

Connecting for tomorrow's journey

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Foreword

It is with great pleasure that I propose this year's report on behalf of ERTICO and ERTICO Partners. As CEO from January 2022, I have the honour of being at the helm of this unique organisation at an exciting time in our history.

Connecting the dots

ERTICO today is more relevant than ever in light of the challenges our society faces: climate change, air quality, population pressures in urban areas, the need for seamless multimodality, innovative technologies for cooperative, connected and automated mobility, data access and sharing in the mobility space, enhanced traffic management models, one-stop-shop demands for transport logistics, and so on. How can we juggle these multiple demands while remaining focused on delivery?

Connecting the dots is the key: working across all requirements to ensure strong linkages and partnerships between all stakeholders in intelligent transport systems—to deliver the smart and sustainable mobility we seek.

An impartial and independent public-private partnership, ERTICO is uniquely placed to do this, bridging the gaps. We enable all sectors to connect across silos and stand united in the mobility landscape, whether you are working in connectivity and digital, public authorities, research, service provision, suppliers, vehicle manufacturers, users, or the traffic and transport industry. Through ERTICO, public and private partners can collaborate effectively on new projects with the support of the European Commission. This is a way to scale up new technologies and emerging innovations, making them ready for mass production and rollout.

Our ITS Congresses are exemplars of connecting the dots between key stakeholders by fostering new thinking and developing fresh insights, bringing together ERTICO Partners and a large community of policymakers and business decision-makers at a national, European and international level.

Looking back

2021 was the second year of the COVID-19 pandemic and continued to bring many challenges. We had to continue remote working and adapt to a 'new normal', but we also saw valuable opportunities to continue our efforts to connect the dots. The pandemic clearly demonstrated that mobility is an essential part of people's lives and that (e-)commerce depended heavily on the delivery of goods.

For ERTICO, it was also a demanding year, with intense work on diverse projects, proposals and preparations for the ITS World Congress in Hamburg. I am proud of the ERTICO team, who continued to push forward during those difficult days and with very little face-to-face contact. I believe this shows how strong our team is and reflects the resilience of our partnerships. It was a delight to see the successful outcome of the World Congress, with more than 13,000 participants, an all-time record for the ITS community.

Even stronger connections ahead

Looking forward, data has become the key to safer, cleaner and more efficient mobility. ERTICO offers the potential to deliver the sustainable ITS solutions required under the European Green Deal and a genuinely holistic European data space for mobility that is evolving from the European Data Strategy.

Cooperative mobility offers a new impetus to the industrial strategy in Europe. The European Commission's policy measures on sustainable and smart mobility and connectivity will enable society to shift towards automation and alternative powertrains, with accelerated investments in charging infrastructure and new business models from the energy sector.

Collaborations with cities are equally important since they re-format our urban landscapes through the commitment to smart mobility and logistics that are not only about moving people and goods but also data.

With new concepts, industrial players, services and models appearing, transport is shifting from a traditional to a more modern and broader-based sector, contributing significantly to a better and more inclusive society. Both the societal and environmental impacts of mobility rank higher than previously.

ERTICO is, at heart, an enabling platform, bringing to the table a diverse group of stakeholders working on ITS while simultaneously guiding innovative processes leading to the digitalisation of transport. We promote innovative concepts that are beneficial for both the public and private sectors. We also provide a channel for ERTICO Partners via thought leadership and advocacy work with policymakers and other organisations on smart, clean and safe mobility.

Together with colleagues including ITS America, ITS Asia-Pacific and the ITS Nationals in Europe, we can capitalise on our outstanding knowledge exchange and expertise and be a trusted advisors to international and European bodies. As we continue connecting the dots in ITS, we can help others in the public and private sectors to do the same: remaining loyal to our core mission of innovation and deployment while making future mobility safer, smarter, greener, more efficient, and trusted.

ERTICO is more relevant today than ever. I am thrilled and honoured to serve ERTICO Partners, our in-house teams, and the entire ITS community. I look forward to meeting you in person.

Joost Vantomme
ERTICO CEO

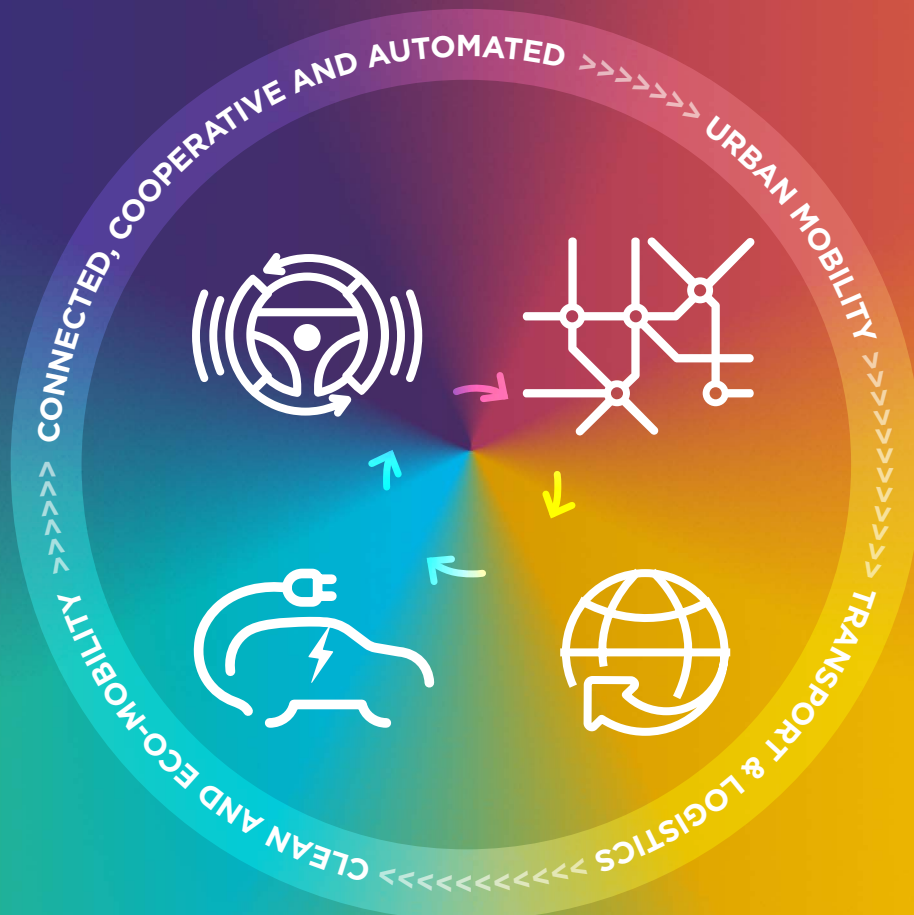


Looking at the future: Vision 2035

We live in an inspiring time when the world of smart mobility and sustainable transport is changing: ERTICO is a positive agent to deliver that change. As we move closer to 2035, challenges and opportunities lie ahead: road safety, climate change, air pollution, increased pressure on the transport of goods, and many more.

We hold a unique position in the ITS ecosystem, with diverse activities across EU-funded projects and innovation platforms, including the ERTICO Academy, City Moonshot, Start-Up initiatives, policy and advocacy, and ITS Congresses worldwide to create an open forum for debate and innovative progress. This is all possible thanks to the support and expertise of ERTICO Partners. Together, this partnership is the ideal enabler for future smart mobility.

People can already see the power of smart mobility and more sustainable transport. Our focus is to continue connecting the dots, making mobility smarter, safer and cleaner by applying innovation and supporting ERTICO Partners in Europe and beyond. A joined-up approach across vehicles, technology, infrastructure, people and goods is needed, and this is what the ERTICO Partnership is working on. With our partners and the wider ITS community, we constantly capitalise on new opportunities by combining the right technologies with appropriate policies, business models and commercial viability.





CONNECTED, COOPERATIVE & AUTOMATED MOBILITY

ACCELERATING AUTOMATION
AND CONNECTIVITY FOR
SAFER AND SMARTER MOBILITY

CCAM continues to benefit from the expanding deployment of 5G and the emergence of 6G. Technologies and services will converge towards a hybrid approach in which short-range and long-range communications offer further developments for CCAM and higher levels of automation. Such automation will enable the realisation of CCAM services for shared multimodal transportation of people and goods. Data privacy and security are important enablers to support the transition from individual legacy vehicles toward CCAM services. These will consolidate into multiple trusted and interoperable data platforms, offering services to individuals, logistics service providers and public authorities. To facilitate deployment, an EU-wide regulatory regime will establish interoperability for integration in, for example, the broader traffic system and cross-border operations.



CLEAN & ECO-MOBILITY

REDUCING ENVIRONMENTAL
IMPACT

A major transport objective of the UN Climate Change Conference (COP26) in Glasgow was to show that the transition to zero-emission road transport technology has reached a tipping point. This step-change towards mass-market clean mobility will focus on electric vehicles, necessary infrastructures, and the greater multimodality and shared mobility ecosystem. It will significantly contribute to the European Green Deal, making Europe climate neutral by 2050. In the shorter term, clean air policies in cities will change travel patterns and impose the 'polluter pays' principle. Evidence-based guidelines describe ways to relieve transport pollution for a healthier population, a better quality of life, and reduce CO₂ emissions significantly. Pricing, taxation, education and awareness will contribute to adopting greener behaviour. The ways in which transport is managed today will change accordingly as transport decision-makers increasingly set environmental targets.



URBAN MOBILITY

DELIVERING SEAMLESS
MOBILITY FOR ALL

Future transport policies, including sustainable and smart mobility principles, will link more directly to urban and rural demographic changes. Infrastructure management will be optimised and seamlessly integrated for people and goods alike; this will involve all modes of transport, such as cycling, walking, public transport and urban air mobility. Automated Mobility as a Service (MaaS) will be the norm, offering multiple travel/mode choices, including public transport and user services, supported by interoperable transport payment and ticketing systems. Traffic management will be more predictive and interactive, not only reactive, and include the principle of co-opetition between private and public bodies. Mobility Network Management - where all transport modes and their operators communicate and cooperate via mobility platforms - will move towards reality by focusing on a user-centric approach. Multimodality will be integrated into services offered by private and public operators, including vehicle manufacturers.



TRANSPORT & LOGISTICS

CREATING THE DIGITAL
INFRASTRUCTURE FOR
FREIGHT TRANSPORT AND
LOGISTICS OPERATIONS

CMR is the most common paper document in freight transport. Adopting eCMR, the electronic version of consignment notes, is now a reality and a huge step towards digitalising European supply chains. We will continue to see the integration of ports and cities, focusing on the management of goods and data exchange. 5G/6G enablers and automation deployment will play an important role in modernising freight and logistics. Implementation of smart logistics services will be supported by a trusted and interoperable EU-wide data platform while secure and seamless shared multimodal solutions will become available. Delivery as a Service (DaaS) for last-mile operations and Logistics as a Service (LaaS) is becoming a reality. Developing clean electromobility will be the primary building block for urban logistics. Cooperation between the European Ministries of Transport, the European Commission's Digital Transport and Logistics Forum (DTLF), the United Nations Economic Commission for Europe (UNECE) and the International Road Transport Union (IRU) will be vital.

Who is ERTICO?

ERTICO-ITS Europe, established in 1991 by 15 industry leaders and the European Commission, aims to bridge the gap between Research & Development and the real-life deployment of new intelligent transport systems (ITS) and mobility services. ERTICO runs numerous European funded projects and has a central role in public consultations and policymaking, establishing long-term relationships with key stakeholders worldwide. ERTICO has organised 40 ITS European and World Congresses: unique events that present and help shape the future of ITS. To advance the smart mobility agenda, ERTICO continues to work towards its vision by being a thought leader, engaging with stakeholders and connecting the dots between eight sectors across four main focus areas within the ITS community.



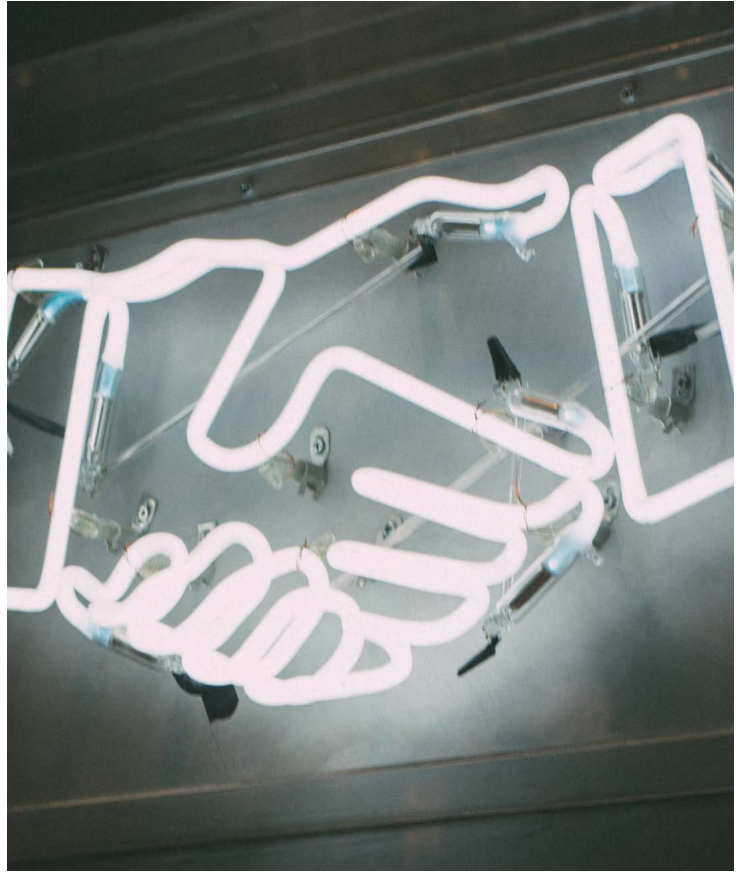
Partners are the heart of ERTICO

Partnership powers our drive and ambition to revolutionise mobility for all.

We bring people and organisations together to help make mobility safer, more sustainable and efficient. Year on year, private and public sector organisations join the ERTICO Partnership in increasing numbers, from 15 in 1991 to 111 today, shaping the development of the eight sectors that comprise transport and mobility. Together, we are leading the digitalisation of transport through cutting-edge technologies, services and mobility solutions to move people and goods in smarter ways.

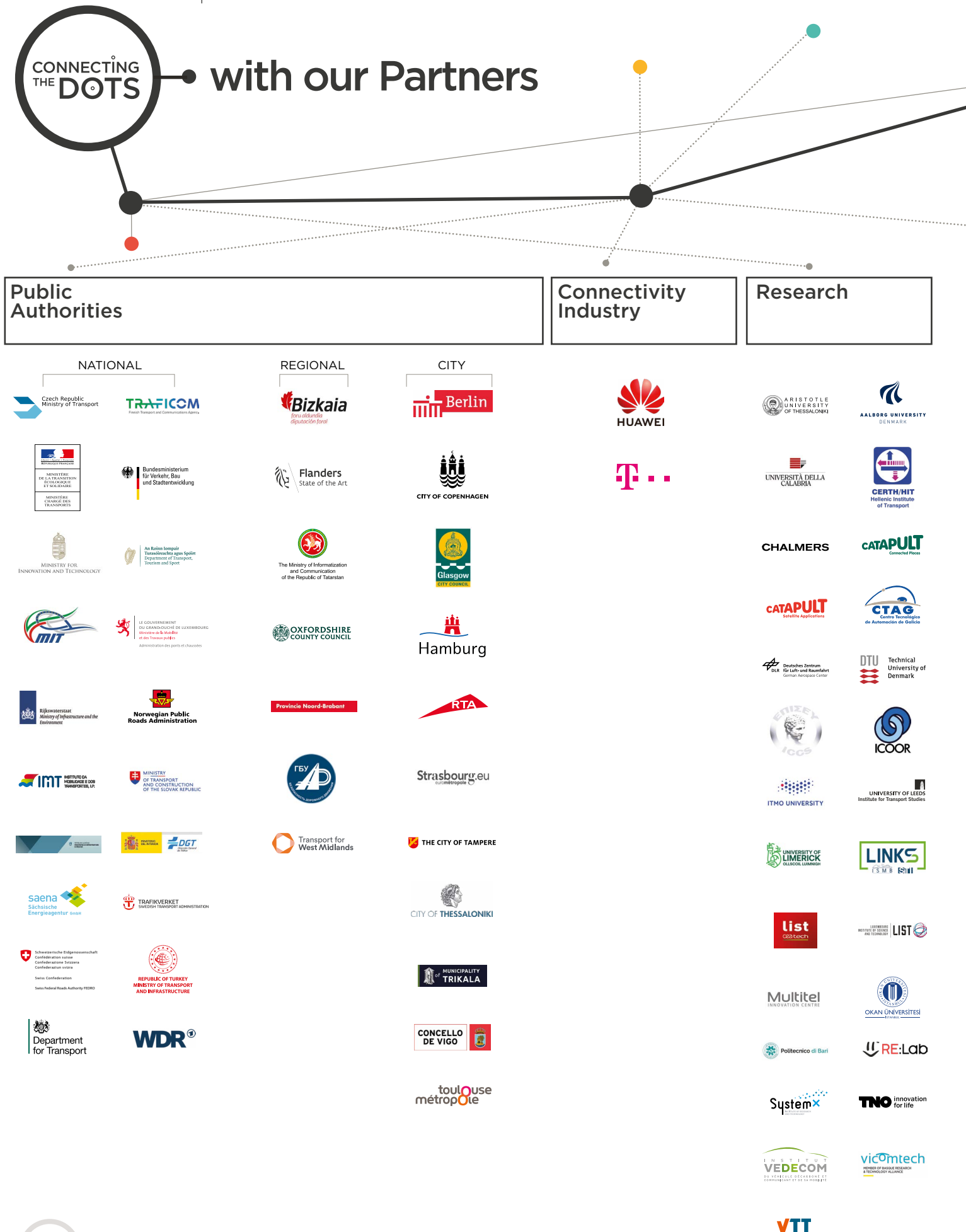
Our Partners come from various sectors and activities, including service providers, suppliers, the traffic and transport industry, research, public authorities, user organisations, manufacturers, communications and the connectivity industry. They benefit from diverse cooperation opportunities and collaborative working to, for example, develop new technologies through shared projects and overcome barriers to deployment and interoperability.

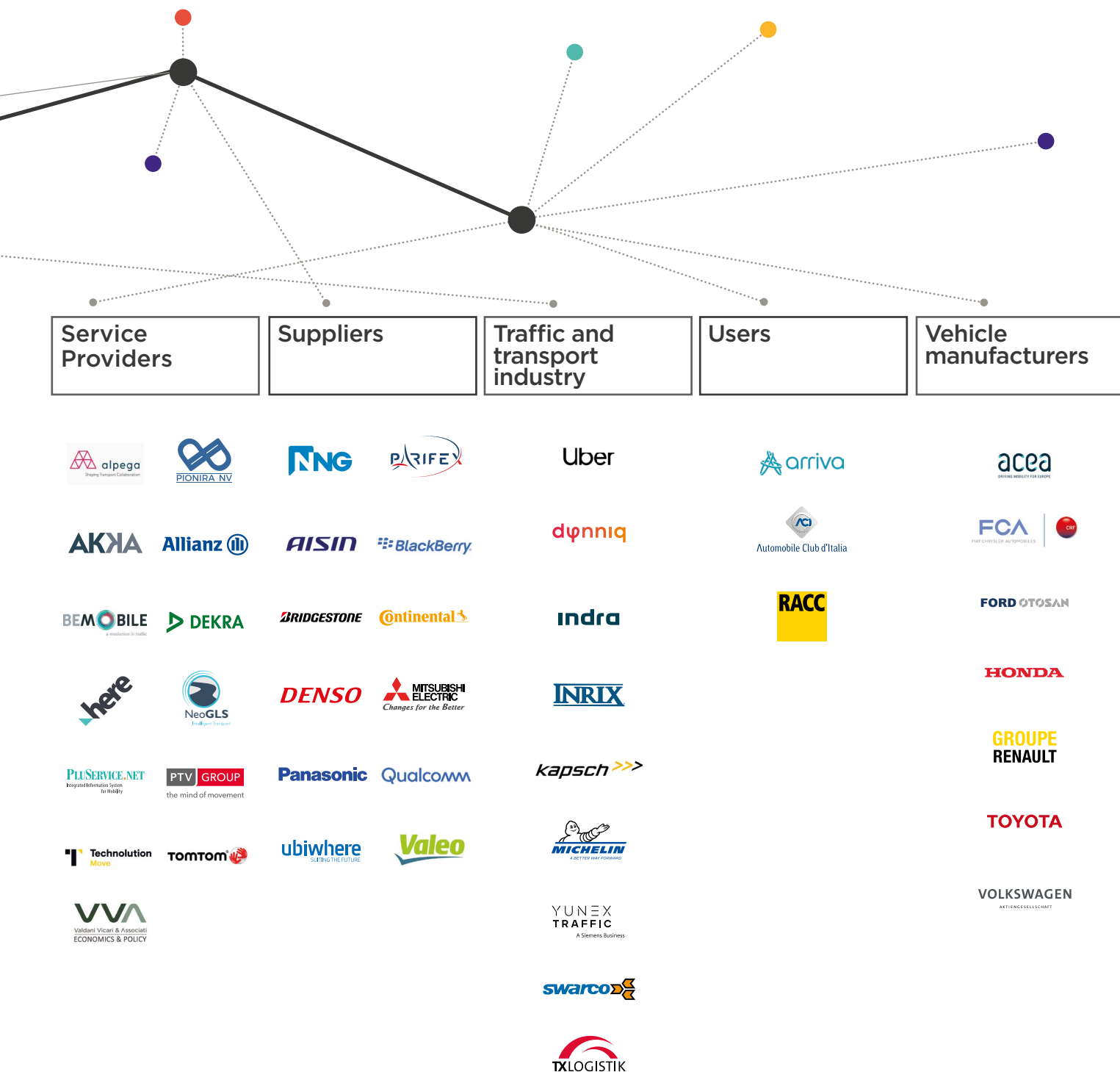
Critically, ERTICO paves the way for industry voices to be heard by policymakers: we are a voice for smart, efficient and sustainable change. The cross-sector public-private approach is one of ERTICO's biggest strengths, helping to shape the debate, present practical solutions, and provide an objective outlook on policymaking.



“ For almost three decades, ERTICO has provided the platform for all stakeholders working on and with intelligent transport systems to meet and exchange ideas and best practices. It is, without a doubt, the organisation where innovation and experience are brought under one roof and where the public and the private sectors are at parity in discussing the future of smart mobility. In 2022, the ERTICO Partnership has once again proved that cooperation and synergy among the public and private sectors are the key to the future of mobility. More accessible transport, multimodal mobility, digitalisation and automation, but also green, sustainable and user-focused mobility is what we have all agreed to work for, together. ”

Angelos Amditis, ERTICO Chairman





“ The partnership with ERTICO offers SAENA various opportunities such as working together on co-funded projects, getting insights on market trends, networking with new ITS stakeholders, promoting Saxon ITS activities and partners on a European level, and having exclusive access to a wide range of event and innovation platforms. Those possibilities enhance and strengthen the portfolio of SAENA to support Saxon ITS activities and its partners to a new level. ”

Marcel Kolling,
Project Manager Efficient Mobility Saxony, SAENA

“ Oxfordshire County Council is proud to be a member of ERTICO. We have already created fruitful partnerships and shared learnings with world-leading companies. ERTICO provides a safe and expert network for public body organisations to further develop ideas and explore delivering public value through innovation and collaboration. ”

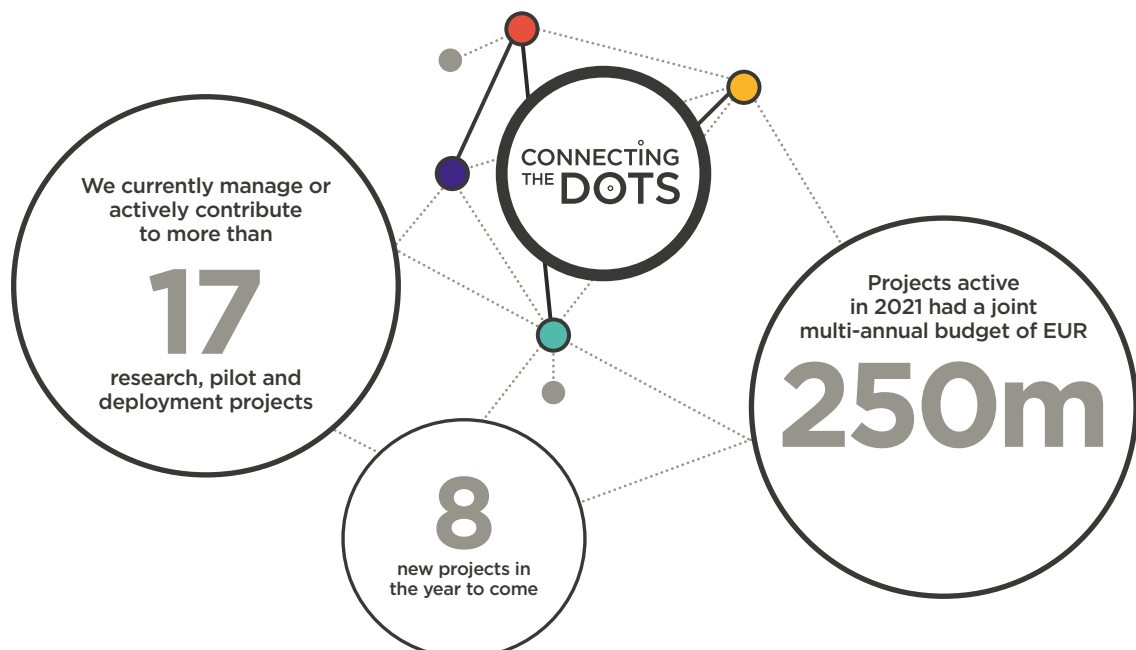
Llewelyn Morgan,
Head of Innovation, Oxfordshire County Council

What does ERTICO do?

Deploying innovation is central to ERTICO's work to make mobility smarter, safer and cleaner, working with ERTICO Partners across four priority areas: Connected, Cooperative & Automated Mobility (CCAM), Urban Mobility, Clean & Eco-Mobility, and Transport & Logistics. This includes European Commission co-funded projects, ERTICO Partnership-funded Innovation Platforms and other multi-stakeholder activities, including some funded solely by industry and public authorities. These are complemented by horizontal initiatives such as the ERTICO City Moonshot, ERTICO Academy, Start-Up Initiative and international cooperation activities that align Europe and EMEA with the other ITS regional organisations that ERTICO partners with.

Our CCAM activities pave the way for the Research & Innovation necessary to ensure the availability of such services by 2035. CCAM contributes to decarbonisation and improved safety in line with EU targets, including the European Green Deal and Vision Zero. Our Urban Mobility focus area looks at aligning ITS with our strategic goals of integrated, accepted and inclusive infrastructure supported by operational CCAM services and enabling decarbonisation. Thought leadership is key: for example, contributions by ERTICO experts in Sustainable Urban Mobility Plan (SUMP) guidance documents. Our activities and priorities in Clean & Eco-Mobility focus on reducing emissions, dealing with pollutants from all forms of transport, and extending to brakes and tyres and tailpipes to improve air quality and health. Our aim in the area of Transport & Logistics is to increase interoperability and connectivity to optimise cargo flows and enhance supply chain management while using existing resources better.

Our Innovation Platforms focused on deploying ITS are self-funded ERTICO activities and open to ERTICO and non-ERTICO Partners. Targeting European markets, we also seek opportunities globally. We currently manage or host seven Innovation Platforms covering deployment services, including traffic management, electro-mobility, traffic and traveller information to ADAS linked digital maps, Mobility as a Service (MaaS), and cloud-based vehicle sensor data.



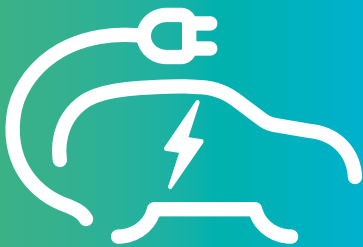
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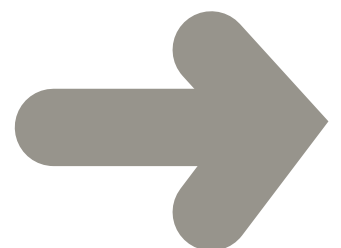
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CONNECTED COOPERATIVE AND AUTOMATED MOBILITY

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.



The future of mobility is connected, cooperative and automated

By creating a pathway to CCAM, ERTICO leads numerous R&I projects, platforms, demonstrations and other activities, coordinating multiple stakeholders to focus on common challenges, develop a shared vision, and enable a harmonised approach.

In line with industry trends and recent developments, the name of the focus area 'Connected and Automated Driving' (CAD) was revised and changed to Connected, Cooperative and Automated Mobility (CCAM) to better align with the general terminology used by policymakers and institutions such as the European Commission, but also the language increasingly used by ERTICO members and Partners.

This change underlines an important development within this theme: CCAM is about far more than just driving, and mobility can be seen in the broadest terms. It is not only connected and automated but also cooperative in nature, involving many different ITS actors, systems and sets of technologies. Stakeholder cooperation is therefore essential for the integration of vehicles, infrastructures and mobility services such as traffic management, as well as integrating cooperative and automated approaches through existing transport systems, for example, public transport networks.

Notably, ERTICO's approach, founded on technology neutrality, seeks to enable interoperability and cooperation for a CCAM world that is open to all. We also believe in large-scale demonstrations, testing and pilots - learning by doing - to showcase CCAM technologies, support user engagement and public involvement (embracement in the jargon), making CCAM a reality faster.

Given ERTICO's multi-stakeholder nature, we play a unique role in formulating and recommending common evaluation methodologies and validation frameworks for CCAM by facilitating cross-sector knowledge exchange and thought leadership for the safe and successful deployment of CCAM.

We are trusted by the European Commission to be one of the founder members of its co-programmed CCAM Partnership, officially launched in June 2021. This strong presence will see us co-create the partnership's priorities and steer the development of the future Horizon Europe Work Programmes in CCAM in areas such as coordination and integration of the vehicle in the transport system.

For many years, ERTICO has been actively involved through the ARCADE project in the EU-US-Japan Trilateral Working Group for Automation in Road Transportation (ART). While supporting the European Commission in organising the European contribution, the group has contributed to developing an impact assessment framework, cooperation and information exchange between the three regions in human factors, roadworthiness testing, new mobility services, and physical and digital infrastructure. This information

is included in the unique knowledge base created by the ERTICO-coordinated three-year ARCADE project to deliver a one-stop shop for CCAM insights. By building a consensus among stakeholders, coordinating R&I and testing across Europe, 23 partners from 11 Member States are moving towards state-of-the-art deployment with the ultimate goal to enable robust and harmonised deployment by ensuring developments move in the right direction while avoiding duplication of effort and potentially costly mistakes.



ERTICO also led stakeholder cooperation in the HEADSTART project, until its official finalisation last December 2021, to define testing and validation procedures of CCAM functions across technologies such as communications, cyber security and positioning, notably in harmonised methodologies for vehicle safety assessments. ENSEMBLE recently ended in March 2022 and overarches from the fourth focus area of Transport and Logistics to deliver significant results in truck platooning. We are also involved in the SHOW project, the European Commission's largest funded project to demonstrate shared CCAM in urban transport, particularly electro mobility.

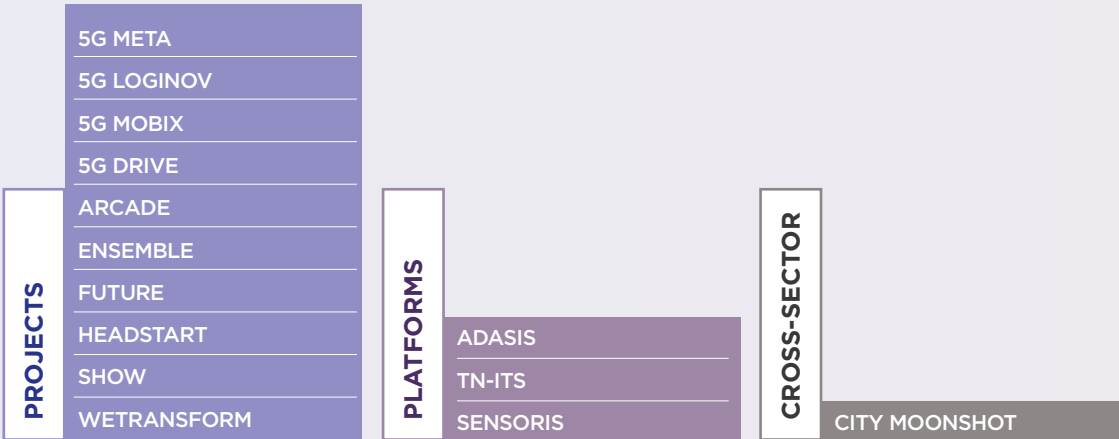
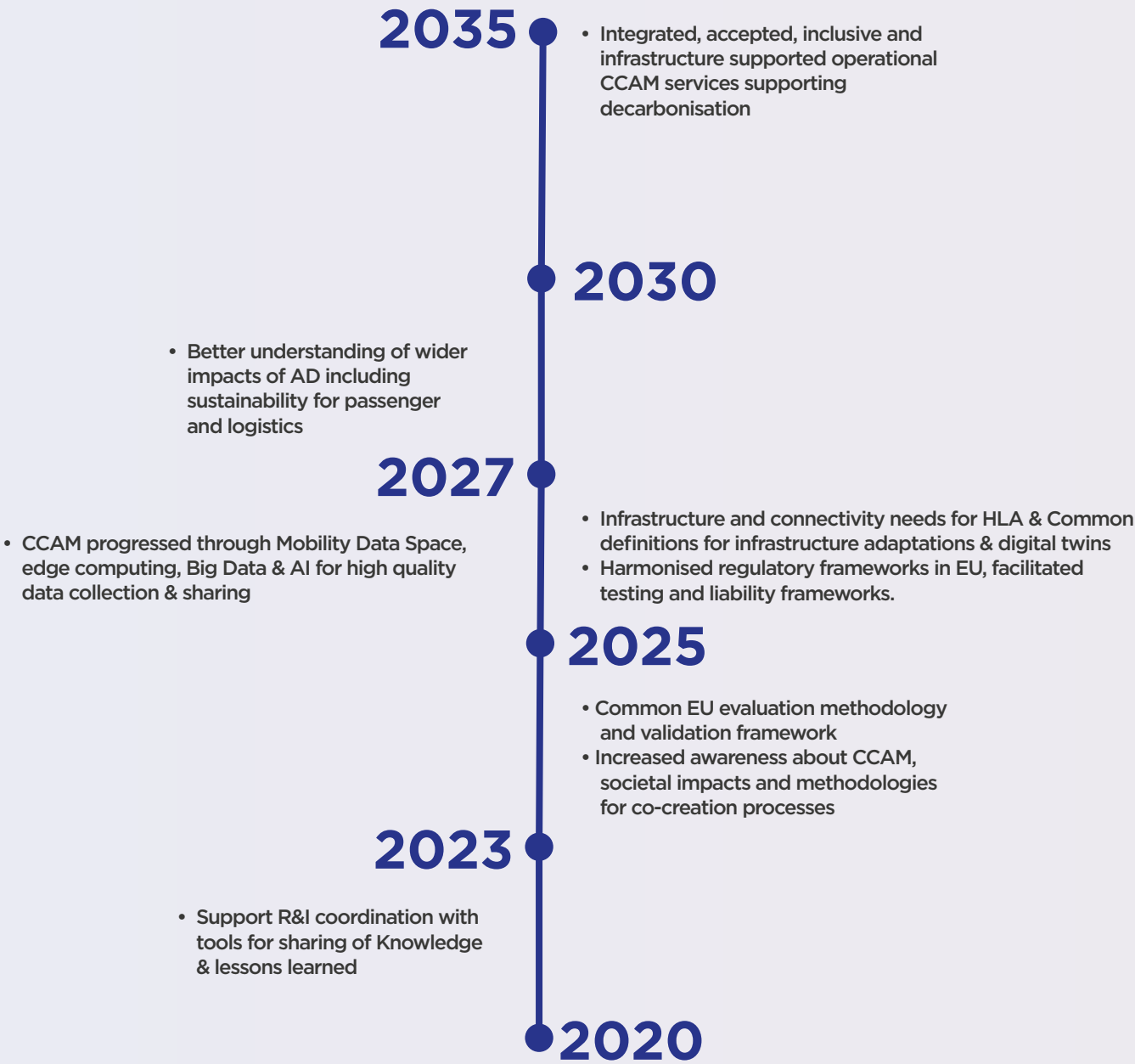
Another technology-driven activity is the CONCORDA project which ended during the summer of 2021 but sought to assess hybrid connectivity by demonstrating C-ITS in action and prepared European motorways for automated driving with cross-border continuity of service. The ICT4CART project also ended recently, aimed at deploying and testing a versatile ICT infrastructure for connected and automated road transport. Other 5G-focused projects, including 5G-MOBIX (advanced 5G CCAM use cases and new business opportunities, again cross-border) and 5G-META (a flexible open telematics platform to leverage real-time vehicle captured data) are actively contributing to the advancement of CCAM.

ERTICO managed Innovation Platforms under the CCAM focus area include SENSORIS, aiming to define a globally standardised interface to exchange information between in-vehicle sensors and a dedicated cloud, as well as ADASIS, which focuses on map-enhanced driver assistance systems for automated driving.

In this critical area of delivering smarter and more cooperative mobility, ERTICO is connecting the dots to advance key coordination tools while providing harmonised methodologies and share the best practices and driving innovation in technology with its Partners, including edge computing, Big Data, Artificial Intelligence, cyber security and the Internet of Things - showcasing CCAM in action.



ROADMAP





5GMETA aims to deliver a flexible open telematics platform to leverage real-time vehicle captured data, working with traditional and new auto industry players and ensuring data privacy, security, interoperability and ownership. The project also looks to ease the creation of innovative data-based CAM services and applications, providing new revenue flows, reducing costs and enforcing safety.

5gmeta-project.eu

Impact:

5GMETA has a business-driven design with APIs and architecture for fast prototyping, training and operation of new services. It will also define a data monetisation model compatible with OEMs, TIER1, SMEs and high-tech start-ups, and data licenses to retain user control and limit commercial and geographical data usage.

Next Steps:

The first version of the 5GMETA platform will be released, and the first project hackathon was completed in the first quarter of 2022. Updates for the platform will follow continuously based on improvements decided during and after the hackathon.



5G-MOBIX examines the implications of 5G and its role in the future of autonomous driving. It develops and tests automated vehicle functionality using core 5G technological innovations along multiple cross-border corridors and local trial sites in Europe and Asia. The project considers impacts and deployment scenarios for regulatory, business and social aspects.

5g-mobix.com

Impact:

5G-MOBIX has a variety of trial sites and cross-border corridors in and outside Europe, including Turkey, China and South Korea. Successful outcomes will provide European industry and stakeholders with a head start in the future development and deployment of 5G for cross-border CCAM. The proven showcased technologies developed through international cooperation will provide confidence in choosing and progressing sustainable and scalable solutions in the pan-European deployment of 5G for connected and autonomous driving.

Next Steps:

Local and cross-border trial sites are set to complete full trials as the project ends and perform their last public demonstrations. Various protocols, scenarios and 5G features are being tested, and their performance will be evaluated, investigating cross-border challenges concerning telecommunication infrastructure, application security, privacy and regulatory issues.



The 5G-DRIVE Horizon 2020 project trialled and validated interoperability between EU and China 5G networks operating at 3.5 GHz bands for enhanced Mobile Broadband (eMBB) and 3.5 and 5.9 GHz bands for two principal V2X scenarios: Intelligent Intersection and GLOSA. 5G-DRIVE had 17 European partners from 11 countries including mobile operators, car manufacturers, SMEs, research institutes, academia and consulting partners.

5g-drive.eu

Impact:

5G-DRIVE validated standards in 5G technologies and triggered the rollout of 5G networks and innovative V2X solutions that will help to drive new business opportunities, jobs and business models.

Next Steps:

The project was finalised in July 2021, with the final review in September 2021 to deliver planned outcomes by promoting 5G potential, strengthening 5G co-operation and encouraging early 5G market adoption.



ADASIS focuses on advancing map-enhanced driver assistance systems that lead to automated driving. It is developing the ADASIS worldwide de facto industry standard interface to enable Advanced Driver Assistance Systems (ADAS) to access map and geo-referenced data ahead of the vehicle position. This concept, known as ADAS Horizon, adapts as the vehicle advances on its route. After releasing its first standard in 2012, v3.1 was released in 2020 to support Automated Driving with high definition map data. In 2021, v3.2 was released internally, including an extended list of traffic signs, localisation objects and a fully defined application API for autonomous-driving software developers.

adasis.org

Impact:

ADASIS engages with global industrial stakeholders including Japanese, Chinese and South Korean counterparts. ADASIS specifications have enabled the market introduction of new vehicle systems such as Truck Predictive Powertrain Control, leading to reduced fuel consumption and CO₂ emissions of 5%. These achievements extend to passenger vehicles, helping the automotive industry to meet European Green Deal targets.

Next Steps:

In 2022, ADASIS v3.2 will be publicly released and v3.3 will be finalised, including definition of the low-level protocol to achieve an interoperable standard.



ARCADE (Aligning Research & Innovation for Connected and Automated Driving in Europe) engages a CAD Stakeholder Network through workshops, conferences and symposia to identify challenges, needs and solutions to deploy CCAM and build consensus across sectors on R&I. It facilitates the exchange of knowledge and experiences from past and ongoing research and piloting activities on CAD at national, European and international levels, and supports the European CCAM Partnership in particular to define the future R&I agenda.

connectedautomateddriving.eu

Impact:

ARCADE has consolidated the online Knowledge Base of CAD 'know-how', providing an overview of R&I projects and test sites, impact assessment, testing and evaluation methodologies, regulations, policies and standards, roadmaps and strategic plans at European, Member State and international levels. ARCADE has also contributed to defining future R&I priorities in Europe, including the Strategic Transport Research & Innovation Agenda on CART, the ERTRAC CAD Roadmaps and the Strategic Research and Innovation Agenda (SRIA) from the European CCAM Partnership.

Next Steps:

ARCADE was extended and is expected to end in July 2022 to ensure the continuous update of the Knowledge Base until the start of follow-up support action. An analysis of Horizon 2020 funded R&I projects and an overview of international activities in CCAM are being finalised and will be published on the Knowledge Base. One of the final achievements of ARCADE will be releasing the first comprehensive map of CCAM testing and pilot sites in Europe.



CONCORDA aimed to prepare European motorways for automated driving and high-density truck platooning with adequate connected services and technologies. The project was simultaneously a pre-deployment action paving the way for interoperable hybrid C-ITS deployments and an innovation action for evaluating C-V2X PC5 in coexistence with ITS-G5 802.11p, MEC-based low-latency ITS message (re-)distribution, and implementing and assessing advanced CAD/CCAM services such as CACC and HFTP.

ertico.com/concorda

Impact:

CONCORDA demonstrated that C-ITS technology works. Short-range, 802.11p and PC5 provide reasonable performance beyond road safety for CCAM. There is room for improvement in implementing and optimising the respective service stacks. Coexistence proved possible by using separate channels in the ITS band 5.9GHz. The long-range over LTE enables Hybrid Communication, complementing short-range.

Next Steps:

CONCORDA fully achieved its objectives to pave the way for other CAD, CAM and CCAM projects. Learnings and findings were advertised to, and partially adopted by Horizon 2020 projects, such as ICT4CART, 5G-CARMEN, 5GCroCo and 5G-MOBIX (short-and long-range) and C-ROADS (Hybrid communication profile) as well as other takeaways from best practices and project studies.



The Data for Road Safety (DFRS) ecosystem is a scalable solution, with the DFRS platform hosted under the ERTICO umbrella. Any industry partner in transportation, mobility and traffic data, and public authorities, can join and exchange safety-related traffic data and information. The European Commission's Delegated Regulation 886/2013 on Safety Related Traffic Information is the inspiration for this ecosystem.

dataforroadsafety.eu

Impact:

Aiming to reduce fatal accidents and injuries on European roads, the EU has set a new reduction target for 2021-2030. A 50% reduction target for road deaths and, for the first time, for serious injuries. These are target milestones to reach zero road deaths in Europe by 2050 ('Vision Zero'). Data sharing for road safety is meant to contribute to this target.

Next Steps:

ERTICO hosts this unique mobility data space and chairs the General Assembly. The ERTICO team is also responsible for communication and dissemination activities and is involved in the technical working groups. Membership to the DFRS ecosystem is open to entities of the public and private sectors that possess process and/or handle relevant safety-related data for events mentioned in the Delegated Regulation 886/2013.



EAVP

The European AVP (EAVP) is a new Innovation Platform established under ERTICO in January 2022. Automated Valet Parking (AVP) is an automated vehicle parking system designed to remove off-street parking issues, whereby a driver can leave the AVP vehicle and the vehicle moves autonomously through the parking area into a parking lot.

Impact:

The objective is to facilitate and provide support, on a permanent basis, to implement priority actions for deploying AVP in Europe, as defined and identified by the platform working groups, and to foster and cultivate the relevant standards. The scope of activities encompasses areas of innovation related to AVP within a pre-competitive framework and timeline, up to and including TRL9 Technology Readiness Level.

Next Steps:

ERTICO coordinates and leads this platform, and is actively involved in the technical, business, communication, and dissemination working groups. Starting from a concrete alignment between the members on status market, technology and available resources, a clear priority and activity roadmap will be established, and focused communication set up to all stakeholders to join the platform.



HEADSTART defined testing and validation procedures of CAD functions, including enabling technologies such as communications, cyber security and positioning. The resulting methodology considers different test instances such as simulation, proving ground and real world field-tests to validate safety and security performance according to the needs of different user groups (technology developers, consumer testing and type approval). Within this project, ERTICO leads the Expert Network and international cooperation.

Impact:

New testing and validation procedures, methodologies and tools will directly affect industry development strategies and processes. In particular, development costs and time will be reduced by optimising physical testing. Project results will also empower the New Car Assessment Programme with testing procedures that are reliable, repeatable and can be understood by end-users. This is essential to increase the safety awareness of new vehicle buyers.

Next Steps:

The project closed at the end of 2021. Initiatives in 2021 included a joint white paper with SAKURA/SIP-adus, Towards the Harmonisation of Safety Assessment Methods of Automated Driving. This was presented and discussed in a collaborative online workshop on safety assurance (SIP-adus conference).

headstart-project.eu



ICT4CART provided an ICT infrastructure to enable the transition towards road transport automation. The main goal was to design, implement and test a versatile ICT infrastructure to enable the shift towards higher levels of automation in real-life conditions. ICT4CART technology addressed gaps and worked with key elements such as hybrid connectivity, data management, cyber security, data privacy and accurate localisation.

ict4cart.eu

Impact:

Important recent activity included completion of demonstration activities at four project pilot sites: Germany, Austria, Italy and cross-border. The consortium successfully tested several use cases such as smart parking and on-demand fleet management applications, lane merging, virtual mirror for urban crossing, and key technologies including G5 short-range communication, hybrid communication infrastructure, and increasing vision of a vehicle on the surrounding traffic.

Next Steps:

ICT4CART ended in February 2022 and held two final events to highlight its future exploitation, including possible scenarios and business models related to different automation levels, pricing policies, and a further initiative for the future of ICT Infrastructure in Connected Automated Road Transport.

SENSORIS

SENSORIS is a membership and business-driven Innovation Platform committed to defining a globally standardised interface to exchange information between in-vehicle sensors and a dedicated cloud, and between clouds. It also establishes a request channel enabling the service cloud to ask vehicles in a region to upload specific sensor data.

sensoris.org

Impact:

SENSORIS released its first specification v1.2.2 to the public and six months later, in March 2022, released a new specification to enable the exchange of information between in-vehicle sensors and a dedicated cloud as well as between clouds.

Next Steps:

These include the possible submission of SENSORIS to CEN or ISO, the contribution of SENSORIS standards to environmental and safety impacts, and developing SENSORIS v2.0.



TN-ITS GO and the TN-ITS platform enables the exchange of spatial road data between road authorities as trusted data providers and data users such as mapmakers and other parties.

tn-its.eu

Impact:

The TN-ITS association gathers stakeholders to develop further the TN-ITS data sharing between pan European road authorities and service providers. The main goal of TN-ITS is to facilitate and foster the exchange of ITS-related data, especially concerning changes in (semi)permanent road attributes such as speed limits. In this respect, TN-ITS contributes to realising the digital twin: building and maintaining a virtual representation of physical road attributes. A significant benefit of the TN-ITS data feed is that data is highly reliable: sourced from public authorities, users can trust the data they receive. This allows key services such as ISA and maps providers to offer end users regularly updated, accurate, trusted information and digital maps.

Next Steps:

TN-ITS GO project officially ended in December 2021, but further activities within this field are now carried out in the framework of NAPCORE. The TN-ITS data sharing mechanism has already deployed in 14 EU member states. TN-ITS GO finalised those 14 pilot services and their evaluation in its final year. It also carried out maintenance of the CEN TS 17268 TN-ITS specifications. Meanwhile, the TN-ITS platform welcomed new partners and worked on reaching out to other countries and road authorities to support the implementation of further services.



NAPCORE (National Access Point Coordination Organisation for Europe) is the world's largest approach for coordinating mobility (data) platforms. Set up by all European member states, Norway, Switzerland and international organisations, NAPCORE aims to coordinate the European National Access Points (NAPs) and National Bodies (NBs) established under the ITS Directive.

napcore.eu

Impact:

NAPCORE empowers NAPs as the backbone for ITS digital infrastructure and mobility data exchange in Europe to facilitate an EU-broad coordination of National Access Points and National Bodies, and harmonise implementation of European specifications on the ITS Directive at an organisational level. NAPCORE strives to increase interoperability by establishing mobility data standards and recommendations for data exchange, content, access and data availability in the mobility domain in Europe on a technical level.

Next Steps:

The NAPCORE consortium is carrying out several activities in the coming year, such as starting to align discussions between various data exchange formats like DATEXII and TN-ITS. NAPCORE will initiate Member State engagement by generating an inventory on the status and roadblocks for related data sharing, and establishing focused marketing and communication that addresses their mobility needs, objectives and engagement. NAPCORE will further expand the TN-ITS ERTICO Innovation Platform through extensions and enhancements of TN-ITS stakeholder network services, developing and promoting TN-ITS technical specifications, and safeguarding harmonisation between Member States.



Digitalisation and automation in the transport sector create significant challenges for the workforce and labour market. The EU funded H2020 project WE-TRANSFORM (Workforce Europe - Transformation Agenda for Transport Automation) aims to create a structured dialogue and knowledge base on the effects of automation with stakeholders of all transport modes and sectors, and develop an action-oriented agenda to address challenges and mitigate impacts.

wetransform-project.eu

Impact:

New testing and validation procedures, methodologies and tools defined by HEADSTART will directly affect industry development strategies and processes. In particular, development costs and time will be reduced by optimising physical testing. Project results will also empower NCAP with testing procedures that are reliable, repeatable and can be understood by end users. This is essential to increase the safety awareness of new vehicle buyers.

Next Steps:

A central outcome is an action-oriented agenda to solve challenges faced, and to enable and support a durable and practical dialogue among all stakeholders on the impacts of automation on the workforce and possible solutions to mitigate adverse effects.

“ At Continental, we have more than 150 years of experience in mobility technology. Being an active member of ERTICO, we see a strong benefit from the collaboration between ERTICO Partners to unleash all capacities of CCAM technology. Together with the ERTICO team, Continental plays an active role in European CCAM partnerships to directly support the agreed EC policy objectives. ”

Dr. Thorsten Burger,
Head of Public Affairs, Continental

“ ‘CCAM is at the core of our research and innovation activities at ICCS. Through our participation in ERTICO, we have a multi-stakeholder community to discuss and further promote our research. We have the ability to work together with the partnership in highly competitive European co-funded projects and innovation platforms, co-shaping the future of tomorrow’s connected and automated mobility. ”

Dr Panagiotis Lytrivis,
Senior Researcher, ITS Team Leader,
Institute of Communication and
Computer Systems (ICCS)



URBAN MOBILITY

DELIVERING SEAMLESS MOBILITY
FOR ALL

We aim to make urban mobility safer, more efficient, cleaner, equitable and sustainable.

We do this by promoting partnership and innovation, deploying new technology, making better use of data, working to reduce CO₂ emissions and improve air quality, understanding and integrating multiple modes of transport, and managing infrastructure better.



Delivering greener, cleaner and more sustainable mobility for cities of tomorrow.

ERTICO and its Partners contribute to targets that include saving millions of tonnes of CO₂, improving road safety and saving one million hours from traffic congestion and delays. The European Commission's Sustainable and Smart Mobility Strategy maintains that at least 30 million zero-emission cars will be running on European roads by 2030, 100 European cities will be climate neutral, and automated mobility will be deployed on a large scale.

Our key themes, therefore, include Mobility Network Management (MNM), optimising and integrating infrastructure management for people and goods across all transport modes, and looking at the system as a whole, including public transport and UAM. We aim to make traffic management more connected, predictive and interactive, including the concept of co-opetition between private and public sectors. Mobility as a Service (MaaS) is a key focus here, supported by increasing levels of automation and interoperable payment and ticketing systems. Active Mobility (cycling + walking) and fully flexible personalised mobility are also on the radar. As in other areas, we want to connect the dots in urban mobility and put people at the heart of our work through a user-centric approach.

We know urban areas are taking their responsibilities seriously. With the ERTICO City Moonshot interviewing 150 cities worldwide: 92% are taking transport-related action to address the climate crisis. This initiative will continue, covering more cities and helping to foster greater dialogue and understanding around the challenges and opportunities.

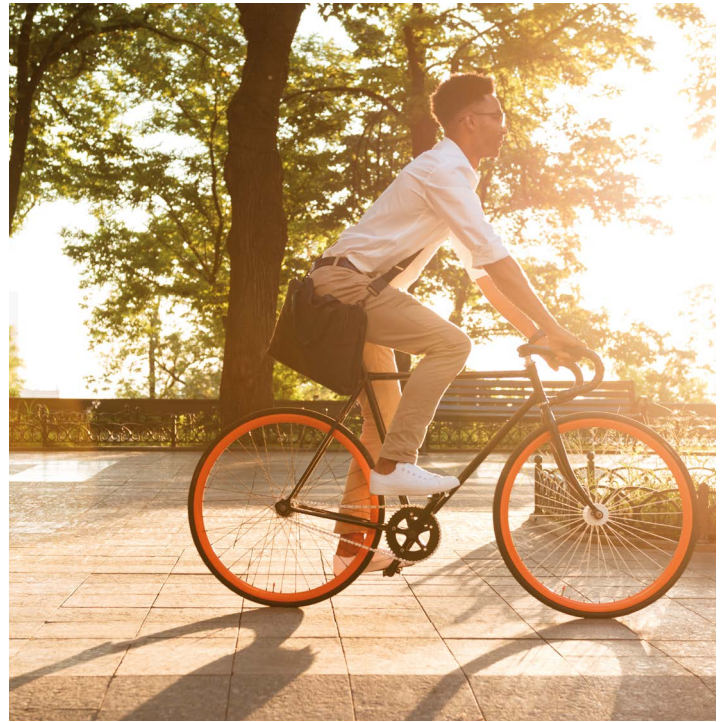
2021 saw extensive revisions and updates to the guidance for Sustainable Urban Mobility Plans (SUMP) with ERTICO input, covering intelligent transport systems (ITS), Mobility as a Service (MaaS) and Urban Air Mobility (UAM).

The SHOW project (SHared automation Operating models for Worldwide adoption) exemplifies large-scale activity, focused on deploying shared, connected and electrified automation for public transport. This four-year project includes 69 partners and 20+ European cities and organisations in North America, Asia, and Australasia. It involves integrating fleets of automated vehicles in public transport, demand-responsive transport (DRT), MaaS, and Logistics as a Service (LaaS) schemes.

Transformational change: ERTICO is also at the forefront of the flagship SOLUTIONSplus project to establish a global platform for urban mobility and sustainable electro-mobility in large urban areas in developing and emerging nations. See Clean and Eco-mobility for more details.

Making mobility data flow: NAPCORE, the National Access Point Coordination Organisation for Europe, launched in 2021 as the world's largest cooperation and data sharing platform across 30+ mobility data platforms, with ERTICO as a partner. Building on the results of, among others, three ERTICO-supported projects - TN-ITS and TN-ITS GO Map Update Exchange, and EU-EIP European ITS Platform - it aims to deliver on the ERTICO ambition to develop 'plug-and-play cities' for C-ITS.

Our managed Innovation Platforms continue pushing forward the state of the art in urban mobility. The MaaS Alliance is a global public-private partnership with 100+ members that brings together solutions, operators and cities to create more efficient multimodal mobility and speed up deployment of C-ITS in cities.



The TISA platform for traffic information has worked on standards such as TPEG and TMC and breakthrough communication protocols for many years. Contributing to interactive traffic management and working on elevating principles of co-opetition and trust among traffic stakeholders into what we now call Mobility Network Management, the TM2.0 platform brings together 42 stakeholders to collaborate on advanced and connected interactive traffic management, elaborating on a systemic, holistic approach toward multimodal mobility management.

ERTICO also plays an increasingly important role in shaping unmanned aerial mobility. For example, the UAM community gathers at its leading event, Amsterdam Drone Week, where ERTICO was the dedicated chair and organiser of expert panels. ERTICO has also contributed to the Practitioner Briefing Urban Air Mobility and Sustainable Urban Mobility Planning under the European Commission's framework of SUMP guidelines.

In Active Mobility, ERTICO work with prominent groups including Cycling Industries Europe (CIE) and representatives of user groups such as the European Cyclists Federation (ECF).

Our congress events play a central role in knowledge sharing and capacity building. At the same time, ERTICO Academy sees ERTICO and its Partners engage in face-to-face training and webinars on urban mobility, clean and eco-mobility as well as CCAM.

ERTICO remains at the forefront of urban mobility, helping to refocus policy and operations from traffic management and efficiency gains towards more environmental targets to ensure we can plan and deliver the greener, cleaner, more people-focused and sustainable cities of tomorrow.

ROADMAP

- Zero-emission UAM integrated in multi-modal mobility management + Fully flexible and personalised mobility for all

2032

2035

- C-ITS widely deployed in cities + Widespread availability of integrated mobility solutions

- Mobility Network Management through integrated multimodality and traffic management systems
- Automated MaaS (L4) deployed at large scale

2030

- Connecting traffic management networks including sensing active mobility modes (cycling + walking)

- Plug-and-play cities for C-ITS

2025

- MaaS deployed (incl.rail) at large scale in Europe

- 100 European climate neutral cities in Moonshot

2022

- Interoperability framework for MaaS (APIs) and Accelerating deployment of C-ITS in cities

- SUMP guidelines: ITS, MaaS, UAM

2021

PROJECTS

SOLUTIONSPUS
NAPCORE
SHOW

PLATFORMS

MAAS ALLIANCE
TM2.0
TISA

CROSS-SECTOR

ERTICO ACADEMY
ERTICO CITY MOONSHOT



The MaaS Alliance is a public-private partnership Innovation Platform working to establish the foundations for building a common approach to Mobility as a Service, and unlocking the economies of scale needed to support the successful implementation and uptake of MaaS globally.

maas-alliance.eu

Impact:

The main goal is to facilitate an open MaaS ecosystem that benefits users, societies and the environment. The Alliance brings together stakeholders from all sectors to enable the successful deployment of MaaS around the world. It also contributes to policymaking by promoting the benefit of MaaS to new stakeholders, monitoring and sharing information on market development, and supports the technical interoperability of services.

Next Steps:

With more than 115 members worldwide, the Alliance is growing its network to include other key stakeholders in the community. By building stronger collaboration with its members and the mobility sector worldwide, the Alliance will support its members and three working groups. The MaaS Alliance has been selected to be a part of the European Commission's Multimodal Passenger Mobility Forum (MPMF) and works to be an effective asset in preparing policy initiatives in sustainable multimodal mobility for passengers in Europe.



TISA is an international market-driven platform that creates standards to communicate information to mobility service providers, including weather, parking, traffic and flow prediction, emergency alerts and warnings. It is responsible for TPEG and TMC communication protocols of traffic information.

tisa.org

Impact:

In 2021, TISA members conducted a trial in Germany that concluded in September. This confirmed the effectiveness of the TPEG-based Emergency Alerts and Warnings protocol, which provides real-time emergency alerts to travellers in a safe way while ensuring compatibility with both in-vehicle navigation systems and in-vehicle digital radio receivers.

Next Steps:

A part of the TPEG protocol family (ISO 21219-series), the TPEG Emergency Alerts and Warnings technology will be submitted to ISO for worldwide standardisation.

TM 2.0

TM2.0 Innovation Platform draws together 42 members from the public and private sector to focus on solutions for advanced interactive traffic management. The core principles for TM2.0 are co-opetition and trust. All stakeholders collaboratively support the priorities set out and agreed with the public authorities in dialogue while also competing on quality and service: co-opetition. Trust is an important part of the concept, as cooperation cannot be achieved unless all those involved follow the agreements and plans based on trust. Co-opetition is the principle upon which competitors cooperate for the common good.

tm20.org

Impact:

TM2.0 platform members work within Task Forces focused on central aspects of the concept. Three Task Forces were successfully concluded in 2021 covering: Micromobility and Network Management; Data Exchange and Business Models in Multimodal Mobility Management; and the Applicability of Socrates 2.0 Results. Their final reports are on the TM2.0 website at www.tm20.org. This work has contributed to the Delegated Regulations on SRTI and RTTI, and revision of the ITS Directive.

Next Steps:

In 2022, new Task Forces will look at the relationship between traffic management and MaaS, creating a certification based on the TM2.0 concept, ITS services and their standardisation requirements, and the relationship between traffic management and environmental sustainability.



The SHOW project aims to advance sustainable urban mobility by deploying shared, connected, electrified fleets of automated vehicles (AVs). It aims to be the most significant and most holistic real-life CCAV urban demonstration initiative in Europe with a consortium of 70 Partners from 13 countries, and will pilot real-service seamless operation in 20 European cities for at least 12 months. In total, SHOW will deploy a fleet of more than 70 SAE L4/L5 AVs of all types for both passenger and cargo that will transport more than 1.5 million passengers and 350,000 units of goods. SHOW collaborates globally, seeking twinning activities with organisations in the USA, South Korea, Australia, China, Japan, Singapore and other locations.

show-project.eu

Impact:

In the second half of 2021, the consortium expanded its international collaboration by signing a Memorandum of Understanding with the Mobility Innovation Collaborative Research Organization, The University of Tokyo (UTmobl) and ITS Japan. In January 2022, SHOW achieved its 24-month milestone, marking the official kick-off of several demonstration activities in different pilot sites. SHOW autonomous fleets became operational across several European locations such as Finland, Sweden, Spain and Austria. The consortium has also specified the priority urban automated mobility use cases, impact assessment framework, and new business and operating models. SHOW partners have developed an open modular system architecture to integrate AVs in existing public transport systems.

Next Steps:

In the months ahead, SHOW partners will focus on practical implementation of the project, continuing and expanding demonstration activities in all project pilot sites, and developing multiplication plans and actions for follower sites. Partners will also work towards exploitation plans and officially launching the SHOW marketplace, and continue with citizen and community engagement activities to increase acceptance of AV fleets.

“ We all have a role to play in creating smarter, safer and greener cities. ERTICO is the perfect forum to share best practices on how to do that. It connects cities, policymakers and industry stakeholders to shape forward-looking solutions and policies that leverage the latest technology and innovation. Uber is grateful to be a part of the vibrant ERTICO community and jointly transform Europe’s mobility for the better. ”

Zuzana Pucikova,
Director of EU Public Affairs,
Uber and EU Climate Pact Ambassador

“ The City of Copenhagen plays an active role in many of ERTICO activities, including the City Moonshot Initiative and ERTICO Academy, and participated in European projects such as SPICE, C-Mobile and SOCRATES2.0. ERTICO continuously promotes dialogue about project ideas and invites us into relevant proposals and consortia. The City of Copenhagen is also an active member in the ERTICO Strategy Committee as one of the few public authorities where we strive to promote a multimodal perspective. ”

Christina Mose,
Head of Traffic Division, Technical and
Environmental Administration, City of
Copenhagen



CLEAN & ECO-MOBILITY

REDUCING ENVIRONMENTAL IMPACT

Clean and Eco-Mobility are central to ERTICO's vision of making mobility smarter, safer and cleaner.

We are working towards achieving these goals in multiple ways, addressing both CO₂ emissions as well as pollution.



Creating a cleaner eco-mobility future for all.

The increasing awareness of the climate crisis, raised at the 26th UN Climate Change Conference (COP26) in 2021, decarbonise society in general, and transport, in particular, continues to accelerate. Transportation is also being transformed in line with the European Commission's Sustainable and Smart Mobility Strategy, with ambitious targets, including the European Green Deal and the need to reduce greenhouse gas (GHG) emissions from transport by 90% by 2050.

In addition to combating climate change, key ERTICO themes for the year included pollutants, air quality and particles resulting from all forms of traffic, the associated health impacts, the application of innovative technologies, and the use of multi-sector partnerships and data sharing to help mitigate those issues. We want to change how we consume mobility: this means asking, what are the most efficient and environmentally friendly ways to move people and goods? This also means putting people at the heart of what we do.

ERTICO's role in driving decarbonisation includes supporting R&D for innovative lower carbon solutions and facilitating their inclusion into transport systems and future mobility through multi-stakeholder partnerships, platforms and projects. The scale of the challenge and the opportunities for change are clear. The first phase of the ERTICO City Moonshot initiative interviewed 150 cities worldwide, with the results relating to clean and eco-mobility including:

- **32% of cities have declared a climate emergency and a further 16% intend to.**
- **89% of cities measure air quality and 37% adjust their transport policies depending on air quality levels, for example by incentivising public transport.**
- **73% of cities have estimated GHG emissions from transport.**
- **92% of cities are taking transport-related action to address the climate crisis, the most common being additional cycle lanes, increased investment in public transport, and establishing charging infrastructure for electric vehicles (EVs).**

In light of emissions and air pollution issues, MODALES is the first major project to look at the interaction and impacts of powertrain, brakes and tyres together with driver behaviour to develop new knowledge and guidance for low-emission driving. With 16 European partners, three international partners and nine pilot sites, road trials have now started. MODALES produced the first version of a driver support app tested in seven European countries, with a training video developed and additional on-road trials in China and Russia.

The transition to EVs is key to reducing emissions and pollution, especially in developing nations. ERTICO is at the forefront of the SOLUTIONSplus project, which brings together cities, industry, research, implementation and finance partners to establish a global platform for shared, public and commercial e-mobility. With the UN reporting that 90% of countries with the most urbanised populations back the greater use of EVs or bicycles, SOLUTIONSplus includes city-level demonstrations testing various solutions in Vietnam, the Philippines, Nepal, Rwanda, Tanzania, Ecuador, Uruguay, Spain, China and Germany.

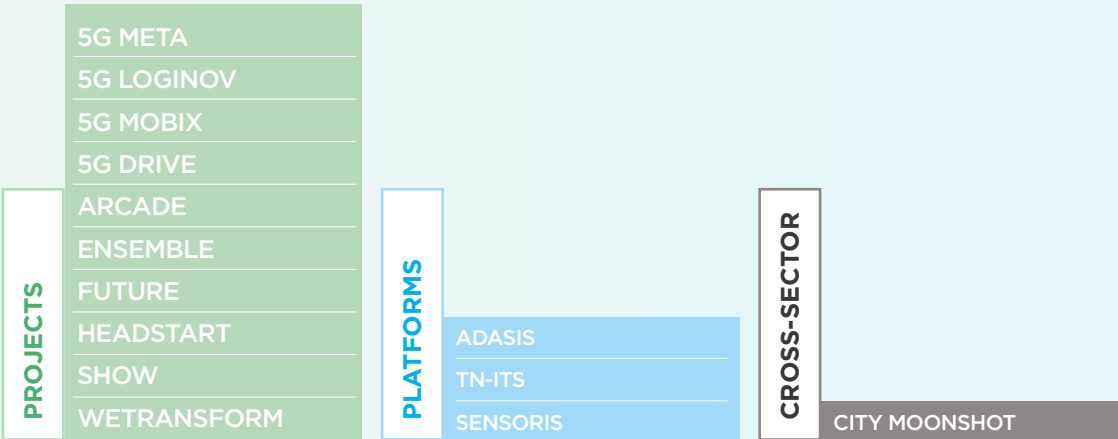
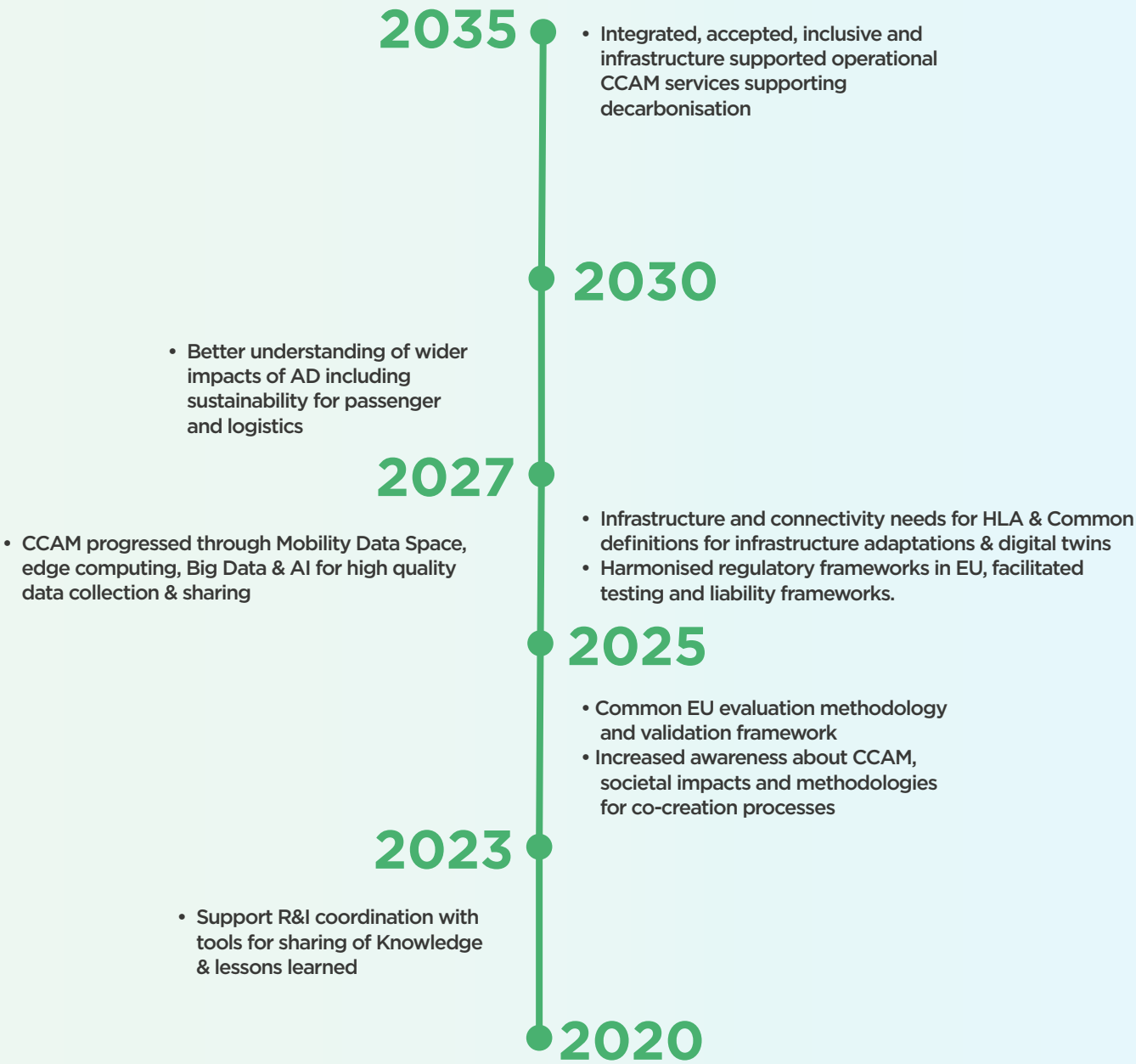
In 2021, SOLUTIONSplus also established a Start-up Incubator led by ERTICO in cooperation with FIER Automotive. This benefits from experience gained through ERTICO's successful Start-ups Initiative and its 'Connect, Innovate, Grow' approach. Activity includes seed funding, training, business plans and guidance for start-ups in Africa, Asia and Latin America. The SOLUTIONSplus incubator was integrated into the ITS World Congress in Hamburg last October 2021.

ERTICO is also part of the eCharge4Drivers consortium: 32 partners across 12 countries working to make the EV charging experience more user-friendly, with better-designed charging stations and increased interoperability. Meanwhile, the NextETRUCK electrification project will start in the second half of 2022, led by ERTICO Partner TNO. This will play a pioneering role in decarbonising vehicle fleets by demonstrating next-generation electro-mobility: innovative, affordable and competitive vehicles and ecosystems for tomorrow's medium freight haulage, with innovations in e-powertrain components and architecture, smart charging infrastructure and management, and fleet management using IoT and digital tools.

The future will be greener: ERTICO remains at the forefront of ensuring public and private partners work together on a detailed roadmap to meet ambitious targets, creating a cleaner eco-mobility future for all.



ROADMAP





eCharge4Drivers is working to make electric vehicle (EV) charging more prevalent and user-friendly with an improved charging station design and increased interoperability. To boost the rollout of charging stations, the project prioritises user behaviour alongside commercial and regulatory needs. The project started in June 2020, with large-scale user needs questionnaire taking place in 2021, alongside the design of enhanced services and new charging concepts. Usage data collection for EV charging facilities in 10 European pilot sites continues.

echarge4drivers.eu

Impact:

eCharge4Drivers demonstrate additional convenient charging options within cities (for example, enhanced user interfaces and advanced functionality under development), charge points at lampposts, network battery swapping stations for light EVs, and a transportable charging station service for temporary needs.

Next Steps:

Low power DC charging stations and more efficient components for cars and light vehicles are being designed and developed, as well as battery swapping services in Berlin and Barcelona. An EV charging location planning tool is under development. Interoperable software services for users are being developed, including Plug & Charge guidelines, interconnections for transparent payment, enhanced route planners, booking and information services, and charging optimisation. The various charging solutions and services will be deployed in the 10 demonstration areas during 2022 for verification and evaluation. Work on developing guidelines for investors and regulatory recommendations, led by ERTICO, runs from mid-2022.



MODALES is working to reduce air pollution from all types of road vehicles by encouraging the adoption of low-emission driving behaviour and appropriate maintenance. The project focuses on emissions from the powertrain, brake wear and tyre wear, exploring innovative and complementary solutions to reduce them.

modales-project.eu

Impact:

MODALES is the first major project that considers the interaction of powertrain, brakes and tyres and driver behaviour to develop knowledge and guidance for low-emission driving, as well as maintenance, retrofit and legal aspects. The project has analysed factors influencing petrol and diesel engine emissions from driving, OBD (On-Board Diagnostics), vehicle inspection and maintenance. It has developed low-emission driving guidelines and a training manual, the trial version of a driver support app, and started trials of the app with drivers. It has also undertaken the first retrofit of a Selective Catalytic Reduction system on a light van and assessed its performance.

Next Steps:

Training videos developed to provide best practice to drivers will be published, and an updated version of the MODALES app released to determine its effects on driving and acceptance by drivers of cars, taxis, vans, trucks and buses. A low-emission driving awareness campaign will accompany this trial period, with the evaluation and impact of trials determined by the end of 2022. Ongoing work will lead to recommendations for tackling vehicle tampering that leads to increased emissions and improving mandatory vehicle inspections.



SOLUTIONSplus is a flagship project to support the sustainable electrification of road transport in large urban areas across Europe, Asia, Africa and Latin America. It establishes a global platform for sharing, public and commercial e-mobility solutions to kick-start the transition towards low carbon urban mobility. SOLUTIONSplus encompasses city-level demonstrations to test different types of innovative and integrated e-mobility solutions, complemented by a comprehensive toolbox, capacity development and replication activities.

solutionsplus.eu

Impact:

2021 saw the official launch of SOLUTIONSplus Start-up Incubator. Led by ERTICO, this offers support to 13 start-ups worldwide, benefitting from the experience gathered by the ERTICO Start-ups initiative and its 'Connect, Innovate, Grow' approach. The consortium kicked off a series of regional training, including training for Africa on procurement delivered by ERTICO and the first activities related to peer-to-peer exchanges on key topics such as e-bikes sharing systems. The SOLUTIONSplus e-mobility toolbox, supported by the UN Environment Programme, was officially launched, and additional training for the e-global learning program is in production. E-mobility solutions have been implemented across living labs with preliminary work to enable demonstrations ongoing in other locations. In March 2022, SOLUTIONSplus presented its first results at the H2020RTR2021 conference organised by the European Commission.

Next Steps:

In the months ahead, SOLUTIONSplus Start-ups Incubator portfolio will be enlarged with start-ups from Europe. Meanwhile, start-ups already supported by ERTICO will receive further assistance on business plans and move into the next phase with their technologies. New training for the SOLUTIONSplus e-global training programme will be developed, including a session organised by ERTICO. Demonstration activities will continue in the living labs, and SOLUTIONSplus e-mobility technologies will be developed further. The consortium will work on additional replication cases.

“ The digital and sustainability transition in mobility opens horizons and opportunities that Bridgestone strives to seize for the benefit of consumers and society. The partnership and the participation with ERTICO in the H2020 project MODALES have been instrumental in accelerating the development of new approaches and know-how to help demonstrate the feasibility of innovative solutions for cleaner mobility. ”

Alessandro Cascini,
Head of Public Affairs, Bridgestone EMIA

“ In the last 10 years, CERTH and ERTICO have successfully worked together on EU projects on clean mobility, with a focus on vehicle emission reduction and electric vehicle development. Thanks to this collaboration, CERTH/HIT established an active research lab covering almost all vehicle types: from e-kick scooters to heavy-duty vehicles. ”

Dimitris Margaritis,
Head of Lab 'Environmental and Energy Impacts of Transport Systems, CERTH



TRANSPORT AND LOGISTICS

CREATING THE DIGITAL INFRASTRUCTURE FOR FREIGHT TRANSPORT AND LOGISTICS OPERATIONS

The rise in just-in-time delivery and explosion in online shopping with same-day or next-day delivery reshaped logistics. While the freight sector did a remarkable job during the pandemic, coping with huge demand alongside restrictions in movement, this experience highlighted problems and inefficiencies that remain in complex supply chains and opportunities for improvement.



Combining innovation and smarter technical solutions to make Transport and Logistic cleaner and more efficient.

ERTICO plays a central role in coordinating and leading improvement efforts, from identifying gaps in standards and aligning standards to support interoperability to supporting practical change in critical areas such as congestion and improving end-to-end supply chain visibility.

Key themes include improving the efficiency and economics of freight and transport while reducing environmental impacts. Our work is accelerating to digitalise the supply chain, including 5G/6G applications, automation and other digital enablers essential to modernise logistics, supporting multimodality, intermodality and synchromodality while exploiting the opportunities presented by data and data sharing. Indeed, smart logistics services will require a secure and trusted EU-wide data platform founded on interoperability. Delivery as a Service (Daas) for last-mile operations and Logistics as a Service (LaaS) is becoming a reality, with cleaner electro mobility driving future urban logistics.

One significant recent development involves e-CMR (electronic consignment notes). CMR control how goods are transported internationally and is the most common document in freight transport, generating hundreds of millions of paper documents each year for cross-border movements.

ERTICO coordinated the AEOLIX project to test and pilot cloud-based collaborative e-CMR operations, playing a major role in implementing e-CMR as the de facto standard in Europe. In April 2022, Germany became the eighteenth country to approve e-CMR: another huge step in digitalising European supply chains. Improvements in cross-border freight will follow, with impacts on operationalising requirements like the European Green Deal. The impacts of e-CMR are huge, and this approach may ultimately be replicated outside Europe.

This work has continued through the FENIX project, moving from 11 pilot sites in nine European countries to form the basis for a pan-EU rollout of electronic Freight Transport Information (eFTI) covering all TEN-T (Trans-European Transport Network) corridors. FENIX drives the transition to open source information sharing, uniquely federating platforms cross-border and supporting interoperability between key stakeholders.

Another ERTICO project, 5G-LOGINNOV, uses 5G technologies to optimise freight operations at ports and logistics hubs toward a more sustainable future. The project applies approaches including data analytics, IoT-enabled devices, next-generation traffic management, 5G logistics corridor as well as CCAM. Innovations undergoing tests in Greece, Germany, and Slovenia include automated truck platooning and monitoring emissions data, with positive environmental impacts emerging: CO₂ and other emissions are estimated to reduce by around 10% due to a higher loading factor at ports.

ERTICO is also involved in many other activities to help port areas, logistics hubs, and urban areas handle future logistics capacity, coping with congestion and environmental issues while developing new business opportunities. For example, the STORM project investigates transformation and structural changes in freight and logistics, including zero-emission vehicles. It focuses on new tools and procedures for digitalisation, sustainability and future policy requests.

The SHOW project is also relevant here as it includes applications and uses cases for urban logistics, automated driving and last-mile delivery. CONCORDA (Connected Corridor for Driving Automation) also looked at automated driving and high-density truck platooning on motorways that could lead to a 40% reduction in emissions. Meanwhile, the BOOSTLOG policy project aims to redesign the framework for transport and logistics for the next five years and boost the impacts generated by EU-funded R&I projects. The TM2.0 Innovation Platform for traffic management includes strong logistics and urban dimensions, including linking logistics hubs with traffic management of urban adjacent nodes.

ERTICO contributes to the development of the Mobility Data Space, part of the European Data Strategy. Our members and partners are keen to implement trusted, safe and secure solutions via multiple platform services providers and including peer-to-peer solutions.

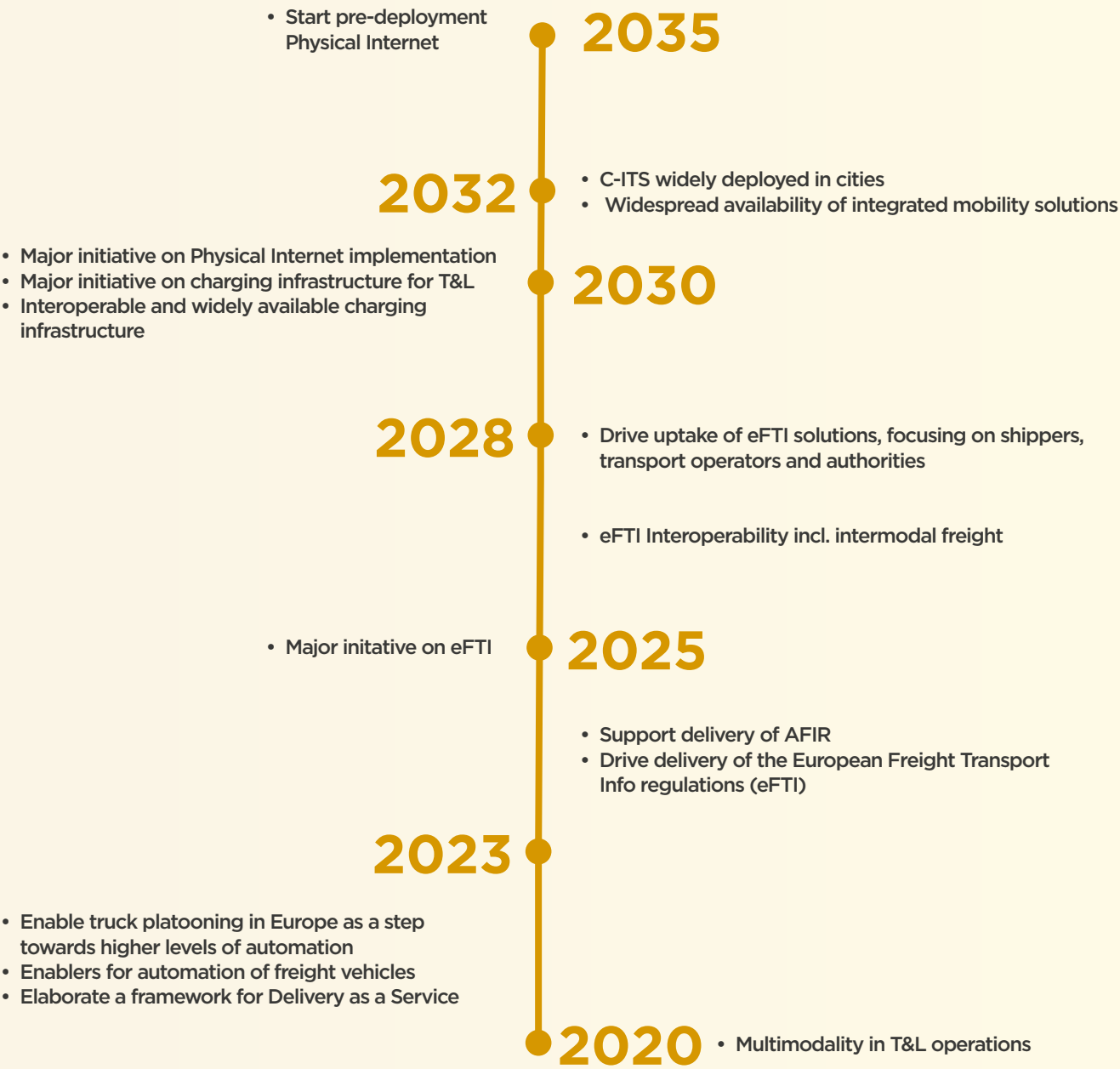
While such innovation is required to modernise freight transport, serious challenges remain. These include addressing interoperability and governance issues, engaging with stakeholders, better supporting collaboration, and promoting the benefits of interoperability, while always recognising the needs and priorities of end-users.

Using 5G, 6G, and other digital enablers is fundamental to moving forward successfully, alongside strong cooperation between ERTICO and ITS stakeholders, for example, the European Ministries of Transport, the European Commission (DG MOVE) and Digital Transport and Logistics Forum (DTLF) community, groups such as the Association of Logistics and Sustainable Intermodality (ALIS), the UN Economic Commission for Europe, and World Road Transport Organisation (IRU).

ERTICO will continue to help connect the dots: combining innovation and smarter technical solutions with the right policies and operational activities for every stage of the movement of goods, creating an industry that is both cleaner and more efficient.



ROADMAP





5G-LOGINNOV

5G-LOGINNOV aims to optimise freight and traffic operations at ports and logistics hubs by using innovative concepts, applications and devices supported by 5G technologies, Internet of Things (IoT), data analytics, next-generation traffic management, CCAM and the 5G logistics corridor.

5g-loginnov.eu

Impact:

The project admitted five innovative start-ups to the consortium, aiming to develop 5G-based solutions in the framework of activities at the project's three living labs.

Next Steps:

5G-LOGINNOV continues to develop partnerships to further its vision - to support the new generation of 5G-CAD terminals and a new type of IoT-5G connectivity devices, and through technical solutions, business models and priority scenarios by deploying new CAD and Logistics as a Service in real-life port-city areas.

BOOSTLOG

Starting in February 2021, BOOSTLOG examines the impact of freight transport and logistics EU-funded research to support competitiveness and address the climate challenge. It aims to boost the impact generated by future EU-funded R&I projects to contribute to EU policy objectives, address societal challenges and increase EU competitiveness. The project will map more than 160 projects funded by FP5, FP6, FP7 and Horizon 2020, identify successful implementation cases into the market and regulations, and develop actionable reports on subjects prioritised by stakeholders.

etp-logistics.eu/projects

Impact:

BOOSTLOG transforms the European freight transport and logistics R&I ecosystem by directly impacting how selected investments can contribute to EU policy objectives and companies' sustainability and competitiveness. The project will assess the impacts by identifying the gaps and priorities for future funding programmes.

Next Steps:

These include aligning initiatives for sustainability measurement schemes that may be applicable to the sustainability impact assessment of European-funded R&I projects. This will start by defining sustainability KPIs relevant to the EU research agenda followed by a framework that enables both before and after sustainability assessments. Existing approaches on how to quantify sustainability KPIs will be aligned, and new approaches may need to be derived. If relevant, the integration of a benchmark/target value for sustainability indicators will be discussed. The elaborated framework will have to be reviewed by relevant stakeholder groups including the European Commission, evaluators and project proposal submitters.



ENSEMBLE

ENSEMBLE aimed to achieve the next step towards deploying multi-brand truck platooning in Europe by demonstrating real-life traffic conditions while providing specifications at the tactical layer for both levels of platooning: support level and autonomous level.

platooningensemble.eu

Impact:

In September 2021, seven OEMs publicly demonstrated the first step in platooning automation with their established specification for the Platooning Support Function. The basis is a specifically developed V2V (Vehicle-to-Vehicle) communication protocol that supports the correct behaviours and reaction of each truck in the platoon for every envisioned traffic use case.

Next Steps:

Platooning Autonomous Function, the second level of platooning theoretically defined in ENSEMBLE, can lead the way to a discussion around automated driving on European roads. The ENSEMBLE team is reporting on its research into the impact of platooning on physical infrastructure and traffic, and the impact on business. These were presented at the ENSEMBLE final event in March 2022.



FENIX has been developing the first European federated architecture for data sharing, serving the logistics community of shippers, logistics service providers, mobility infrastructure providers, cities, and authorities to offer interoperability between existing and future individual platforms. The project has 11 pilot sites in nine European countries and builds on work done under the AEOLIX Living Labs.

fenix-network.eu

Impact:

FENIX arises from the work and recommendations of the European Commission's Digital Transport and Logistic Forum (DTLF) to create a viable and valid federative network of platforms as an enabler for Business to Administration (B2A) and Business-to-Business (B2B) data exchange and sharing by transport and logistics operators. FENIX will overcome today's fragmentation and lack of connectivity around ICT-based logistics decision-making systems. It will interconnect different digital platforms and harmonise the services they offer. Through a neutral, open solution, FENIX will enable data sharing in the form of digital corridor information systems serving the European logistics community.

Next Steps:

FENIX pilot sites in nine EU countries have been conducting trials using the FENIX connectors. They will establish a federated network of transport and logistics actors across Europe to optimise TEN-T corridor information systems.



STORM explores novel concepts for freight and logistics, new business models, and innovative solutions based on zero-emission vehicles to support the transition of the transportation sector towards a sustainable freight future. It aims to identify new data, develop novel methodologies, and create use cases focusing on electrification and automation of freight and logistics transport. STORM focuses on the sector's future needs by complementing existing solutions with new methodologies and tools while providing insights on how future transport planning and simulation tools must be reshaped to address the latest challenges, emphasising emerging data sources to support transport planning.

project-storm.eu

Impact:

The STORM consortium has contributed to boosting knowledge and innovation transfer, and providing new business opportunities for industry stakeholders. The project has assessed needs, expertise and analysis gaps, and defined requirements for data and advanced analysis methods. After collecting relevant input via surveys, the consortium organised a workshop with stakeholders to discuss the most pertinent topics in freight transport and logistics, to identify the main issues to be tackled, and significant needs to be addressed. In 2022, a number of work packages were officially kicked off: WP4 to elaborate new, advanced methods and tools, WP5 to assess new methods and data via case studies, and WP6 for recommendations.

Next Steps:

In the next year, STORM will continue to work on three use case scenarios: zero emissions freight, green city logistics, and policy analysis. The partners will also develop a methodology to apply new synthesised data for heavy-duty freight vehicle movements to optimise a charging infrastructure network for such vehicles in Europe. Furthermore, using the insights acquired on knowledge gaps for national and international transport policy assessment and planning, the consortium will propose developments to current strategic assessment tools and elaborate developments for new ones.

“ Mobility becomes connected and collaborative. We appreciate the role of ERTICO in facilitating the collaboration between the different stakeholders and providing a fantastic platform for joint innovation. In 2021 the successful organization of the 27th ITS World Congress in Hamburg demonstrated once again the key role of ERTICO towards better mobility systems in the future. ”

Oliver Bahns,
Head of Connected Mobility, T-Systems

“ The Ministero delle Infrastrutture e della Mobilità Sostenibile (MIMS) as well as TTS Italia (Italian ITS Association) is proud to have been an ERTICO member since 2018. The digitalisation of logistics is a key point for a safer, more efficient and greener mobility. As a beneficiary of the FENIX project coordinated by ERTICO, we also hope to contribute to seamless data sharing. ”

Mr. Paolo Sangiorgio,
Director Divisione 4 - Direzione Generale per la sicurezza stradale e l'autotrasporto (Road Safety and Haulage Transport), Ministry of Sustainable Infrastructures and Mobility

Networking, Congress and Partner events

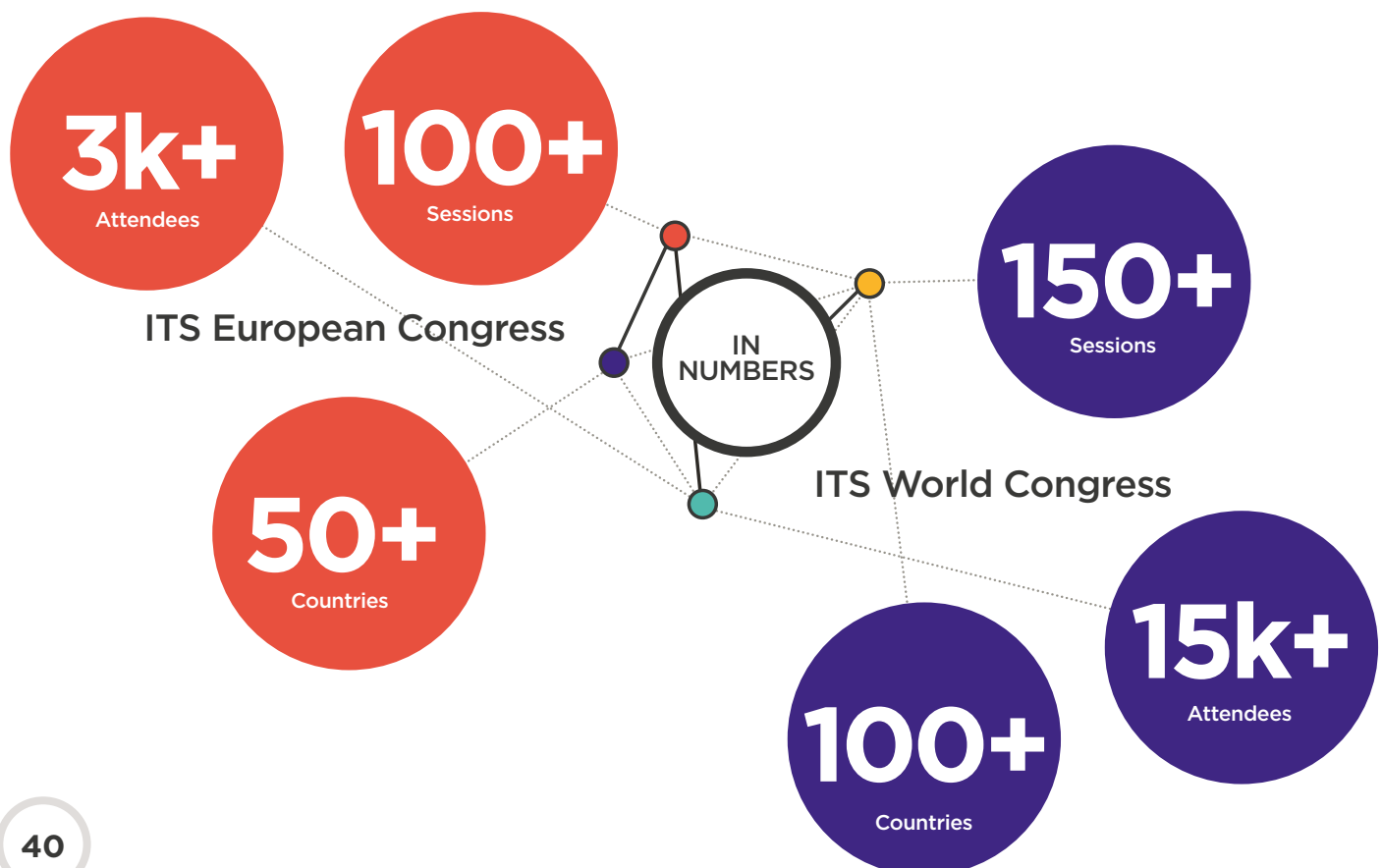
ERTICO is a powerful platform for the European and global ITS community to unite and share ideas, bridging the gaps across key mobility players: connecting the dots. We regularly meet to assess the industry's current state, focus on new technological developments, create forum for ideas sharing, and facilitate productive engagement between policymakers, public authorities, cities, industry, start-ups, academics and other innovators.

We are a highly active Partnership, bringing together 111 diverse players from the public and private sectors. An essential part of ERTICO's role is to shape and present a shared vision and speak with a single voice to the world outside the ITS community, including policymakers and other key decision-makers. To this end, the annual ITS European and World Congress combine an engaging conference programme with focused trade show and exhibition, specialist technical sessions and technical demonstrations.

European and World Congresses: Connecting the ITS community

At a time of continued change, including the COVID-19 pandemic and accelerating digital transformations, it is more vital than ever that ERTICO and its Partners shape the debate around mobility and the future of transport, further strengthening relationships and creating synergies.

The ERTICO events and ITS Congress team support these efforts, keeping people connected, and helping take the conversation and state of the art forward. Each year, we present a European or World Congress in a major city, with the ITS World Congress coming to Europe every third year. These events are planned and delivered by ERTICO in association with ITS America and ITS Asia-Pacific.



Experiencing the ITS European Congress and ITS World Congress



In October 2021, the 27th ITS World Congress took place in Hamburg and was a major success: one of the first in-person events on this scale in Europe for many months.

More than 13,000 people from 66 countries gathered under the theme **Experience Future Mobility Now**. Prestigious guests at the opening ceremony, attended by a record audience of 1,600 people, included former German Chancellor Dr Angela Merkel, community activist and author Dr Auma Obama, Deputy Director-General of the European Commission's DG MOVE Matthew Baldwin, and ERTICO Chairman Dr Angelos Amditis.

Over five days, participants experienced 210 sessions in the Technical Programme, 27 live demonstrations and 19 technical visits. In the 25,560 square metre exhibition area, more than 4,000 visitors saw future mobility for themselves with 198 exhibitors showcasing innovative solutions and technologies. The ERTICO Academy, meanwhile, offered a session on Traffic Management while four workshops were organised by ERTICO's Innovation Platforms, TM2.0 and MaaS Alliance (MaaS Summit), attracting many stakeholders. The Start-up Programme provided valuable networking opportunities.



The ITS European Congress 2022 took place in Toulouse from 30 May to 1 June. As capital of the French department of Haute-Garonne and Occitanie region, the city is an important hub for business developments and has many industry connections, in particular to aerospace. The city is also a leader in ITS and smart mobility, and this year's event was a testament to that, with an innovative opening ceremony, lively exhibition area and technical programme, all under the theme **Smart and Sustainable Mobility for all**.

Looking ahead

The pandemic meant the ITS World Congress in Los Angeles was postponed to September 2022, and the ITS European Congress in Lisbon to May 2023.

The 28th ITS World Congress in Los Angeles, 18-22 September 2022 will explore the theme **Transformation by Transportation**, showcasing solutions that save lives, improve mobility, promote sustainability and increase efficiency. Los Angeles is an ideal host city as it transforms itself into a leader for progressive technology and advanced infrastructure, ensuring transport innovations support a diverse group of commuters and travellers.

The 15th ITS European Congress in Lisbon, Portugal from 22-24 May 2023 is themed ITS: the Game Changer. It will highlight how ITS and smart mobility are changing the world around us, sharing the host city's latest achievements and linking to Lisbon's evolving vision and strategy for mobility.

In October 2023, the ITS World Congress takes place in the major Chinese city of Suzhou in the south-eastern Jiangsu Province, 100km west of Shanghai. Taking place in a major economic centre and focal point for trade, sometimes called the Venice of the East, the congress is themed **Driving Towards Intelligent Society**.

Finally, Dubai, UAE is the EMEA region host for the ITS World Congress, 15-21 September 2024 at the Dubai World Trade Centre. Dubai RTA has taken major steps to advance ITS, including intelligent transport centres and self-driving projects. The Dubai Smart Self-Driving Transport Strategy aims to convert 25% of total mobility journeys into smart self-driving trips by 2030.

We hope you can join us at these flagship events, and share in our ongoing efforts to connect the dots in delivering smart

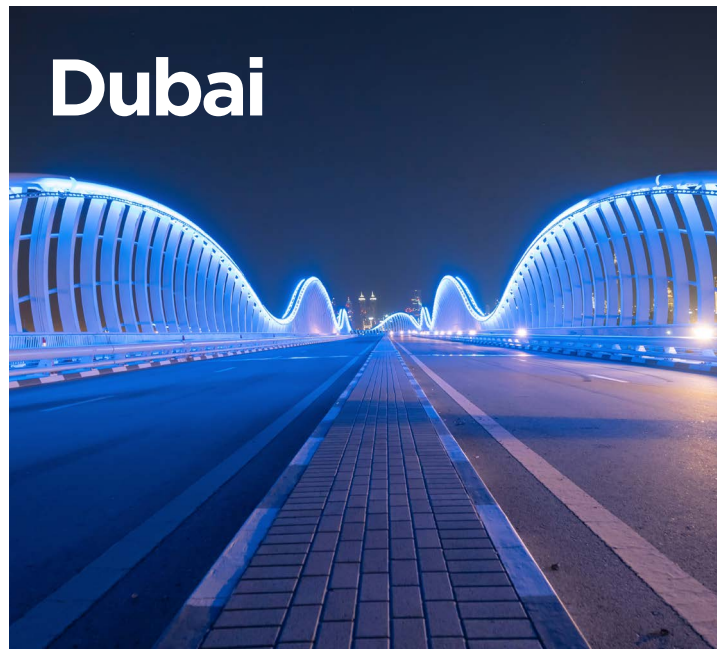
Los Angeles



Lisbon



Dubai





Connection with EU Institutions

ERTICO actively engages with the European Commission and other EU institutions on key mobility issues. The Commission continues to launch policy initiatives on connected and automated driving, sustainability and smart mobility, and the broader digital agenda. These go hand in hand with the European Green Deal, Digital Strategy and Data Strategy.

In CCAM, the Sustainable and Smart Mobility Strategy proposes flagships and actions to support the large-scale deployment of automated mobility by 2030. The third mobility package highlighted that coordination of Research & Innovation and testing across Europe is required to address the fragmentation of effort and a lack of a coherent long-term vision and strategy. At the request of the European Commission, a co-programmed partnership in Horizon Europe was prepared for CCAM with the involvement of ERTICO, one of the founding organisations of this new PPP. This partnership launched in April 2021, with a Strategic Research and Innovation Agenda (SRIA) drafted with the support of several associations, including ERTICO. We are leading Cluster 7 on coordination and co-leading Cluster 4 on integrating the vehicle into the transport system for the seven clusters in total. We keep the ERTICO Partnership informed and involved by regularly sharing information and updates on developments in this field.

As a main stakeholder in the CCAM PPP, ERTICO contributed to developing the Horizon Europe Work Programme on CCAM for 2021-2022 and is currently drafting, in cooperation with other mobility organisations, the Work Programme for 2023-24. In the continuity of the Declaration of Amsterdam in 2016, EU Member States have organised high-level meetings to discuss issues and needs for European cooperation in developing and deploying connected and automated driving. At the fifth such meeting, organised under the French Presidency of the Council of the EU in February 2022, ERTICO CEO Joost Vantomme and ERTICO Chairman Dr Angelos Amditis presented on ERTICO's experiences of innovation in the mobility data ecosystem and lessons learned from our R&I initiatives, contributing to discussions on sharing practices and identifying R&I priorities.

In 2020, the Commission adopted the European Data Strategy, which provides for establishing EU-wide common interoperable data spaces in strategic sectors, including a common mobility data space. This will facilitate access, pooling, and sharing of data from existing and future transport and mobility data sources. With the publication in November 2021 of calls by the Digital Europe Programme to fund, among others, a preparatory action for a common European mobility data space, ERTICO invited representatives from DG CNCET, and DG MOVE to a Strategy Committee Meeting to share our wide experience relating to data sharing for mobility and logistics.

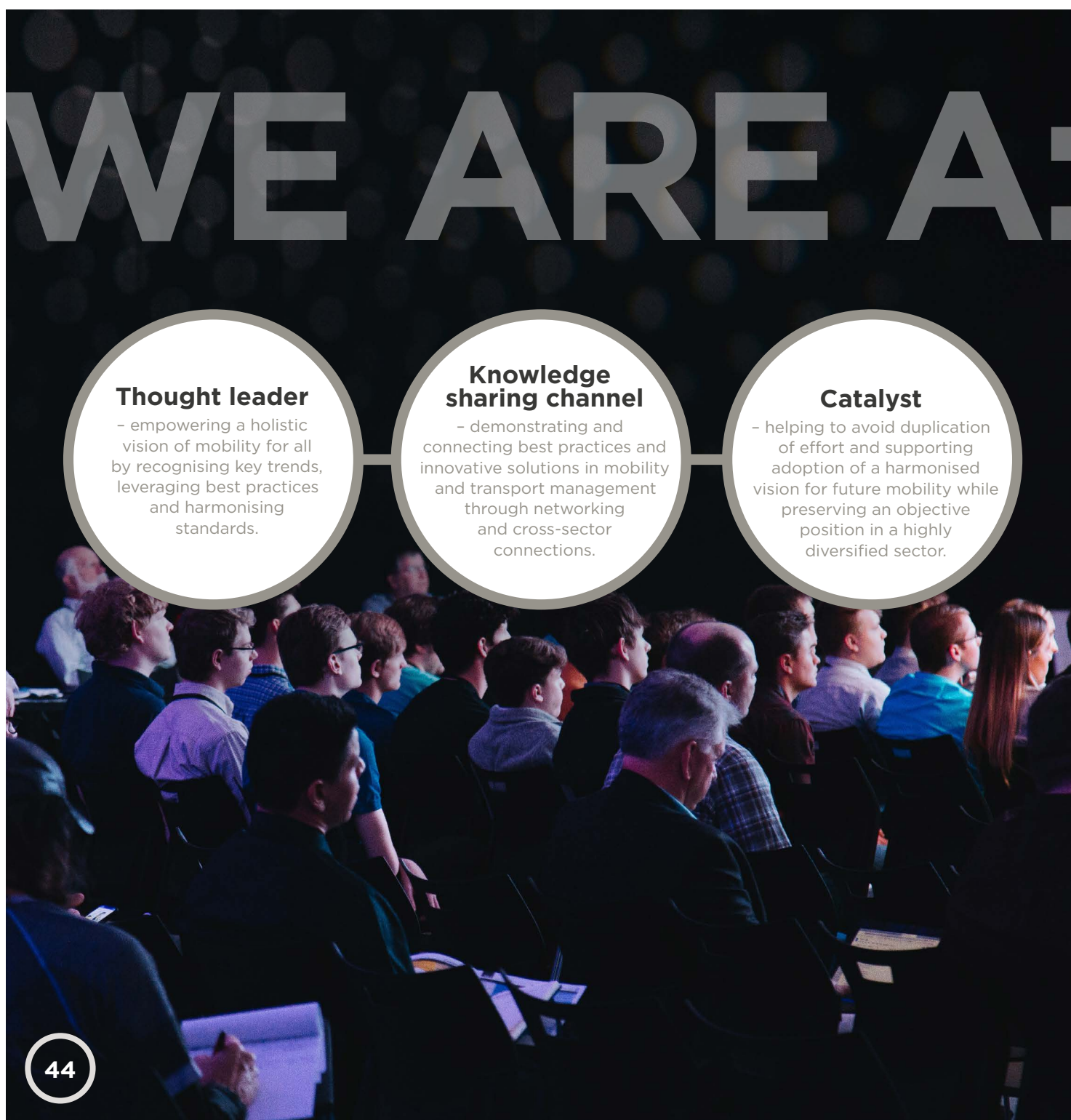
A proposal for a revised ITS Directive was also launched at the end of 2021. The TEN-T guidelines were revised and foresee that all major cities (urban nodes) on the Trans-European Transport Network must develop a Sustainable Urban Mobility Plan (SUMP) by 2025. ERTICO is a key enabler of these SUMP. We have been instrumental in drafting relevant Briefings and Guidelines, in cooperation with other mobility stakeholders and under the auspices of the European Commission. Specifically, the SUMP Briefings on ITS and MaaS were drafted by ERTICO in 2019 and the UAM Briefing in the first months of 2022. The EU's proposed new urban mobility framework reflects another focus area for ERTICO, namely SUMP.

ERTICO experts also advise the Commission on the new Multimodal Passenger Mobility Forum operated by DG MOVE, which had its inception meeting in February 2022.

In February 2022, ERTICO became a full member of the 6G Smart Networks and Services Industry Association (6G-IA). This is the voice of European industry and research for next-generation networks and services. Its primary objective is to contribute to Europe's leadership in 5G, beyond 5G and SNS/6G research.

Thought leadership and knowledge sharing

As leading experts in smart mobility, ERTICO and its Partners are thought leaders in the digitalisation of transport and seamless mobility. ERTICO empowers knowledge sharing in its efforts to connect the dots between industries and stakeholders, and to lead the way forward by exchanging ideas and engaging in dialogue with EU institutions on deploying innovation. This includes ERTICO-organised high-level discussions with European and international institutions to embrace cooperation and interoperability with regional and national authorities.





ERTICO City Moonshot

Cities are at the heart of the mobility revolution, with a growing share of global populations living in cities and megacities, their ever-increasing commitment to improve urban quality of life and air quality, and efforts towards more user-centric services. To support cities in developing and deploying smart mobility solutions, ERTICO set up the City Moonshot initiative in 2020. This seeks to engage, inspire and empower cities by discussing their smart mobility challenges, needs and trends.

To gather inputs on needs and existing knowledge, the team has so far interviewed more than 150 cities on all continents and across key topics such as data sharing, Mobility as a Service (MaaS), and policy priorities on sustainability and the role of transport. The data gathered was analysed, aggregated and presented in the ERTICO City Moonshot Report (Phase I), a unique knowledge database to understand city authorities' needs, strategies and plans in relation to the climate crisis, air pollution, data sharing and MaaS. The team is now rolling out Phase II.

In 2022, a Special Interest Session covering results to date and Phase II activities took place at the ITS European Congress in Toulouse. Questions in the City Moonshot survey have been reviewed, enlarged and adapted to cover new needs and additional areas, such as Urban Air Mobility (UAM), electro mobility, and gaining deeper insights into MaaS. More than 150 new dialogues with cities are planned for the months ahead.

ertico.com/city-moonshot

ERTICO ACADEMY

The ERTICO Academy is a unique mobility training platform powered by ERTICO and its members. It offers training in smart mobility on a wide range of topics while supporting and fostering the sustainable deployment of ITS across Europe.

ERTICO Academy aims to share knowledge and increase mobility literacy to enable the integration of innovative technologies in European transport systems, to benefit citizens, regulators and businesses and ultimately leading to a better life for all.

In addition to training modules designed by ERTICO in-house experts and partners, ERTICO Academy offers interactive training sessions, a hands-on learning experience and guided feedback to empower participants to learn and upskill with the help of subject matter experts from various fields. At the ITS World Congress in 2021, the Academy delivered specific training on Traffic Management including DATEX and FCD, and an overview on user-centric mobility management. The ITS World Congress in Hamburg last year also marked the release of the thought leadership/educational video developed by ERTICO partner Arriva, focusing on decarbonisation and using Arriva bus operations in Limburg as a case study. In March 2022, the ERTICO Academy organised three physical training sessions in Ankara within the framework of the ITS Summit organised by ITS Turkey.



In the months ahead, the Academy is working on increasing the accessibility of training, which may include translations into different languages. It is continuing the conversation with public authorities including ministries and cities to provide onsite and online training as part of Sustainable Urban Mobility Plans (SUMPs). The Academy is also planning a regional training event in southern Europe for September 2022.

ertico.com/academy

ERTICO Start-up Initiative



ERTICO provide start-ups and scale-ups with a unique opportunity to Connect, Innovate and Grow. Launched in 2019, the ERTICO Start-up Initiative connects European start-ups with ERTICO Partners.

By creating an environment in which new businesses can develop and engage with stakeholders across the smart mobility community, ERTICO match businesses with appropriate partners and projects. This can mean gaining access to leading-edge mobility solutions and greater involvement in EU-funded projects, plus networking events and improved visibility at a European and international level including a presence at ITS European and World Congress, the annual ERTICO Think Tank, and European Start-up Prize for Mobility. In 2021, the initiative was an integrated part of the ITS World Congress in Hamburg, including the exhibition area, and joining pitching and matchmaking sessions. The ITS European Congress in Toulouse in 2022 was another opportunity to meet public and private sector stakeholders, and benefit from networking and promotional opportunities.

As a public-private partnership with more than 25 years' experience in ITS and smart mobility, and more than 100 partners, ERTICO is one of the few organisations in Europe able to provide start-ups and scale-ups in this area with specialised targeted opportunities.

ertico.com/startups/

Activity Development Days

Every year, ERTICO's Innovation and Deployment team organises our Activity Development Days (ADD) in Brussels exclusively for ERTICO members. These took place online in 2020 and 2021.



The two-day event looks to determine the ERTICO Partnership's future priorities, especially in the context of the European Commission's policy plans and targets. Partners, guided by ERTICO subject matter experts, closely examine active EU funding programmes associated with transport and mobility, discuss the most innovative ideas and concepts, and forge a plan for proposal submissions. These proposals may become projects that will respond to EC invitations to research, innovate and deploy future mobility solutions and services, contributing to the strategic research agenda.

The ADD programme centres on ERTICO's four focus areas: Connected, Cooperative & Automated Mobility (CCAM), Transport & Logistics, Urban Mobility, and Clean & Eco Mobility, with a series of workshops interrogating active and upcoming funding opportunities. The connection between strategic Commission goals and operational deployments are conducted through several panels. During these, representatives from the Commission (DG MOVE, DG Connect, DG RTD and other funding bodies as ERTICO guests (EIB, EBRD, ESA, and Eurocities as they run the City Missions) share thoughts and insights into strategic objectives and plans.

Feedback from ERTICO Partners on the ADD is always positive: it is a unique opportunity to hear directly from and make connections with EU institutions and other members of the ITS and ERTICO community on their needs and plans. The ERTICO Innovation and Deployment team uses valuable feedback from the ADD and its related survey to inform the creation of project-winning consortia from the outset of funding opportunities.

International Cooperation

When we connect with our colleagues, it is clear that many of the challenges presented by smart mobility are similar in all regions around the world, and that aligned action can be supported by exchanging ideas and best practice. As a result of such interactions, and in line with requirements set by European funding bodies, ERTICO is proud to be a bridge to the world, including many non-European partners as associated international partners in projects that have such a mandatory requirement.

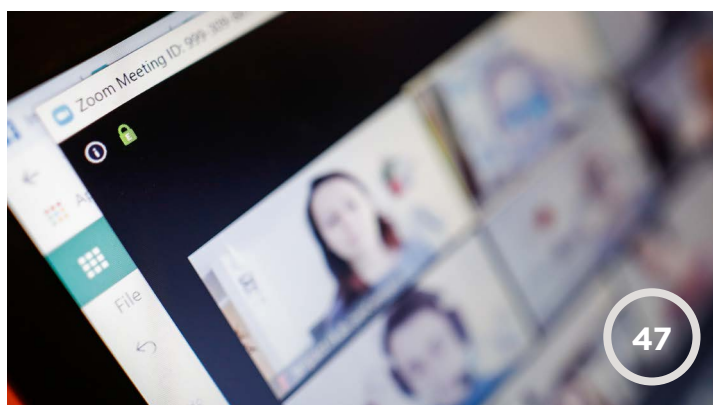
International cooperation is a key activity. Through our joint work with colleagues from other ITS pan-national and national associations and the wider research, academic and industry community, we continually organise events, meetings, think tanks, and knowledge exchange forums on diverse topics. Site visits and delegations are planned and coordinated by ERTICO, visiting Silicon Valley, Chinese transport and mobility partners and Central Asian stakeholders in the last few years.

In October 2021, ERTICO has signed a Memorandum of Understanding with the International Road Federation Geneva (IRF) and we are also building closer relations with the European Space Agency (ESA), enhancing its role in planning future innovations relevant to users and the ITS community.

ERTICO has intensified the cooperation CAICV China (connected and automated vehicles ecosystem) to discuss technology, regulation and potential for alignment of roadmaps. The same counts for the cooperation with UN-ECE (United Nations) WP.29 focusing on connected/automated vehicles and ITS whereby various meetings/webinars were held with a fruitful keynote and participation of ERTICO.

With pandemic restrictions and lockdowns preventing travel and physical meetings, the conversations continued in the virtual world through webinars and online meetings. ITS America, ITS Asia-Pacific and colleagues from the Transportation Research Board and its Committees engaged with ERTICO experts in online meetings. This included involving the ERTICO Chairman and our Innovation and Deployment Director at panels during the ITS Congress organised in 2021 by ITS America, and three Mobility Management Meeting online sessions organised by China, Europe and the US. ERTICO worked with China Highway and Transportation Society and TRB on topics such as Integrated and Smart Mobility, Traffic Management and Sustainability, and MaaS, while it also organised a successful physical MMM during the ITS World Congress in Hamburg on Curbside Management.

ERTICO has provided this channel to a number of partners as well as the European Commission's DG MOVE and JRC, with whom we have a close relationship. The exchange of ideas has continued, at the ITS European Congress 2022 in Toulouse, and with many more planned for the ITS World Congress in Los Angeles in September 2022.

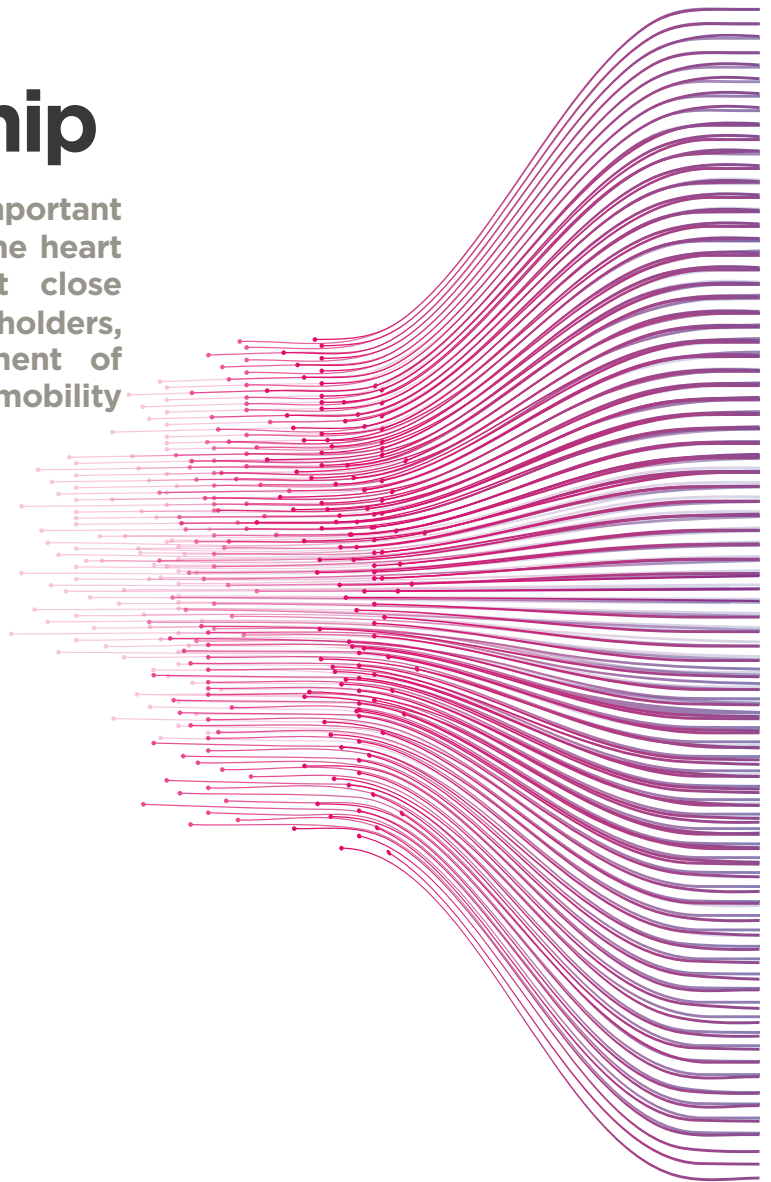


Be part of the ERTICO Partnership

Joining the ERTICO Partnership is an important way to connect the dots: partners are at the heart of our work. We enable and support close collaboration between key stakeholders, coordinating the planning and deployment of intelligent transport systems and smart mobility solutions around the world.

This activity includes:

- Advocacy, raising awareness and influencing policy in constructive ways.
- Implementing co-funded projects and Innovation Platforms.
- Sharing policy and market insights through events and networking opportunities including ITS World and European Congress, and webinar series.
- Targeted training, matchmaking and technology to drive strategy development, including the ERTICO Academy, ERTICO City Moonshot and Start-up Initiative.



“ We are happy to join the ERTICO Partnership, which is the place to be for the future in ITS. Multitel, a world leader in railway signalling technologies, will become a strong partner to collaborate and develop new technologies. Through the ERTICO ecosystem, we aim to expand our cooperation with ITS key players at the European level. ”

Dominique DERESTIAT,
General Manager, Multitel

“ The University of Limerick has benefited greatly from its membership of ERTICO. It has enabled the Emerging Risk research group to develop partnerships and foster activity at the European level. The group is currently working with ERTICO on a number of project proposals in the areas of smart and green transport. ”

Professor Norelee Kennedy,
Vice-President of Research,
University of Limerick

“ ERTICO offers us the unique opportunity to be part of an innovative expert community that provides support in designing and developing the deployment of future ITS on the roads. We understand that sharing challenges, knowledge and projects with other organisations is the quickest way to achieve the goal of providing a public service with added value to the users of our road infrastructures. ”

Eduardo Sainz,
Head of Road Service,
Biscay Regional Council

EU Co-Funded Projects

EU-supported projects is another way for ERTICO Partners to get involved in leading edge ITS projects and programmes. Working closely with the European Commission, we offer co-funded project opportunities backed by ERTICO's high success rate and our proven track record in management, technical support and stakeholder engagement.

ERTICO Partners have an opportunity to join consortiums to connect with other multi-sector players, working on projects and programmes across advanced R&D, demonstrations, testing, pilots and implementation.

Up-to-date market and technology insights

Joining the ERTICO Partnerships connects you to all aspects of the mobility community, to share the latest thinking and approaches while anticipating new technologies and market trends. We keep the conversation up to date.

The ERTICO Partnership was designed from the outset to bring together the diversity of interests and know-how in the mobility sector on the basis that 'together we are stronger': a forum for knowledge sharing on the opportunities and challenges ahead, and shaping development of the sector beyond individual interests into a shared vision.

This is far more than a talking shop: our partners play a central role through, for example, ERTICO governance bodies and other activities.

Our ongoing mission is to:

- **Promote active and sustainable collaborative relations with EU institutions and policymakers.**
- **Connect local and regional transport organisations with national authorities.**
- **Perform testing to support deployment of interoperable ITS and smart mobility.**
- **Contribute to standards for applications and services, steering standards towards global harmonisation including the International Organization for Standardization (ISO), European Telecommunications Standards Institute (ETSI) and European Committee for Standardization (CEN).**

International connections

Connecting and co-operating with international partners is a priority for ERTICO. This includes European partners joining overseas delegations that include technical and market specialists, commercial executives and business decision-makers: a great way to forge new links and strengthen international contacts. ERTICO delegations have travelled around the world, to China, the Silicon Valley, Japan and many other locations, meeting and sharing ideas with diverse stakeholders, visiting corporate HQ headquarters, and attending conferences and trade shows around the world. Due to the pandemic, extensive travel and ERTICO Missions were not possible until the first months of 2022 when we resumed travelling. ERTICO's presence in Ankara, Turkey for the ITS Summit in March 2022 was one of the many international cooperation activities we undertake.



Networking with peers

ERTICO Partners can play an important role at our European and global events: presenting and discussing new approaches, sharing ideas, networking and building visibility. This is a great way to connect with ITS and smart mobility colleagues while building relationships with potential new clients and business partners.

Partners have exclusive access to the annual ERTICO Think Tank event and Focus-On workshops. In addition, the ITS World and European Congress, organised with ITS America and ITS Asia-Pacific, are uniquely focused events that showcase the smart, sustainable and more efficient mobility solutions of today and tomorrow. European Congress attract more than 3,000 participants, with World Congress welcoming more than 15,000 people to explore innovation in ITS, from public authorities to ITS procurement specialists. ERTICO Partners are offered speaking opportunities at our events and congress.

Other partner services

The ERTICO communications platform at www.erticonetwork.com provides the latest updates to the global ITS community and other key stakeholders. ERTICO's fortnightly newsletter and monthly events calendar are well received by a regular audience of more than 5,000 subscribers. This reach means our partners benefit from marketing and profiling opportunities. For example, providing original content for the ERTICO newsletter and other channels, along with profiling opportunities for projects and companies, technology updates, interviews and event announcements. We help our partners to connect with potential customers and other partners.

During the past year, the ERTICO Partnership team has organised Round Tables and Deep Dives on topical themes including Mobility Data Platforms and AI in Traffic Management, under the auspices of the ERTICO Strategy Committee. This gives partners the opportunity to exchange views and discuss issues with other stakeholders including the European Commission, industry and public partners, from within and outside the ERTICO Partnership.

ERTICO Partnership options

ERTICO is open to any public or private organisation that is active or interested in implementing intelligent transport systems and smart mobility solutions in Europe and beyond. We offer two partnership levels: ERTICO Partner and ERTICO Premium Partner.

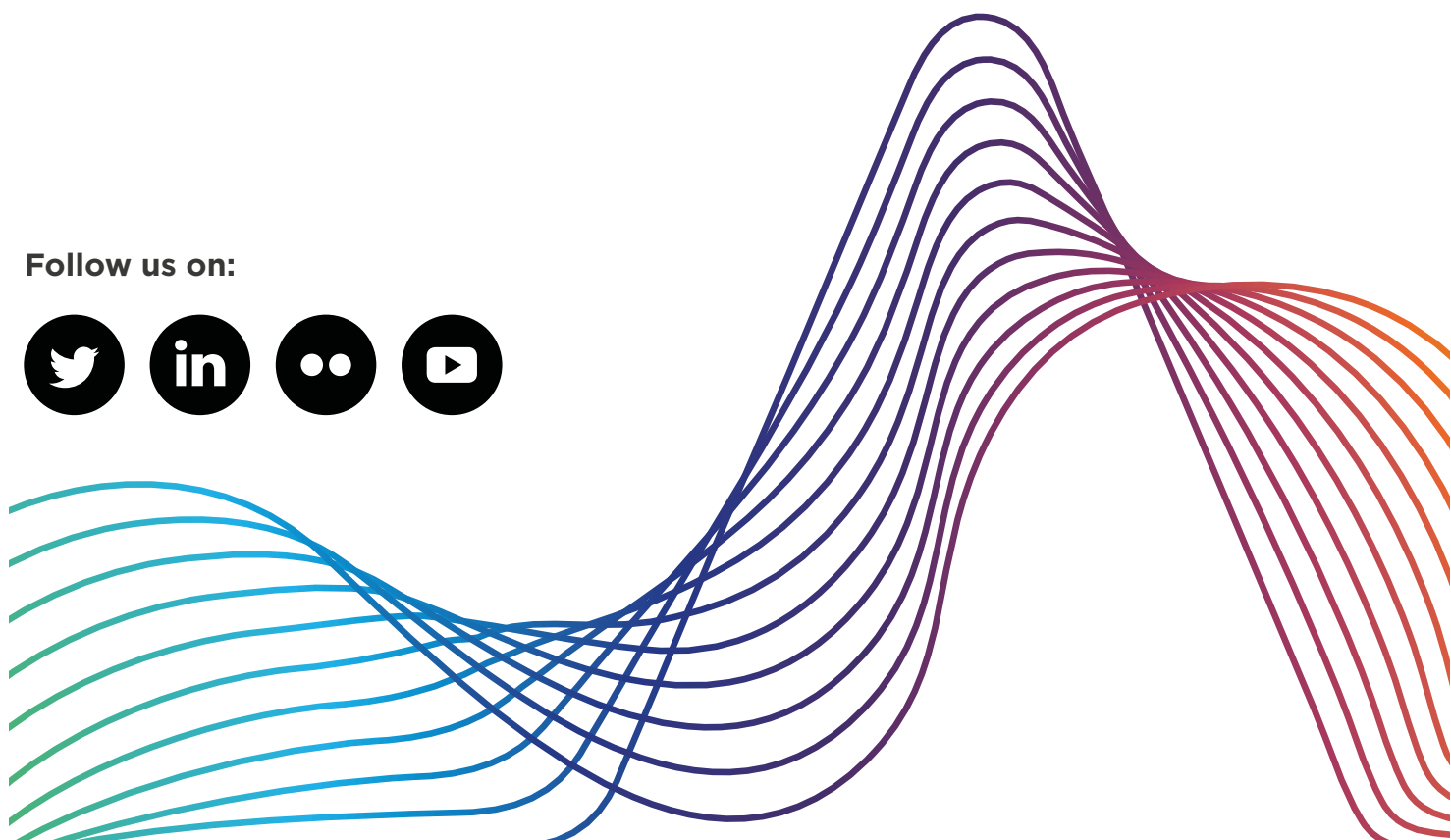
ERTICO Partners have access to all the networking opportunities that we offer, with the potential to raise your profile within an engaged audience and foster greater international co-operation. Partners become part of our shared vision and endeavour with other ITS pioneers around the world.

ERTICO Premium Partners have all the opportunities described above plus the ability to access the proposal development process, and tap into the IP and financial benefits that can result from innovative ITS projects. Premium Partners also participate and engage at the highest level of ERTICO congress.

What you get

	PREMIUM	PARTNER
Access to ERTICO proposal building and projects	✓	
Invitation to ERTICO Activity Development Days	✓	
High level speaking opportunities at ITS Congress	✓	
One free ticket, VIP access, discount exhibition spaces at ITS Congress	✓	✓
Speaking at ERTICO events and workshops	✓	✓
Networking possibilities with other ITS stakeholders	✓	✓
50% discount for ERTICO Innovation Platforms	✓	✓
Staying up to date on evolving EU policies	✓	✓
Knowledge sharing through the ERTICO Academy and discounted training	✓	✓
Participation in other value added activities including ERTICO City Moonshot and Start-Up Initiative	✓	✓
Playing an active role in ERTICO governance	✓	✓
Full marketing opportunities through ERTICO communication channels	✓	✓

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tomorrow's journey.