

## Response to Industrial Strategy Green Paper Consultation Intelligent Transport Systems UK, November 2024

### 1. About Intelligent Transport Systems UK

Intelligent Transport Systems UK (ITS UK) is the national membership association for transport technology. We provide a national platform to support the roll out of technology for a cleaner, safer and more effective transport network, both at home and abroad.

ITS UK has 175+ members, from both the private and public sector, and covering all sizes and disciplines, with members working in areas like Road User Charging, Mobility as a Service (MaaS), traffic management and enforcement, integrated transport, Connected and Autonomous Vehicles (CAV), public transport services, smart ticketing and much more. More information on ITS UK and the intelligent transport sector can be found at [www.its-uk.org](http://www.its-uk.org)

We believe that intelligent transport has a vital role to play in supporting the UK Government's ambitions:

- **Economic growth:** The sector is conservatively valued at £1.5bn and generates £15bn a year for the UK economy. It is an important export, with UK businesses integral in the roll out of intelligent transport overseas, and there is potential for the UK to develop a competitive advantage in the sector in the future, with the global market expected to be worth £900bn by 2025.<sup>1</sup> The industry also supports highly skilled jobs and training opportunities.
- **Decarbonisation:** The intelligent transport sector is vital in incentivising the travelling public to low carbon forms of transport and decarbonising the road, rail and wider transport network. The sector is ready to support Government in reaching Net Zero by 2050.
- **Creating a safer network:** Intelligent transport systems can help reduce road deaths, such as by helping local and national transport authorities better understand their networks, or by providing CCTV and other monitoring technology to ensure safer journeys for the public.
- **Optimising capacity & cost efficiency:** Intelligent transport has a key role in optimising the usage of our transport network, by making best use of current infrastructure assets, incentivising behaviour change and through the predictive maintenance of infrastructure. Ultimately, this ensures the best possible usage of our limited road and rail network and can provide cost effective increases in capacity.

### 2. Transport as a Key Driver of Productivity, Economic Growth and Sustainability

The Green Paper published alongside this consultation cites how “a resilient, safe, and secure transport network provides access to social and economic opportunity, and is fundamental to business investment and location decisions. A lack of infrastructure is holding back the growth of major city regions such as Manchester, where lack of transport is estimated to cause a productivity gap of £8.8 billion each year”.<sup>2</sup>

It is well proven that transport plays a key role in a country's ambition to deliver economic growth, promote decarbonisation and reduce social inequalities.<sup>3</sup> Efficient transport networks provide a host of social and economic benefits by improving accessibility to housing and jobs, increasing productivity and ensuring more balanced regional economic development.<sup>4</sup> With transport

<sup>1</sup> Intelligent Transportation System Global Market Report 2022: Sector to Reach \$51.29 Billion by 2030 at a 7.7% CAGR, Business Wire

<sup>2</sup> <https://assets.publishing.service.gov.uk/media/670cde8692bb81fcdbe7b745/industrial-strategy-green-paper-final.pdf> p.35

<sup>3</sup> <https://lordslibrary.parliament.uk/strategies-to-address-issues-in-the-transport-system/#:~:text=These%20national%20networks%20are%20important,and%20leads%20to%20improved%20productivity>

<sup>4</sup> <https://www.oecd.org/en/data/indicators/infrastructure-investment.html#:~:text=Efficient%20transport%20infrastructure%20provides%20economic,labour%20mobility%20and%20connecting%20communities>

responsible for 26% of the UK's total carbon emissions in 2021<sup>5</sup>, promoting modes of sustainable transport, alongside modernising the network and its technological infrastructure to maximise efficiency, integration and mobility of goods and individuals, will be critical for the UK in meeting its Net Zero targets without compromising on the pro-growth agenda set out in this Industrial Strategy Green Paper.

In this submission, ITS UK is responding on behalf of its members across the transport technology sector. We have answered those key questions of pertinence to the sector.

#### 4. What are the most important subsectors and technologies that the UK government should focus on and why?

The collection of subsectors and technologies that encompass the UK ITS industry stand to play a vital role in the Government's growth objectives. ITS technologies connect businesses, skills, knowledge, and goods across the UK, acting as a backbone for the growth of other sectors.

Below are a number of sub-sectors which the UK has significant expertise in:

- **Automation of transport:** Automation, and improved data sharing in freight and maritime sectors, alongside leveraging technology in the strategic road and rail networks, can increase efficiency and reduce costs in the movement of key imports, exports and manufacturing inputs across value chains. The landmark Automated Vehicles Act has set the UK at the forefront of creating a legislative environment to foster the uptake of self-driving vehicles, and a number of UK companies have developed expertise in this area.
- **Traffic management and enforcement:** The UK has expertise in running one of the busiest road networks in Europe, with a strong safety record and with ageing infrastructure assets. Increasingly, the UK is leading the way in utilising data, such as from connected vehicles, and AI to improve traffic flows and increase safety for all road users, not just motorists.
- **Integrated Transport:** Technologies such as Mobility-as-a-Service (MaaS), could provide huge improvements in mobility for UK regions, and rural and semi-rural communities. Similarly, the UK has significant capabilities in smart ticketing and creating more integrated transport services, such as through on-demand services like DRT.
- **Digital twins and asset management:** The UK is well-regarded for its asset management expertise and the development of the 'digital twin' sector in the UK. A recent study by the Department for Transport has shown that digital twins could provide benefits of around £850 million (of present value in 2010 prices) across a ten-year period.<sup>6</sup>

The ITS industry also has the potential to support UK plc as an export. A survey of 100 companies in the industry showed that the export revenue from this sample totalled some £175 million, with each company exporting an average of £4.1 million, 26% of their total annual revenue.<sup>7</sup>

The survey revealed that there is a strong interest from the sector for greater overseas trade and that the sector's priority markets - United States, Australia, Germany, France and the Netherlands - are all nations where the UK has sought to develop better trading relationships in recent years.

#### 5. What are the UK's strengths and capabilities in these subsectors?

The UK has long since a global leader in the field of ITS. Some of the most prominent strengths and capabilities are as follows:

- **A strong culture of innovation** that has seen the UK develop world-leading products across the ITS sector.

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<sup>5</sup> <https://www.gov.uk/government/statistics/transport-and-environment-statistics-2023/transport-and-environment-statistics-2023>

<sup>6</sup> <https://www.its-uk.org/publications/its-exports-study/>

<sup>7</sup> <https://www.gov.uk/government/publications/integrated-network-management-digital-twin-economic-benefits-analysis>

- **A focus on safety**, both across the road and rail systems. Much of the technology involved in achieving such a strong safety record has helped been delivered by UK businesses.
- **A developing regulatory environment**, particularly for the roll out of autonomous vehicles, following the passing of the Automated Vehicle Act.
- **Increasing utilisation of transport data**, which is leading to major changes in how our transport system is operated and managed. Many UK transport authorities take an ‘open by default’ approach to data, which provides the private sector with opportunity to develop new products and services to benefit the travelling public.
- **An ecosystem of dynamic start-ups and scale-ups** within the transport sector. Many are developing new tools and products that can create more effective, efficient and seamless journeys for people and freight.

## 6. What are the key enablers and barriers to growth in these subsectors and how could the UK government address them?

There are a number of barriers to the growth of the transport technology sector:

**A lack of uptake in transport technology in the public sector:** With an unstable and uncertain funding environment for many transport authorities, it can be difficult for them to justify investment in technology and innovation, even where a product or service may reduce costs or increase revenue in the long term. This can be down to the limited capacity of these organisations, particularly local authorities, but it can also be due to procurement processes that incentivise capital expenditure over operational expenditure. In particular, the split between capital and operational expenditure can limit local transport authorities from procuring ‘software as a service’ or from utilising innovative new products. If we are to see changes, central Government will need to review the funding arrangements for Local Authorities, possibly by providing fixed funding periods to give these authorities the certainty they need.

**A complex data environment:** There is currently more data available than ever on the transport network. Innovations in telecommunications are giving us fast and affordable connectivity and precise location referencing; data from vehicles, other sensors and network operations are allowing real-time information and multimodal mobility opportunities that can be accessed from a range of mobile devices. Increasingly, organisations are learning how to integrate and use this data for the betterment of the travelling public. As the DfT’s Transport Data Strategy set out, however, the effective use of data can have many significant barriers, including:

- **Discoverability** - not being able to find the data needed;
- **Privacy, security and ethical concerns** as well as wider cultural factors within organisations - not being able to share;
- **Legal, monetary and contractual barriers** - being uncertain over what can be shared, and at what level;
- **Lack of widespread data literate culture and technical skills** across the transport sectors - not knowing how to share and how to extract value from the data;
- **Lack of incentives to invest in and make data available** - not being able to make the business case to unlock the funding and resources to share;
- **Data standards and quality** - not knowing in what format to share data and being concerned about sharing imperfect data;
- **A lack of leadership in the transport data sector** - not prioritising or valuing sharing, or lacking a clear sense of purpose as to why data should be shared.<sup>8</sup>

Government can support the sector by providing leadership, guidance and resource. In particular, the opportunity for the Government to bring key players to the table to develop a Smart Data scheme in transport, such as it has done for Open Banking, could have major benefits in developing the transport data sector, and in providing more benefits to the travelling public.<sup>9</sup>

<sup>8</sup> <https://assets.publishing.service.gov.uk/media/63eb62c9d3bf7f62e21c274a/dft-transport-data-strategy.pdf>

<sup>9</sup> <https://www.its-uk.org/smart-data-is-transport-ready/>

**Outdated or unnecessary regulations:** With rapid technological change, it can be difficult for regulations to stay relevant. Across the transport technology industry there are examples of where legislation or regulatory change is required, such as:

- **Escooter legislation:** In England, rental e-scooters are available to ride in selected local authority areas as part of the Department for Transport's national shared e-scooter trial, implemented in order to gather data on their usage, safety and environmental benefits. These trials were previously due to end in May 2024 but are currently extended to May 2026, and have been enabled through use of Vehicle Special Orders (VSO). However, this is not a viable long-term solution, and doesn't apply to privately owned e-scooters which remain illegal to use on public roads and spaces.
- **VAT on Demand Responsive Transport services using smaller vehicles:** Demand Responsive Transport (DRT) is an innovative approach to public transport that utilises technology to provide dynamic, on-demand bus services for local communities. DRT is particularly effective in providing a public transport link for those with limited transport alternatives, such as in rural areas. In the UK, only Public Service Vehicles (PSV), defined by law as having 10 seats or more, benefit from a zero-rated VAT exemption. This means that any DRT scheme that uses smaller vehicles falls within the Private Hire Vehicles (PHV) rules and therefore is subject to VAT on fares.
- **The Home Office Type Approval (HOTA) process for road safety devices:** The process for providing approval for road enforcement technology does not allow for the dual use of devices, limiting innovation in the road safety sector.

**7. What are the most significant barriers to investment? Do they vary across the growth-driving sectors? What evidence can you share to illustrate this?**

The main barrier for investment in transport technology is uncertainty of funding for transport authorities, as highlighted in the response to Question 6.

Many start-ups and scale-ups in the transport sector are supported by innovation funding, whether through Government directly, Innovate UK or Catapults. This funding is very welcome and has helped support a strong ecosystem of innovation start ups in the UK. However, many report finding it difficult to commercialise and grow following these grants, with some reporting that they have greater success with overseas customers than those in the UK. A greater focus on commercialisation and how these companies can move from trials to deployment, would be strongly welcomed.

**12. How can the UK government best use data to support the delivery of the Industrial Strategy?**

With increasing amounts of data across the transport network, there are many ways the Government could leverage this data to facilitate the delivery of its Industrial Strategy. One major opportunity would come from the implementation of Smart Data schemes across transport. Smart Data is defined as data that possesses: a framework for data sharing, common and open standards, active participation of data holders and practical delivery. Smart Data guarantees data quality, lowers the cost of innovations, and improves interoperability. With the increasing availability of data from all transport sectors, there lies the opportunity to gather and share this data amongst transport providers, deepening the sector's understanding of consumer behaviour and choice.

With this information, transport providers can greatly improve the efficiency of their services, reducing their costs and providing consumers with a faster, consolidated, streamlined service. This would lead to a faster movement of goods and individuals at lower costs, reducing timelines and costs for inputs required to build up the priority growth sectors set out in this strategy.

The Government is due to publish a consultation on Smart Data in Transport this Autumn. Following the consultation, the Government needs to set incentives, governance frameworks, and guidance in deploying Smart Data schemes in transport. Initially the Government should look to support pilots to identify the use cases in transport where Smart Data can be deployed with relative ease and high reward.

**13. What challenges or barriers to sharing or accessing data could the UK government remove to help improve business operations and decision making?**

The DfT Transport Data Strategy set out a number of barriers to the best use of data (highlighted in our response to Question 6). Other barriers include:

- **Culture:** Ensuring a culture of sharing and ‘open by default’ across transport;
- **Skills:** Skilled data professionals are in high demand, with transport often competing with other sectors for skilled labour;
- **Access to real time data:** The transport sector is developing its use of real time data, but further funding could be provided to offer greater real time information to the public;
- **Commercialisation and ownership:** For some data services, such as those from connected vehicles, there are questions around ownership and commercialisation, and how such services can be monetised.

The Department is looking to develop a new Transport Data Strategy, providing an opportunity to build on some key challenges the sector is facing. We would urge the Government to work with its suppliers, including transport operators, and its partner authorities, to make the case for an ‘open by default’ approach to data across the transport sector. ITS UK welcome the proposed National Data Library and would be interested in understanding the role transport data will play in this.

**14. Where you identified barriers in response to Question 7 which relate to planning, infrastructure, and transport, what UK government policy solutions could best address these in addition to existing reforms? How can this best support regional growth?**

A significant improvement would be a shift towards a healthier approach to risk in procurement. This would ensure transport authorities are able to implement innovative technology more effectively. There may be opportunities too, for the private sector to fund transport improvements for the public, particularly in R&D for emerging technology. Procurement should promote:

- **Wider Economic and Societal Benefits:** Consider the broader impact beyond immediate costs. For instance, increasing road capacity through technology without physically widening roads can improve traffic flow and reduce congestion.
- **Quality Over Price:** Prioritise Quality when evaluating bids. Sometimes a higher upfront cost can result in better long-term value.
- **Social Value:** Look beyond financial metrics. Procurement decisions should also consider local community benefits, such as job creation or environmental stewardship.
- **Whole Life Cost and Return on Investment:** Evaluate not only the initial capital expenditure but also ongoing operational costs (maintenance, energy, asset refresh etc.). Procurement should consider when the Return on Investment will be realised.

**20. Do you have suggestions on where regulation can be reformed or introduced to encourage growth and innovation, including addressing any barriers you identified in Question 7?**

The following regulatory changes would support the growth of the transport technology sector:

- A change in regulations for DRT to allow smaller vehicles to be used without being charged VAT;
- E-Scooters to be set on a permanent legal footing; and
- Further secondary legislation for the deployment of automated vehicles, following the passing of the Automated Vehicles Act.

**Intelligent Transport Systems UK  
November 2024**