

# A future state for the UK motorway network

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Appendix:  
Strategy Papers



## UNION CONNECTIVITY REVIEW (ISSUED 7/12/23)

<https://www.gov.uk/government/publications/union-connectivity-review-final-report>

This study identified that there is a gap in UK-wide strategic transport planning that has resulted in cross-border schemes and those where the costs and benefits are in different nations seeming to be a lower priority than other schemes which may provide greater local benefit. The Review recommends the creation of UKNET - a strategic transport network for the whole United Kingdom. This would be a multi-modal, pan-UK network based on a series of principal transport corridors with the aim to improve journey times, cost, reliability, frequency and the environmental impact of their travel.

## TRANSPORT DATA STRATEGY (ISSUED 28/3/23)

<https://www.gov.uk/government/publications/transport-data-strategy-innovation-through-data>

The transport data strategy demonstrates how the Department for Transport will work with and support the transport sector to harness the benefits of data to help grow and level up the economy, reduce environmental impacts and improve transport for the user. The review identified that too often, transport data resides in silos and is not shared, which prevents the value of data being realised and opportunities unlocked. The review recommends interventions to see faster change in data enabled innovation in transport to help solve our key societal challenges, and create seamless, low emission, less congested journeys through integrating our transport systems.

## STRATEGIC ROAD NETWORK AND THE DELIVERY OF SUSTAINABLE DEVELOPMENT (ISSUED 23/12/22)

<https://www.gov.uk/government/publications/strategic-road-network-and-the-delivery-of-sustainable-development>

This publication identified that the SRN has an essential role in supporting the government's commitments in

Decarbonising Transport: A Better, Greener Britain ("the transport decarbonisation plan"). The policies for the SRN should include developing innovative policies to reduce car dependency. It should be noted that there is a move towards not adding new connections onto high speed traffic SRN routes to prevent additional weaving/manoeuvres which increases risk to safety, reduces the reliability and efficiency of journeys. A potential outcome from this could be the need for smarter interfaces between the SRN and the local infrastructure?

## GROUP DIVERSITY, INCLUSION AND WELLBEING STRATEGY 2022 TO 2025 (ISSUED 27/2/2022)

<https://www.gov.uk/government/publications/group-diversity-inclusion-and-wellbeing-strategy-2022-to-2025>

One of the main features of this strategy was building a transport network that works for everyone.

## SELF-DRIVING VEHICLES (ISSUED 15/9/23)

[Self-driving vehicles - Transport Committee \(parliament.uk\)](https://www.parliament.uk/committees/transport/self-driving-vehicles)

The report provided various recommendations of which the following were relevant to this paper:

- Needs a cautious approach to introduction of self driving vehicles as they could worsen congestion and exacerbate existing inequalities in transport access.
- While it is widely assumed that self-driving vehicles will prove safer than human drivers, this is not a given - safety must remain the Government's overriding priority.
- Over time drivers may become less practised and therefore less skilled.
- The Government must take the lead to resolve issues - including access to data, verifying roadworthiness, legal liability and insurance implications
- Self-driving vehicles will need well-maintained roads and signage, nationwide connectivity, and up-to-date digital information about the road network.
- Existing preparations are too siloed and divorced from broader planning. If the Government is serious about

self-driving vehicles, it should ensure meeting their needs is an integral part of future infrastructure strategy

## NATIONAL HIGHWAYS - STRATEGIC ROAD NETWORK INITIAL REPORT: 2025-2030 (INITIAL REPORT)

[cre22\\_0102-srn-initial-report-2025-2030\\_vn.pdf](https://www.nationalhighways.co.uk/cre22_0102-srn-initial-report-2025-2030_vn.pdf)  
(nationalhighways.co.uk)

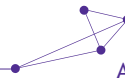
RIS 3 strategies for National Highways are as follows:

1. Improve sustainability by:
  - offering increased choices to enable customers to travel differently
  - increasing capacity through technology rather than large civils builds
  - Facilitate low-carbon travel
2. Creating a step change in road safety which includes an ambition to play a stronger role in influencing user behaviour and vehicle standards.
3. Making the most of their network by operating increasingly connected roads, undertaking increasing proactive maintenance, making our technology more resilient and investing in vital renewals to deliver safer, more reliable journeys.
4. Evolve customer and community services by improving the data and information provided to our customers. Taking a broader approach to supporting end to end journeys, including improved facilities for freight and nonmotorised users. Supporting growth and development alongside the SRN and addressing legacy impacts on their network, including air quality and noise

## NATIONAL HIGHWAYS - CONNECTING THE COUNTRY (ISSUED MAY 2023)

[cre22\\_0150-masterplan-national-highways-ris3\\_final-1.pdf](https://www.nationalhighways.co.uk/cre22_0150-masterplan-national-highways-ris3_final-1.pdf)  
(nationalhighways.co.uk)

This document sets out our 2050 vision for the SRN to be part of a seamlessly-integrated transport system that meets our customers' needs by connecting the country safely and reliably, delivering economic prosperity, social value and a thriving environment. The report focuses on nine areas and sets out a series of ambitions. The following are



pertinent to this paper:

- Regardless of which region our customers are travelling through, they will receive the same high level of service and connectivity
- Optimise the SRN and create a fully-integrated national transport network, working with partners to deliver seamless multi-modal travel. Help customers choose the right mode for their journeys and support viable alternatives to short hop journeys on our network.
- Roads will be the safest in the world
- National corridors will be CAV-enabled, providing congestion and safety benefits. Freight automation will be established on routes to major international gateways.
- The SRN will be decarbonised
- We will provide a trusted and stress-free end-to-end experience for our customers, with accurate and personalised journey information and attractive rest areas that offer rapid and reliable low-carbon fuelling
- Asset and operational resilience will be maximised through an intelligent, data-led approach.

### **NATIONAL HIGHWAYS\_DIGITAL, DATA, AND TECHNOLOGY STRATEGY 2023-2025**

<https://nationalhighways.co.uk/our-work/digital-data-and-technology/digital-data-and-technology-strategy/>

This document includes a digital future vision. It is centred on three core themes and incorporates five strategic priorities and embraces Digital Roads, Digital for Customer and Digital Design & Construction initiatives etc.

Over the next two year the aims are as follows:

- 1.aim to better inform our customers and provide them with trusted travel information, for example on road closures, ensuring that they feel safe and in control of their journeys and increase the offer to businesses, freight and hauliers.
- 2.continue to improve the security, reliability and resilience of our digital, data and technology services

3.invest in digital, data and technology people, processes and technical capabilities

4.deliver our net zero, sustainability and social value agendas, by mapping our biodiversity corridors and calculating carbon data

### **NATIONAL HIGHWAYS - DIGITAL ROADS STRATEGY**

#### Digital Roads - National Highways

Digital Roads will harness data, technology and connectivity to improve the way the Strategic Road Network (SRN) is designed, built, operated and used.

One of the core areas cited is Digital Operations which covers

- Intelligent asset management - Data and technology is harnessed to enable predictive asset management.
- Enhanced operational capability - Greater automation and network adaptability is enabled through the use of data and sensor technology.
- Digitally enabled workers - Digitally enabled workers have access to accurate, up to date and consistent information, enabling them to do their work more efficiently and more safely.

Another is core area is Digital for Customers which covers:

- Information provision - Customers receive accurate, consistent, and close to real time journey information through their preferred digital channels.
- Customer engagement - receive better quality data from customers, which informs the decision making and enables call centre staff to provide excellent customer service.
- Partnerships and alliances - Work with local highway authorities, transport operators, vehicle manufacturers and technology providers to improve customer experience and provide end-to-end journey support.

### **NATIONAL HIGHWAYS\_OPERATIONAL TECHNOLOGY 2035 STRATEGY**

<https://nationalhighways.co.uk/media/n1edbo0z/operational-technology-strategy-2035-issue-may-2022.pdf>

The paper details how operational technology services will be developed to support the overall NH strategy. Largely similar to previous reports and strategies with overall aims, however the following new aims have been extracted that are applicable to this paper:

- Continue to enhance the speed of response to incidents on the strategic road network (2030)
- Eliminate implementation of roadside technology requiring maintenance. (2035)
- World leading seamless end to end management of operational technology services (2035)
- Be a leading advocate of regulatory change to support in-vehicle technology. (2035)

### **DFT FUTURE OF MOBILITY: URBAN STRATEGY (ISSUED MARCH 2019)**

<https://assets.publishing.service.gov.uk/>

[media/5dcd8417ed915d071ca239e9/future-of-mobility-strategy.pdf](https://assets.publishing.service.gov.uk/media/5dcd8417ed915d071ca239e9/future-of-mobility-strategy.pdf)

- The benefits of innovation in mobility must be available to all parts of the UK and all segments of society
- Mobility innovation must help to reduce congestion through more efficient use of limited road space, for example through sharing rides, increasing occupancy or consolidating freight.
- Through 9 overarching principles new mobility systems and services must be developed and designed to operate as part of an integrated transport system combining public, private and multiple modes for transport users.
- Data from new mobility services must be shared where appropriate to improve choice and the operation of the transport system
- Age demographic changing - more elderly, increase in younger people not forecast to increase in rural areas - changes transport needs. Fewer younger people own cars and more elderly do. Impact on those having and being comfortable with using technology. Low earners may not be able to afford and therefore excluded.



- Health benefits to supporting people to get around - combat loneliness
- Rise in on-demand public transport services
- Privacy (or perceived) issues - big brother watching/tracking you.

#### UK GOVERNMENT NATIONAL AI STRATEGY (ISSUED SEPT 2021)

[https://assets.publishing.service.gov.uk/media/614db4d1e90e077a2cbdf3c4/National\\_AI\\_Strategy\\_-\\_PDF\\_version.pdf](https://assets.publishing.service.gov.uk/media/614db4d1e90e077a2cbdf3c4/National_AI_Strategy_-_PDF_version.pdf)

A 10 year strategy that builds on the UK's strengths but also represents the start of a stepchange for AI in the UK, recognising the power of AI to increase resilience, productivity, growth and innovation across the private and public sectors.

Part of this will be to enable better data availability in the wider economy, stimulate the development and adoption of AI technologies and consider how the development of AI solutions can tackle big, real-world problems such as net zero.

#### UK GOVERNMENT CONNECTED & AUTOMATED MOBILITY 2025: (ISSUED AUG 2022)

<https://assets.publishing.service.gov.uk/media/62ff438c8fa8f504cdec92df/cam-2025-realising-benefits-self-driving-vehicles.pdf>

In this paper the Government has recognised that CAM vehicles will happen, and it will be vital to manage the changes that connected and self-driving technologies will bring by introducing the right rules, training and support at the right time.

The potential benefits of connected and self-driving technologies are considerable: from better integrating rural communities and reducing isolation for people with disabilities or older people, to helping deliver essential goods and improving access to education, work and leisure. Intelligent vehicles will communicate not just with each other, but also with road infrastructure such as traffic lights, helping minimise congestion. These technologies could also make our roads safer, they don't

get distracted, tired and are likely to react more quickly than a human.

To maximise these benefits, government is committed to working with industry, local government, safety organisations and others as we move towards the safe roll out of these technologies.

This paper commits to a new legislative framework for safe self-driving road vehicles, based on the recommendations of the Law Commission. This new framework will enable innovation whilst also ensuring safety.

#### FUTURE INTELLIGENT TRANSPORT SYSTEMS STRATEGY (ISSUED 2017)

[its-strategy-2017-final.pdf \(transport.gov.scot\)](https://assets.publishing.service.gov.uk/media/54401111000000000000000000000000/its-strategy-2017-final.pdf)

This paper is aligned with Scotland's Strategic Priorities and the overall National Transport Strategy outcomes to deliver a safe and efficient network, inclusive, sustainable economic growth, embrace innovative solutions and to be customer focused.

Scotland have created this objective led strategy to address three overarching needs:

- To ensure the Strategy has a distinctly Scottish context, aligned with the Scottish Government's Purpose, national strategic priorities and reflecting the diverse nature of the strategic road network and the geographic and socio-economic landscape of Scotland
- To ensure the Strategy is customer focussed by putting the needs of our customers at the heart of what we do so that future decisions on ITS provision and investments contribute to a safe and efficient road network and are informed and driven by user needs.
- To ensure that decisions on investments in future ITS provision and operation align with Transport Scotland's established investment hierarchy and are objective-led by contributing to one or more of the specific Objectives we have set for the Strategy.

The goals of tackling inequality and boosting competitiveness are underpinned by four priority areas for

the Scottish Government:

- Investing in our people and infrastructure in a sustainable way
- Fostering a culture of Innovation and research and development
- Promoting Inclusive growth and creating opportunity through a fair and inclusive jobs market and regional cohesion; and
- Promoting Scotland on the international stage to boost our trade and investment, influence and networks.

It was stated within the paper that Transport Scotland is in favour of innovation on the trunk road network and are keen to encourage and support the development of new ITS technologies

User research determined that the focus of peoples' concerns are around journey times and journey time reliability; the desire for a safe and efficient transport network available when they want to travel; and accurate, up-to-date and reliable sources of travel information available across a variety of media platforms. There was also evidence of a lack of awareness of many of the travel information services Transport Scotland provides through our Traffic Scotland service.

The ITS strategy was summarised into developments within the following 6 themed areas:

**Theme 1:** Asset management and operational Services - making the most of the ITS we have already

**Theme 2:** Quality Traffic and Travel Information - for individuals and information service providers

**Theme 3:** Environment and Sustainability - using ITS to complement initiatives on air quality and alternative fuels

**Theme 4:** Intelligent Mobility, including Connected and Autonomous Vehicles - adapting to the expected increasing presence of CAVs on the network and the broad needs and potential effects that might result from Mobility as a Service

**Theme 5:** Economy, Connectivity and Freight - assisting the path of goods to market whilst reducing detrimental





effects of road freight traffic with technology

**Theme 6:** Data, Innovation and Collaboration - communications, connectivity, analytics, security, and asset management information.







**Intelligent**  
Transport Systems **UK**  
Empowering Transport Technology