

National Highways Digital Lab: An Insight into Data Services for Local Authorities



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TTF CONFERENCE 2025



Our Journey

...strategy and transformation

Connecting the country

National Highways long-term strategic plan to 2050

Trends & Disruptors

Demand



Infrastructure



Vehicles



Focus Areas

How much our customers will travel

- Growth and levelling up
- Car travel
- Freight and logistics

How our customers will experience travel

- Safety
- Digital
- Decarbonisation

How we will manage our network

- Customer experience
- Sustainable network development
- Asset resilience

National Highways journey



Our 2050 vision looks at how we meet our customers’ needs by connecting the country safely, reliably, delivering economic prosperity, social value and a thriving environment.



Digital Roads 2025

Our strategy that will harness data, technology and connectivity to improve how the Strategic Road Network is designed, built, operated and used.



Our vision

Our customers will be **better informed** and have **trust in the journey information they access**, ensuring that they **feel safe and in control** of their journeys.



Our Offering

...shared value(s)

Our purpose

We are the National Highways Digital Lab, an open platform for data-led insights & innovation to better connect the country

Our **commitment** is to improve the journey of our **customers and impact on our communities**. We're opening up our data and expertise as a **platform for innovation** across the **connected services ecosystem**

Data Lab

- Data services
- Data standards
- Developer community

Insights Lab

- Market trends and research
- Voice of road communities
- Thought leadership

Immersion Lab

- Customer experience immersion
- Employer experience immersion
- Industry events

Innovation Lab

- New technology pilots and centre of excellence
- SMEs and start-ups accelerators
- Innovation hub

CoLab

- Learning and development
- Experts network
- Talent management

Data services to untap value

5/5 services are now live in the Digital Lab Developer Portal



DATA SERVICES FOR EXTERNAL PARTNERS

1



Road and Lane Closures

Roadworks provided as spatial data with impacts down to the lane closed or restricted and lane closure impacts from electronic signs

2



Speed Managed Areas

Roadworks provided as spatial data with the speed limit and lane closure impacts from electronic signs

3



Digital Variable Message Signs

Electronic sign updates provided as spatial data with the message

4



Diversion Routes

A map of the diversion routes pre-agreed with local authorities and police should an incident occur

5



Road Limits and Features

Description of relevant parts of the SRN, e.g. emergency areas

KISSME service design to access data services

DIGITAL LAB
Developer Portal



1. Register

Register an account with National Highways.

Register



2. Subscribe to the APIs

Create your subscription and gain your API key.

Subscribe



3. Access our APIs

Start integrating our APIs.

Explore APIs



DATEX II is an open standard for exchanging traffic and travel information now on V3.4.



It provides a **structured and machine-readable format** for data exchange in XML and JSON.

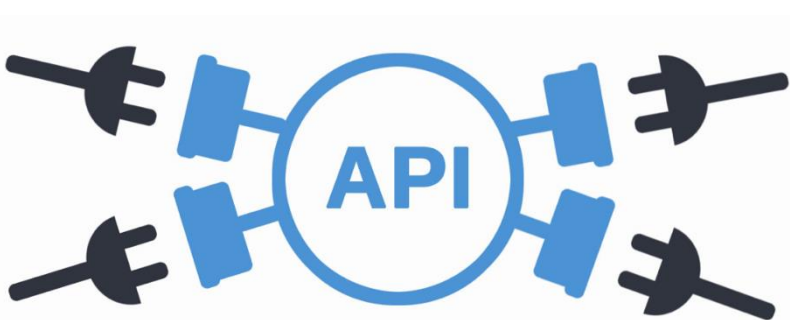


The exception is **Diversion Route data service** which is **available in multiple spatial data formats** to promote interoperability.



Data Standards & Architecture

Task 4.1	Road and Traffic Data Standard (DATEX II)
Task 4.2	Mobility Data Ecosystem Architecture
Task 4.3	Multimodal Standards
Task 4.4	Metadata Specifications
Task 4.5	METR (Management of Electronic Traffic Regulations)
Task 4.6	NAP Interoperability



Our Approach

...design and experience

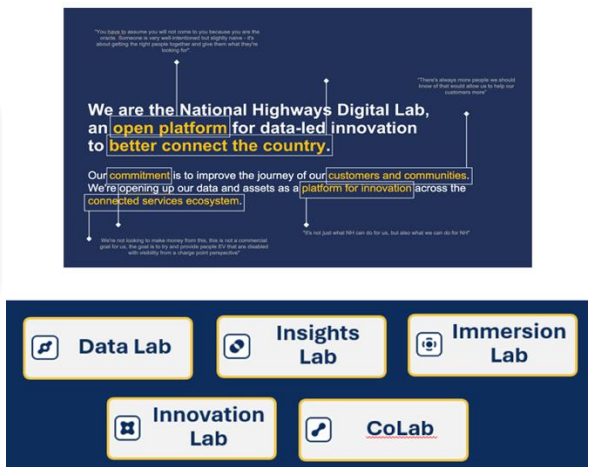
New capabilities to forge partnerships

Partnership Experience

Partnership Management

Partnership Engagement

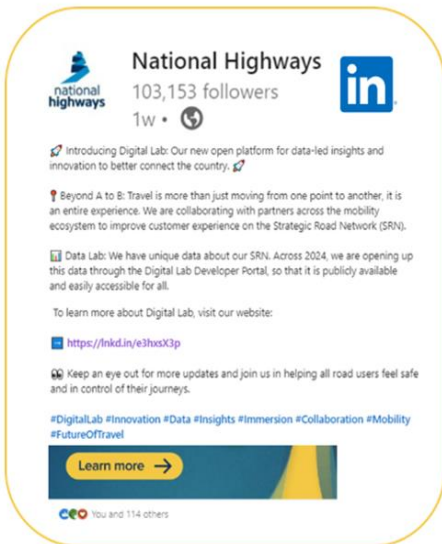
Value Proposition and Service Offerings



Partner Category Engagement, Onboarding and Experience



Visual Identity and Comms



6 segments across the mobility ecosystem will drive most impact for customers and communities

1

Wayfinders

2

Data Aggregators

3

Domain Specific Apps

4

OEMs & Tier 1 Suppliers

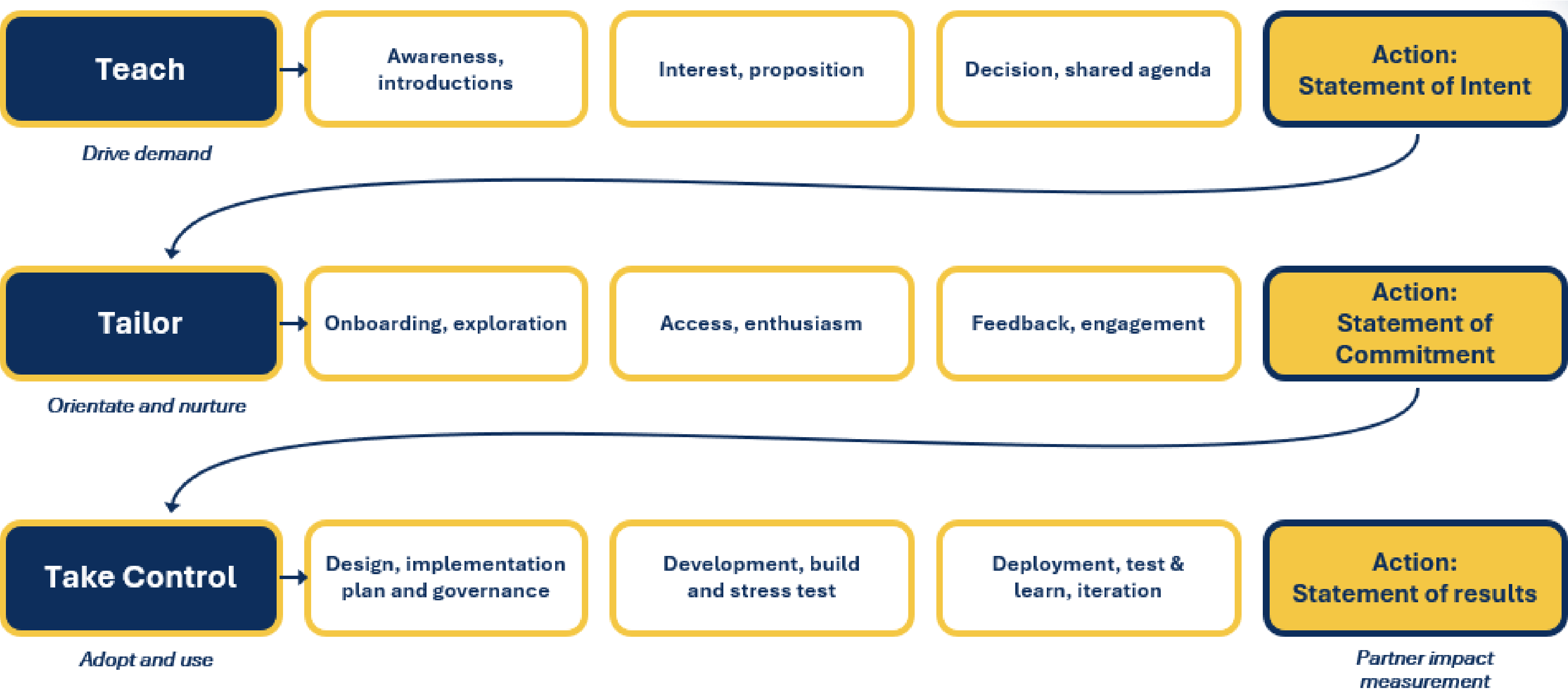
5

Public
(Local Authorities,
Charities & Academia)

6

Freight, Fleet
& Logistics

Partner experience and blueprint



Segment personalisation

Panel: The importance of data in improving customer experience

Sarah-Jayne Williams
Director of Geo Partnerships
Google

Kamran Ashraf
Head of Digital Lab
National Highways

Douglas Gilmour
Global Business Development Manager
TomTom N.V.

Anna Watt
Transport Research Lead
Transport for West Midlands

Highways UK
ROADS FOR A CONNECTED FUTURE

13:30

National Highways Theatre

Digital self-serve

Search the website

DIGITAL LAB is an **open platform** for data-led insight and innovation to **better connect the country**

Accessible Highways

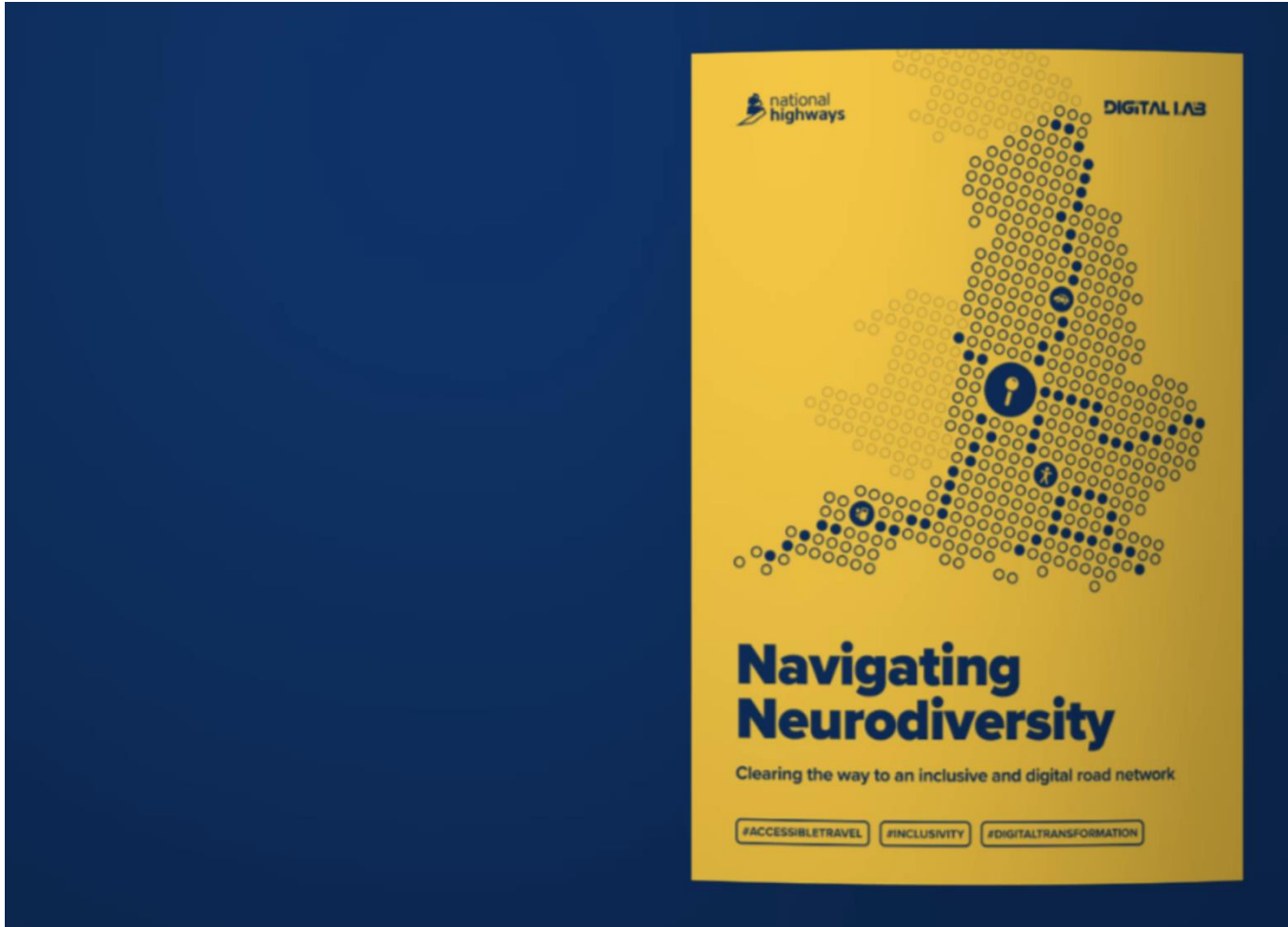
...taking people
with us



Stimulating CoLab on Inclusion

In the UK **disabled people take 38% fewer trips** than those without disability.
This figure hasn't changed since data collection began in 2007

Insights Lab - Release of the Navigating Neurodiversity Report



Immersion Lab - Launch of the report at our Accessible Highways event



- 1 Navigating Neurodiversity report ~7 mins
- 2 Video from ADHD UK ~7 mins
- 3 Video from Disabled Motorists UK ~7 mins
- 4 Video from EY Neurodiversity Network ~7 mins

- 5 Social Media's view ~5mins
- 6 Neurodiverse stimulus cards ~5 mins
- 7 Neurodiverse experience prototype ~4 mins
- 8 Journey Map of a Dyslexic driver ~7 mins
- 9 Journey map of an Autistic driver ~7mins

71%

71% of disabled people's ability to travel is restricted. (8)



2-3x

Those with disabilities are 2-3x more likely to report difficulties with using transport compared with non-disabled people. (1)



Stimulating CoLab on Commercial Drivers



Around **1.3 million people** in the UK work in the freight, fleet and logistics with significant health issues being reported

Insights Lab - Release of the Steering Inclusion Report



14



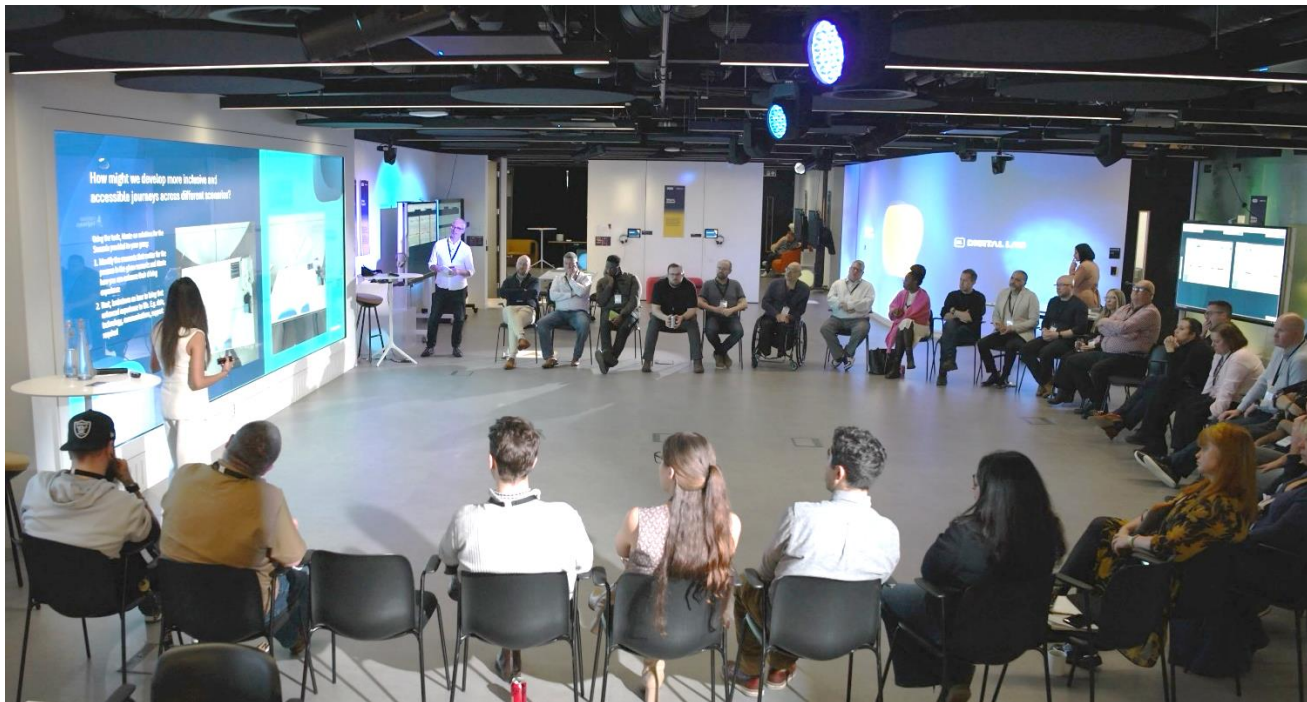
Immersion Lab – Leveraged Steering Inclusion content at our Accessible Highways event

40+
participants

17
organisations

155k
Commercial driver
representation

35
Stimulus materials



Wincanton



Travis Perkins





Progress to date and future roadmap

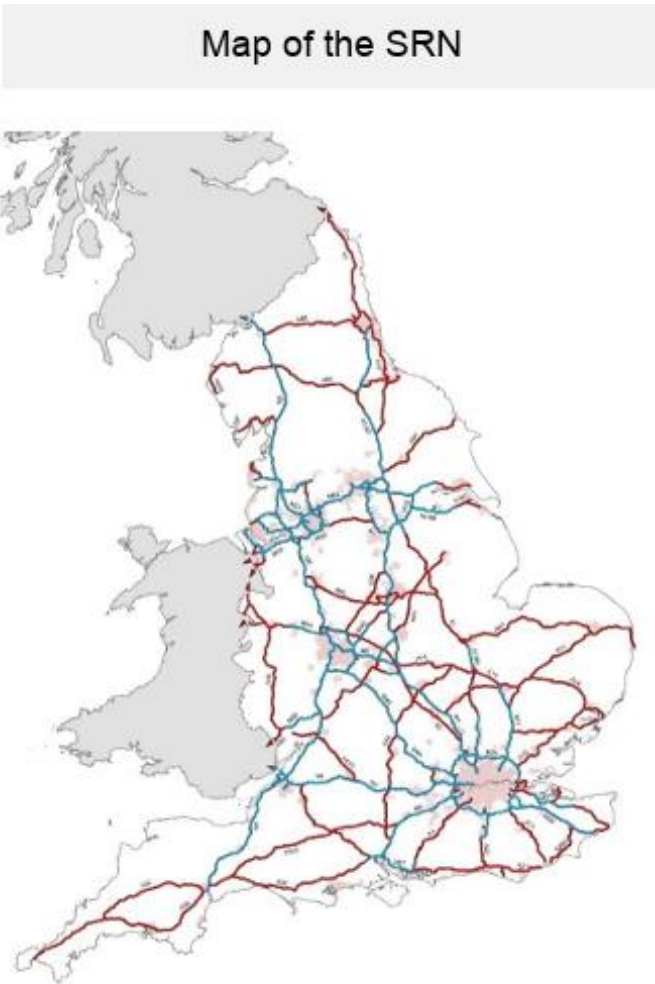
Partner Engagement



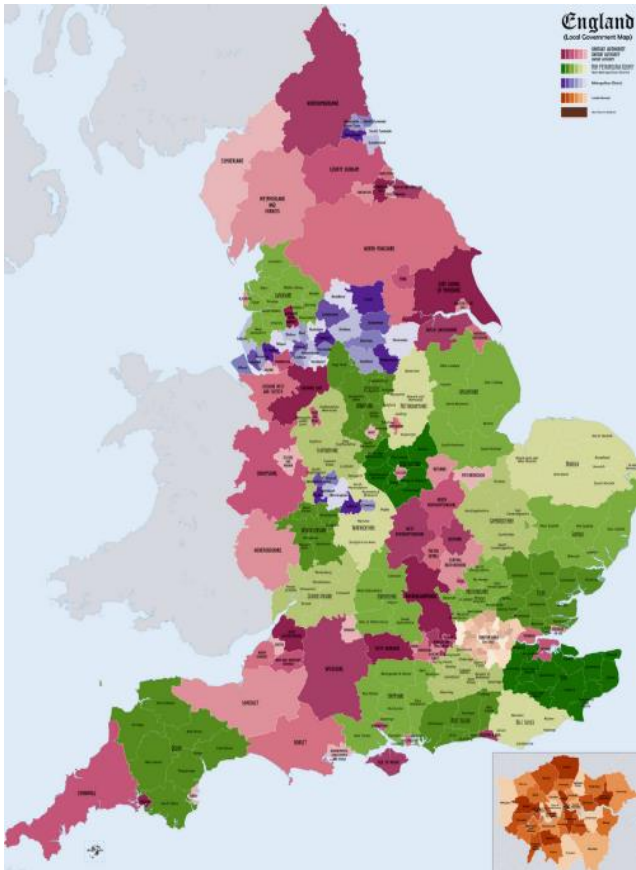
Wider Mobility sector partner opportunity landscape - SMMT FACTS 2024 JULY

Managing future demand and scale

National



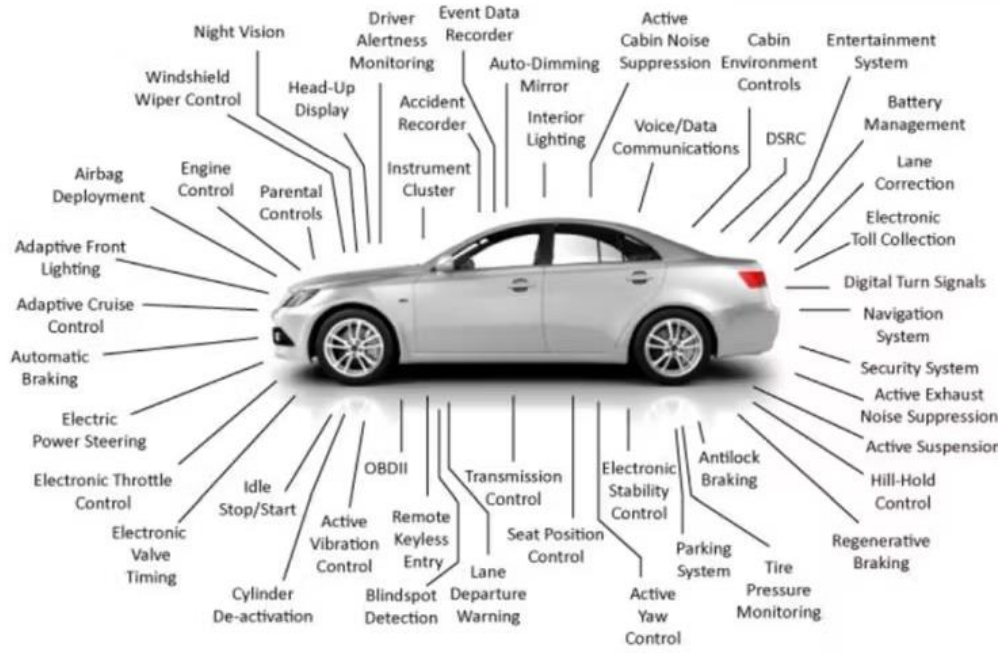
Local



Individual

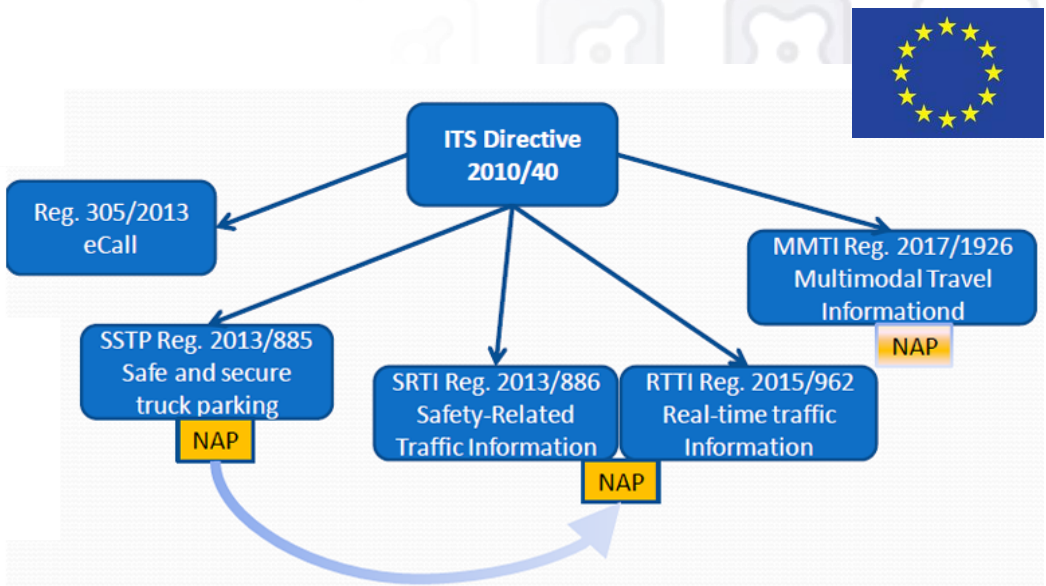


Corporate



Compliance

European Intelligent Transport Systems Regulation



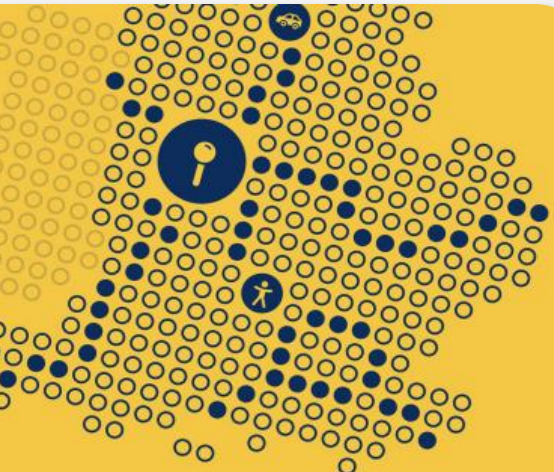
Thank you for your time!

Partner up and learn more

DIGITAL LAB
Developer Portal



Register Explore APIs



**Navigating
Neurodiversity**

Search the website 

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CoLab

Innovation Lab

Data Lab

Immersion Lab

Insights Lab





Steering Inclusion

