ERTICO Partnership Innovation for more efficient and safer transport

CEVOLVER final event
Aldenhoven, Germany
27th September 2022

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CEO

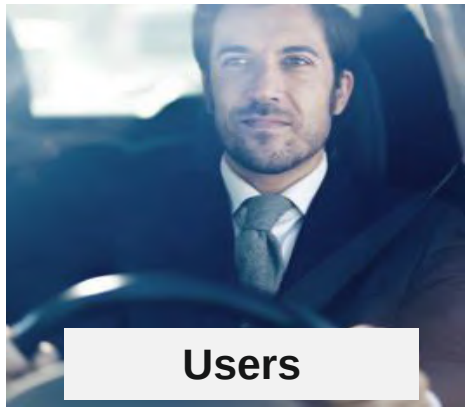
ERTICO-ITS Europe

ERTICO-ITS Europe
A Public Private Partnership

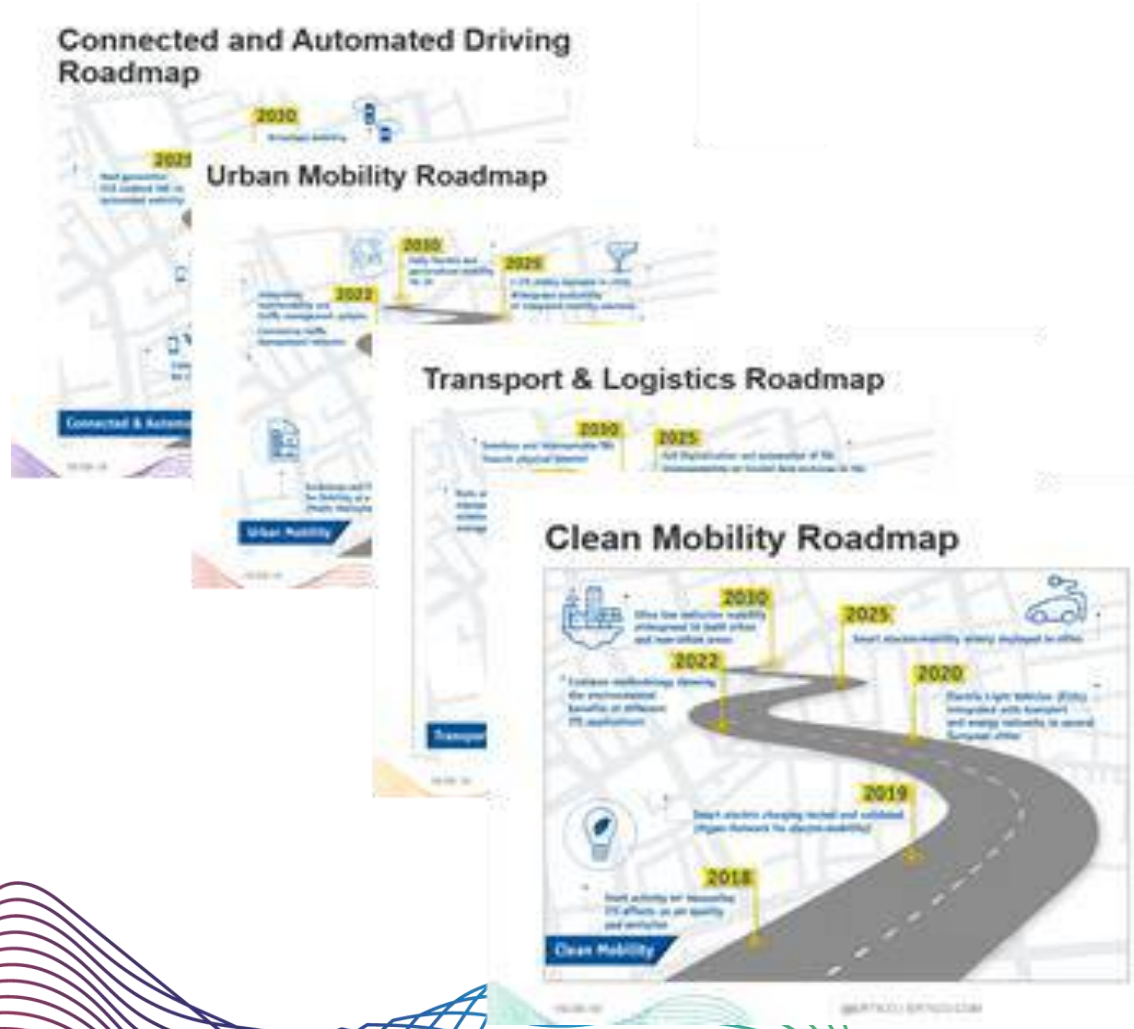
Bringing together
120 + Partners from 8 mobility sectors since 1991 to make mobility **smarter**, **cleaner, safer** and **more efficient.**

Geographical scope: EMEA

www.ertico.com



Our 4 roadmaps in synch with EU policy focus areas



- **Smart and Sustainable Mobility strategy**
- **Urban Mobility strategy**
- **Green deal**
- **Digital and data economy, AI and cybersecurity**
- **Competitiveness and industrial strategy**

Sustainable and Smart Mobility Strategy – putting European transport on track for the future[1]

Source: (1) https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0789

1m tonnes CO2
1m hours saved
10.000 lives saved

2030 100% achieved

75% achieved

2025 50% achieved

25% achieved

2020

Societal targets

I&D targets towards 2030 & 2050*

ERTICO will support the EU in delivering its societal targets

- ***Decarbonisation****: at least 55% emissions reduction by 2030 & 90% reduction of transport emissions by 2050*

  ERTICO will contribute to the savings of 1m tonnes CO_2 by 2030

- ***Safety****:* Vision Zero and the Safe *System approach: reducing road fatalities caused by human error with 50% reduction by 2030 (compared to 2020) & with 0 fatalities by 2050*

  ERTICO will contribute to saving more than 10,000 lives in Europe

- ***Efficiency****: No dedicated KPIs set by the EC.* Focus on less-energy consuming cars, better infrastructure for alternative fuels, better links between modes of transport and better safety and fewer delays thanks to the roll-out of digital technologies

✓ ERTICO will contribute to saving 1m hours from traffic congestions and delays

we will work on setting a methodology to assess the KPIs. Each project calculating KPIs, following the EC Sustainable Urban Mobility Indicators (SUMI).

Source: SUMI*: https://transport.ec.europa.eu/transport-themes/clean-transport-urban-transport/sumi_en

Most important needed innovation steps for safe and sustainable mobility (focus on connectivity)

1. **Start with the product** itself (future proof manufacturing: air quality/climate, safety, connectivity)

2. **Decarbonisation**: *EU target at least 55% emissions reduction by 2030 & 90% reduction of transport emissions by 2050*

   - ✓ ELVITEN project (L vehicles) in urban context
   - ✓ AFIR: availability of charging points, interoperability, working on charging habits (eCharge4Drivers project)
   - ✓ Driver behavior (Modales project)
   - ✓ HDV segment (NextETRUCK project) and role of city hubs for good delivery
   - ✓ …

Most important needed innovation steps for safe and sustainable mobility (focus on connectivity)

3. Safety: *EU target of* Vision Zero and the Safe *System approach: reducing road fatalities caused by human error with 50% reduction by 2030 (compared to 2020) & with 0 fatalities by 2050*

- ✓ V2V/V2I + include VRU
- ✓ SRTI data & role of DFRS ecosysem
- ✓ eHorizon
- ✓ New General Safety Regulation & role of ISA
- ✓ eCall: issue with shut off 2G/3G networks (no backward compatibility 4G or 5G with 2G/3G)
- ✓ Role of connectivity for automated driving
- ✓ …

Most important needed innovation steps for safe and sustainable mobility (focus on connectivity)

4. Efficiency: Focus on less-energy consuming cars, better infrastructure for alternative fuels, better links between modes of transport and better safety and fewer delays thanks to the roll-out of digital technologies

- ✓ Role of data, NAPCORE and B2G data sharing. V2grid, charging infrastr. data, UVAR data and other information to be available in machine readable format at NAPs. One-stop-shop for entry and retrieval of data instead of EU-27 without much interoperability and with not that quality of data. Need for compliance assessment of the data entry (kind of certification mechanism)
- ✓ Other digital twins from infrastructure (TEN-T, national and local)
- ✓ Integration vehicle to grid
- ✓ MaaS & TaaS with interoperability and open API's
- ✓ Traffic management 2.0 and internet of mobility
- ✓ ...

1m tonnes CO2
1m hours saved
10,000 lives saved

2030 - 100% achieved

- 75% achieved

2025 - 50% achieved

- 25% achieved

2020 -

Societal targets

PROJECTS

PLATFORMS

ERTICO Academy
ERTICO City Moonshot

2035

NextETRUCK

2035: All new cars are zero emissions, as well as a majority of new HDVs (trucks, buses)

2030

Smart electro-mobility widely deployed in cities

Ultra low emission mobility widespread in both urban and non-urban area

2027

eCharge4Drivers

2027: Europe-wide smart infrastructure for clean modes

2025

ELVITEN
eCharge4Drivers

Electric Light Vehicles (ELVs) Integrated with transport and energy networks in several European cities and on key interurban corridors. Eco/low-emission driving apps or features used for all remaining ICE vehicles

2023

MODALES
OptiTruck

2024: Common methodologies to allow externally auditable impact assessment of ITS measures for clean/ eco-mobility

2020

MODALES

2022: Low-emission driving app and training tested and available

Clean and Eco-Mobility

Clean and Eco-Mobility

Legislation and related activities

Alternative Fuel Infrastructure Regulation (AFIR),

Legislation regarding air quality standards and CO_2 emissions through Paris COP21 and Glasgow COP26

Projects

MODALES

eCharge4Drivers

SOLUTIONSplus

NextETRUCK: Nextgen vehicles: Innovative zero emission BEV architectures for regional medium freight haulage

FUTURE HORIZON *(Associated Partner)*

Stimulating Road Transport R&I

Platforms involvement

eMI³

ADASIS, SENSORIS, MaaS Alliance

ITS Congresses

ERTRAC, EGVIA2ZERO

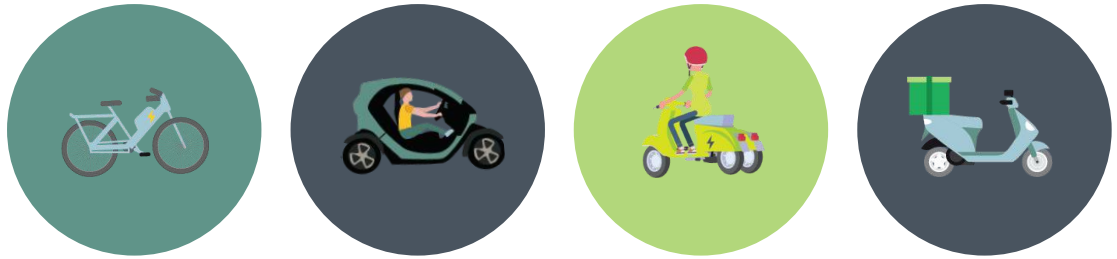
Q 3/4 2021 | Q 1/2 2022 | Q 3/4 2022 | Q 1/2 2023 | Q 3/4 2023 | Q 1/2 2024

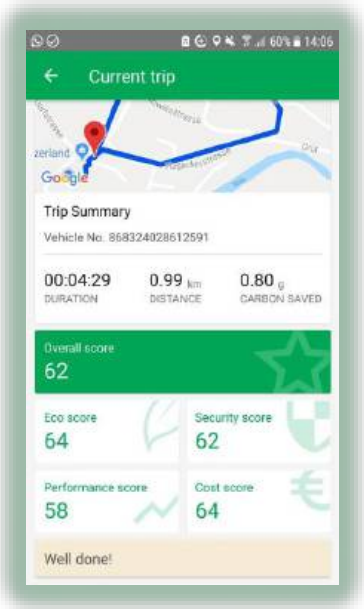
Example project

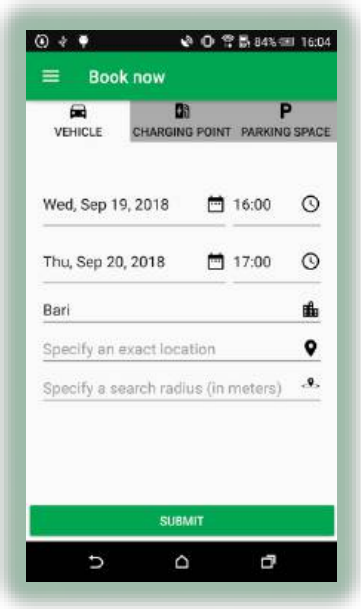
ELVITEN “Electrified L-category Vehicles Integrated into Electricity Networks”

Project to realise the potential of Light Electric Vehicles by:

- Establishing usage schemes in six pilot cities (for personal transport and light deliveries)
- ICT tools to support and motivate EL-Vs usage
- Evaluating their impacts on travel and charging patterns, on the overall effects on transport networks and city liveability. CO_2 savings?
- Integrate light EVs with existing transport networks.

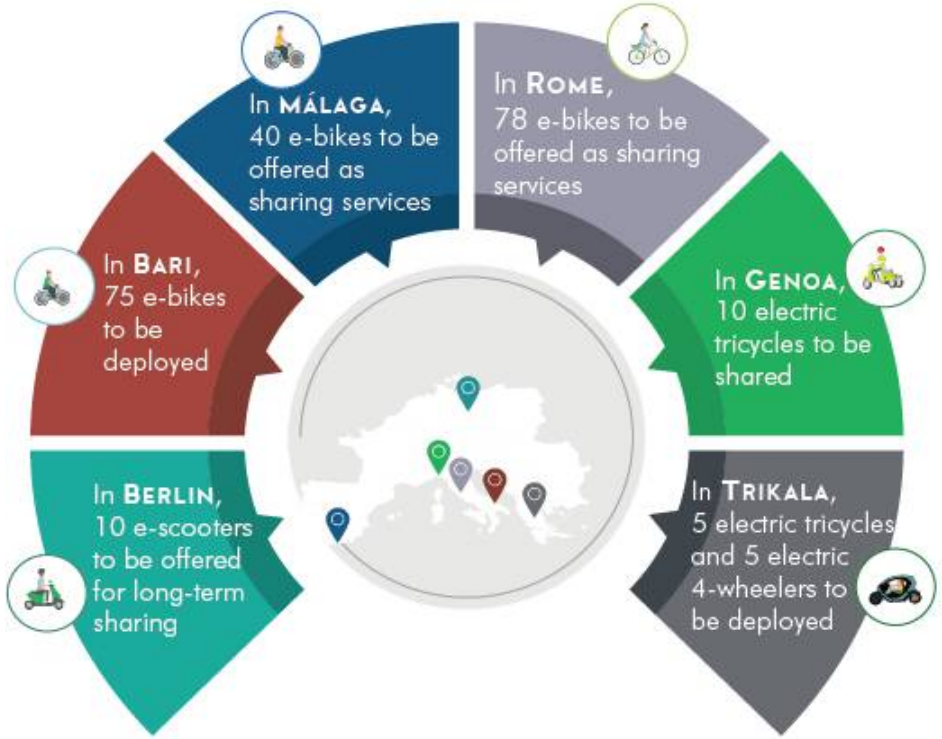






Example project

ELVITEN demonstration cities



ELVITEN

Impact

223 electric vehicles

Total estimated / measured savings:

X tonnes CO_2 per year

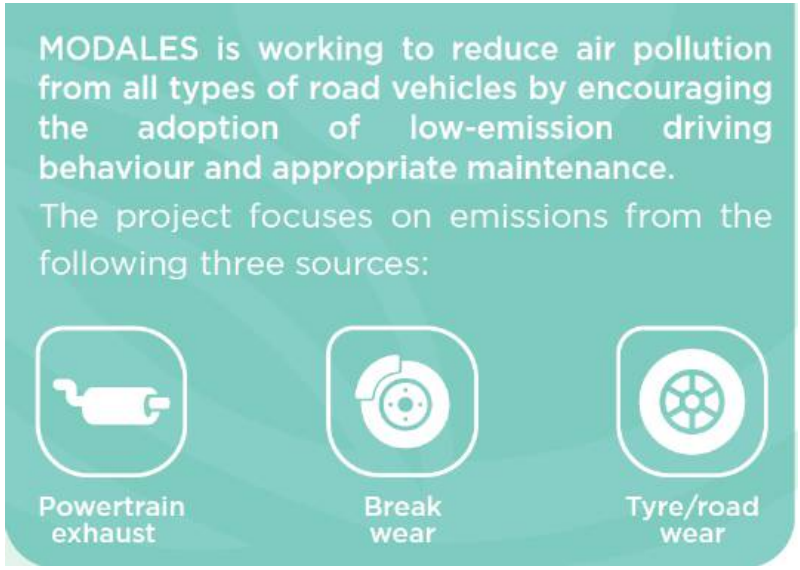
Looking at how *technological solutions for green driving can contribute to urban clean air policies*

Looking at the effects (in terms of emissions reduction) and user acceptance of green and low-emission driving solutions, from the ERTICO-led research project **MODALES**, from two other parallel projects and from the perspective of cities.

Solutions are aimed principally at older ICE vehicles, where there is the greatest potential and need for emissions reduction through driver behaviour change and maintenance choice.

Focus on the MODALES project

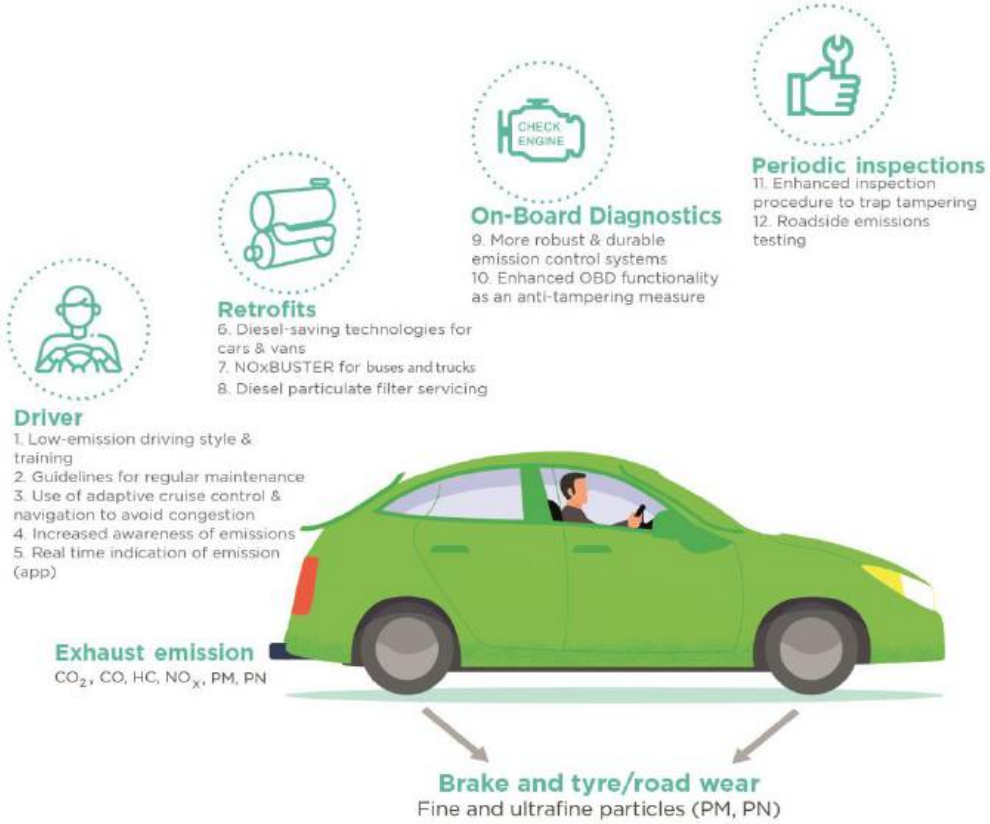
Adapting driver behaviour for lower emissions



modales-project.eu

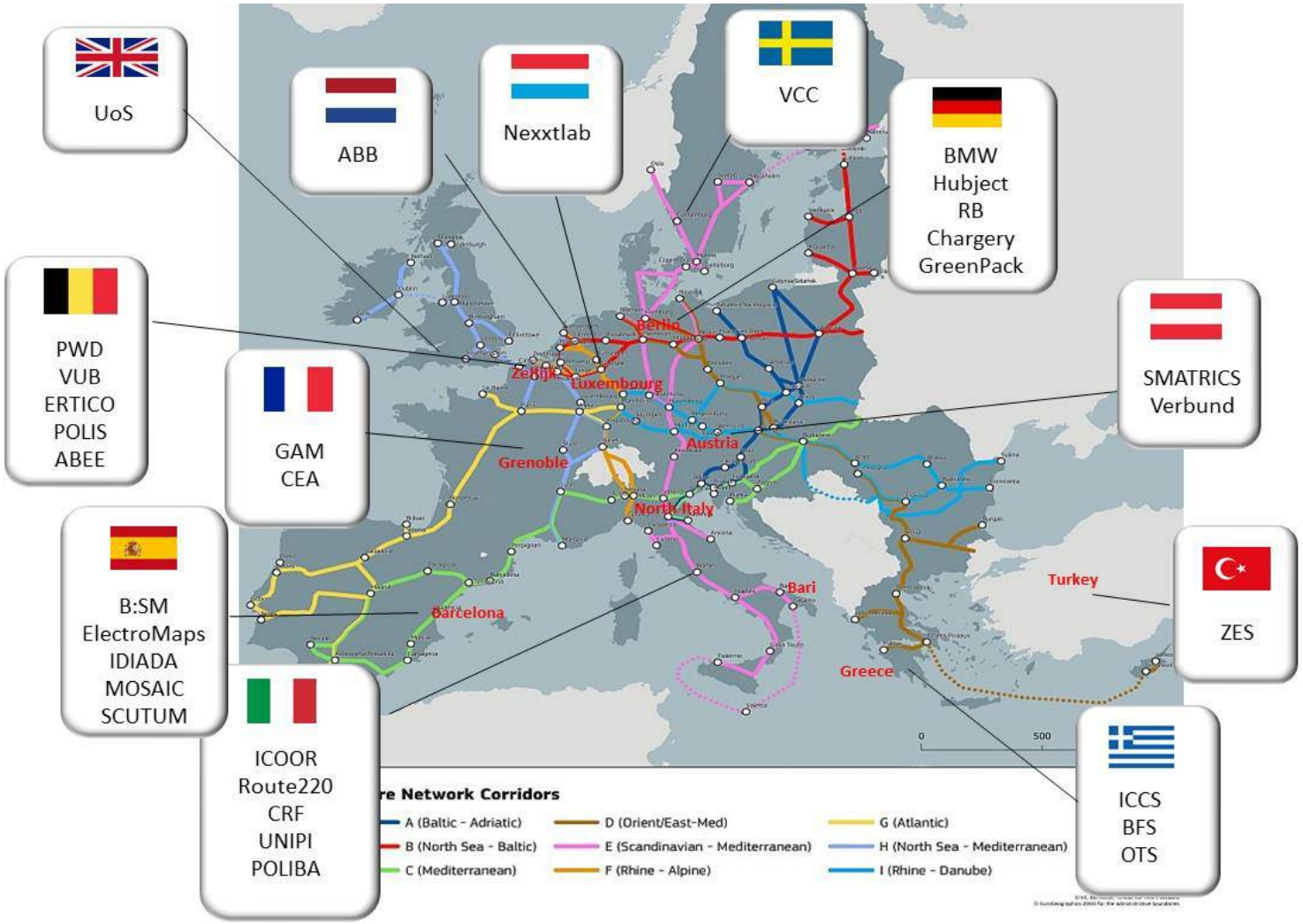
MODALES receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 815189.

MODALES innovation areas



MODALES runs from September 2019 to August 2022, with a budget of €4.72 million.

eCharge4Drivers



- **Improve comfortability of charging**
- **Enable services interoperability and provide appropriate information to users**
- **Promote smart charging solutions**
- **Propose standardised charging options for LEVs**
- **Support the wide deployment of charging infrastructure**

Call identifier: H2020-LC-GV-2018-2019-2020

Topic: GV-10-2017 “Demonstration (pilots) for integration of electrified L-category vehicles in the urban transport system”

EC funding: 14,424,526.39 €

Duration: June 2020 – May 2024

Demonstrations in **ten** areas to cover needs for urban and for longer trips

solutions plus

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 875041

InCo flagship project on "Urban mobility and sustainable electrification in large urban areas in developing and emerging economies"

Funded under the Horizon 2020 call GV-05-2019

Duration: 1 January 2020 31 December 2023

Total budget: €20,233,098.75 (EU Contribution:€17,970,258.75)

Consortium of 46 partners, 116 associated and support partners

10 Living Labs: Kathmandu, Manila/Pasig, Hanoi, Montevideo, Quito, Kigali, Dar es Salam, Hamburg, Madrid and Nanjing (self-funded)

ITS to facilitate electro-mobility

Demonstrating next generation e-mobility concepts for medium distance freight haulage

NextETRUCK - EFFICIENT AND AFFORDABLE ZERO EMISSION LOGISTICS THROUGH **NEXT** GENERATION **E**LECTRIC **TRUCK**S

- Innovative, affordable and competitive zero emission vehicles in medium freight haulage category (N2 & N3)
- **Innovations** in e-powertrain components and architectures, smart charging infrastructure and management, improved thermal design of the cabin, fleet management systems with IoT and digital tools.
- Aim for at least 10% energy efficiency increase compared to existing highest-end benchmark EVs of the same size category and operating for similar mission profiles.
- Advanced vehicle Digital Twin, as well as digital tools for fleet management & virtual integration of ZEV
- Demonstration in 3 real-world cases where the concepts' feasibility are validated for a range of at least 200 km daily operation during at least 6 months (Barcelona, Istanbul, Utrecht)

42 Months (3.5 yrs)

ERTICO to lead work on use cases, demonstration planning, procedures and ramp-up (demonstrations planned in the Netherlands, Spain and Turkey).

150 Cities interviewed

Understand the needs and requirements from the cities in relation to mobility and transport.

Phase I 150 cities
Report available at
ertico.com/city-moonshot

Report: https://ertico.com/wp-content/uploads/2022/03/Ertico-Moonshot-Report-Final.pdf

Key topics in the survey (Phase I)

1. Sustainability (air quality & climate change)
2. Data sharing
3. Mobility-as-a-Service (MaaS)

Phase II

1. Sustainability
2. MaaS
3. Electromobility
4. Urban Air Mobility

ERTICO

ITS EUROPE

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Innovation for tomorrow’s journey.

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ITS

Intelligent Transport Systems

Automated driving

Drones

Data exchange

Traffic management

Artificial Intelligence

Mobility Apps

Mobility as a Service

Transport and Logistics

Navigation

Intelligent Infrastructure

Safety

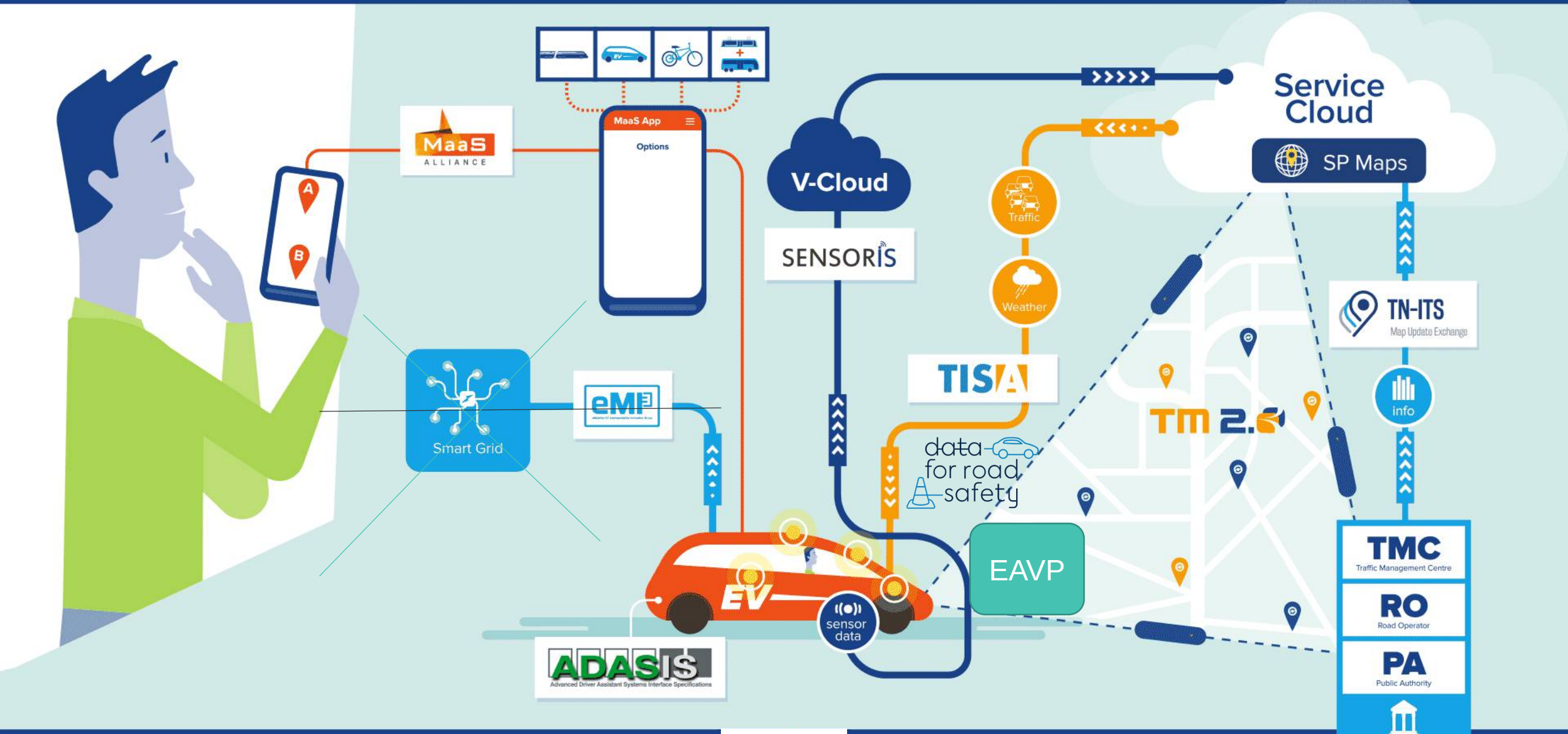
Multimodality

Payment Systems

V2X Communication

eMobility

SMART MOBILITY DEPLOYMENT BY ERTICO PARTNERSHIP

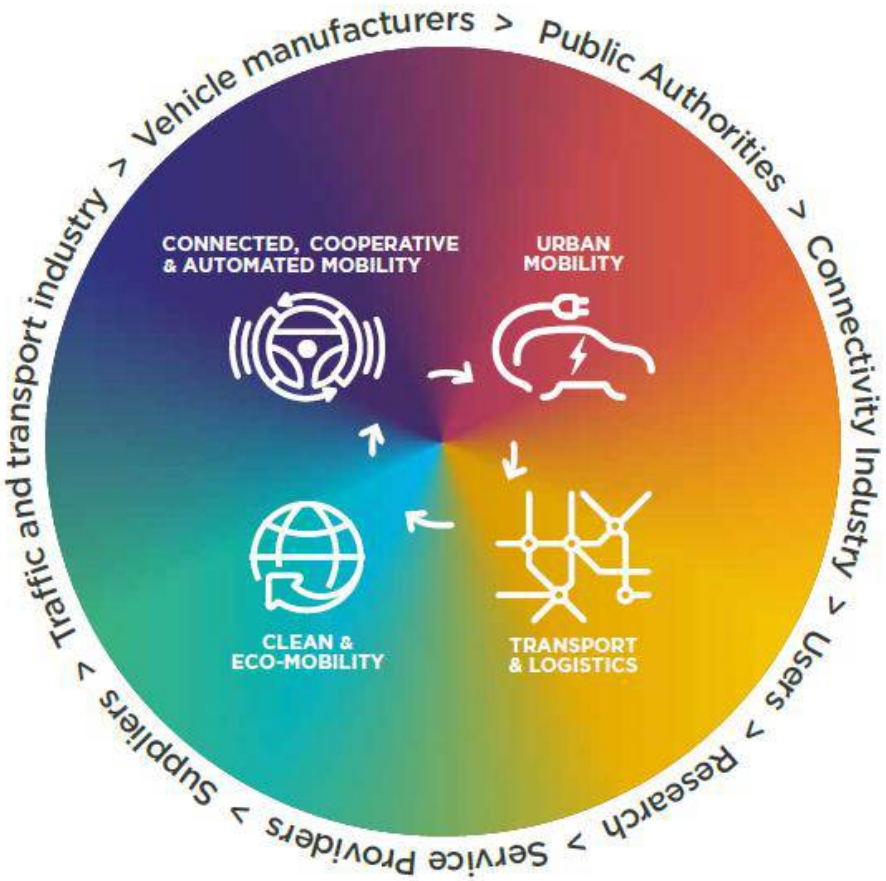


ERTICO

Upcoming ITS Congresses

Overview 2021-2022

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



Connecting for tomorrow's journey

ERTICO Activities