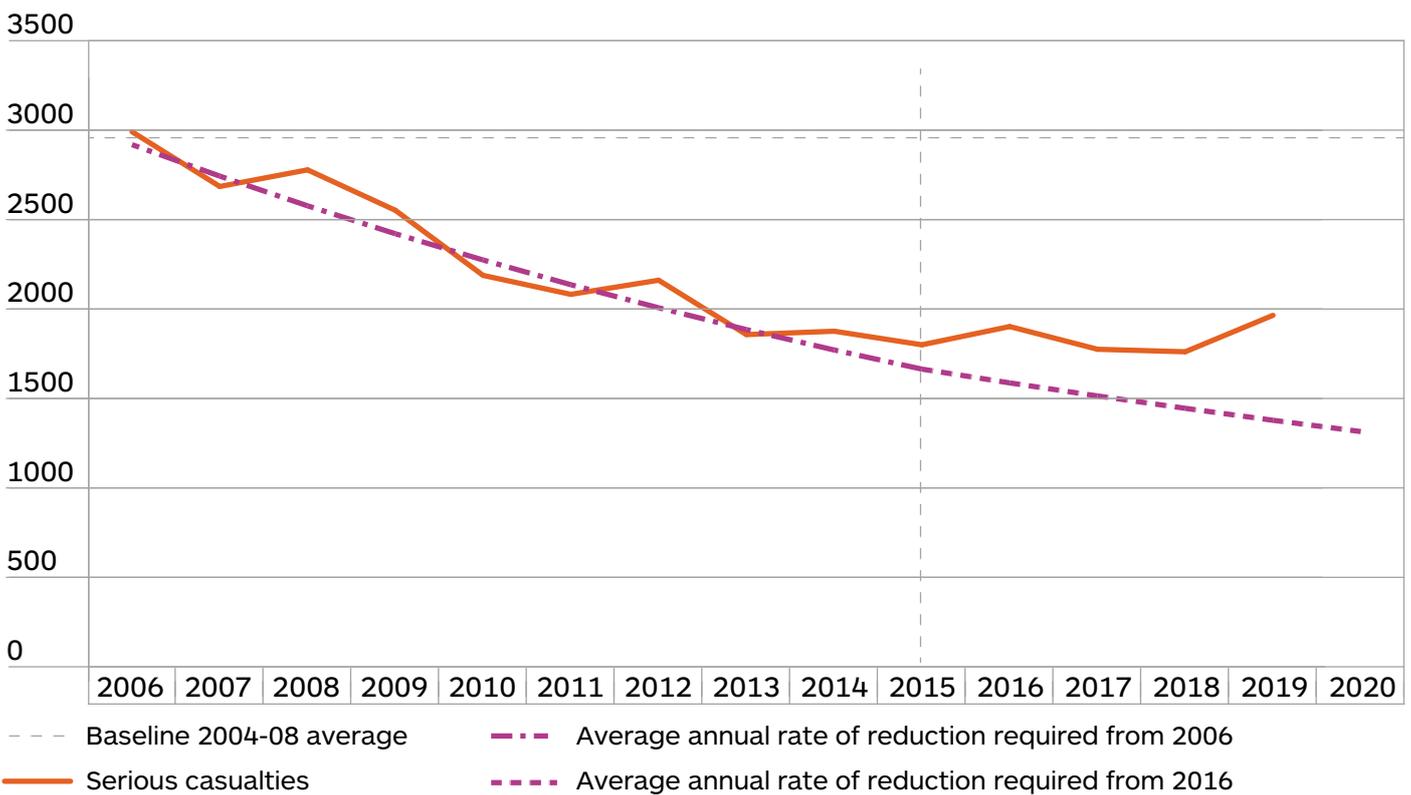


Figure 4: Progress to casualty reduction target: Seriously-injured



*Due to changes in the way casualty severities are recorded, figures for slight casualties in 2019 are not comparable with previous years.

Figure 5: Progress to casualty reduction target: Children killed

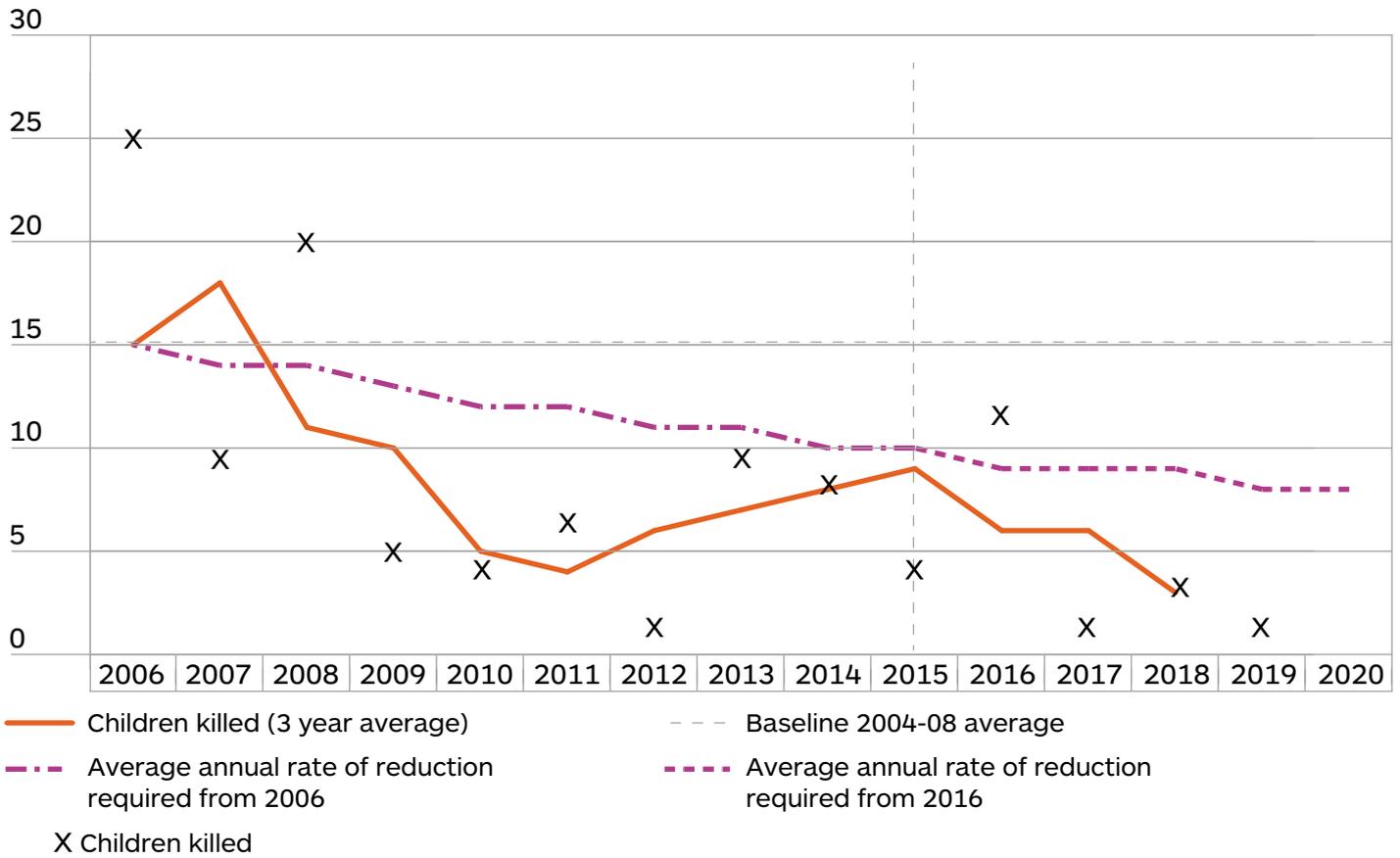
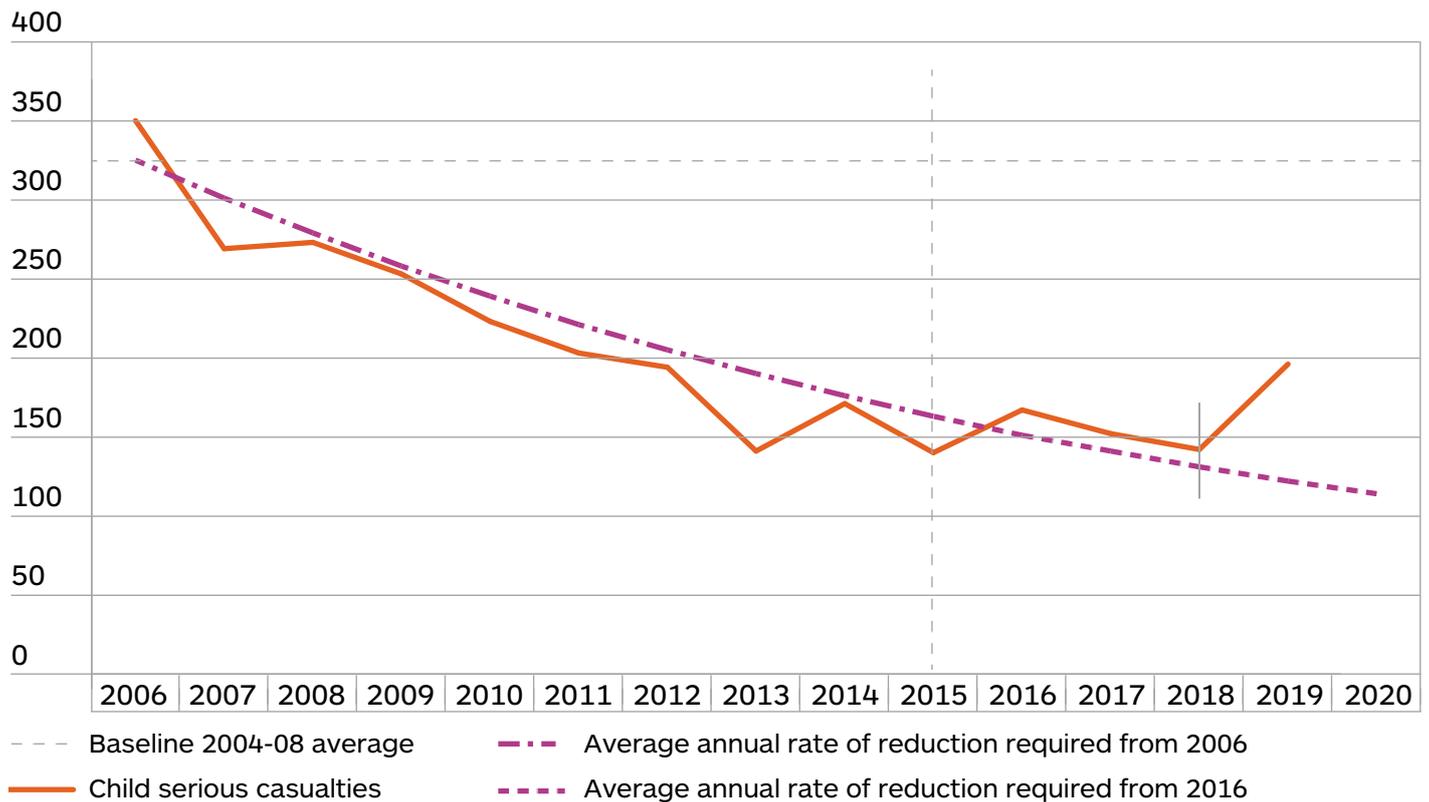
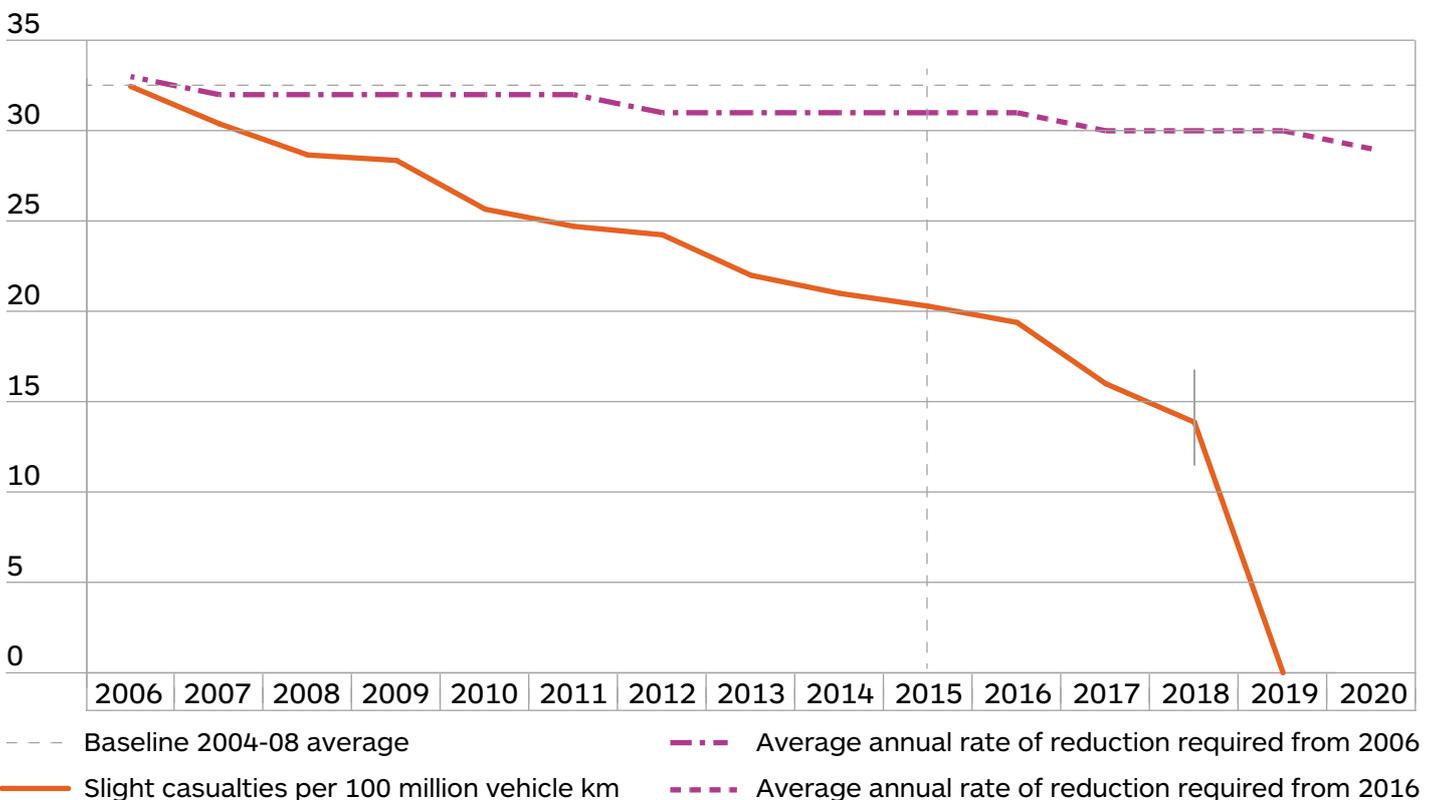


Figure 6: Progress to casualty reduction target: Children seriously-injured



*Due to changes in the way casualty severities are recorded, figures for serious casualties in 2019 are not comparable with previous years.

Figure 7: Progress to casualty reduction target: Slightly Injured casualties per 100 million vehicle km

*Due to changes in the way casualty severities are recorded, figures for serious casualties in 2019 are not comparable with previous years.

The 2020 Framework: highlights from the last decade

The Framework to 2020 has been running for almost a decade now and its success has been quantified by progress towards the current targets, as well as the completion of almost all 97 commitments (96 original + 1 added in the Mid-term Review) which remained relevant throughout the period. The adoption of the Safe System and identification of three Priority Focus Areas of Age, Speed and Vulnerable Road Users in the 2016 Mid-term Review allowed us to concentrate our effort on areas where maximum impact could be achieved towards delivering the 2020 targets. This effort was supported by stronger partnership working, evidence-led decision-making and finance provided through the Framework Fund and the more-recent Evaluation Fund. These measures contributed to Scotland's roads being safer than in 2010, and created better conditions for delivery of the Healthy and Active Nation agenda.

The Broader Picture: the UN, WHO, the EU and the UK

The Global status report on road safety 2018⁹, launched by the World Health Organisation in December of that year, highlights that the number of global road traffic deaths continues to climb, reaching 1.35 million in 2016. However, the rates of death relative to the size of the world's population has stabilized in recent years. At this rate, the Sustainable Development Goal (Target 3.6) to halve road traffic deaths by 2020, will not be met. Road traffic injuries are now the leading killer of people aged 5-29 years, signalling a need for a shift in the current child health agenda, which has largely neglected road safety. Road collisions are the eighth leading cause of death for all age groups, surpassing HIV/AIDS, tuberculosis, and diarrhoeal diseases. The burden is disproportionately borne by those classed as vulnerable road users - pedestrians, cyclists and motorcyclists - particularly in developing countries.

⁹ https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/

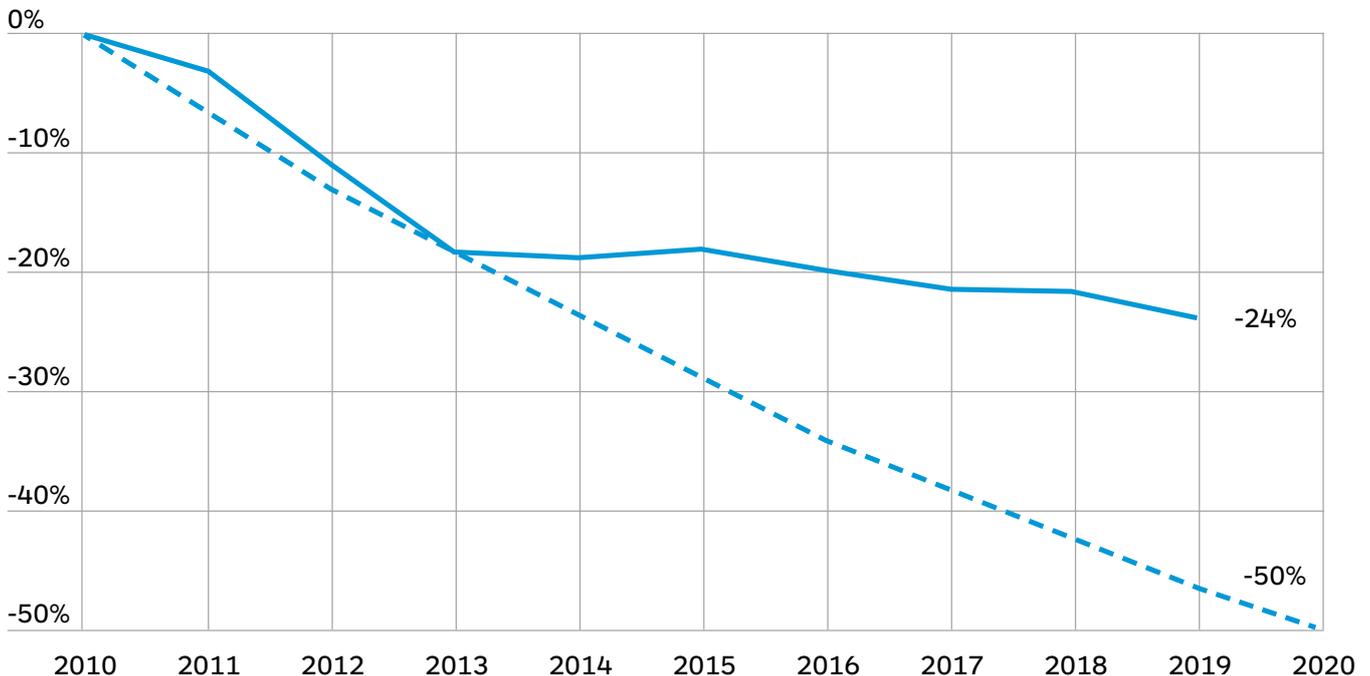
In February 2020, the third global ministerial conference in Stockholm reviewed the UN decade of action on road safety, adopted the Stockholm Declaration¹⁰ and set goals for 2030. This was followed by a general assembly and the adoption of a new resolution on road safety¹¹.

Closer to home, fewer people lost their lives on EU roads in 2019, according to preliminary figures¹² published in June 2020 by the European Commission. An estimated 22,800 people died in a road crash last year, almost 7,000 fewer fatalities than in 2010 – a decrease of 23%. Compared with 2018, the number fell by 2%. With an average of 51 road deaths per 1 million inhabitants (compared to 200 in 1965), Europe remains by far the safest region in the world when it comes to road safety.

A plateauing of the reduction in fatalities has been occurring since 2013 which means it is unlikely that the target of halving the number of road deaths by 2020 will be reached, even when factoring the initial positive effect of COVID-19 lockdowns¹³ on traffic flows reductions and reduced road fatalities (see Figure 8¹⁴ below).

In June 2019, the European Commission published its Staff Working Document: EU Road Safety Policy Framework 2021-2030 - Next steps towards "Vision Zero"¹⁶. This maps out the way forward, implementing the Safe System approach systematically at EU level and encouraging members to follow the Safe System results' hierarchy below (Figure 9).

Figure 8: Reduction in the % number of road deaths since 2010¹² for the EU28 taken together (blue line) plotted against the EU target for 2020 (blue dotted line).



10 <https://www.government.se/492199/contentassets/2b0b907242fc407da58757bf2b70370e/stockholm-declaration-english.pdf>
 11 <https://www.un.org/pga/74/wp-content/uploads/sites/99/2020/08/Draft-Resolution-Road-Safety.pdf>
 12 https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1003
 13 <https://etsc.eu/pin-briefing-the-impact-of-covid-19-lockdowns-on-road-deaths-in-april-2020/>
 14 <https://etsc.eu/wp-content/uploads/14-PIN-annual-report-FINAL.pdf>
 15 <https://etsc.eu/14th-annual-road-safety-performance-index-pin-report/>
 16 <https://ec.europa.eu/transport/sites/transport/files/legislation/swd20190283-roadsafety-vision-zero.pdf>

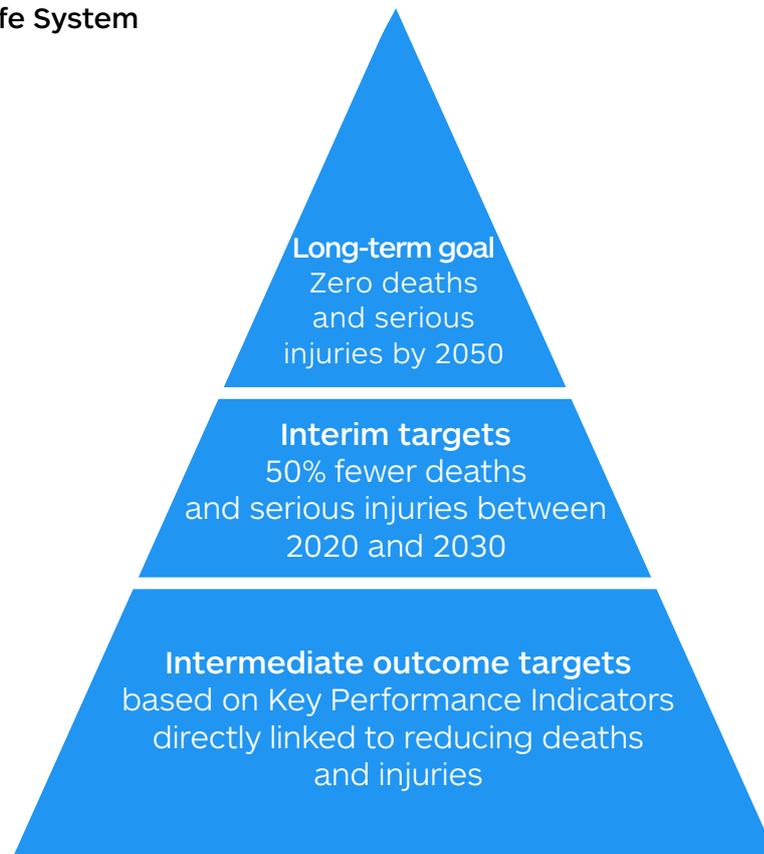
Great Britain is seeing a similar plateauing with 1,870 road deaths in the year ending June 2019¹⁷ which is an increase compared to the previous year. This change is not statistically significant and long-term trends are broadly stable since 2010. Over the same period, the volume of traffic on roads in Great Britain has increased by 7%. In July 2019, the UK Government published its refreshed Road Safety Statement and two year action plan¹⁸ acknowledging that flat lined trend. The Statement recognises we can no longer keep doing the same things in the same way if we want to improve. It puts forward 74 actions covering road safety policy in Britain, moving the UK towards an integrated approach that focusses on both collision prevention, and post-collision response.

The Statement is based on a lifelong-learning approach to road safety, from the very young to the elderly.

Summary

Many of the road safety issues in the last decade at UN/EU or UK level have also been experienced in Scotland; there has been a substantial reduction in killed and seriously-injured casualties (KSIs) since the 1970s, but the recent plateauing of these reductions means road safety needs to be back at the top of the agenda. Most developed countries recognise that, to achieve further reductions in KSIs, a step change in road safety delivery is required: from providing focus for improved joint working, to embedding the Safe System ambition and approach into the delivery of national and local activity.

Figure 9: The EU Safe System results hierarchy



¹⁷ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/848485/road-casualties-year-ending-june-2019.pdf

¹⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/817695/road-safety-statement-2019.pdf

Current and Emerging Challenges

These challenges, either within or outwith the road safety system, have been identified to make an impact now, or in the near future, on road safety generally and, more particularly, on the new Framework. They have been encapsulated in twelve themes which not only map easily onto the Safe System, but also align with Scottish Government's policies, plans and strategies. A high-level summary of each challenge and its impact on road casualties with more-evidenced narrative, is provided below.



Climate Emergency
its potential effects on road casualties and the benefits that road safety can bring



Active & Sustainable Travel its potential effects on road casualties and the benefits that road safety can bring



Health improving road safety to reduce impact on public health services



Safe System
implementing the Safe System at all levels



Speed Management
road users not travelling at appropriate speeds, its effect on road casualties



Road Safety Delivery
delivering a shift in resources and funding to focus on road safety delivery



Driving/Riding for Work & Workplace Culture its effect on road casualties



Emerging Technologies
consideration of benefits and challenges of emerging technologies on road safety



Enforcement/Deterrence increasing the visibility of road policing enforcement



Road Infrastructure & Maintenance decreasing road maintenance/assets and its impact on road casualties



Post-Crash Response
improving the fast and effective response to road collisions

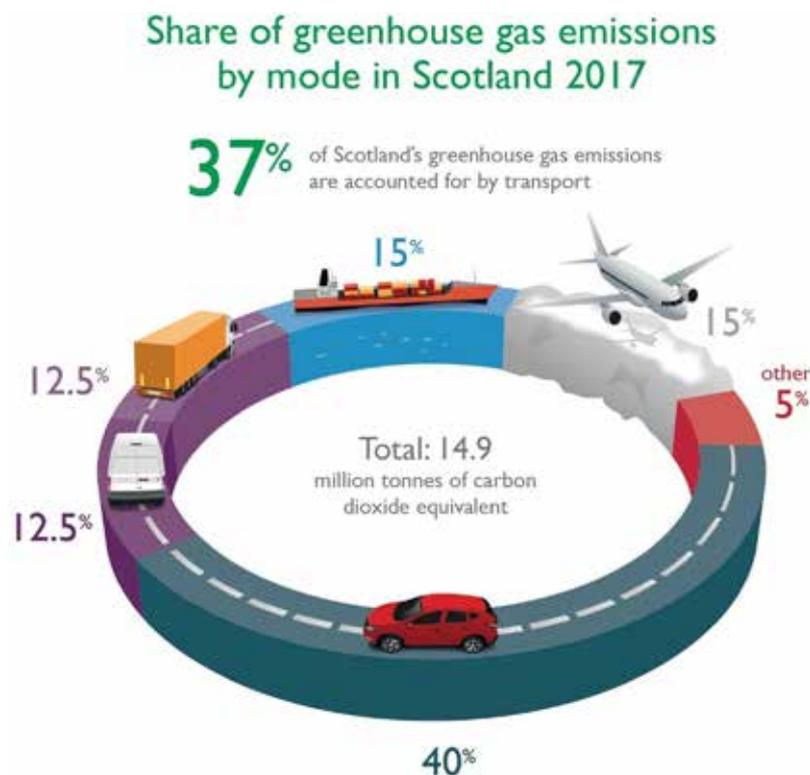


Road Users unsafe road use by certain types of Road Users and its effect on road casualties

Climate emergency: the potential effects of climate change on road casualties and the benefits road safety initiatives can bring

In direct response to the Paris Agreement, Scotland's landmark Climate Change Act¹⁹ is the toughest, most ambitious legislative framework in the world. It commits Scotland to becoming a net-zero society by 2045 – five years before the rest of the UK - in line with advice from the government's independent expert advisors, the UK Committee on Climate Change. The Scottish Government will also respond to the global climate emergency by adopting an ambitious new target to reduce emissions by 75% by 2030 – the toughest statutory target of any country in the world.

Figure 10: Share of greenhouse gas emissions by mode in 2017



Transport is currently Scotland's largest sectoral emitter, responsible for 37% of Scotland's total greenhouse gases in 2017. The largest source of transport emissions is road vehicles, with cars contributing 40% and Light Goods Vehicles (LGVs) and Heavy Goods Vehicles (HGVs) responsible for 25%.²⁰

The National Transport Strategy 2 Strategic Environmental Assessment report²¹ states: "our transport system will adapt to remain resilient and reduce the harmful effects on future generations, and will help deliver our net-zero target". This will be tackled through a range of actions including an ambition to phase out the need for new petrol and diesel cars and vans by 2032 and promoting greener, cleaner choices by reinforcing the Sustainable Travel Hierarchy to promote and design our transport system so that walking, cycling and public and shared transport are promoted.

¹⁹ <http://www.legislation.gov.uk/asp/2019/15/enacted>

²⁰ National Atmospheric Emissions Inventory 1990-2017

²¹ <https://www.transport.gov.scot/media/45122/national-transport-strategy-2-strategic-environmental-assessment-environmental-report.pdf>

Road safety, as with other cross-cutting policies, must take the climate emergency into consideration and this Framework will seek to do just that.

Changes in temperature and rainfall, along with extreme weather events caused by climate change, will affect many aspects of our lives including road safety. There will be more torrential rain, higher summer temperatures and heat waves that affect the conservation of the pavement and road mobility. Road users will need to adapt and gain the knowledge, skills and experience required to become safe and responsible users under such conditions. Employers and employees should be encouraged to apply the [Severe weather: fair work charter](#)²² in order to mitigate road safety risk within their organisations.

Non-road safety-related initiatives implemented to tackle the climate emergency may also have negative effects on road safety. For example, the roll-out of more electric vehicles - be it cars, vans or buses - in the next decade will continue to pose a road safety risk due to their lack of noise emissions at low speeds.²³

In relation to vehicle emissions reduction and air quality improvement, speed management - a pillar of the Safe System, whose primary role is improving road safety - also has the potential to reduce vehicle emissions by smoothing traffic flow and thus contributing on several fronts to providing a safer environment to facilitate increases in walking, wheeling and cycling. A 2017 UK National Institute for Clinical Excellence Public Health Advisory Committee was tasked with looking at [air pollutants from vehicles](#).²⁴ It advised that reducing 'stop-go' driving can help lower these. It also found traffic-calming measures like speed bumps could increase emissions. Many traffic-calming measures are promoted as a way of making 20 mph speed limits 'self-enforcing' to ensure compliance. The Public Health Advisory committee advised the UK Government

to 'promote a smooth driving style' via a range of measures that should include implementing 20 mph limits in urban areas where speeds are already low, but without additional calming measures. The Department for Transport's three-year evaluation of the HGV speed increase in England and Wales²⁵ (from 2015) published in July 2020, has helped develop our understanding of the impact of the HGV speed limit change on a number of fronts including: driver behaviour; vehicle speeds; the economy; the environment; and most importantly, road safety. Its key findings are that there has been no statistically significant change in the number of accidents involving at least one HGV on all single and dual carriageway roads and no attributable change in noise and air quality due to the policy change. Our own [evaluation of the potential impacts of increasing speed limits for HGVs in Scotland](#)²⁶ shows there are small safety disbenefits and marginal environmental impacts; There are small safety benefits and increases in CO2e emissions when restricting the speed limit change to trunk roads. Conversely, when the speed limit increase is applied to all rural roads there are small safety disbenefits and reductions in CO2e.

Finally, in relation to promoting greener, cleaner choices by reinforcing the Sustainable Travel Hierarchy of NTS2, the new Framework consistently applies the Hierarchy on road safety matters; we expect to have intermediate outcome targets to 2030 for pedestrians and cyclists and we propose the following two strategic actions in relation to the Hierarchy:

- ensure road safety is a key focus of active & sustainable travel in Scotland
- all road users will understand their road safety responsibilities and improve their attitudes and behaviours to ensure the safety of themselves and other road users.

22 <https://www.gov.scot/publications/severe-weather-charter/>

23 Until the fleet is naturally renewed with latest EU safety feature requirement that came into force on 1 July 2019 - <https://roadsafetygb.org.uk/news/noise-systems-to-stop-silent-electric-cars/>

24 <https://www.nice.org.uk/guidance/ng70>

25 <https://www.gov.uk/government/publications/final-report-on-the-increased-speed-limit-for-heavy-goods-vehicles>

26 <https://www.transport.gov.scot/media/42375/final-report-june-2018-evaluation-of-impact-of-increasing-speed-limit-for-hgvs-in-scotland.pdf>

Active & Sustainable travel: its potential effects on road casualties and the benefits road safety can bring

The Scottish Government is committed to achieving a more active and healthier nation. It is also committed to the long-term vision for active travel in Scotland²⁷, where communities are shaped around people, with walking and cycling the most popular choice for shorter, everyday journeys. In order to encourage more people to choose active travel, the Scottish Government doubled the active travel budget to £80 million in 2018-19 and it is now at a record £100.5 million for 2020-21 with the commitment to provide over £500 million over five years for large scale, transformational active travel infrastructure projects, access to bikes and behaviour change schemes.²⁸ The main beneficiaries of this investment are local authorities, working in partnership with active travel stakeholders. In 2020, there are over 280 walking, cycling and place-making infrastructure partnership projects underway, seeking to deliver better segregated cycleways and walkways to make our towns and cities friendlier and safer. The funding is also used for urban design projects, e-bike grants, and behaviour change and education projects.

Transport Scotland invests over £1 billion per year in active and sustainable transport. Since 2012, it has invested almost £30 million to establish one of the most comprehensive electric vehicle charging networks in Europe to support our 2032 ambition to phase out the need for new petrol and diesel cars and vans. It made an extra £17 million available through its Low Carbon Transport Loan earlier this year, and will expand the scheme to include used electric vehicles. Its transformational Bus Partnership Fund for local authorities and the roll

out of infrastructure for the trunk road network to prioritise high-occupancy vehicles, such as buses, will be used in conjunction with new partnership powers from the Transport (Scotland) Act 2019, to secure reciprocal commitments on a range of bus measures to improve the bus offer and support the viability of bus networks across the country. On 16 July 2020, and in response to COVID-19 pandemic, the Scottish Government announced it was providing £10 million to support the rapid deployment of bus priority infrastructure²⁹ by local authorities. At the same time, to breathe new life into mid-life buses and to improve air quality, the £8.8 million Bus Emissions Abatement Retrofit scheme now has improved grant thresholds for operators. As previously noted, electric vehicles will continue to pose a road safety risk at low speeds due to the lack of noise they create.³⁰

We envisage that more and more people, will opt to cycle (including on e-bikes³¹), walk or use micromobility devices - such as e-scooters, hoverboards or segways - be it for environmental considerations in response to our climate emergency, or for reasons of personal health and fitness - which will result in more vulnerable people on the roads. In early July 2020, the Department for Transport (DfT) introduced new regulations and guidance to allow rental e-scooter trials³² to start for the next year across towns and cities in the UK. Stronger active mobility policies, especially in urban areas, can be a major game changer in reducing CO2 emissions, improving air quality, and reducing congestion. We know the perception of urban and rural roads as unsafe is a barrier against these everyday journeys. That is why measures which encourage these mobility choices also need to take safety considerations into account systematically, as does this new Framework. The UK Government, as part of its Future of Mobility Regulatory Review, following the publication of the

27 <https://www.transport.gov.scot/media/33649/long-term-vision-for-active-travel-in-scotland-2030.pdf>

28 <https://www.gov.scot/publications/protecting-scotland-renewing-scotland-governments-programme-scotland-2020-2021/pages/2/>

29 <https://www.transport.gov.scot/news/10-million-for-pop-up-bus-priority-infrastructure-in-scotland/>

30 Until the fleet is naturally renewed with latest EU safety feature requirement that came into force on 1 July 2019 - <https://roadsafetygb.org.uk/news/noise-systems-to-stop-silent-electric-cars/>

31 In July 2020 the Scottish Government is providing £900,000 to encourage the uptake of e-bikes across Scotland. Local authorities, public sector agencies, community groups and further and higher education institutions can now apply for money to adopt e-bikes, adaptive bikes and e-cargo bikes as an alternative to car journeys - <https://www.transport.gov.scot/news/e-bikes-to-help-charge-scotland-s-green-recovery/>

32 <https://www.gov.uk/government/publications/e-scooter-trials-guidance-for-local-areas-and-rental-operators/e-scooter-trials-guidance-for-local-areas-and-rental-operators>

Future of Mobility: Urban Strategy³³ in March 2019 recently closed a call for views and evidence³⁴ from all those with an interest in what an innovative and flexible regulatory framework should look like for emerging transport technologies and business models, recognising their benefits to society, the environment and the economy, but also the risks they could pose if left unmanaged.

As the active travel agenda unfolds (pedal cycle traffic is estimated to have increased by 15 per cent since 2008), Scotland may face the so-called 'safety in numbers' effect which can be defined as follows: with significant increases in walking and cycling, the safety rate improves, but the actual number of pedestrian and cyclist casualties may increase. This could be exacerbated by the current lack of knowledge of the Highway Code³⁵ among drivers in relation to ensuring the safety of cyclists and pedestrians.

Since the Mid-term Review of the current Framework, road safety initiatives have focused on making walking and cycling safer but have not had the opportunity to tap into the record-level of Scottish Government funding for Active Travel. Due to Covid-19 pandemic and to better enable physical distancing, the Scottish Government launched late April 2020 a £30 million Spaces for People fund³⁶ for a new infrastructure programme for pop-up walking and cycling routes or temporary improvements to existing routes. More importantly, there appears to be a misalignment between the road safety benefits of supporting active travel and the benefits to the active travel in supporting road safety. There is for example a different approach towards mandating, or not, cycle (and e-scooter) helmet-wearing. Additionally, the traditional accident investigation and prevention approach on trunk roads have not met the expectation of stakeholders and campaign groups with respect to active travel.

Due to their numbers and greater vulnerability, pedestrians continue to represent the second-largest category of killed and seriously-injured by mode of transport (27% in and 24% respectively for provisional 2019) after car users (46,4% and 46,5% respectively for provisional 2019). 95% of pedestrian casualties for provisional 2019 occurred on built-up roads.

Although the number of cyclists killed remains statistically very low, the number of seriously-injured is almost identical in actual 2018 to that of 2008. 63% of all fatalities over the last three years to 2019 were on non-built up roads. In 2017, cyclists accounted for 1.5% of all journeys and 0.6% of traffic in Scotland but, disproportionately, 7.7% of all casualties. Per unit distance travelled, pedal cyclists in Britain have approximately twice the level of risk of being killed than is the case in the Netherlands and Denmark where, of course, cycling is far more common.³⁷

Health: improving road safety to reduce impact on public health services

This challenge looks at health holistically as issues of fatal and serious injuries sustained post-collision are covered in the separate post-crash response challenge.

Given the significant and rising costs associated with ill-health and related failure demand, there is both an economic and health benefit to a renewed focus on preventative interventions which reduce pressure on other parts of the public sector and contribute to Scotland's long-term sustainable economic growth. Public health reform is an equal partnership between central and local government, recognising that improving public health is a shared responsibility at both national and local level. Reform aims to improve public

33 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/846593/future-of-mobility-strategy.pdf

34 <https://www.gov.uk/government/consultations/future-of-transport-regulatory-review-call-for-evidence-on-micromobility-vehicles-flexible-bus-services-and-mobility-as-a-service>

35 Note that DfT on 28 July launched a consultation on The Highway Code which focuses on improving road safety for cyclists, pedestrians and horse riders until 27 October. The main alterations to the code being proposed are introducing a hierarchy of road users, clarifying existing rules on pedestrian priority on pavements, providing guidance on cyclist priority at junctions and establishing guidance on safe passing distances and speeds when overtaking cyclists and horse riders

36 This has been supported by a package of guidance and support to local authorities from Transport Scotland and Sustrans Scotland for improvements such as widened pavements and cycle lanes - <https://www.transport.gov.scot/news/10-million-to-support-pop-up-active-travel-infrastructure/>

37 DfT ROAD SAFETY MANAGEMENT CAPACITY REVIEW - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/717062/road-safety-management-capacity-review.pdf

health through a 'whole system' approach, focused on prevention and early intervention, and creating the conditions for wellbeing in our communities.

Road casualty reduction is an important contributor to improving Scotland's public health by preventing premature death and injury, particularly among motorcyclists, young people, cyclists and pedestrians. Public health and road safety are linked by a number of factors, such as the speed and volume of traffic, which can cause injuries and prevent opportunities for healthy activity outside the home.³⁸ Safer roads and road use pave the way for more people cycling and walking which, in turn, improves their health and increases the numbers living in vibrant, healthy and safe communities. Transport Scotland's published the Good Practice Guide on implementing 20 mph speed limits³⁹ to promote the introduction of 20 mph and are supportive of these limits in the right environment. The only major UK study into the effectiveness of sign-only 20 mph speed limits was published by the Department for Transport in 2018.⁴⁰ This three year study found that, overall, 20 mph limits are perceived to be beneficial for cyclists and pedestrians.

Thus, improved road safety would directly assist in achieving the Public Health Priority of a Scotland where we live in vibrant, healthy and safe places and communities, as well as Scotland's National Performance Framework Health outcome: We are healthy and active.

However, public perception seems to be that road death is not a public health issue when compared to other causes of sudden death such as murder or knife crime. This perception is not evidenced by mortality statistics, which show, in 2018, around three times more people were killed on the roads than were victims of murder.⁴¹

In addition, data collected on discharges from non-obstetric and non-psychiatric acute hospitals consistently show the c. 3000 per year admissions for those seriously-injured in collisions (those requiring at least an overnight stay) is consistently double that of casualties reported via STATS 19⁴² (c. 1600 per year). Looking to the future, this disparity needs to be addressed in order to understand the true picture of road casualties. This may become more of a problem in the future as people walk and cycle more and continue to report injuries through hospitals rather than the police.

Finally, the health of our road users needs to be appropriate for the mode of transport. On physical health, good eyesight can become problematic with age and may lead to greater use of contributory factors such as 'failed to look properly' or 'failed to judge other person's path/speed'. From a mental health perspective and following a research carried out by Mercedes in 2017⁴³, van drivers, particularly in the Gig economy, are especially prone to poor mental health from a combination of unpredictable journey times, traffic congestion, tight deadlines, high workload and lack of social interaction, all of which can lead to stress and fatigue, thus creating a road safety risk to themselves and others.

The Safe System: implementing it at all levels

While the Safe System Approach has been adopted in Scotland, there seems to be a lack of knowledge, among stakeholders and members of the public, on what it is and what it means for road safety professionals and for individual road users.

As a result, many professionals continue to use traditional delivery methods which seek to correct human behaviour, rather than acknowledge that collisions are also related to the inherent risks of the existing infrastructure.

38 <https://www.rosipa.com/rospaweb/docs/advice-services/road-safety/practitioners/rospa-road-safety-and-public-health.pdf>

39 <https://www.transport.gov.scot/media/38640/20-mph-good-practice-guide-update-version-2-28-june-2016.pdf>

40 <https://www.gov.uk/government/publications/20-mph-speed-limits-on-roads>

41 National Records of Scotland, Vital Events Reference Tables 2018 and supplementary analysis - <https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/vital-events-reference-tables/2018/section-6-death-causes>

42 road accidents reported to the police. These provide detailed statistics about personal injury road accidents, vehicles and casualties involved - <https://www.gov.uk/government/collections/road-accidents-and-safety-statistics>

43 <https://www.vansdirect.co.uk/mercedes-vans-investigates-mental-health-van-drivers>

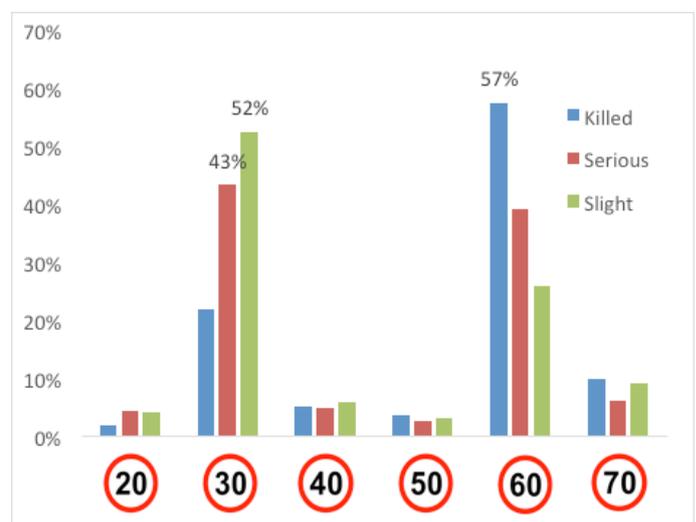
Unlike this traditional approach, the Safe System accepts that human error is no longer the primary cause of collisions. Rather, a failure of the road system is what results in death or serious injury. A Safe System also shapes interventions to meet the long-term goal of zero deaths and serious injuries, rather than relying on traditional road safety interventions to reduce collisions. The key objective for those managing the roads is to recognise that, when collisions occur as a result of road user error, high-severity outcomes, such as death and serious injury, need not occur. Therefore, roads and infrastructure need to be 'forgiving' and take account of human vulnerability.

In many areas, this will require a significant shift in how road safety is delivered. We need to educate all those involved on what the Safe System entails, and why it is important everyone plays their part to ensure it is fully-implemented within every aspect of road safety delivery.

This will be difficult in the current economic environment where many areas are already unable to react to and address collision causation factors. Therefore, switching to a more proactive/preventative approach will require significant buy-in from leadership, followed up by decisive action to align objectives in public health, occupational health and safety, environmental, and social justice, in order to maximise the benefits of cost-effective investment in improving the various infrastructures. Fully-implementing the Safe System can produce economic savings for a society, as the costs of preventing casualties are usually substantially less than the actual costs of treating these casualties. Currently, road collision costs, including for casualties, represent around 0.5% of Scotland's gross domestic product.⁴⁴

Speed Management: road users not travelling at appropriate speeds, its effect on road casualties

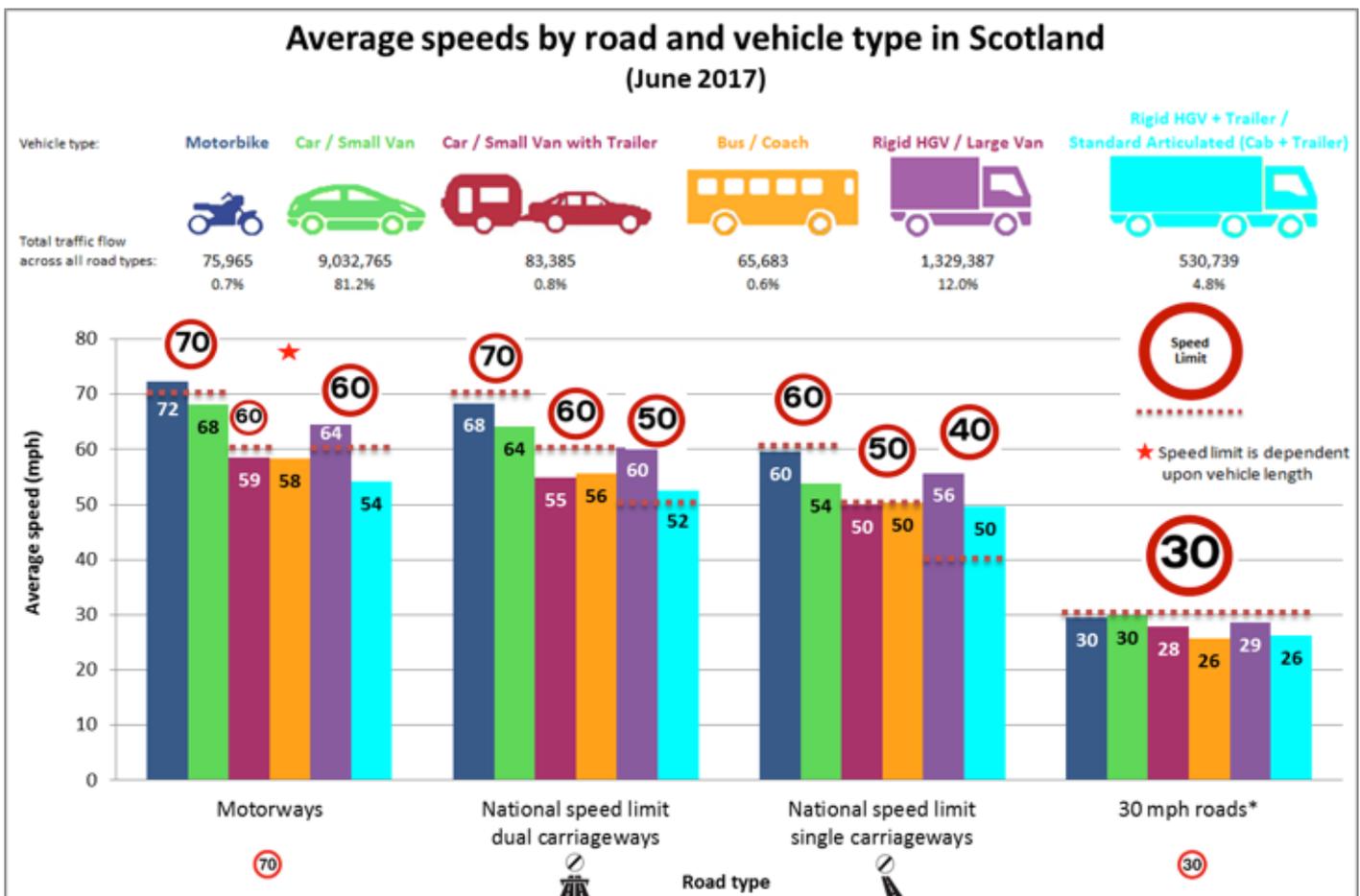
There continues to be a cultural speed issue in Scotland, evidenced through the Road Safety Information Tracking Study (RITS) of Driver attitudes and behaviour⁴⁵ which found that, since 2012, reported speeding behaviours have remained mostly unchanged, at around 55%, though a downward trend is more apparent since July 2015. There are still too many collisions related to non-compliance with the speed limits or not driving/riding to the conditions. In Scotland overall, the number of fatalities due to speeding has decreased from 30% in 2009 to 17% in 2018. The following graph, which shows casualties by severity and speed limit, clearly shows more than half of all fatalities occur on 60 mph roads (typically rural roads) and almost half of serious injuries (and 82% of all pedestrian serious casualties) occur on 30 mph roads (mostly urban and sub-urban roads).



⁴⁴ The total cost of collisions to Scotland was £1 billion in 2018 compared to a GDP was £180 billion

⁴⁵ <https://roadsafety.scot/resources/rits-driver-attitudes-and-behaviour-tracking-2018/>

The graph below shows average speeds by road and vehicle type⁴⁶ analysed at 26 sampled locations in June 2017 in a one-off exercise, using four to ten counters per road type. It indicates low levels of national speed compliance - mostly from HGVs on dual and single carriageways. It is worth noting, before Average Speed Cameras were deployed on the A90, one in five vehicles were estimated to be exceeding the speed limit by 10 mph or more. This figure is now approximately 1-in-5000.⁴⁷ The same improvement has been seen across other routes where such systems have been installed.



In relation to non-national speed limits, such as 20 mph zones, road policing operations, observational studies and/or self-reporting data all indicate a low level of speed compliance. For example, the RAC Report on Motoring 2019⁴⁸ found non-compliance with 20 mph was up from 39% to 44%. The three-year study by the Department for Transport into the effectiveness of sign-only 20 mph limits⁴⁹ found that lack of enforcement and lack of concern about the consequences of speeding were the primary reasons given for non-compliance.

Given the above, it may be beneficial to consider undertaking a National Speed Management Review.

⁴⁶ All counters were desired to be at least 1 kilometre from any fixed safety camera enforcement and at a location where other elements such as roundabouts, junctions etc. would not influence a driver's speed. The majority of counters met the specified location criteria but due to both counter and data availability it was not always possible to include counters in the sample that met all the desired criteria

⁴⁷ <https://www.transport.gov.scot/transport-network/roads/scottish-safety-camera-programme#42385>

⁴⁸ <https://www.rac.co.uk/drive/features/the-menaces-on-our-roads-2019/>

⁴⁹ <https://www.gov.uk/government/publications/20-mph-speed-limits-on-roads>

Road Safety Delivery: delivering a shift in resources and funding to focus on road safety

Road safety funding practices vary, even across areas whose road safety records are favourable, suggesting there is not a 'one size fits all' approach.

More recently, in July 2019, the Road Safety Foundation assessed the effectiveness of road safety engineering in local government across the UK⁵⁰, including Scotland. It found many local authority practitioners share three main concerns:

- Low levels of resourcing within engineering teams, resulting in a large proportion of time responding to public concerns and administrative duties, rather than designing and implementing life-saving schemes
- The lack of capital investment for engineering improvements
- The inability to compete with other core local authorities services, and lack of recognition (at a senior level) of both the scale of the problem of road trauma and the real opportunity to tackle the issue

Diminishing financial resources have coincided with a reduction in the number of 'traditional' road safety officers (some authorities no longer have any) and engineers across Scotland. Not only has this produced a knowledge/skills drain within local authorities but, without professional and appropriate resources, there is a significant reduction in the priority which should be given to road casualty reduction both on the roads and in our educational establishments. Furthermore, the opportunities to share information and good practice are also reduced.

Currently, the estimated spend, at both national and local level, is not commensurate with the value of preventing deaths and serious injuries; in 2018, the cost of collisions to the Scottish economy was £1 billion, compared to an estimated spend of £100 million in 2017. Further analytical work by Transport Scotland has calculated a benefit-cost ratio of 4:1⁵¹, when taking into account the overall road safety spend, encompassing police, justice and health resources, compared to the cost of casualties that may have been prevented in 2017. If widely-communicated and recognised at every level of government, there is a compelling case for decision-makers to re-prioritise road safety spend within overall budgets by better aligning public health, occupational health and safety, environmental, and social justice objectives with road safety objectives. This would help maximise the benefits of cost-effective investment and funding in road safety through co-funding opportunities from various budget lines.

With this in mind, there is an opportunity to prepare a strong business case for road safety investment, using a 'willingness to pay' model: such a cost-benefit analysis would assess the value of a life saved against the negative impact of road collisions on, for example, increased journey time, to make road safety initiatives compete successfully with other funding demands.

The current Framework to 2020 established and maintained strong partnership working across the whole road safety community in Scotland, and therein lies its success. However, significant challenges lie ahead, given the increased pressure to perform better with fewer resources. With this in mind, the Framework Strategic Partnership Board developed an approach in summer 2018 which highlighted the need to strengthen how we work collaboratively, particularly at local level, to co-design and deliver road safety change. This has been named the 'Team Scotland' approach.

⁵⁰ <https://roadsafetyfoundation.org/assessment-of-the-sustainability-of-road-safety-engineering-in-local-government/>

⁵¹ Scotland's road safety spend was approximately £103 million in 2017/18. Compared with 2004-2008 levels, a total of 45,882 casualties across all injury categories were prevented over the period 2009-2017. This amounts to an overall cost saving of £3.02 billion making a caveated benefit cost ratio of 4:1. The total estimated accident costs in Scotland in 2017 was £1.01 billion across all road safety injury accidents.

The main aim of Team Scotland is to ensure better connections between national and local activity and provide an evidence base for road safety delivery. Team Scotland aims to work closely with delivery partners to understand local systems and their relationship to national systems; identify those initiatives being undertaken at local level; learn from best practice; and evaluate results with a view to sharing best practice. It is also about delivering a wider understanding of the challenges we all face, and working more closely to devise and implement solutions for those challenges. The Team Scotland approach has already begun and will continue to run through the new framework. In order to further improve connectivity between national and local levels, we have introduced a new tier in the Framework governance structure - the Local Partnership Forums (see Section 8).

Driving/Riding for Work and Workplace culture: its effect on road casualties

We must strive for a future where no one is killed while driving/riding for work. Health and Safety Executive (HSE) figures⁵² highlight that, in 2018-19, driving accounted for 18 of the 29 work-related deaths in Scotland, making driving the most dangerous work activity. This situation poses a risk to every road user, even more so with the increase in Light Goods Vehicles (LGVs) on our roads and the growth of the “Grey Fleet⁵³”.

In 2018 in the UK, LGVs were the second most-registered vehicles, coming just behind cars. Over the last 24 years, vehicle stock has increased by 51%. The largest increase was for LGVs (88%), followed by motorcycles (72%), and cars (49%), and this trend looks set to continue. According to the Freight Transport Association⁵⁴, there is a common misconception that the increase in vans on our roads is due to a soaring demand for online shopping, as part of the Gig economy: this

is not true, as only one in ten vans is used for this purpose. Rather, the majority is used to support an array of trade professions, such as plumbers and gardeners, enabling them to travel to and from jobs with their equipment on board.

Health and safety law applies to work activities on the road in the same way it does to all work activities. All workers are entitled to work in a safe environment where risks to their health and safety are properly controlled. Employers have duties under health and safety legislation for on-the-road work activities, and this also extends to the self-employed. In general, this requires an adequate and suitable generic assessment of risks for the various types of driving tasks undertaken within every organisation, including: delivering goods; travelling to meetings; call-outs; emergency response; vehicle recovery operations; and courier delivery; to name but a few. In addition, employers must consider the safety-critical features of: the journey purpose; the vehicle to be used; and the driver/rider him/herself; as these are equally important factors in collision risk. Unfortunately, the HSE does not recognise the driving seat as a place of work and compliance to health and safety legislation for on-the-road work activities varies due to the size of the company and their commitment to road safety.

A recent IAM RoadSmart White paper⁵⁵ highlights some alarming practices and attitudes when it comes to employers, with almost half of them expecting employees to answer their phone at any time, including while driving for work.

The Gig economy is another area of great concern as drivers/riders have to ‘chase’ work, often with little or no training, nor any safety equipment, which often results in them taking greater risks and having poor wellbeing on the road.⁵⁶

52 www.hse.gov.uk/statistics/sources.htm

53 Grey Fleet' is a term used to describe the business miles travelled by an employee in their own vehicle. This 'fleet' of employee-owned cars is deemed 'grey' as the vehicles in use are in somewhat of a grey area of responsibility for the employer

54 <https://www.drivingforbetterbusiness.com/downloads/dfbb-publications/DfBB-CV-Fleet-Review-Apr2019.pdf>

55 Just over one in eight employees who drive for work (13%) and more than one in 20 leaders (6%) consider the hard shoulder a safe place to take a work call. One in six UK employees who drive for work (17%) say they have been involved in an incident when driving for work due to a phone call from a colleague. <https://www.iamroadsmart.com/media-and-policy/newsroom/news-details/2019/12/16/urgent-action-is-needed-to-reduce-fatal-and-serious-crashes-involving-at-work-drivers-says-iam-roadsmart>

56 Companies seem more interested in 'the life of the parcel than the person delivering it'

A variety of respected organisations, such as HSE, the Royal Society for the Prevention of Accidents (RoSPA), and the Transport Research Laboratory (TRL), have consistently indicated between one quarter and one third of all collisions in the UK involve someone driving for work. In Scotland in 2018, there were 8,411 reported road casualties, of which 1,299 occurred where the journey was work-related. These resulted in nine pedestrian deaths, three in a car/taxi, and three in an LGV. 441 of those injured were travelling in a car/taxi, 272 were pedestrians, and 193 were in an LGV. In 2018, the greatest number of those killed or seriously injured (KSI) were aged 53-61 - 280 (including seven fatalities), with the lowest number being for the over 60s - 123 KSIs (including five fatalities).

Transport Scotland has estimated that 1.1 million private vehicles are used for business on Scotland's roads. This 'Grey Fleet' can have a significant effect on both the risk profile and the operational costs of any organisation. Research carried out by Driving for Better Business highlighted a number of concerns around compliance with legislation and the wellbeing of employees driving for work.⁵⁷ These include: mobile phone usage; health & safety; business insurance; regular servicing; and vehicle safety checks. We need to ensure the 'Grey Fleet' becomes the 'black and white fleet'.

In addition with HGVs travelling 2.6 billion kilometres on Scotland's roads every year⁵⁸, the need for these vehicles to be properly-maintained and used safely is paramount. Concerns include issues such as driver fatigue and poorly loaded/insecure vehicles.

The Scottish Occupational Road Safety Alliance (ScORSA) was created to raise awareness of managing occupational road risk and to promote occupational road safety within Scotland, so that road safety becomes ingrained in the workplace culture. This would, for example, include applying the [Severe weather: fair work charter](#).⁵⁹ ScORSA is the only dedicated source of free

information, guidance and advice in relation to the management of occupational road risk specifically aimed at enterprises based in Scotland.

Emerging Technologies: consideration of benefits and challenges of technology on road safety

Scotland needs to be ready to embrace new trends, such as connectivity and automation, which will, in the future, create new road safety opportunities by reducing the role of human error (driver/rider error or action was reported in 65% of all reported accidents in 2018, with 'failed to look properly' the most common type at 32%). However, as we remain in the transition phase, new risks will emerge; these include vehicles with a wide range of different automated/connected capability, which will have to operate in mixed traffic conditions alongside 'traditional' vehicles and vulnerable road users, such as motorcyclists, cyclists and pedestrians.

A specific EU strategy on connected and automated mobility was adopted as part of the "Third Mobility Package". The strategy offers tremendous potential in reducing and eventually eliminating driver error, but it also creates new challenges, such as cyber-security and the interaction with traditional' vehicles and other road users, both of which need to be carefully monitored.

In Scotland in 2019, a provisional total of 4,557 car users were injured in road collisions, representing 60% of all casualties. Of these, 78 died. There were provisionally 1,243 pedestrian casualties (16% of total casualties), of whom 46 died; 564 pedal cycle casualties (7% of the total) of whom 8 died; and 519 motorcycle casualties (7% of the total), of whom 25 died.

⁵⁷ a UK government-backed Highways England programme to help employers in both the private and public sectors reduce work-related road risk, decrease the associated costs and improve compliance with current legislation and guidance - <https://www.drivingforbetterbusiness.com/>

⁵⁸ <https://www.transport.gov.scot/media/47300/scottish-transport-statistics-2019.pdf>

⁵⁹ <https://www.gov.scot/publications/severe-weather-charter/>

Following adoption of an EU regulation on the general safety of motor vehicles and the protection of vehicle occupants and vulnerable road users, as of mid-2022, it will be mandatory for all new cars on the EU market to be equipped with advanced safety systems. An estimated 7,300 deaths and 38,900 serious injuries will be avoided over a ten-year period within the EU. The infrastructure safety management work will include network-wide risk mapping and reinforced provisions for vulnerable road users. The former UK Government has committed to align its vehicle standards to that of the EU.

Using current figures, and based on the population of Scotland within the EU, the impact of adopting vehicle safety measures in Scotland could prevent around seven fatalities and 39 serious injuries per year.

New in-vehicle safety and driver assistance systems can both mitigate the severity, and reduce the likelihood, of collisions. Furthermore, the development of safer vehicles has had a significant, positive impact on crash survivability. While road user behaviour accounts for the majority of crashes, the Safe System also identifies the need to make crashes survivable. Research and development in this area is essential.

Initially, when the fleet is mixed, there will be complex interactions between autonomous vehicles, human-driven vehicles, pedestrians and other road users. These interactions would be a first for both technology and human, and the challenge will require navigating unfamiliar and difficult situations which would typically require some form of human judgement. Another key factor is the possibility of road users purposely interfering with Connected and Autonomous Vehicles (CAVs) which brings a further risk into the mix.

In Scotland in 2018, there were 230 bus and coach-users injured, of whom 35 suffered serious injuries (two died). There were also 319 casualties who were travelling in Low Goods Vehicles (LGVs), 73 Heavy Goods Vehicles (HGVs), 104 in taxis, 20 in minibuses and 56 people using another means of transport.

The development and deployment of CAVs has the potential to bring transformative change to peoples' lives, not just in how we travel, but in how we work, where we live, the environment, and safety. The CAV Roadmap for Scotland⁶⁰ sets out the future vision for how Scotland can benefit from and contribute to this exciting and innovative sector.

It supports the Programme for Government commitments to put sustainable transport at the heart of decision-making and ensure that transport plays a key role in delivering net zero emissions by 2045.

The CAV Roadmap is aligned with Scotland's Future Intelligent Transport Systems Strategy and our draft National Transport Strategy (NTS2), which sets out a compelling vision for the transport system over the next 20 years, one that protects our climate and improves lives.

New technology is also being used in road infrastructure to mitigate risk. Scotland's Intelligent Transport System (ITS) makes use of Automatic Number Plate Recognition, Average Speed Cameras and Variable Message Signs to improve the journey. In addition, Temporary Average Speed Cameras at Roadworks (TASCAR) contribute towards the safety of road workers and road users, as well as improving traffic flow.

In-car technology and telematics will also play a part in helping to manage risk. The motor insurance industry recognised this and many companies offer reduced premiums, when technology helps reduce risk, particularly for young drivers. Since then, there has been a greater uptake of telematics through black box technology and, more recently, via phone apps.

With the rise in technology within and outwith vehicles, there is an ever-growing risk of overconfidence in, and over-reliance on, technology. This could lead to road users adopting more risky behaviours, believing the technology will accommodate them and adapt appropriately. Furthermore, technology is still largely unfamiliar and may lead to increased distraction and/or

⁶⁰ <https://www.transport.gov.scot/publication/a-cav-roadmap-for-scotland/>

improper use which, in turn, increases collision risk. Hence, new and emerging technologies must be researched and evaluated to evidence whether they help or hinder road safety.

Scotland needs to be sure it embraces technology for the right reasons and this will involve not only partnership working, but also substantial investment and intensive research to determine the benefits, risks and challenges before implementing new technology.

Enforcement/Deterrence: increasing enforcement of the rules of the road

Enforcement is an essential part of the Safe System. A [Brake and Direct Line survey](#) found almost two in three (62%) drivers said more enforcement would persuade them to take more care on the road.⁶¹ This would enhance road safety but this reality is felt differently by different road users. The latest RITS Driver attitudes and behaviour tracking study⁶² identified the perception of 'you are more likely to be stopped by the police this year' continues to show a downward trend, now at its lowest -32%. In addition, a three-year study by the Department for Transport into the effectiveness of sign-only 20 mph limits⁶³ showed lack of enforcement and lack of concern about the consequences of speeding were identified as the primary reasons for non-compliance.

Given this, there is an issue of road users not perceiving the police to be visible enough for them to improve their behaviour.

Technology, such as alcohol interlock for convicted drink-drivers in some European countries, can be used to enhance enforcement beyond usual road policing by combatting the small minority who insist on using our roads in a dangerous and antisocial manner. They continue to present a threat to themselves and others. Other technology, such as speed and red light cameras, has been proven to reduce deaths and injuries, as demonstrated in a report by Professor Richard Allsop, on behalf of the RAC Foundation⁶⁴, which estimated that fixed speed cameras have reduced injury collisions across all severities by 16%, and fatal and serious collisions by 14%.

The level of public support for safety cameras in Scotland⁶⁵ is high - a road user perception survey showed 76% agreed with the use of safety cameras and that they are a good thing; 71% agreed they help discourage dangerous driving in areas they are used; and 64% agreed they help prevent accidents in areas they are used.

An important development in the use of technology is the proliferation of dash/helmet cameras, providing digital video and photographic evidence which can be used in prosecutions. Operation Snap⁶⁶, an award winning initiative by GoSafe Wales (the Welsh equivalent of the Scottish Safety Camera Programme) enables the public to submit footage to the police for such use. Since late 2016, there has been an increase in detection rates without significant extra enforcement costs, and the public has reacted positively to this initiative, often viewed as a form of community policing.

61 Brake is a road safety charity working with communities and organisations across the UK to stop the tragedy of road deaths and injuries, make streets and communities safer for everyone, and support people bereaved and seriously injured on roads. - <https://www.brake.org.uk/facts-resources/15-facts/463-speed-enforcement>

62 <https://roadsafety.scot/resources/rits-driver-attitudes-and-behaviour-tracking-2018/>

63 Published in November 2018 - <https://www.gov.uk/government/publications/20-mph-speed-limits-on-roads>

64 <https://www.racfoundation.org/research/safety/speed-camera-data-report>

65 <https://www.transport.gov.scot/media/45762/safety-camera-annual-report-2018-19.pdf>

66 <https://gosafe.org/faq/operation-snap/>

Another form of community policing in Scotland, in which the public assist police in protecting the most vulnerable road users, especially against aggressive driving, is Community Speedwatch.⁶⁷ This initiative invites active members of local communities, with police support, to monitor speeds of vehicles using hand-held equipment. Vehicles exceeding the speed limit are then referred to the Police for further action with the aim of educating drivers and encouraging them to reduce their speeds.

Road Infrastructure & Maintenance: decreasing road maintenance/assets and its impact on road casualties

The Scottish Government's Infrastructure Investment Plan (IIP) sets out priorities for investment and a long-term strategy for the development of public infrastructure in Scotland up to 2035 by sector. Investment in Scotland's transport infrastructure will support the sustainable travel hierarchy as set out in the National Transport Strategy and Scottish Planning Policy. The projects and programmes listed within the IIP will make a significant contribution to meeting our targets and policies established for reducing collisions on the trunk road network.

Maintaining the road network in Scotland is a vital part of ensuring the safety of the network. Each element of the maintenance regime plays an important part in providing a safe driving environment. Cyclical reviews of the road surface, infrastructure features, and foliage cutbacks, as well as an annual winter service programme, are used to ensure that potential hazards are identified.

Our road network is constantly under pressure due to changes in the volume and type of traffic and requires that we provide solutions in order to meet current and future challenges. We must continue to improve our network by installing engineering measures to provide a safer network. A solution-led approach must be adopted for all types of maintenance works, including routine and cyclical maintenance operations, as well as larger structural/carriageway schemes.

In Europe it is estimated that road infrastructure and road surroundings are a contributing factor in more than 30% of crashes. Well-designed and properly maintained roads can reduce the probability of road traffic accidents, while "forgiving" roads (roads laid out on Safe System principles e.g. with the protection of roadside hazards to ensure that driving errors do not need to have serious consequences) can reduce the severity of accidents that do happen.

Route risk mapping with proactive road assessments in addition to the more traditional reactive analysis of high accident cluster sites provide useful tools to assess the safety quality of the road network and to target investment

In addition, as in car technologies advance and become more prominent we need to ensure our infrastructure is ready for the higher levels of automation in vehicles, by launching work towards specifications for the performance of road signs and markings, including their placing, visibility and retro-reflectivity. This is important already today for the functioning of driver assistance systems like Intelligent Speed Assistance (in the case of speed limit signs) and Lane Keeping Assistance (in the case of road markings), and will become more important as the level of automation increases.

⁶⁷ <https://www.communityspeedwatch.org/>

Post-Crash Response: improving the fast and effective response to road collisions

The response time and time for treatment after collision, particularly provided by first responders, are crucial; a review of European studies of death in traffic crashes concluded about 50% of all deaths occurred within a few minutes of the crash (immediate deaths), either at the scene or on the way to a hospital.⁶⁸

It then peaks around two-hours after the crash (early deaths), followed by another peak within three to four weeks (late deaths). This curve is called the trimodal distribution of trauma deaths.

If first responders at crash sites manage to control life-threatening haemorrhage, carry out airway manoeuvres, and provide life support in the context of impact brain apnoea, then survivability is very much increased. Treatment within the first hour can largely determine a critically-injured person's chances of survival and can turn a fatal collision into a serious one. In Scotland, most road users are not trained as first responders, so casualties normally receive the first response from emergency service personnel. Transport Scotland will continue to engage with Highways England to identify the merits of improving early responses to collisions.⁶⁹

In 2019, 168 people died in Scotland as a result of a collision and a further 2,001 were seriously injured, affecting many families, friends and the wider community. A serious pursuit of Vision Zero, necessitates improving post-crash response by the emergency services (Police, Ambulance, Fire & Rescue) but also increasing the number of other first responders, who will become essential players in mitigating the seriousness of collisions.

The Scottish Trauma Network⁷⁰ is progressing Key Performance Indicators, some of which should align with this Framework; for example, access to Major Trauma Centres, for the majority of the population, within 45 minutes by road. [The Scottish Trauma Network](#) consists of four regional networks (North, East, South East and West), and the Scottish Ambulance Service (SAS). The Major Trauma Centres at Aberdeen Royal Infirmary and Ninewells Hospital Dundee, treat the most severely-injured casualties to ensure they have the best chance of a speedy recovery. Similar centres are being established in Edinburgh and Glasgow, but will not be operational for another five years.

The clock starts ticking as soon as a collision occurs; if it is on a rural road, or at a time of day when there is little passing traffic, it can be some time before the alarm is raised. To combat and reduce the time lag, an eCall system has been mandatory in all new EU-registered cars since April 2018. Separate legislation already required Member States to put in place the infrastructure to handle eCalls. In the UK, BT is the current provider for all the emergency 999 calls. There is no indication from the UK Government that they will disalign from these EU regulations following our departure from the EU. Since 2010, Euro NCAP's Advanced Rewards has recognised car manufacturers who make available new safety technologies which demonstrate a scientifically-proven safety benefit for consumers and society. In addition to eCall, 70% of smartphones can now provide the exact location of a 999 caller by sending an automatic text to the call handler, including precise GPS position to within three metres.

⁶⁸ https://ec.europa.eu/transport/road_safety/sites/roadsafety/files/pdf/ersosynthesis2018-postimpactcare.pdf

⁶⁹ They are training their roads teams in defined first aid to offer a greater resource to address this issue and are looking at the possibility of working with the haulage and distribution industry to broaden knowledge in the professional driving group that could increase the resource available to provide immediate post-crash care

⁷⁰ <https://www.scottishtraumanetwork.com/>

Once the emergency call is made, the triage phase starts. In November 2016, the Scottish Ambulance Service began to pilot the New Clinical Response Model (NCRM) for emergency 999 calls with the aim of saving more lives and matching response-to-patient needs more effectively. Under the new system, patients with immediately life threatening conditions, such as cardiac arrest, or who have been involved in serious road traffic incidents, are prioritised and receive the fastest response. It aspires to provide more at-the-scene patient care and the evaluation report of 2019 found a 43% increase in 30-day survival for all patients in the Purple Category (1,182 people).⁷¹ Encouragingly, this new model has shown a 43% increase in the survival of those with immediate life-threatening conditions - the equivalent of 1,182 lives saved.

[The UK Rescue Organisation](#)⁷² brings together fire and medical services to deliver and develop training, technologies and techniques to improve road safety. This includes new training and better extrication techniques to save time getting treatment to casualties trapped after a collision.

The European Transport Safety Council also recommends emergency services should be provided with and use vehicle rescue sheets⁷³ to accelerate the victim extrication.

Road Users: unsafe road use by certain types of road users and its effect on road casualties

This challenge covers a range of issues from the perspective of various road user categories - such as young drivers - and from a more generic point of view - such as not wearing seatbelts.

Lifelong road use learning

Traffic safety and mobility education, particularly applying its Key Principles⁷⁴, is vital to implementing the Safe System⁷⁵, as it helps develop safe road users. Road safety is a lifelong learning process and education is critical, especially in early years: what our children learn (knowledge), what they are exposed to (experience), and how they behave (skill) at a young age can remain with them throughout their lives. However, excellence in this particular area, is already evident in many parts of Scotland, but it is inconsistent. Using road safety learning resources developed specifically to support Curriculum for Excellence⁷⁶ in all schools, teachers, early years staff, parents, carers, road safety officers and lecturers should continue to work in partnership by engaging children and young people in active and experiential learning.

71 <http://www.scottishambulance.com/userfiles/file/TheService/Publications/SAS%20-%20NCRM%20Evaluation%20-%20Feb%202019.pdf>

72 <https://www.ukro.org/>

73 <https://etsc.eu/post-collision-response-case-study-rescue-sheets/>

74 ETSC Key Principles for Traffic Safety and Mobility Education - https://etsc.eu/wp-content/uploads/LEARN-Key-Principles.pdf?utm_source=ETSC&utm_campaign=e5b4abe700-20200124_education_report_2020&utm_medium=email&utm_term=0_3a7b55edbf-e5b4abe700-307154369

75 For more information on the Safe System approach to road safety: OECD/International Transport Forum (2016), Zero Road Deaths and Serious Injuries: Leading a paradigm shift to a Safe System. <http://bit.ly/2QF2shw>

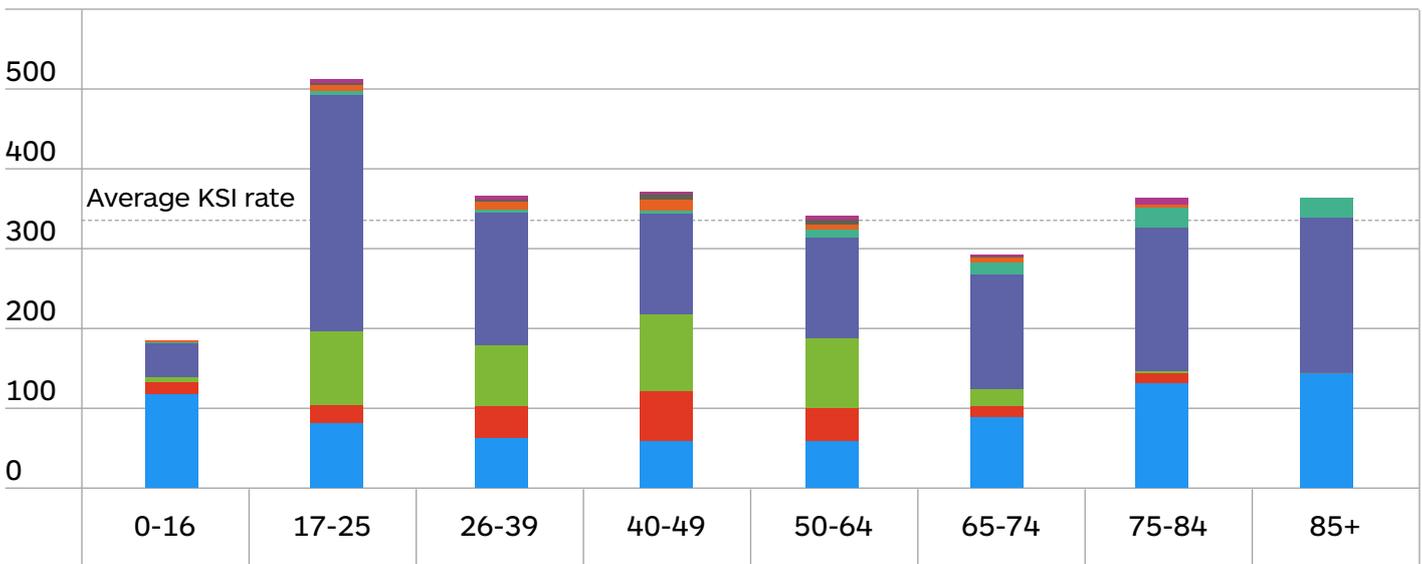
76 <https://roadsafety.scot/wp-content/uploads/2018/09/CfE-2019-20-booklet.pdf>

Young drivers (17-25)

In 2018, young drivers (aged 17-25) accounted for 12% of Scotland's licence holders, but accounted for 17% of drivers involved in fatal and serious collisions. Collisions are one of the biggest killers of young people: in 2018, they accounted for 6% of all 17-25 year-old deaths. Graph 1 shows this age group has a much higher KSI rate per million people, compared to the average rate of the overall population, 503 v 335 respectively.

KSI rate per million population, by age band and road user type, Scotland 2014-2018 average

■ Pedestrian ■ Motorcycle ■ Bus/coach ■ HGV
■ Bicycle ■ Car ■ Van ■ Other



Graph 1: 2014-18 average casualty rate in killed and seriously injured per million population

Road users aged 65 and over

Scotland's population is ageing and, in 2016, 0.44 million people were over the age of 75. By 2040, this figure is projected to grow to 0.79 million, an increase of nearly 79%⁷⁷. This increase has already had an effect on the total number of casualties for the over 60s⁷⁸ which has barely reduced since 2004 when compared to the population as a whole (33% v 54%). In relation to driver KSIs, the trend is even worse for the over 60s which, compared to all ages, has increased by around 7 percentage points between the 2004-08 average and 2014-18⁷⁹ average. In other age groups, the trends have either reduced, or only slightly increased.

While historically people have tended to travel less as they get older, the current generation is healthier, fitter and more mobile than previous generations. They are likely to travel more but this brings increased risk, often because of frailty. What constitutes a relatively-minor crash for a younger driver or passenger, may be serious or fatal for an older person. Age-related frailty⁸⁰ is one of the main reasons why older road users are more likely to suffer death or serious injury in a collision.

⁷⁷ The estimated data, for the period 1981-2016, is taken from the National Records of Scotland (NRS) Mid-Year Population Estimates. The projected data, for the period 2017-2041, is from the Projected Population of Scotland (2016-based).

⁷⁸ Statistics, from Key Reported Road Casualties Scotland 2018 - Web Tables 12

⁷⁹ Table 18a of RRC Scotland 2018 page 114 - <https://www.transport.gov.scot/media/46069/reported-road-casualties-scotland-2018.pdf>

⁸⁰ Serious crashes are more likely to result in fatalities for older drivers compared with younger drivers, due to their increased frailty (Staplin et al, 2001) extracted from RAC Foundation report of April 2010 on Maintaining safe mobility for the ageing population - <https://www.racfoundation.org/wp-content/uploads/2017/11/maintaining-safe-mobility-rac-foundation-140410-report.pdf>

Motorcyclists

2018 data show there has been little reduction in fatal or serious motorcyclist casualties compared to the 2004-08 average. While all modes of transport have shown reductions of 45% (fatals) and 39% (serious injuries) in that same period, motorcyclist data shows reductions of 21% and 24% respectively.⁸¹ In 2018, motorcyclists accounted for 0.1% of all journeys and 0.6% of traffic in Scotland but, disproportionately, they represented 8% of casualties. On average, over the years 2014 to 2018, the motorcyclist casualty rate was highest for the 16-22 and 23-25 age groups (both 0.25 per thousand population).

Seatbelts, drink, drugs and mobile phones

The four biggest dangers whilst driving/riding have been commonly identified as the fatal four. They are still a challenge in Scotland: speeding is covered in a separate challenge, but seatbelts, drink/drug-driving, and mobile phone use are important issues too.

For the period 2014-2018, 13% of in-car fatalities in Scotland⁸² were not wearing seatbelts. A PACTS report⁸³ states that seatbelt wearing reduces both fatal and non-fatal injuries by 60% among front seat passengers, and by 44% among rear-seat passengers. Seatbelt-wearing by rear-seat passengers also halves the fatality risk for belted front-seat occupants, given the dynamics in a vehicle after a collision. Child car seat specialist, Good Egg Safety, has consistently found, during its popular Community Checking Events across Scotland, the suitability of the child car seats or restraints used in them were inappropriate in 57% of cases. They also found, during a mystery shop of car seat retailers (74 premises), 96% of staff failed to ask the necessary questions to identify the most appropriate seat for the child and the vehicle.

Although the number of people killed in Scotland in 2017 (ten) as a result of drink-drive accidents is estimated to be a third of the 2007 figure⁸⁴, driving under the influence of drink or drugs is one of the top ten contributory factors for road accidents in Scotland, and was a factor in 259 (186 and 73 respectively) or 3% of accidents in 2018.⁸⁵ However, it is evidenced that drivers with blood alcohol content level (BAC) between 0.1g/l and 0.5g/l are up to 3 times more likely to be involved in a fatal collision than sober drivers and drivers with BAC between 0.5 and 0.8g are 20 times more likely to be involved in a fatal collision.⁸⁶ Driving over the drink-drive limit, individuals are six times more likely to die⁸⁷ in a road accident because alcohol and drugs affect the body and mind in the following ways: slower reaction times; blurred vision; being unable to judge speed and distances properly; loss of concentration; difficulty in making rational decisions; impaired coordination; increased risk-taking.

As far as mobile phone use is concerned, a 2016 study⁸⁸ found the extra mental workload and cognitive functions drivers have to undertake reduces their reflexes and slows reaction times (both the time to mentally register the event and the time to physically react to it), thus creating a major road safety risk. The latest mobile phone survey undertaken in Scotland⁸⁹ recorded the behaviour of 14,427 drivers and found that, while compliance was good, it is decreasing over time.

Being distracted in the car is one of the main contributory factors to road casualties amongst 20–29 year-olds; there is also the obvious issue of pedestrian distraction. In 2018 in Scotland, distraction inside and outside the vehicle⁹⁰ accounted for 2% of all recorded contributory factors. It is anticipated this will worsen as more technology is rolled out.

81 Table 23 of RRC Scotland 2018 page 114 - <https://www.transport.gov.scot/media/46069/reported-road-casualties-scotland-2018.pdf>

82 % not actually published in a table but the values for 'all casualties' can be found in Appendix F of RRC 2018

83 <https://www.pacts.org.uk/2019/04/pacts-launches-new-report-seat-belts-the-forgotten-road-safety-priority/#:~:text=A%20report%20published%20by%20PACTS%2C%20in%20association%20with,deaths%3B%20an%20additional%201%2C000%20people%20were%20seriously%20injured.>

84 P 37 of RRC Scotland 2018 - <https://www.transport.gov.scot/media/46069/reported-road-casualties-scotland-2018.pdf>

85 Reported Road Casualties, 2018, Table T - <https://www.transport.gov.scot/media/46069/reported-road-casualties-scotland-2018.pdf>

86 https://ec.europa.eu/transport/road_safety/sites/roadsafety/files/newspdf/study_alcohol_interlock.pdf

87 the 2010 North Report found drivers are six times more likely to die in a road traffic accident with a blood alcohol concentration between 50mg and 80mg than with zero blood alcohol

88 Ziakopoulos A, Theofilatos A, Papadimitriou E, Yannis G, 2016 'Cell Phone Use – handheld', European road safety decision support system, developed by the H2020 project, SafetyCube

89 Seatbelt and Mobile Phone Usage Survey Scotland, 2017 - <https://www.transport.gov.scot/media/43968/seatbelt-and-mobile-phone-usage-survey-scotland-2017.pdf> the proportion of car drivers observed using a mobile phone whilst driving was at 1.8% at moving (free-flowing) sites, a marginal increase from the 2014 figure (1.3%). At stationary (traffic light controlled junction) sites, the proportion observed using a mobile phone was 2.4%, an increase from 2014 figure (1.6%)

90 Table T, RRC Scotland 2018 - <https://www.transport.gov.scot/media/46069/reported-road-casualties-scotland-2018.pdf>

Fatigue

Driver fatigue is also a factor in collisions⁹¹ and such collisions are around 50% more likely to result in death or serious injury.⁹² Police Scotland data suggest fatigue is a contributory factor in 5.7% of fatalities (5-year average) equating to around ten deaths each year. In 2018, fatigue was a contributory factor in 2% of all collisions.⁹³

To illustrate this better, a person who drives after being awake for 17 hours has impaired driving skills comparable to a driver with a BAC of 0.05 mg/ml⁹⁴ (the legal limit). When drivers fall asleep, they do not brake or swerve, so any resulting collisions tend to be at higher speeds.

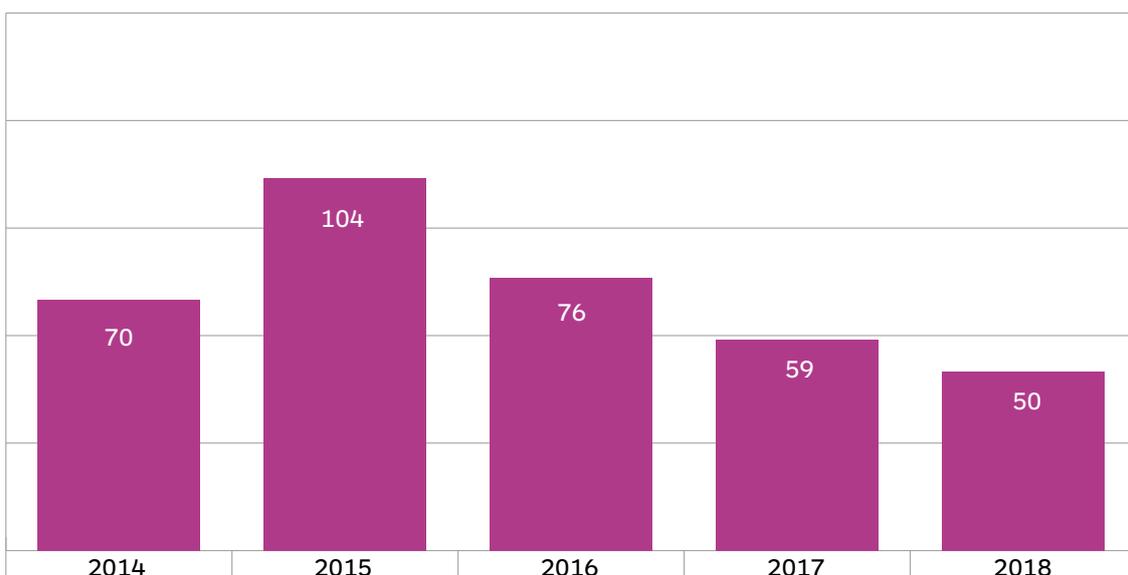
According to the UK Government, 20% of collisions involving commercial vehicles are caused by fatigue; in 2018 in Scotland, fatigue⁹⁵ accounted for 2% of all recorded contributory factors.

Foreign drivers

Scotland's roads are used by residents and visitors alike, for business, recreation and commuting. All road users have a responsibility to understand and conform to the rules of the road, not only to ensure the safety of themselves, but also that of all road users with whom they interact on a daily basis. Graphs 2 to 4 provide some historical statistics on collisions where foreign drivers were involved.

Every country has its own individual traffic laws, and those who drive in different countries must adapt their behaviour to comply. For example, the HGV (>7.5 tonnes) speed limits in Scotland are lower than in England and Wales on dual and single-carriageways roads. In addition, custom and practice may differ from country to country; different Give Way rules, for example, could lead to confusion among foreign drivers resulting in them moving at incorrect times or in a manner that alarms other road users. The causation factor most commonly-anoted for left-hand drive vehicles involved in collisions is 'failed to look properly'.

Graph 2: Left hand drive vehicles involved in accidents, 2014-18



91 Research suggests that sleep-related vehicle accidents are under-reported and are likely to account for 16% to 20% of UK vehicle accidents and up to one quarter of fatal and serious accidents - Anund, Kecklund, Vadeby, Hjalmdahl & Åkerstedt, 2008; Schwarz et al., 2012

92 <https://www.rospa.com/Road-Safety/Advice/Drivers/Fatigue/Road-Accidents.aspx>

93 Table M: Contributory Factors: Reported accidents by severity, 2018 - <https://www.transport.gov.scot/media/46662/sct10192798881.pdf>

94 A driver who hasn't slept for 24 hours has impaired driving skills comparable to a driver with an illegally high blood alcohol concentration of 0.1 g/l - https://ec.europa.eu/transport/road_safety/specialist/knowledge/fatigue/effects_of_fatigue_on_driving/driving_behaviour_en

95 Table T, RRC Scotland 2018 - <https://www.transport.gov.scot/media/46069/reported-road-casualties-scotland-2018.pdf>

Overseas drivers may also be unfamiliar with Britain's imperial system. This could lead to confusion trying to reconcile roadside signage and information with in-vehicle readings (miles v kilometres). A lack of knowledge of UK and Scots law, practices and measurements could confuse and frustrate drivers, possibly leading to rash actions and a lack of concentration.

Although year-on-year there has been a reduction in the number of collisions involving foreign drivers, if Scotland continues to be promoted as a tourist destination, more effort is required to improve safety for all road users. Furthermore, the number of collisions involving foreign drivers/riders should be monitored to mitigate any emerging trends.

Scotland has promoted itself as having some of the most attractive roads in the world for tourists such as NC500 and this has resulted in an increase in the number of drivers/riders unfamiliar with driving on the left.

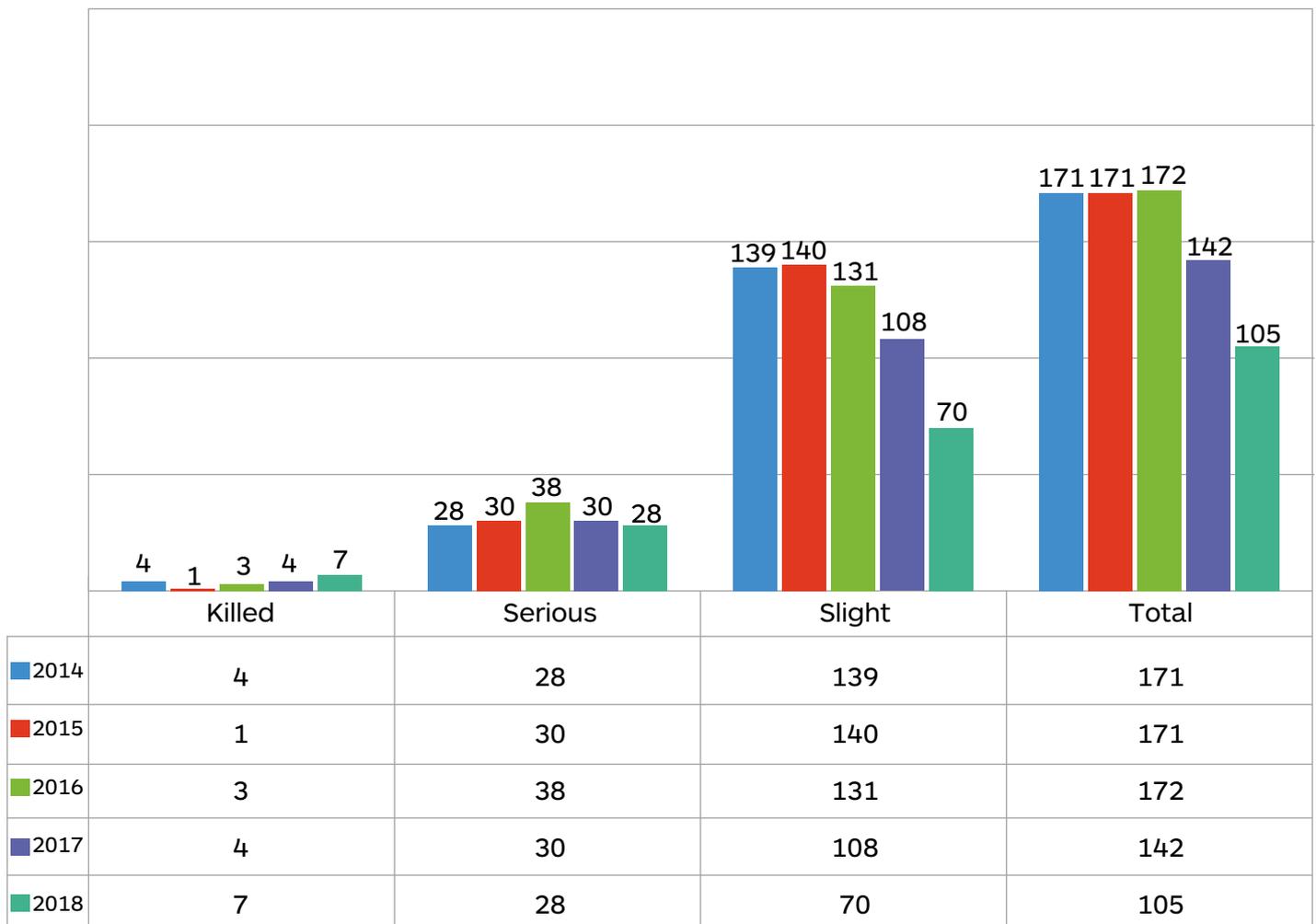
A mix of individuals - families and friends - in a variety of vehicles – such as bikes, cars, and campervans – driving/riding unfamiliar roads, guided by unfamiliar rules and sharing the space with everyday users makes it essential to address this issue, particularly during the peak touristic months.

Graph 3: Non-UK drivers involved in collisions, 2014-18



Educational resources have been produced on this topic for a number of years through 'Driving in Scotland' leaflets. One was designed specifically for migrant workers (in English, Russian, Polish, Lithuanian and French), but demand for this has tailed-off substantially in recent years and it is now an online-only publication. The second is designed for tourists (in English, French, German, Spanish, Italian, and Polish), and includes information on a number of issues including single-track roads.

Graph 4: Foreign casualties involved in accidents by severity, 2014-18



In addition to the leaflets and website, wristbands in eight languages (English, French, German, Spanish, Italian, Dutch, Hindi, and Chinese) saying "DRIVE ON THE LEFT" have been distributed through a number of channels, but mainly via car-hire companies. This practical solution aims at encouraging companies to engage with drivers in a consistent and informed way.

The drive on the left campaign was launched in the Highlands, an area which attracts a large

number of tourists, and drivers and motorcyclists were issued with the leaflets, wristbands and windscreen stickers reminding them to drive on the left and demonstrating the correct position at junctions.

As well as improving foreign driver education we need to apply the correct engineering and enforcement measures, and monitor incidents to ensure we capture any emerging trends and react to them accordingly.

Are the 12 key challenges for road safety, from Climate Emergency, Health to Emerging technologies and Post-crash response, the correct ones?

Yes No

Please explain your answer

Strategic actions

In order to address current and emerging challenges, the following ten Strategic Actions have been identified. These are meant to be overarching, and are not allocated to any nominated road safety partners. They must be seen instead as the collective responsibility of all stakeholders and road safety partners, labelled throughout the naming of the actions as “we”. Their delivery will be monitored through the three-tier structure of the Framework governance. They will have to be translated and expanded through the development of both national and local delivery plans which will sit outwith the Framework. These plans should be flexible, in order to address current and emerging casualty trends.

Speed: we will deliver a range of speed management initiatives to support the Safe System.

Education, for example social marketing campaigns or (potential) speed awareness, as part of wider Road Traffic Diversionary Courses, will be key to ensuring road users understand why speed limits are set in any particular area, and the need to comply with them. Driving/riding to the conditions, particularly in bad weather and on congested roads, is an important skill to gain.

Engineering: consideration should be given to undertaking a National Speed Management Review that would look at what appropriate speeds mean in a Scottish context.

Enforcement of speed through traditional use of road policing, and fixed and mobile safety cameras will also form part of this strategic action. Continuing to embrace new technology and opportunities, such as processing dashcam footage will also be key to achieving success.

Climate: we will deliver road safety initiatives that positively impact the climate emergency and we will mitigate the negative impacts climate change may have on road safety.

In relation to climate change adaptation, road users will need to gain the knowledge, skills and experience required under extreme weather conditions to become safe and responsible. Employers and employees should be encouraged to apply the [Severe weather: fair work charter](#) in order to mitigate road safety risk within their organisations. By smoothing traffic flow, good speed management has the potential to reduce emissions and improve air quality. As far as promoting greener, cleaner choices is concerned, the new Framework consistently applies the Travel Hierarchy to road safety matters.

Funding & Resourcing: we will consider how funding streams can be improved for national road safety delivery.

Consideration could be given to the development of a national Road Safety Improvement Fund to help road authorities meet the challenging 2030 road casualty reduction targets. Road policing should also remain a key priority for Police Scotland. All road safety partners must become smarter at pooling resources from different budget holders to align outcomes and help achieve better road safety performance at all levels.

Change in Attitudes & Behaviour: we will engage in partnership working to enable all road users to understand their road safety responsibilities, allowing them to improve their attitudes and behaviours for the safety of themselves and others.

Implementing a national conversation on road safety will encourage greater personal responsibility and a change in perception which, ultimately, should lead to a transformation of the road safety culture. The over-riding priority is to highlight the impact of road casualties on communities and the costs to everyday people and their families; while also important to the economy, the emphasis should not simply be about the inconvenience of road closures and delays. Potential activity could include celebrity/online-influencer input; a road safety week with planned events; an online knowledge portal; social media campaigns; and competitions for children and their parents/carers.

Technology: we will research, implement and evaluate technologies for use within the Safe System and promote them as appropriate.

As technology is rolled out in vehicles, as part of the infrastructure, or directly to road users, it will be very important to monitor the delivery of Scotland's CAV roadmap and to research and evaluate the impact, both positive or negative, of these features on road safety, particularly around the distracting effects of the latest Human Machine Interface technology.

Active & Sustainable Travel: we will ensure road safety remains a key focus of active & sustainable travel in Scotland.

The current push towards more active and sustainable travel needs to consider road safety issues and outcomes from the initial concept/design phase. In addition, active travel initiatives will have to support tackling the so-called 'safety in numbers' effect. Active & sustainable travel contributes to better place-making which, in turn, contributes to safer places, including from a road safety perspective.

Knowledge & Data Analysis: we will ensure our actions are evidence-led to support the delivery of the Safe System.

Embedding the Safe system means any road safety initiatives under each of the five pillars are backed up by evidence and then fully-evaluated, not only in terms of success in delivery, but also the longer-term success of their road safety outcomes. We need to ensure we can access and harness data from a variety of sources, be it academic research, the motor insurance industry, vehicle manufacturers (through telematics), or technology companies (through mobile phone data, etc.). This will enhance road safety outcomes.

Enforcement: we will optimise enforcement to encourage good road user behaviour to support the Safe System.

Enforcement of the rules of the road, including random testing, spreads across most of the five pillars of the Safe System. Safe road use, such as: seatbelt and speed limit compliance; driving unimpaired by drugs and/or alcohol; and the maintenance of a safe fleet through the MOT regime and insurance checks should contribute to safer roads. The presence, and/or threat, of enforcement, combined with suitable road user education is essential to deter people from taking risks. Enforcement methods should also embrace emerging technology which would make it smarter.

Health: we will strengthen the relationship between health and road safety, reduce the likelihood, number and severity of collisions and improve the post-crash response.

Systematic cross-referencing of casualty data from STATS 19 and health (in terms of hospital admissions data) will provide a clearer overall picture of road collisions in Scotland. In addition, pooling road safety and health resources together at national and local level should realise more benefits than would have been achieved using the same resources separately. It should be better value for money to prevent casualties in the first instance, thus saving health resources which could be re-directed to caring for other patients, rather than treating road casualties. This situation occurred during lockdown when everything was done to avoid overwhelming the NHS with other than Covid-19 related patients.

Education: we will provide opportunities to all road users to gain the knowledge, skills and experience required to become safe and responsible users.

Education is critical to position road safety as a lifelong-learning process. Given the importance of early years, it is vital that learning starts at an early age. We will ensure Curriculum for Excellence allows appropriate time for road safety education. At the same time, we will ensure road users will have access to resources to learn - their road safety knowledge will be enhanced and they can be exposed to risk in a controlled environment - to improve their experience, and their behaviour, to demonstrate positive road safety attitudes and behaviours throughout their lives.

Do you think the strategic actions will deliver the outcomes and address the identified challenges?

Yes No

Please explain your answer

Are some of these actions more important than others?

Yes No

Please explain your answer

The table below provides a snapshot view of how each of the strategic actions have the potential to address a number of challenges, allowing for some kind of prioritisation of these actions to maximise their effect.

> Challenges ✓ Strategic Actions												
Speed	✓	✓	✓		✓			✓	✓			✓
Climate	✓	✓	✓		✓	✓		✓		✓		
Funding				✓	✓	✓	✓	✓	✓	✓	✓	✓
Change in attitudes		✓	✓	✓	✓		✓	✓	✓		✓	✓
Technology				✓	✓			✓	✓	✓	✓	✓
Active & Sustainable Travel		✓	✓	✓		✓			✓			✓
Knowledge & Data Analysis				✓	✓	✓		✓	✓	✓	✓	✓
Enforcement		✓		✓	✓	✓	✓		✓			✓
Health			✓	✓							✓	✓
Education		✓		✓	✓	✓	✓	✓	✓			✓

Road safety performance management

All Safe System work is based on a performance framework, with a hierarchy of targets, and the Scottish model is depicted in the figure below.

Figure 11: Safe System results hierarchy for Scotland



The new Framework has the **Long-term Goal** of moving close to zero fatalities and serious injuries in road transport by 2050.

On this route to 2050 the following **Interim Targets** to 2030 have been proposed, based on a 2014-18 baseline.⁹⁶

- 50% reduction in people killed
- 50% reduction in people seriously injured
- 60% reduction in children (aged <16) killed
- 60% reduction in children (aged <16) seriously injured

Measuring progress towards meeting the Interim Targets to 2030 requires the use of indicators, the most important one being the number of deaths and serious injuries. The Safe System approach relies on gaining a much clearer understanding of the different issues which influence overall safety performance. As such a number of other indicators have been developed which are categorised as either Intermediate Measures - tracking

performance of casualty figures for specific user groups - or Key Performance Indicators - measuring observed road safety behaviours, vehicle safety and road infrastructure.

We are continuing to work with stakeholders and road safety experts to better understand the percentage reductions that we believe would be required for specific indicators in order to achieve our Interim Targets. Where specific reductions can be determined for individual Intermediate Measures, those indicators will then become **Intermediate Outcome Targets**. An initial list of key priority areas that have been identified through our analysis is listed below; however, there may be further areas identified through the lifetime of the framework:

- Percentage reduction in pedestrians killed or seriously injured
- Percentage reduction in cyclists killed or seriously injured
- Percentage reduction in motorcyclists killed or seriously injured

⁹⁶ CRaSH adjusted – see Agilysis report about RSF to 2030 targets and KPIs

- Percentage reduction in road users aged 70 and over killed or seriously injured
- Percentage reduction in road users aged between 17 to 25 killed or seriously injured
- Percentage of motorists driving/riding within the posted speed limit
- Percentage of drivers/riders driving within the legal limit for alcohol or specified drugs
- Percentage of distance driven over roads with a casualty rate below an appropriate threshold
- Percentage of new passenger cars with a EuroNCAP⁹⁷ safety rating equal or above a predefined threshold
- Time elapsed in minutes and seconds between the emergency call following a collision resulting in personal injury and the arrival at the of the emergency services

Key Performance Indicators will be developed to enable the monitoring of road safety behaviours, vehicle safety and road infrastructure. It is envisaged that these will include:

- Percentage of motorists driving within the speed limit
- Percentage of drivers not distracted by a handheld mobile phone/Sat Nav or in-car entertainment system
- Percentage of vehicle occupants wearing a seatbelt or child restraint system correctly
- Percentage of riders of powered two wheelers and bicycles wearing a protective helmet

Reporting on Key Performance Indicators and the progress towards the Interim Targets and the Intermediate Outcome Targets will be done on an annual basis.

More detail on the above targets and KPIs can be found in a separate report - Development of Scotland's 2030 Road Safety Casualty Targets and Key Performance Indicators – produced by Agilysis on behalf of Transport Scotland.

What are your views on the proposed 2030 Interim Targets?

Do you think that the Intermediate Outcome Targets and Key Performance Indicators are appropriate to monitor the progress towards the 2030 interim targets?

Yes No

Please explain your answer

⁹⁷ European New Car Assessment Programme

GOVERNANCE STRUCTURE

The 2020 Framework saw the establishment of a Strategic Partnership Board (SPB), chaired by Transport Scotland's CEO, with senior Police and Fire Officers, members from NHS Scotland, and the Society of Local Authority Chief Executives (and with regular ministerial attendance) to govern the Framework, and this draft Framework proposes that the SPB continues until 2030. The SPB works in partnership with Ministers and senior partner organisations to ensure a strategic and joined-up partnership buy-in to the Framework. It guides Scottish road safety delivery partners in best practice, and constructively challenges their policies and/or actions.

In addition, a supporting Operational Partnership Group (OPG) at senior official level was set up. It has representation from a variety of organisations with a remit for, or vested interest in, road safety, such as Police Scotland, Scottish Ambulance Service, Crown Office and Procurator Fiscal Service, Society of Chief Officers of Transportation in Scotland, RoSPA, IAM Roadsmart and Cycling Scotland. It is proposed to maintain the OPG, having responsibility for the monitoring, analysis and distillation of evidence and information on activities being undertaken by partners towards the delivery of the Framework.

The SPB and OPG should each continue to meet twice a year.

In order to improve communications between national and local level, the new Framework proposes to introduce a third tier – Local Partnership Forums (LPFs).

This LPF would comprise the Chairs of local road safety forums, groups, or partnerships such as the A9 Road Safety Group, Highland & Islands Road Casualty Reduction Group, Western Isles Road Safety Group, Road Safety North East Scotland and Dumfries and Galloway Road Safety Partnership. Its main aim would be to share local road safety issues, plans and evaluations, and would serve as a national knowledge hub. Members would appoint a Chair who would serve for a period of two years and become a formal member of the OPG. The LPF would meet twice a year with Transport Scotland providing the secretariat.

The Framework governance can be depicted as follows:



Do you think that the proposed Governance Structure is appropriate?Yes No

Please explain your answer

Would road safety performance be improved across Scotland as a result of systematically sharing information and best practice between local authorities and/or local/regional partnerships through Local Partnership Forums?Yes No

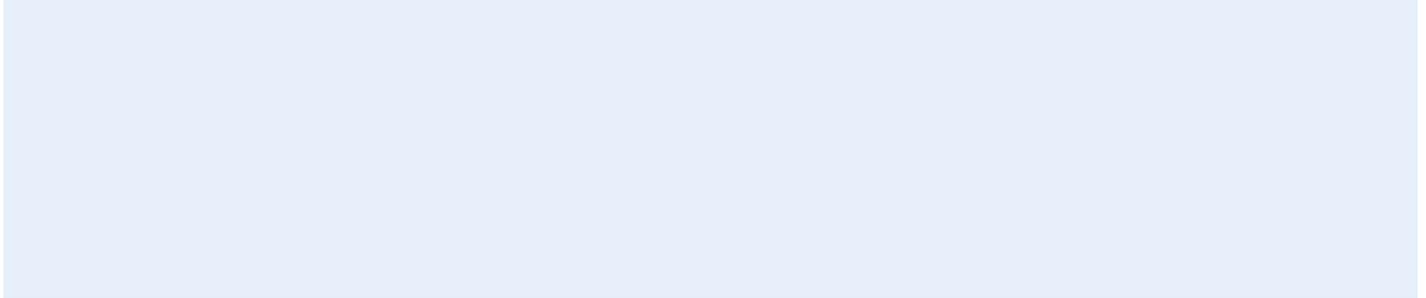
Please explain your answer

In your opinion what aspects of road safety work well at the moment?

Please explain your answer

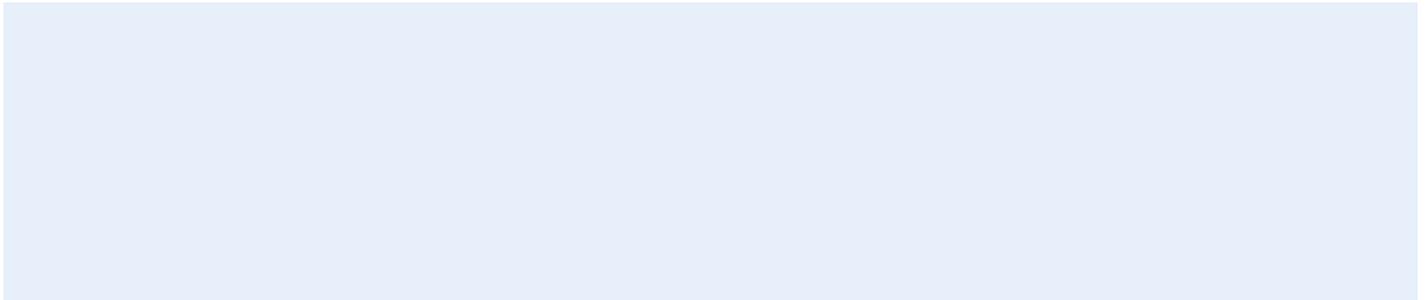
What practical actions would you like to see taken to encourage and promote these aspects?

Please explain your answer



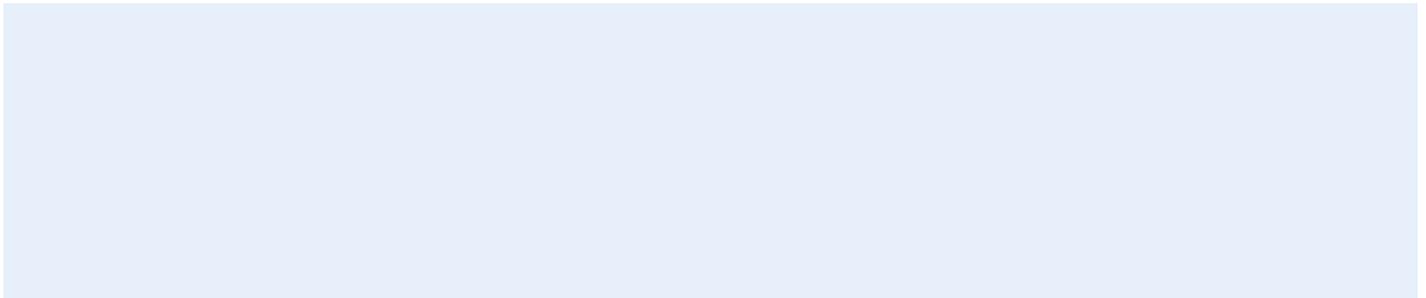
In your opinion what aspects of road safety do not work well in general and as a result of Covid-19?

Please explain your answer



What practical actions would you like taken to overcome these aspects?

Please explain your answer



Annex A – Public consultation questions

1 - Is the vision set out for the next 10 years the right one?

Yes No

1.1 - Please explain your answer

2 - Are the outcomes to deliver the vision the right ones?

Yes No

2.1 - Please explain your answer

3 - Do you agree that the Safe System Approach is fundamental to the success of the Framework?

Yes No

3.1 - Please explain your answer

4 - Are the 12 key challenges for road safety, from Climate Emergency, Health to Emerging technologies and Post-crash response, the correct ones?

Yes No

4.1 - Please explain your answer

5 - Do you think the strategic actions will deliver the outcomes and address the identified challenges?

Yes No

5.1 - Please explain your answer

5.2 - Are some of these actions more important than others?

Yes No

5.3 - Please explain your answer

6 - What are your views on the proposed 2030 Interim Targets?**7 - Do you think that the Intermediate Outcome Targets and Key Performance Indicators are appropriate to monitor the progress towards the 2030 Interim Targets?**Yes No

7.1 - Please explain your answer

8 - Do you think that the proposed Governance Structure is appropriate?Yes No

8.1 - Please explain your answer

8.2 - Would road safety performance be improved across Scotland as a result of systematically sharing information and best practice between local authorities and/or local/regional partnerships through the Local Partnership Forums?

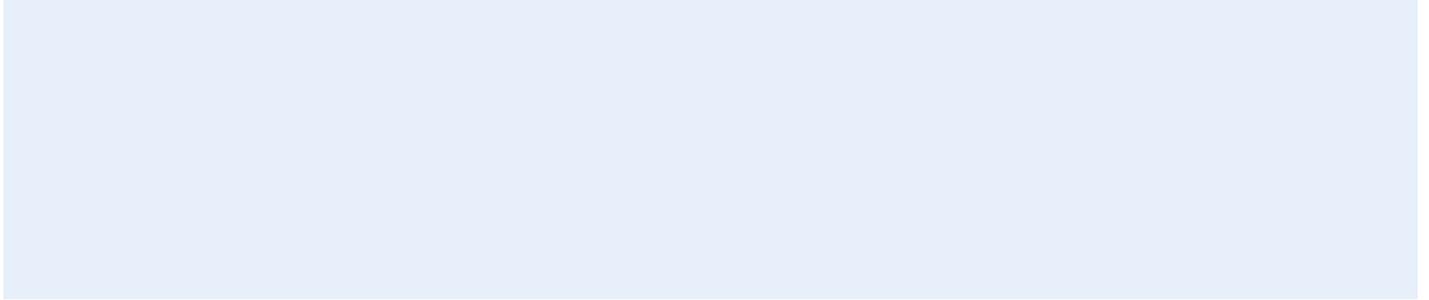
Yes No

8.3 - Please explain your answer

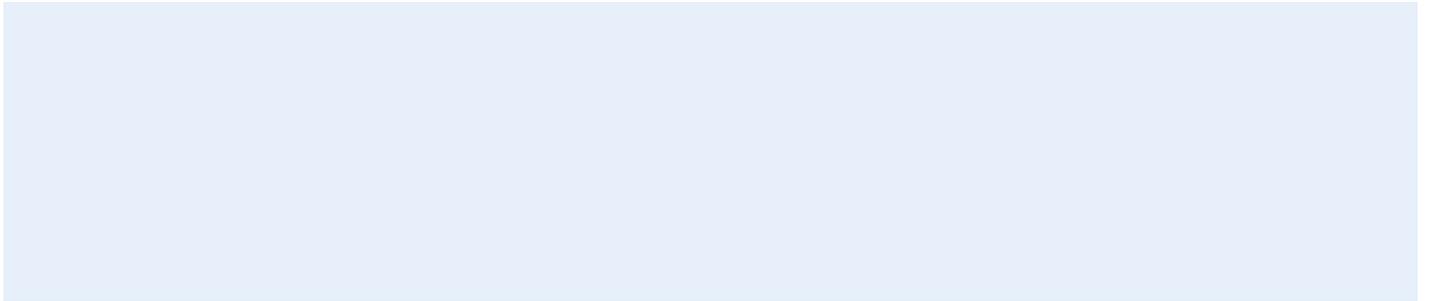
9.1 - In your opinion what aspects of road safety work well at the moment?

9.2 - What practical actions would you like to see taken to encourage and promote these aspects?

10.1 - In your opinion what aspects of road safety do not work well in general and as a result of Covid-19?



10.2 - What practical actions would you like taken to overcome these aspects?



Annex B – Respondent Information Form

Title: Road Safety Framework to 2030 - Public Consultation On Draft

RESPONDENT INFORMATION FORM

Please Note this form **must** be completed and returned with your response.

To find out how we handle your personal data, please see our privacy policy:

<https://www.gov.scot/privacy/>

Are you responding as an individual or an organisation?

- Individual
 Organisation

Full name or organisation's name

Phone number

Address

Postcode

Email

The Scottish Government would like your permission to publish your consultation response. Please indicate your publishing preference:

- Publish response with name
 Publish response only (without name)
 Do not publish response

Information for organisations:

The option 'Publish response only (without name)' is available for individual respondents only. If this option is selected, the organisation name will still be published.

If you choose the option 'Do not publish response', your organisation name may still be listed as having responded to the consultation in, for example, the analysis report.

We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for Scottish Government to contact you again in relation to this consultation exercise?

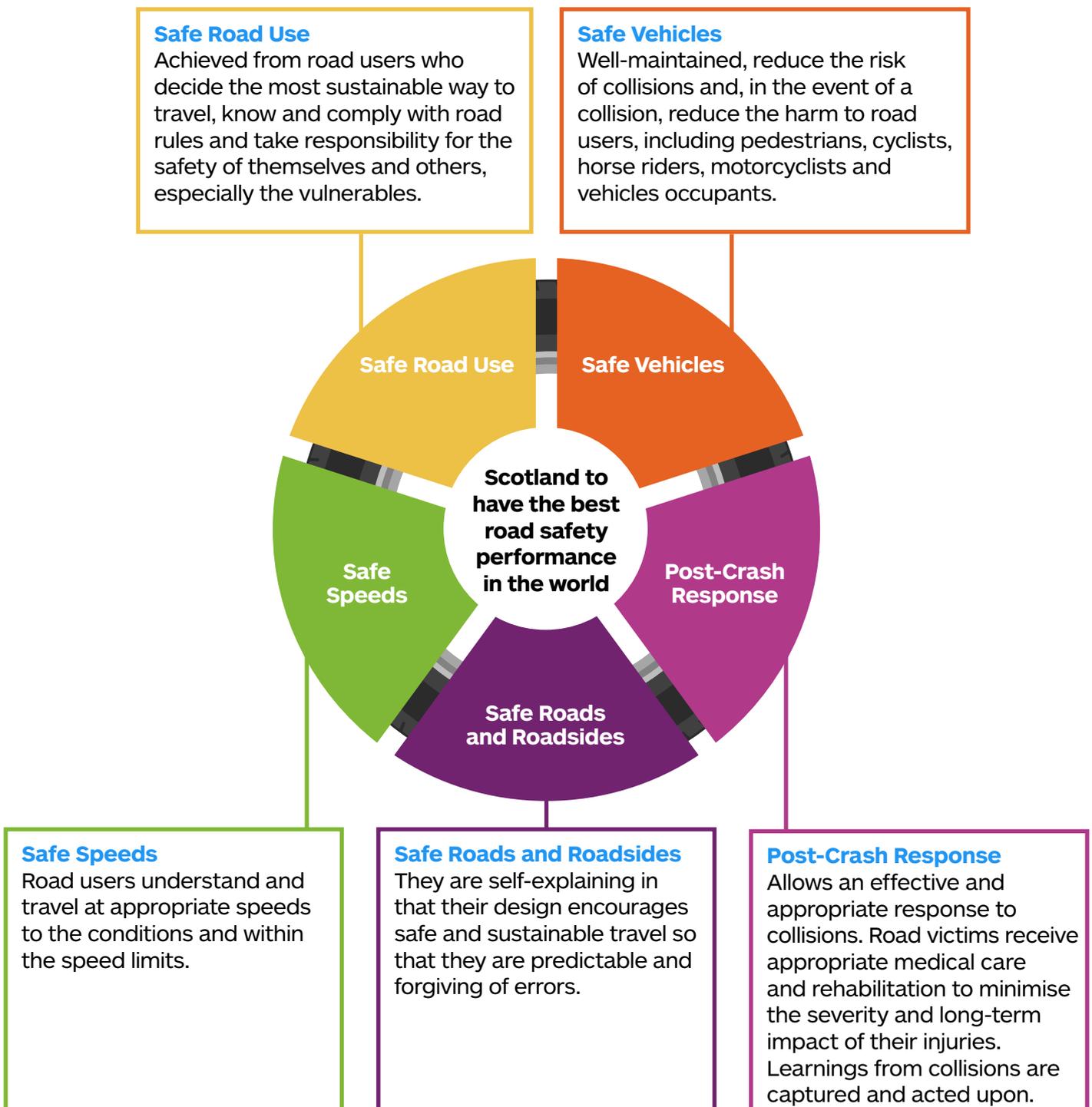
- Yes
 No

Annex C: the Framework at a glance

Our Vision

For Scotland to have the best road safety performance in the world

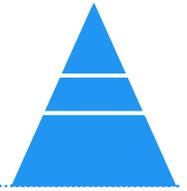
Our Outcomes



> Challenges

√ Strategic Actions

												
Speed	✓	✓	✓		✓			✓	✓			✓
Climate	✓	✓	✓		✓	✓		✓		✓		
Funding				✓	✓	✓	✓	✓	✓	✓	✓	✓
Change in attitudes		✓	✓	✓	✓		✓	✓	✓		✓	✓
Technology				✓	✓			✓	✓	✓	✓	✓
Active & Sustainable Travel		✓	✓	✓		✓			✓			✓
Knowledge & Data Analysis				✓	✓	✓		✓	✓	✓	✓	✓
Enforcement		✓		✓	✓	✓	✓		✓			✓
Health			✓	✓							✓	✓
Education		✓		✓	✓	✓	✓	✓	✓			✓



Our Targets

Interim Targets to 2030

- 50% reduction in people killed
- 50% reduction in people seriously injured
- 60% reduction in children (aged <16) killed
- 60% reduction in children (aged <16) seriously injured



Intermediate Outcome Targets

- Percentage reduction in pedestrians killed or seriously injured
- Percentage reduction in cyclists killed or seriously injured
- Percentage reduction in motorcyclists killed or seriously injured
- Percentage reduction in road users aged 70 and over killed or seriously injured
- Percentage reduction in road users aged between 17 to 25 killed or seriously injured
- Percentage of motorists driving/riding within the posted speed limit



Key Performance Indicators

- Percentage of motorists driving within the speed limit
- Percentage of drivers not distracted by a handheld mobile phone/Sat Nav or in-car entertainment system
- Percentage of vehicle occupants wearing a seatbelt or child restraint system correctly
- Percentage of riders of powered two wheelers and bicycles wearing a protective helmet
- Percentage of drivers/riders driving within the legal limit for alcohol or specified drugs
- Percentage of distance driven over roads with a casualty rate below an appropriate threshold
- Percentage of new passenger cars with a EuroNCAP safety rating equal or above a predefined threshold
- Time elapsed in minutes and seconds between the emergency call following a collision resulting in personal injury and the arrival at the of the emergency services





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