



ITS & the ERTICO Partnership

Making mobility smarter & cleaner

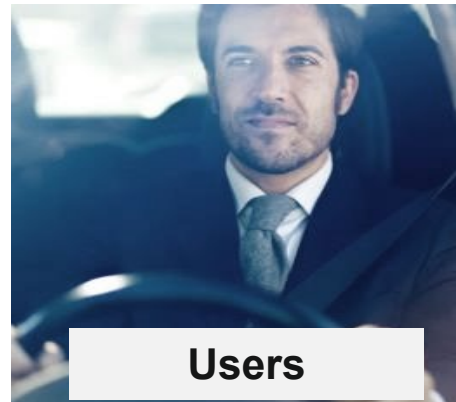
Agenda

1. **What is ERTICO-ITS Europe ?**
2. **ITS : scoping the subject**
3. **Example: data sharing in the ITS context**
4. **Example: traffic & mobility management**
5. **Some perspectives going forward**
6. **And last but not least**

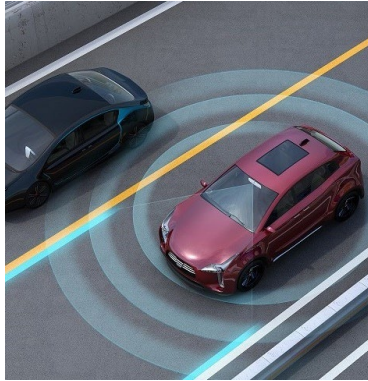
1. What is ERTICO-ITS Europe ?

ERTICO-ITS Europe A Public Private Partnership

Bringing together
120 Partners from 8 mobility sectors
since 1991 to make **mobility smarter,
cleaner, safer and more efficient.**



4 focus areas of smarter mobility



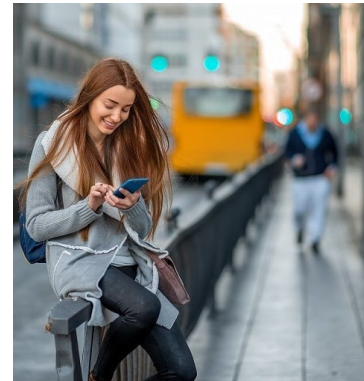
CONNECTED AND AUTOMATED DRIVING

Accelerating
automation and
connectivity for safer
and smarter mobility



CLEAN MOBILITY

Reducing
environmental
impact



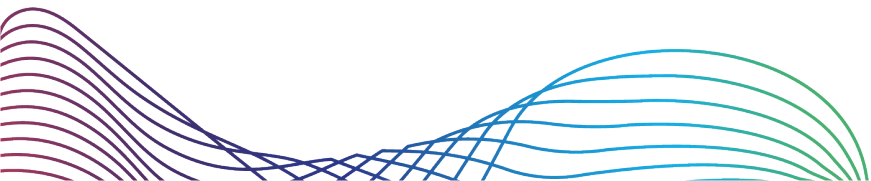
URBAN MOBILITY

Delivering
seamless mobility
for all



TRANSPORT AND LOGISTICS

Creating the digital
infrastructure for
freight transport and
logistics operations



STAKEHOLDER ENGAGEMENT

We always involve all mobility stakeholders. This way we are able to find and implement the most innovative solutions. We do this on a global scale thanks to...



Cross-sectoral dialogue

Within the ERTICO Partnership we share knowledge and information through our workshops and events.

International Cooperation

We promote cooperation and business opportunities on the global stage, with a focus on harmonised standards across the world.



ITS Congress

Every year we organize an ITS Congress in Europe and co-organize an ITS World Congress, both the ultimate showcase for mobility services deployment.

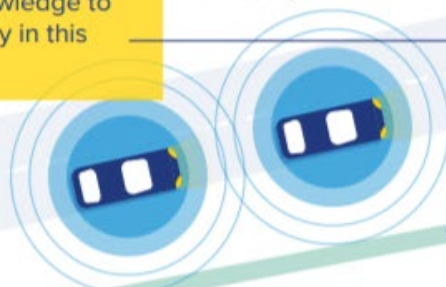


THOUGHT LEADERSHIP

Together with our partners, we are recognised experts in smart mobility and we use our knowledge to pave the way in this field.

Advocating for smart mobility

We are a technology-neutral supporter of mobility and work together with the European Institutions for innovation and deployment.



Envisioning tomorrow's journey

We develop visionary papers on the future of smart mobility. The expertise within our partnership, helps to develop European mobility roadmaps.

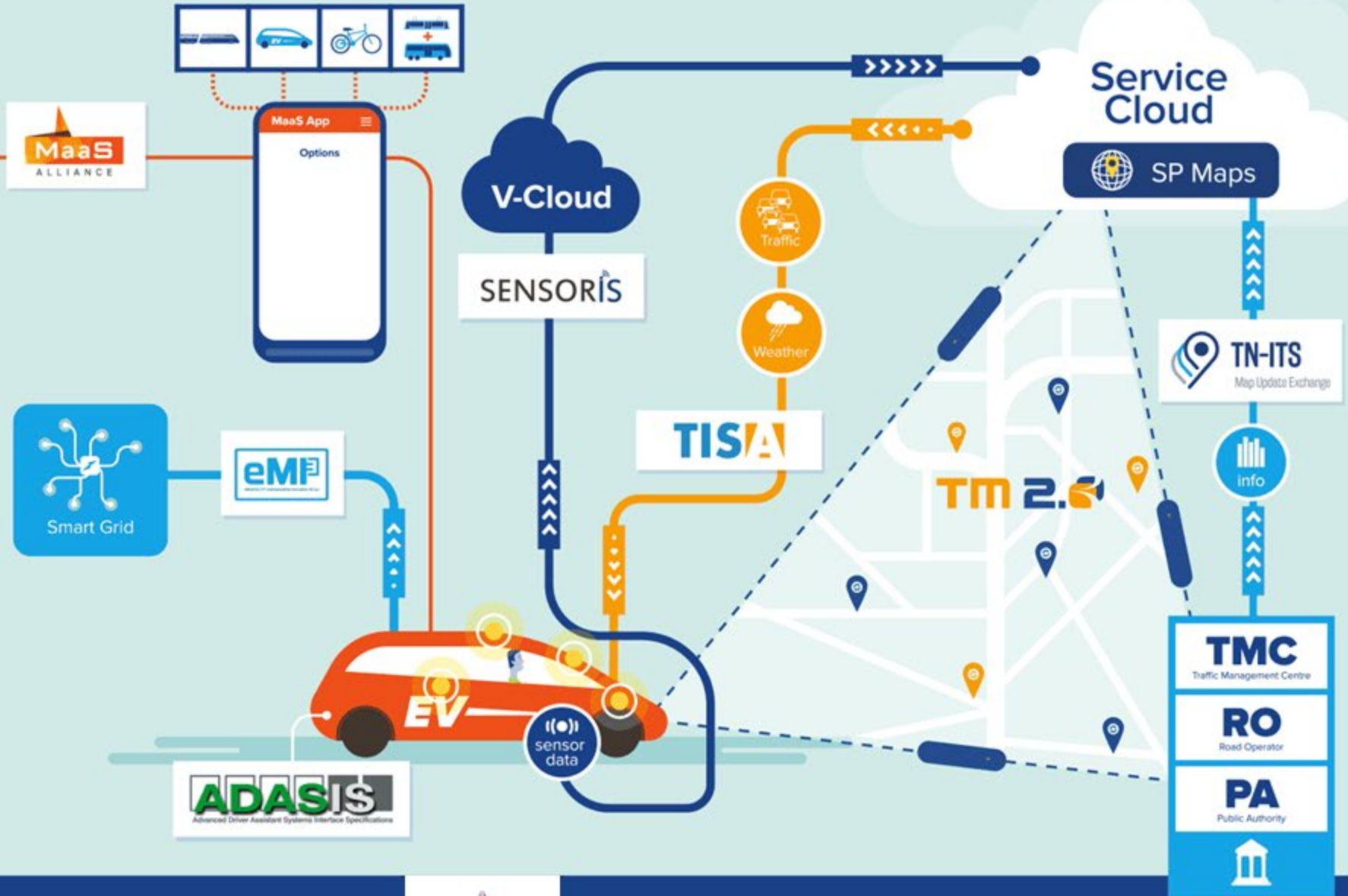
INNOVATION & DEPLOYMENT

Network of National ITS Associations

- ❑ Advocate, showcase ITS, smart mobility
- ❑ Platform for exchange & dialogue
- ❑ Mutual cooperation and promotion
- ❑ Stakeholder inspiration
- ❑ European wide via ERTICO-ITS Europe



SMART MOBILITY DEPLOYMENT BY ERTICO PARTNERSHIP



2. ITS : scoping the subject

Scoping the subject

- ❑ **European directive 7th July 2010 on Intelligent Transport Systems (under review via EC proposal 14 December 2021):**

“Intelligent Transport Systems’ or ‘ITS’ means systems in which information and communication technologies are applied in the field of road transport, including infrastructure, vehicles and users, and in traffic management and mobility management, as well as for interfaces with other modes of transport”

- ❑ **Moving of people, goods and data**
- ❑ **Cross-sector dialogue and multi-modal**
- ❑ **Involved stakeholders:**
 - ✓ **Industry**
 - ✓ **Users**
 - ✓ **Public authorities**
 - ✓ **Regional regulators: e.g. EU**
 - ✓ **International bodies: harmonisation, standardisation**

ITS connects the dots

-> Making the transport system more sustainable, smart and resilient

- Manufacturing and regulation of the mobility products themselves (vehicles, trains, ships, airplanes and their components and systems)
- Physical and digital infrastructure
- Digitisation and digitalisation (data flows, data spaces)
- Data protection and privacy
- Standardisation
- Security and cybersecurity
- Spectrum regulation & management
- Upgrade digital skills

Technology innovation

- ❑ V2V, V2I, V2X and similar on other transport modes
- ❑ From ADAS (e.g. ACSF, AEBS) to automated driving (SAE L3->5): enhancing role of digital infrastructure
- ❑ Capturing data for intelligent decision making:
 - ✓ Sensing and interpreting the outside environment
 - ✓ Activating automation functions
- ❑ Digital twins as welcomed input for HD maps:
 - ✓ Lay-out of road infrastructure (lane marks)
 - ✓ Road signs, traffic signs, speed limits (relevant for ISA)
 - ✓ UVARs (urban vehicle access regulations)
 - ✓ Traffic rules
- ❑ Latency and ubiquity requirements of communications technology

WIN-WIN through ITS

Safety

Improve support of driver/reduce human errors
✓ Vision Zero 2050

Traffic efficiency

✓ Better vehicle throughput
✓ Road capacity learning systems

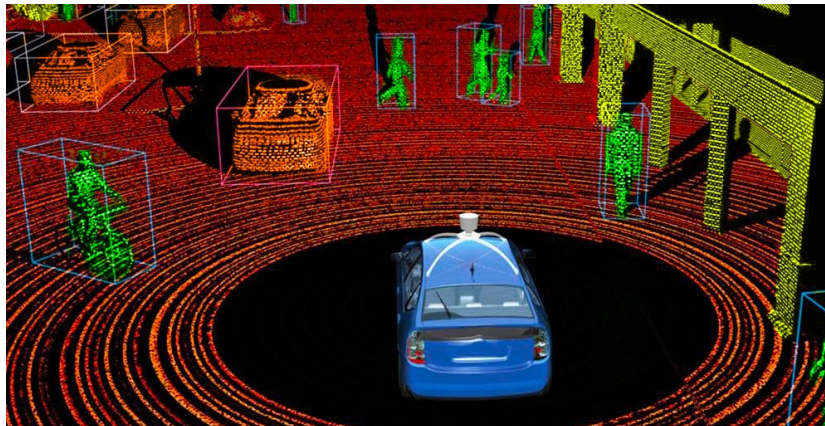
New mobility

✓ Shared/on demand mobility
✓ Access for aging and disabled people
✓ Multi-modal

Resources

✓ Sustainability: climate and environmental gains
✓ Productivity: value of time
✓ Differentiated use of land/urban/suburban
✓ Upgraded city planning

3. Example of data sharing in the ITS context



Experiences and challenges



25 FEB 2021 - 25 FEB 2021

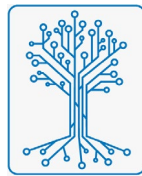
ONLINE

Workshop on Data sharing for Automated Driving

- ~ 80 participants
- Data sharing experiences from large scale projects (UDRIVE, AUTOPILOT, L3Pilot)
- Break-out sessions on principles for industry data sharing, in-vehicle data selection and analysis, GDPR

- Need standardisation of metadata, e.g. for Operational Design Domains, scenarios, functionality and services;
- Define requirements for data sharing in real-time and for in-vehicle selection of data
- Formulation of an easy and understandable approach for organising participant consent and consent chains;
- Definition of approaches for balancing between public interest and industrial confidentiality;

Great momentum for data sharing



GAIA-X

INTERNATIONAL DATA SPACES ASSOCIATION



KRAKEN



Mobility Data Space



X-ROAD

Experiences with data sharing in large projects



www.dataforroadsafety.eu

www.ai.se/en/news/join-edge-lab-and-accelerate-your-understanding-distributed-learning

Trust Framework for Data Sovereignty and Sharing in Data Spaces

European Data Spaces

1



I want share data with parties in other European countries and I want to make sure that I can use data and combine data in an interoperable way.

Trusted data sharing

2



I want to share my data for applications which will combine data from several sources, but I want to control that my data is shared in a secure way.

Data sovereignty

4



I want to know that my data is stored in a cloud under European legislation and where non-EU entities have no access to my data.

Examples of the logistics sector



Develop and Deploy Next Generation ports & logistics hubs operation system architecture integrated in 5G networks at three main ports in Europe: Athens (GR), Hamburg (DE) and Koper (SL) utilising new types of 5G IoT sensors and devices

- 1) **Truck & Emission Data for Sustainable Traffic Management** based on 5G V2X in Hamburg
- 2) **Automated Truck Platooning using 5G based GLOSA** in the logistics corridor of Hamburg to **achieve low emission targets** for ports and hub-logistics
- 3) **Data exchange with SWARCO traffic management center.** Dynamic control loop for the reduction of CO2/NOx emissions from trucks by **avoiding Start-Stop events** by using GLOSA technology

With **5G-LOGINNOV**, ports will minimize their **environmental footprint to the city**. They will decrease disturbance to the local population through a **significant reduction in the congestion** around the port.





A European federated network of information exchange in logistics













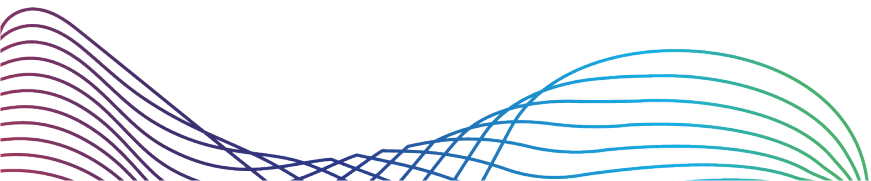
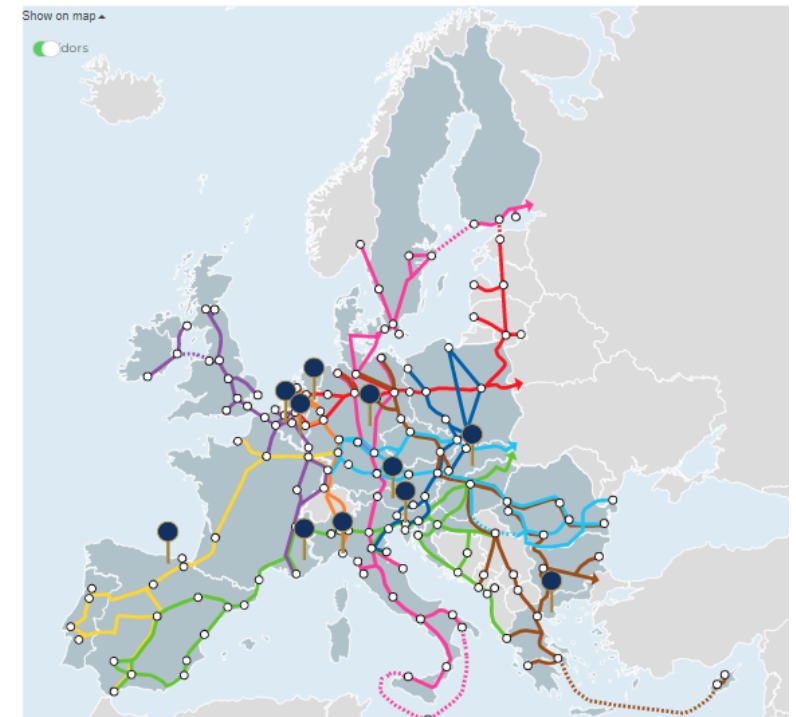
Develops the first European federated architecture for data sharing serving the European logistics community of shippers, logistics service providers, mobility infrastructure providers, cities, and authorities

eCMR is one of the key for supply chain services: UN-ECE convention, signed by 56 states

PILOT SITES

Legend

-  FENIX Pilot Site
-  Baltic - Adriatic corridor
-  North Sea - Baltic corridor
-  Mediterranean corridor
-  Orient / East Mediterranean corridor
-  Scandinavian - Mediterranean corridor
-  Rhine - Alpine corridor
-  Atlantic corridor
-  North Sea - Mediterranean corridor
-  Rhine - Danube corridor



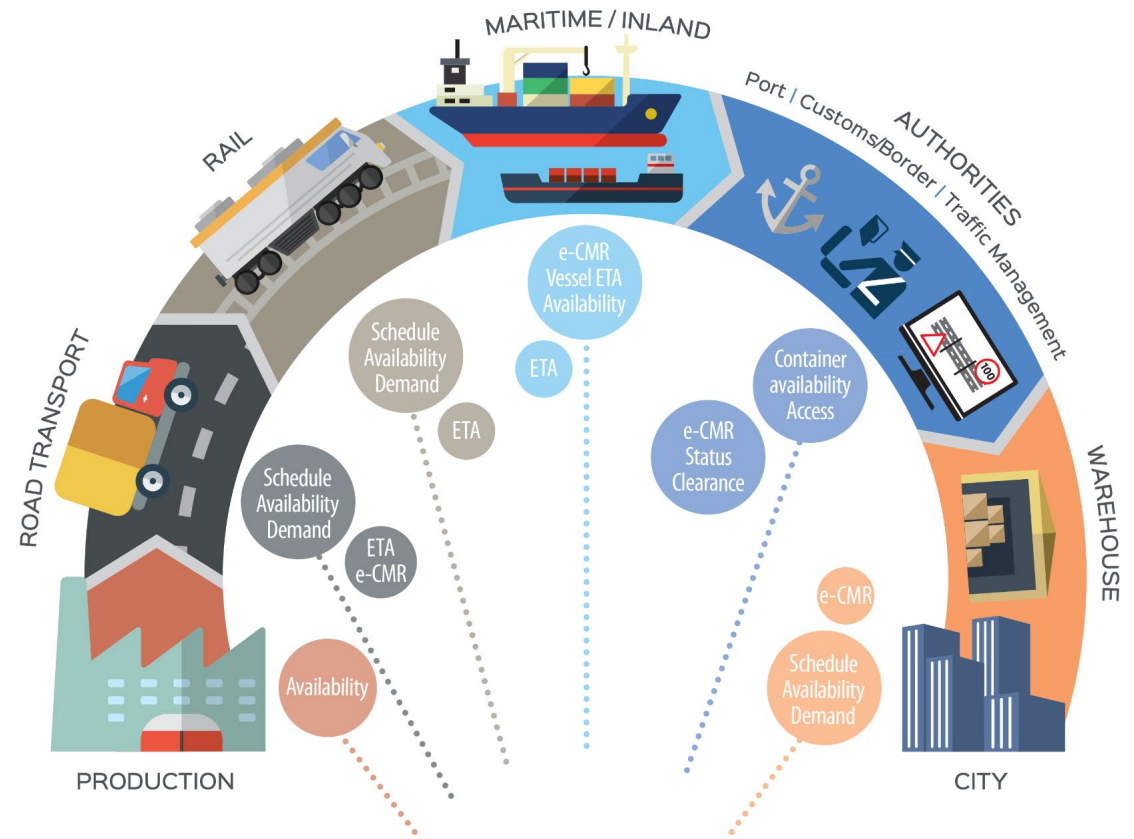
Enabling innovation through cooperation

eCMR is a key for supply chain digitalisation

Piloted in:

- Czech Republic
- Germany
- Greece
- Romania
- Serbia

In cooperation with shippers, transporters, customs, road and enforcement authorities



AEOLIX

Data sharing in the EU research agenda

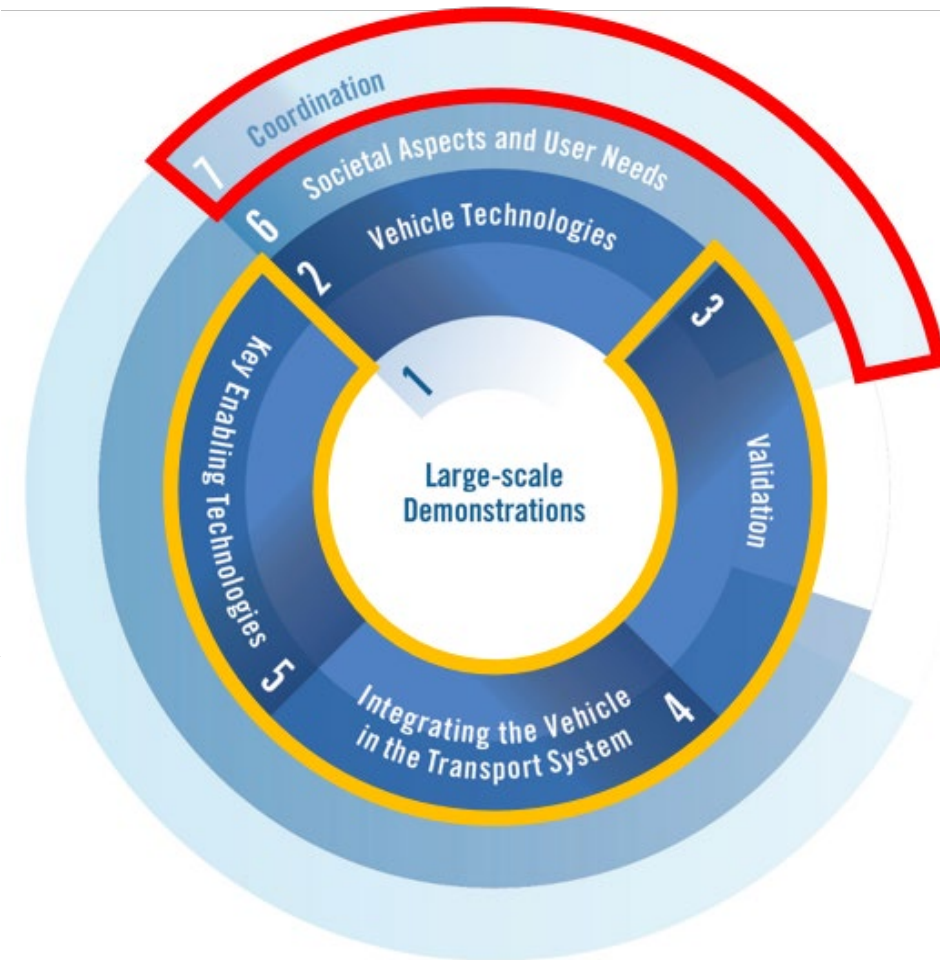
CCAM Single Platform Platform WG2 “Coordination & Cooperation of R&I and testing activities”

- Facilitate data sharing of tests
- Identify challenges, priorities and requirements for Test Data Sharing Framework

CCAM Partnership – Strategic R&I Agenda (SRIA)

- Cluster 3 – Validation, Scenario database
- Cluster 4 – Digital Twin, Traffic Management
- Cluster 5 – Key Enabling Technologies – tools, AI,...
- Cluster 7 – Coordination & Federation

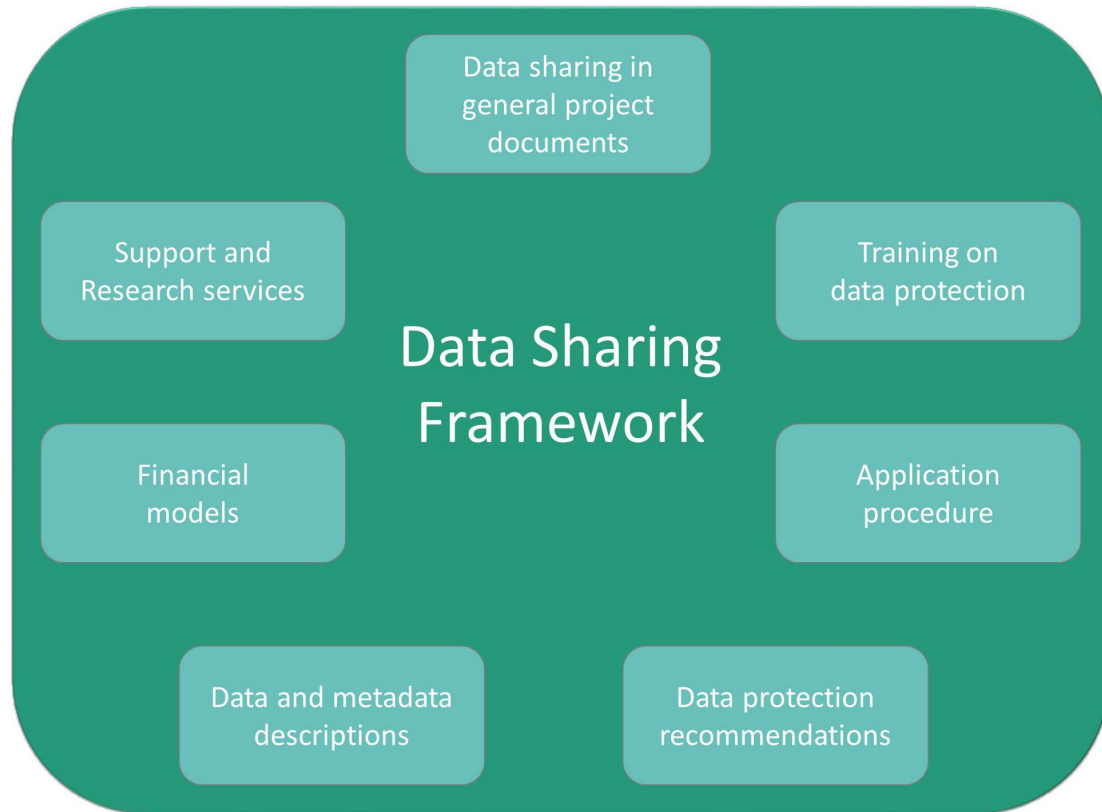
DigitalEurope funding for a European Mobility Data Space framework



CCAM Knowledge Base

ARCADE CSA

- Oct 2018 – July 2022
- 23 partners from 11 States
- 50+ associated partners
- 2000 subscribers



The screenshot shows the website interface for the Data Sharing Framework. The header includes the logo for "connected automated driving.eu" and a search bar. A navigation menu on the left lists various categories, with "Data Sharing" selected. The main content area displays the title "Methodology - Data Sharing Framework" and provides an overview of the framework's purpose and structure. A "Feedback form" pop-up is visible in the bottom right corner.

Methodology - Data Sharing Framework

The Data Sharing Framework (DSF) is based on needs from automation pilots and requirements from the General Data Protection Regulation (GDPR, REGULATION (EU) 2016/679). Updates based on the last years' of experience in implementing the DSF were included in the updated version (v1.1) of the framework.

The FOT-Net Data Sharing Framework consists of:

- project agreement content, including guidelines and checklists to inform data sharing in the agreements, which together with legal and ethical considerations for data sharing. The project agreements include the grant agreement (the work), the consortium agreement, the participant agreement and the data sharing agreements;
- data and metadata description recommendations to facilitate the use of the data.

<https://knowledge-base.connectedautomateddriving.eu/data-sharing/methodology-data-sharing-framework/>

4. Examples of traffic & mobility management

Seamless and Trusted Data Exchange – TN-ITS

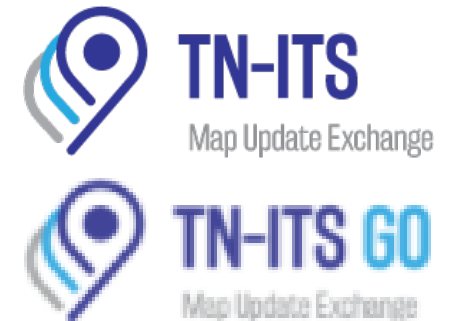
Realisation of the ‘digital twin’ requires trusted data.

- Map and service providers to provide **fresh, regularly updated, accurate, and trusted** digital maps.
- Basis for **future regulatory data governing full automation**, supporting EU policy on RTTI and ITS (e.g. Intelligent Speed Assistance).
- TN-ITS forms a pillar for the European public **mobility data space** for current and future deployed **National Access Points (NAP)** organised by Member States



TN-ITS Map Update Exchange

- TN-ITS association, acting as an innovation platform under the legal umbrella of ERTICO
- TN-ITS Go Programme Support Action (PSA) for implementation and facilitation of seamless spatial data exchange



National Access Point Coordination Organisation for Europe

- Strategy and governance
- Interoperability and level of service
- Content and accessibility
- Development and enhancements of standards (Datex II, TN-ITS, MMTIS, Metadata)
- National bodies and compliance assessment



Advanced Interactive Traffic Management – TM2.0



Started in 2014



Focus on new solutions for advanced and active traffic management

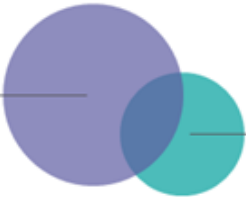


an ERTICO innovation platform

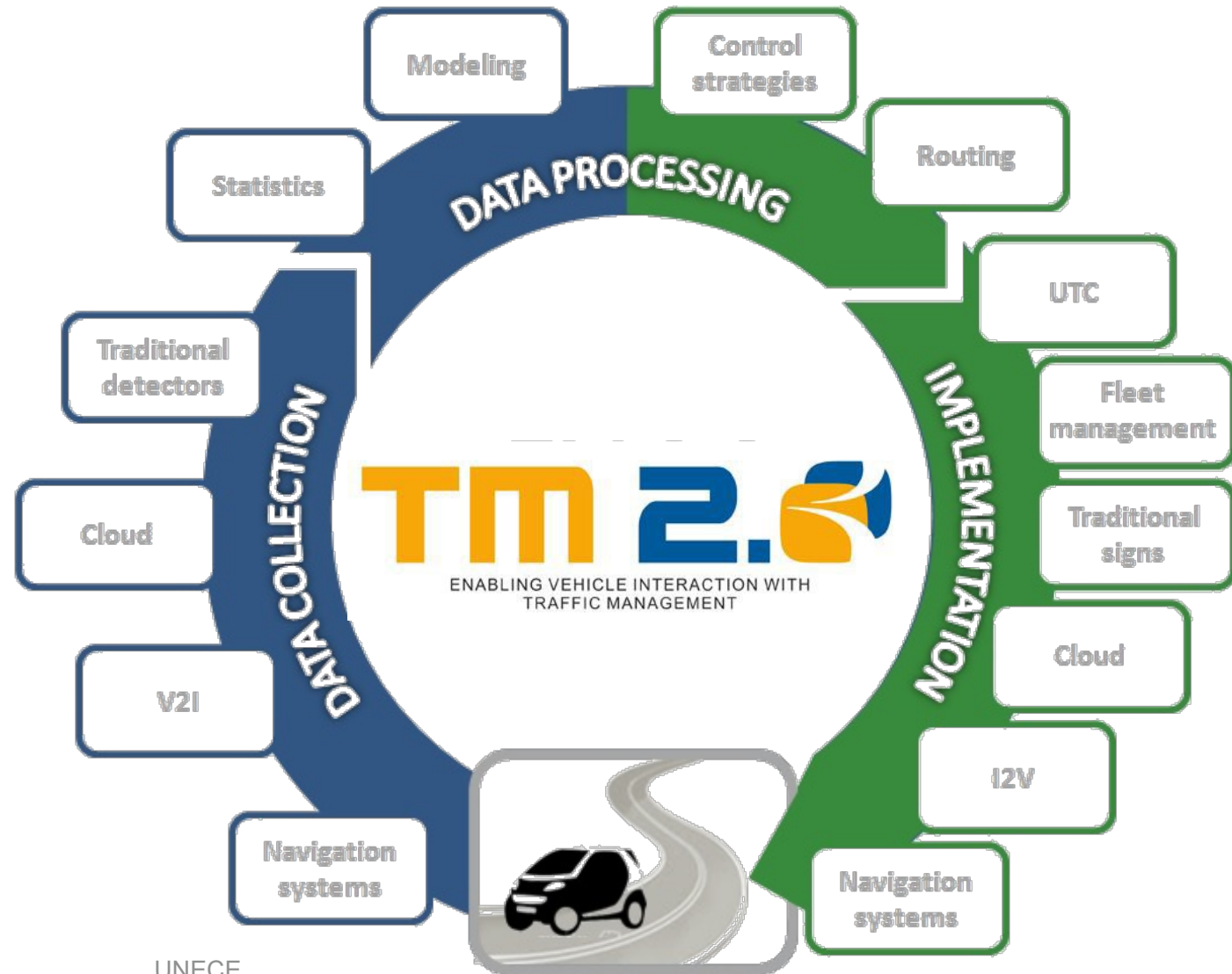


Vision: “Enable vehicle interaction with traffic management”

Use a set of common interfaces, principles and business models to facilitate the exchange of data between vehicles and TMC.



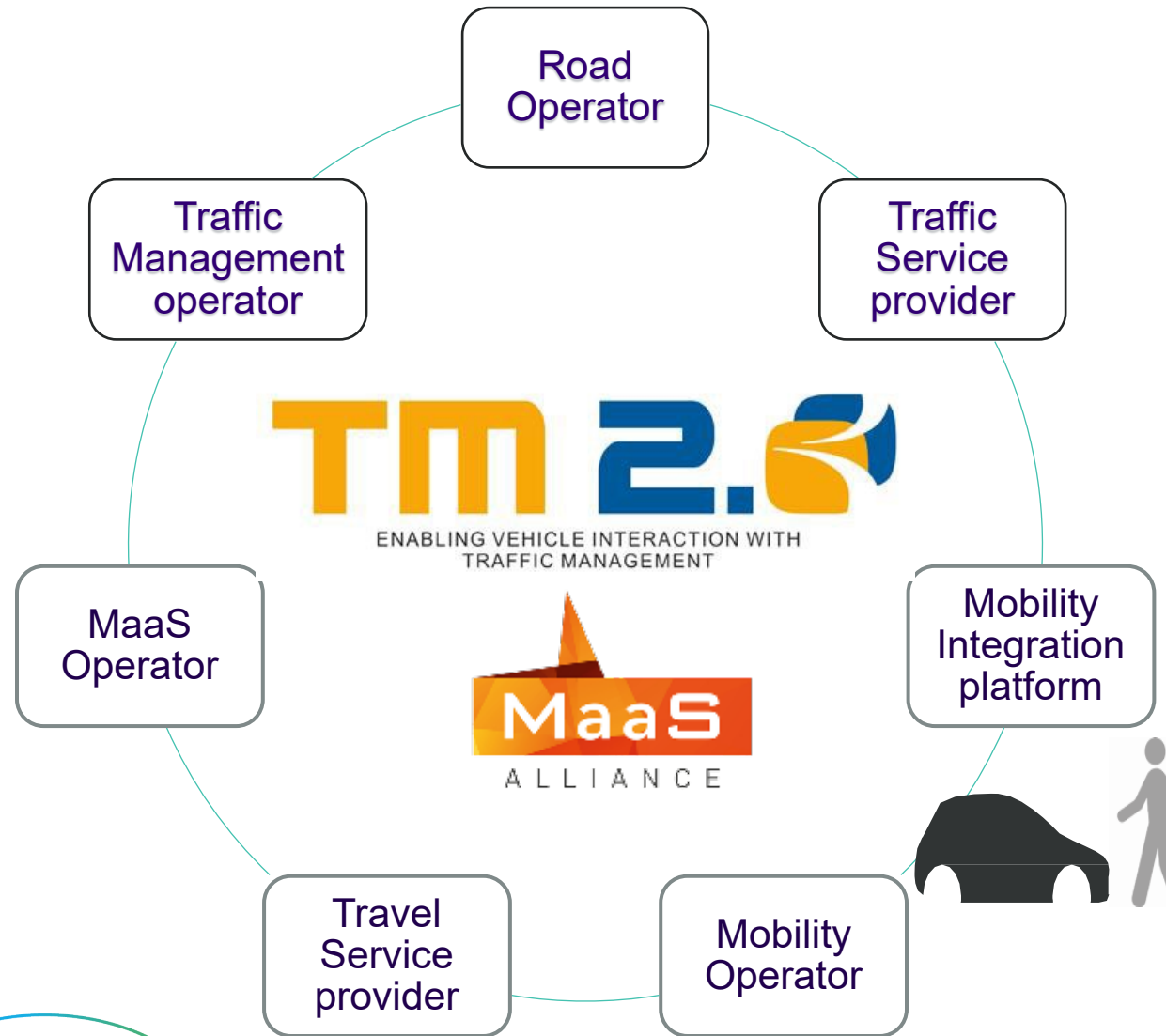
+ Improve entire value chain for consistent TM and Mobility services.



Mobility Network Management

Principles:

- Collaboration
- Trust
- Co-opetition



Loop of information in the mobility value-chain

5. Some perspectives going forward

Work ahead

- Investments in infrastructure and business case
- Availability and accessibility of digital infrastructure
- Availability and accessibility of data (e.g. traffic, travel data)
- Digital divide versus inclusion, e.g. connected/automated vs non-connected/non-automated
- Affordability
- Interoperability, taxonomy, metadata, data
- Continuity across borders
- Inter-modality
- Technology neutrality but also compatibility of technologies in legacy fleet and infrastructure versus newer technologies
- User trust, cybersecurity, artificial intelligence, data protection and privacy

6. And last but not least !

ERTICO - ITS CONGRESSES



- ❑ **European and World Congresses create connections and opportunities for ITS industry stakeholders**
- ❑ **ITS Congresses have been taking place in world cities since 1994, including Detroit, Montreal, Melbourne, Tokyo, Singapore and Vienna – Los Angeles, Hamburg and Dubai up next**
- ❑ **World Congresses attract over 10,000 visitors. European Congresses attract 6,000. Hamburg attracted over 13,000 visitors.**
- ❑ **Raise public awareness of smart mobility concepts and solutions**
- ❑ **Reinforce scientific excellence & provide a platform for business cases**
- ❑ **Advance deployment & create a legacy for all involved**

14th ITS European Congress – Toulouse, France – 30 May to 1 June 2022



- ❑ **Toulouse, France's fourth largest city and the capital of the Occitanie region with over 1,300,000 inhabitants**
- ❑ **Toulouse, an important business hub with many connections to the aeronautical industry**
- ❑ **A packed programme over three days with high level programme including four plenaries and a technical programme with five ITS themes**
- ❑ **Presentations, Demonstrations and state-of-the-art Exhibition under one roof in one unique site the MEET near Blagnac airport. See you there!**

**“Alone we can do so little,
together we can do so much”** Helen Keller

ERTICO Partnership

<https://erticonetwork.com/toulouse-metropole-to-host-next-its-european-congress/>



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