

ITS-05-07



Vehicle-to-Vehicle communication and beyond

UNECE Informal WG on ITS

17th January 2023

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Scoping the subject

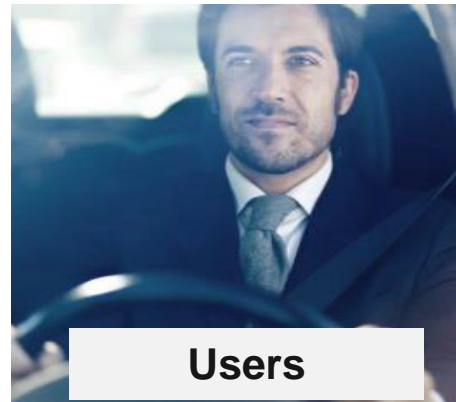
- ❑ GRVA September 2022: discussion on V2V communication as possible future topic
- ❑ WP.29 November 2022: the IWG on ITS to explore the role of WP.29 on V2V communication
- ❑ Main questions that the group wants to address are:
 - What role can/should WP.29 play to support the deployment of V2V communication, if any?
 - What items, if any, should WP.29 focus on?
 - Is there a guidance from your side on the time by which WP.29 should start activities or by which WP.29 should deliver an outcome?

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.

Geographical scope: EMEA

www.ertico.com





Automated driving



Drones



Data exchange



Traffic management



Artificial Intelligence



Mobility as a Service



Mobility Apps



Transport and Logistics



Navigation

ITS

Intelligent Transport Systems



Intelligent Infrastructure



Safety



Multimodality



Payment Systems

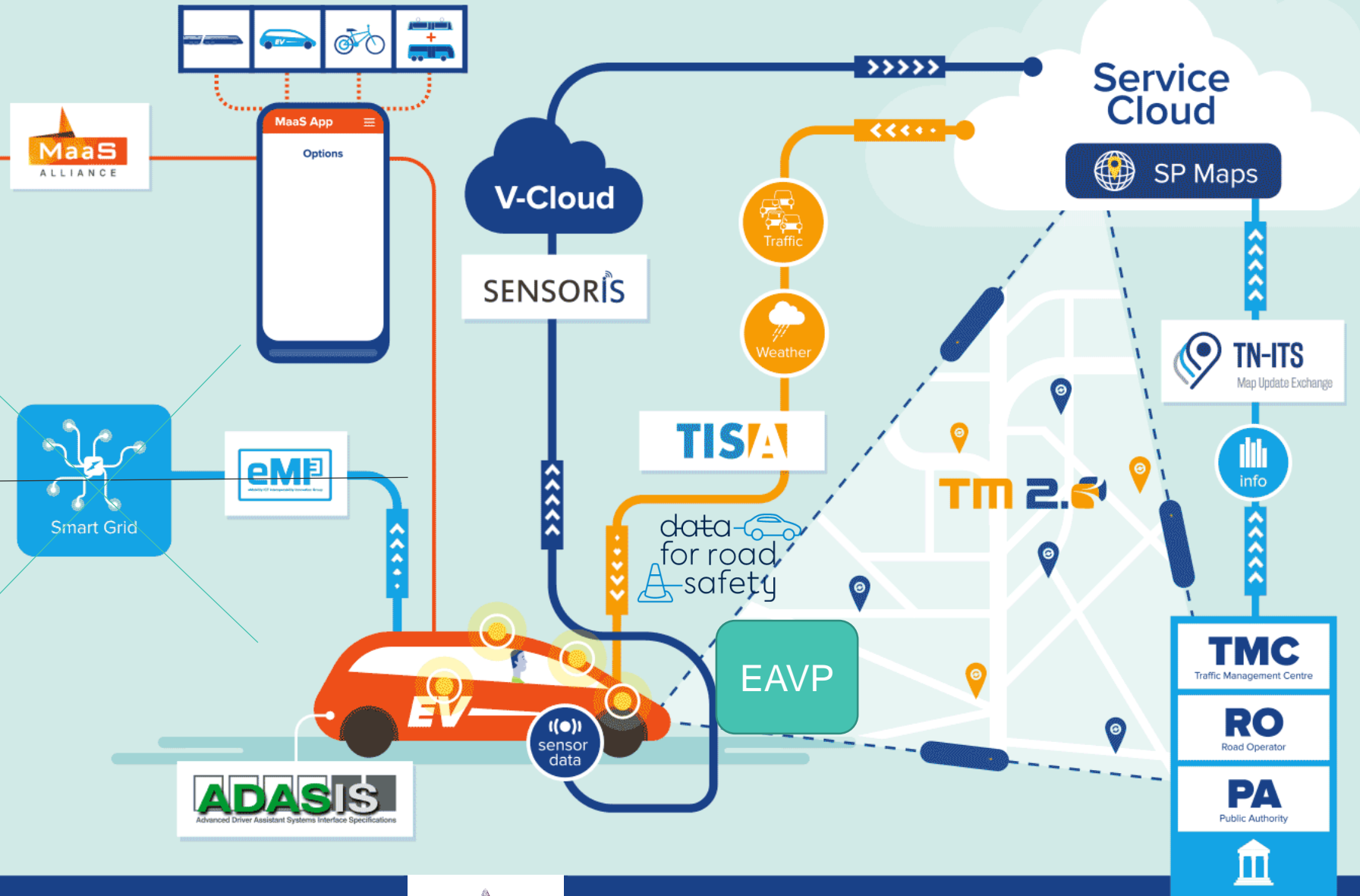


V2X Communication



eMobility

SMART MOBILITY DEPLOYMENT BY ERTICO PARTNERSHIP



Role of ERTICO

- ❑ ERTICO-ITS Europe is a public private partnership for ITS deployment in EMEA and was asked to deliver its perspectives to the IWG on ITS of 17th January 2023
- ❑ ERTICO-ITS Europe is committed to continue its contribution to the FNC sessions ITU/UNECE in March 2023 (like in previous years)
- ❑ ITS and V2V/V2X data sharing is one of the key themes at the forthcoming ITS European Congress, 22-24 May 2023 in Lisbon (www.itseuropeancongress.com)

ERTICO EU projects with V2V/V2I/V2P/V2G -> V2X

Safety & security

- ⑩ Improve support of driver/reduce human errors
- ⑩ Vehicle safety & security (braking, steering, eCall, cybersecurity,...)
- ⑩ Road & pedestrian safety
- ⑩ Platooning, automated valet parking: connectivity support to automated driving

Traffic efficiency

- ⑩ Better vehicle throughput
- ⑩ Road capacity learning systems
- ⑩ Digital twinning, city planning

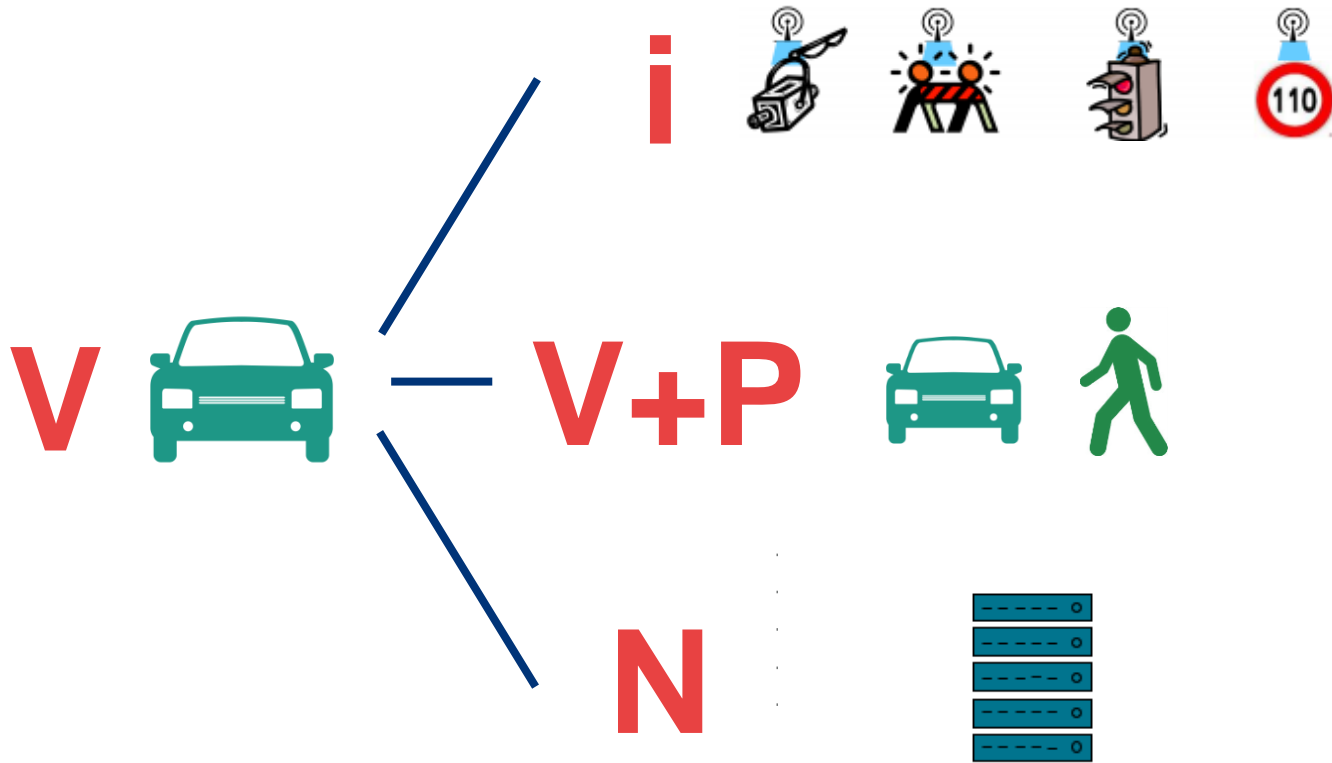
Service economy

- ⑩ Integration into multi-modal digital mobility services, e.g. MaaS and TaaS, shared/on demand mobility services
- ⑩ Insurance related services
- ⑩ Logistic operated systems
- ⑩ Repair & maintenance
- ⑩ Charging infrastructure and systems
- ⑩ Parking & tolling management

Overall

- ⑩ Sustainability (e.g. charging)
- ⑩ Productivity: value of time
- ⑩ Upgraded city planning

Use cases with cooperative ITS



Road Safety Related

- Emergency vehicle approaching
- Slow or stationary vehicle(s)
- Traffic jam ahead warning
- Hazardous location notification

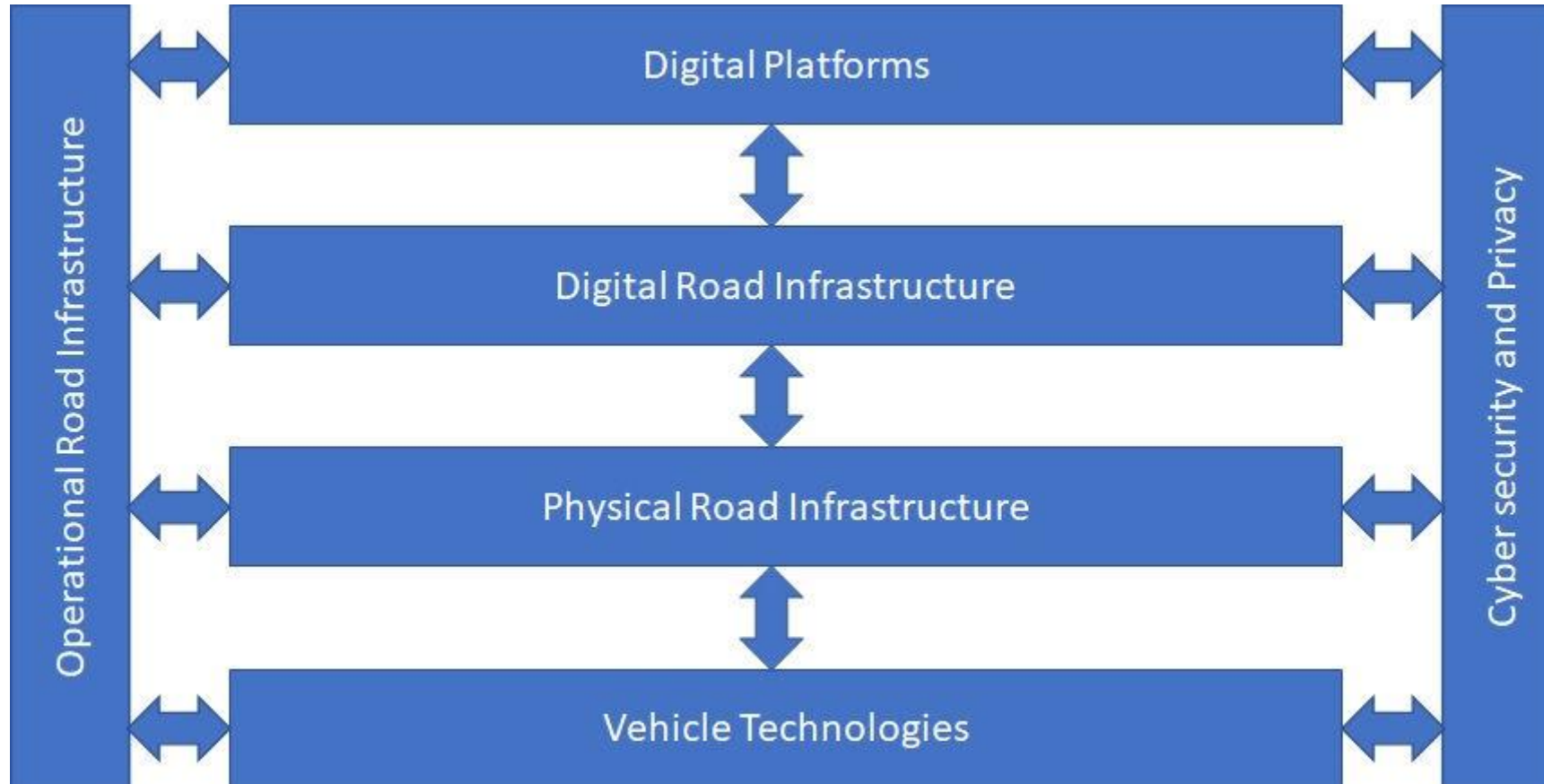
Cooperative traffic efficiency

- Traffic information and smart routing
- Traffic Light Assist
- Green Light Optimal Speed Advisory (GLOSA) / Time to Green (TTG)
- Road works warning
- Weather conditions

Cooperative local services

- Off street parking information
- Park & Ride information
- Information on AFV fuelling & charging stations
- Zone access control for urban access

CCAM functional areas & data sharing: where fit vehicle regulations ?



EU-ICIP Guide to Intelligent Transport Systems Standards, <https://www.mobilityits.eu/ccam-connected-vehicles>

Regulatory policies

Purpose (examples):

- Harmonisation
- Fair market access/level playing field
- Failure of market forces (-> ex-ante regulatory intervention)
- Societal goals/public goods such as safety/security, sustainability

Forum:

- International (whole type approval, vehicle cybersecurity, spectrum, ...)
- Regional (e.g. European Union level): ITS, access to data, privacy/data protection, artificial intelligence)
- National: national access points for ITS, traffic rules,
- Local: urban vehicle access regulations, local digital twins, ...

V2V/V2X: various regulatory “flavours”

Vehicle regulated (mostly type approval/safety related)

- EU and UNECE: regulation of parts & systems
- Which data sets: metadata or the actual datasets ?
- How to access in-vehicle data ?
- Access rights & obligations on in-vehicle data ?
- Security and cybersecurity considerations
- EU on ecall: mandated data sharing for societal/safety goals
- EU on harmonised format for the exchange of data for multi-brand vehicle platooning (possible secondary legislation under the General Safety Regulation)
- EU on data recording and storage (possible secondary legislation under the General Safety Regulation)
- ...

V2V/V2X: various regulatory “flavours”

User related:

- Privacy and data protection (e.g. on 9 March 2021 the European Data Protection Board (EDPB) adopted Guidelines 1/2020 on processing personal data in the context of connected vehicles and mobility related applications)
- Cybersecurity
- Artificial intelligence
- ...

Communications technology related:

- Interoperability
- Compatibility
- Use of spectrum
- ...

V2V/V2X: various regulatory “flavours”

ITS related (the vehicle in connection with other vehicles, infrastructure and beyond):

- European ITS directive 2010/40/EU (currently under revision) and its delegated acts (e.g. eCall, safe/secure parkings, SRTI, RTTI, MMTIS)
- Mandatory and non-mandatory data sharing
- Standards
- National Access Points
- Multimodal digital mobility services (upcoming legislation)

Road infrastructure related:

- Digital twins
- Traffic rules
- ...

Further information:

- <https://joinup.ec.europa.eu/collection/rolling-plan-ict-standardisation/intelligent-transport-systems-cooperative-connected-and-automated-mobility-its-ccam-and>
- ARCADE database: <https://www.connectedautomateddriving.eu/>

Perspectives on WP. 29

Discussion on boundaries of WP.29:

- The vehicle as a mobility instrument for the transport of person or goods
- The vehicle as part of a broader service ecosystem
- The vehicle as an IoT device
- Exact role and purpose of a regulatory intervention at UNECE level versus regional, national or local levels ?
- Where does technical harmonization steps in ?
- Perspectives from adjacent communities such as the road sector, the telco community (ITU-R) ?

Join the ITS European Congress

22-24 May 2023

Website: www.itseuropeancongress.com

Twitter: @ITS_Congress @ERTICO #ITSLisbon2023



**EUROPEAN
CONGRESS**

**LISBON, PORTUGAL
22-24 MAY 2023**

ITS: The Game Changer.

5 Reasons to join

01

Networking with
3200+
international
mobility experts

02

Discover latest
trends &
test smart mobility
innovative technologies

03

Be part of the policy
debates

04

Do business and
enter in partnerships

05

Visit Portugal and
experience ITS in
practice

its

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Be part of the ITS European Congress 2023
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ITS: The Game Changer.

- Cooperative, connected and automated mobility
- New mobility services
- Freight & logistics
- Digitalisation and the data value chain
- Future traffic management



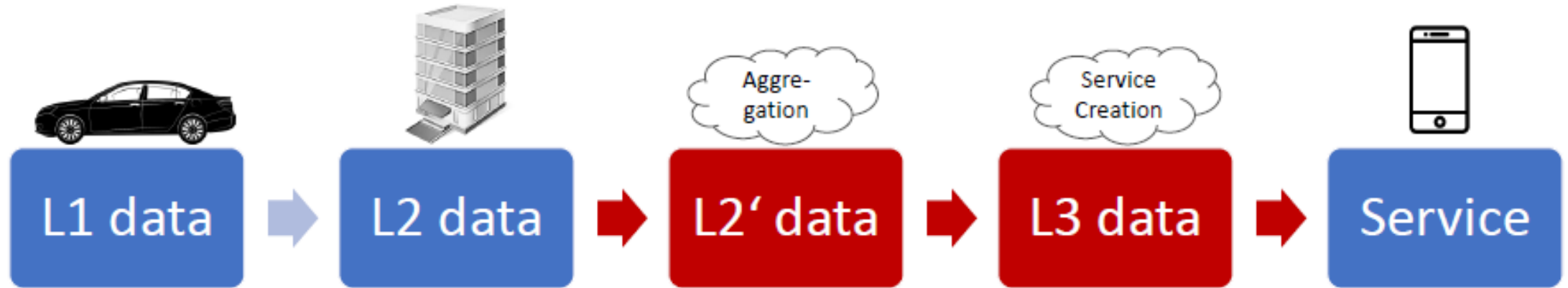
BACK-UP

Example of V2V/V2I: SRTI

- ❑ **SRTI : safety related traffic information (European delegated regulation 886/2013)**
- ❑ **Public/private decentralised mobility data space for safety warnings**
- ❑ **Examples of safety warnings:**
 - ✓ Animal, people, obstacles, debris on the road
 - ✓ Temporary slippery road
 - ✓ Reduced visibility
 - ✓ Exceptional weather conditions
- ❑ **Platform managed by ERTICO**
- ❑ **Participants: OEMs, road authorities, service providers**
- ❑ **European Commission involved**
- ❑ **www.dataforroadsafety.eu**



Example: SRTI



- Raw sensor data
- Doesn't leave vehicle

- Mass data from individual vehicles
- Various data types depending on OEM/fleet:
 - Accident / Broken Down Vehicle / Vehicle In Difficulty
 - ABS / Dangerous Slow Down
 - ESP Actuation / Traction Control / Traction Loss / Hydroplaning / Slippery Road
 - Reduced Visibility / Rear Fog Light Activation / Windshield Wiper Operation

- Intelligently clustered & combined
- (Possibly) validated with other data
- SRTI warning message suitable to warn drivers
- Eight SRTI categories defined in Delegated Regulation 886/2013
- Inform end users via various services and channels



Rich pool of data
(varying degree of
accessibility)

Free flow of data
across sectors and
countries

Full respect of
GDPR (data
protection &
privacy)

Horizontal
framework for data
governance and
data access



Health



Industrial &
Manufacturing



Agriculture



Finance



Mobility



Green Deal



Energy



Public
Administration



Skills

- Technical tools for data pooling/sharing
- Sectoral Data Governance (contracts, licenses, access, use/reuse rights)

- Standards & interoperability
- IT capacity, including cloud storage, processing and services



European
Commission

Efficient & Green MOBILITY



New ITS priority areas

Information & mobility services



Travel, transport & traffic management services



Road safety & security



Cooperative, connected & automated mobility



Examples of our involved projects & platforms with data sharing in CCAM

PROJECTS



SUNRISE

PoDIUM



PLATFORMS



CONNECTED COOPERATIVE AND AUTOMATED MOBILITY

ACCELERATING AUTOMATION AND CONNECTIVITY FOR SAFER AND SMARTER MOBILITY

CCAM services play a central role in delivering decarbonisation and improving safety in the transport of people and goods within the right legal and regulatory frameworks and in line with the European Green Deal and Vision Zero among many other key targets. With a roadmap goal of Inclusive and Integrated CCAM being deployed by 2035, time is short, and much work remains.



Advanced Interactive Traffic Management – TM2.0



Started in 2014



Focus on new solutions for advanced and active traffic management

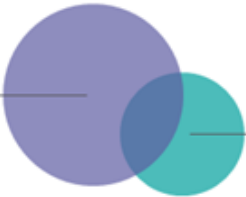


an ERTICO innovation platform

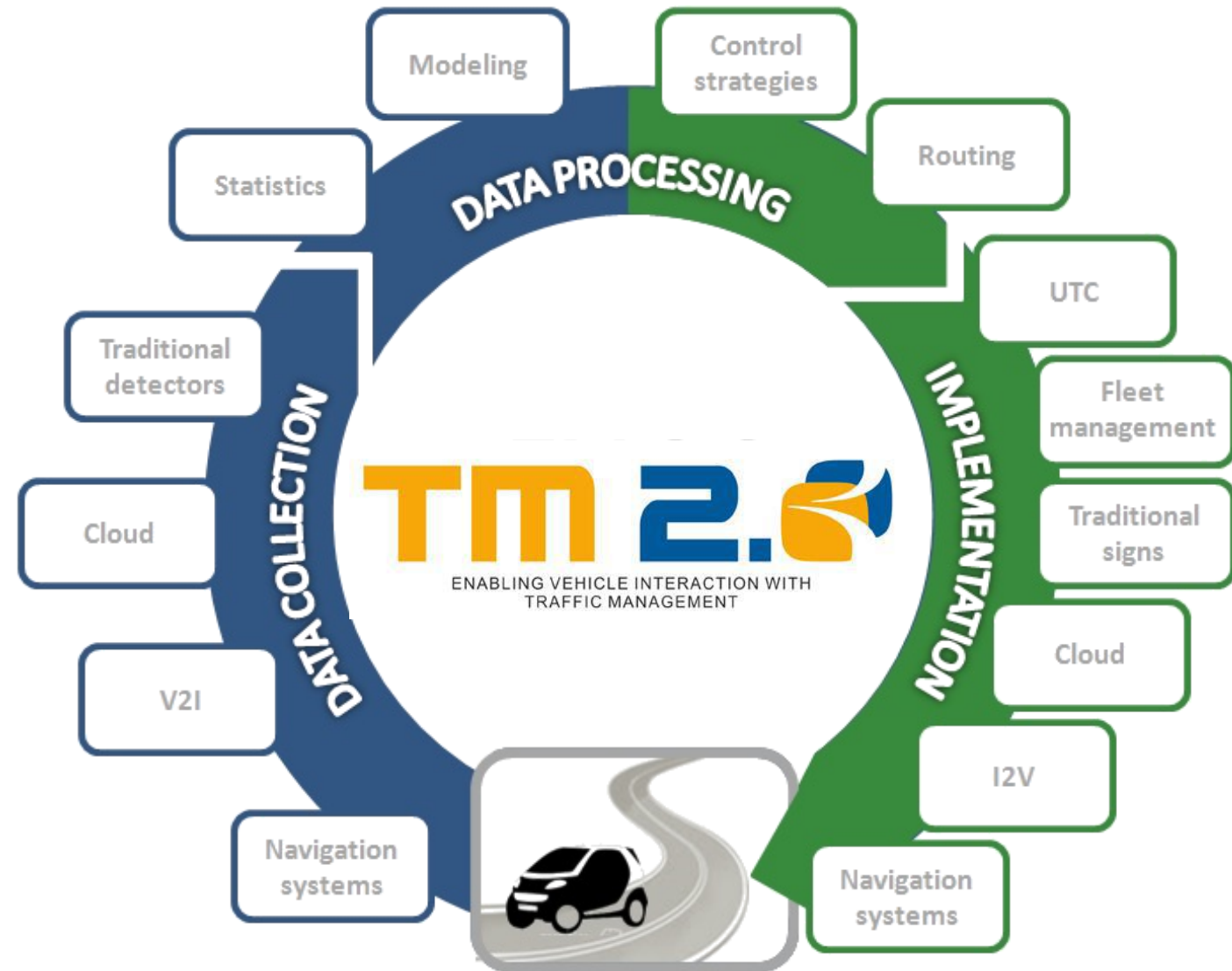


Vision: “Enable vehicle interaction with traffic management”

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

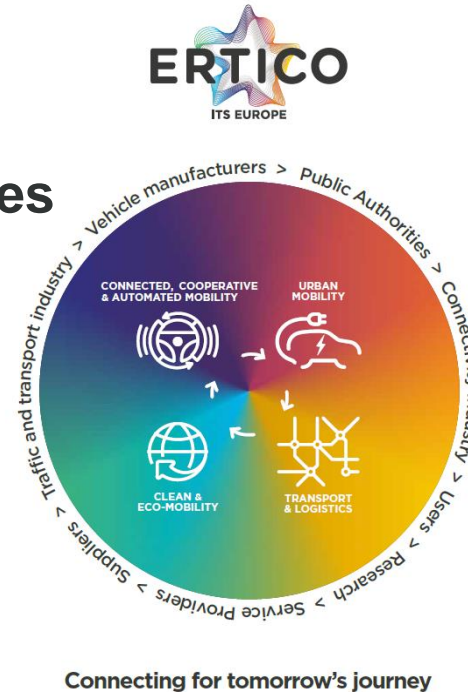


+ Improve entire value chain for consistent TM and Mobility services.



Join our activities

- ✓ ERTICO in general
- ✓ Projects activities
- ✓ Thought leadership & advocacy activities
- ✓ Congress activities
- ✓ Enabling Start-up's
- ✓ City Moonshot
- ✓ Partnership overview/benefits
- ✓ Vision 2035
- ✓ [Download the Annual Report 2021 – 2022](#)



<https://ertico.com/gdpr/>



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ITS EUROPE

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

ERTICO Partnership

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