ERTICO’s Vision for Mobility as a Service by 2030:

“Individual transport modes will be interconnected physically and digitally more effectively. Long-haul transport and urban delivery will be better aligned. Mobility as a Service (MaaS), as well as the equivalent in freight, Delivery as a Service (DaaS), will be well established with business models offering travel choices that include public transport, and a range of related user services such as multi-mode information, booking, ticketing and payment. Private and public transport stakeholders will have established models of cooperation. Consumers will come to expect faster and better service within a digital economy enabled by mobility, so that they can shop, order, and schedule delivery at their convenience.”
Due to multiple enablers and drivers (including digitalisation, urbanisation, decarbonisation, the rise of collaborative economy and decreasing interest in ownership) the landscape of mobility, at an individual and systemic level, is rapidly evolving. The transport sector is forced to go through a tremendous change both on the supply and demand side of the market. It was only fifty years ago when transport was mainly a public-to-public business and services were provided and procured by public bodies or companies. Now it is turning into a complex ecosystem in which the centre role is played by the end-user. Users are not only there to determine and consume their favoured products and services, but also more and more they are involved in the market as “prosumers”, contributing to the value chain as producers of services e.g. by sharing their resources as a part of the collaborative economy. This modernising trend has created a growing demand for a new user-centric, customer-centric, market-centric mobility model, Mobility as a Service (MaaS). MaaS is challenging current players in the transport industry, urging them to rapidly position themselves in the reformed ecosystem and to find new partners and business models driven by optimization, resource efficiency and environmental responsibility – yet also meeting the growing needs of well-informed, digitally orientated and demanding customers and taking good care of social inclusion.

Mobility as a Service (MaaS) is the integration of various forms of transport services into a single mobility service accessible on demand. For the user, MaaS offers added value through a single application to provide access to mobility, with a sole payment channel instead of multiple ticketing and payment operations. MaaS aims at providing an alternative to dependency on car ownership that may be seen as convenient, flexible, reliable and cheaper.

The main building blocks of Mobility as a Service are: access to multimodal mobility services, single journey planning and ticketing options for the user, and the provision of reliable, advanced travel information from the planning phase until the end of journey. As MaaS models become more mature, it is easy to predict various other value-added linked services (e.g. mobility-related integration of payment for parking or entertainment services consumed during the journey) that can be combined to the MaaS offering.
Benefits of MaaS

Although the main motivation behind MaaS is to provide better, digitally-enabled mobility services for the end-user, it has also many important wider benefits. A successful MaaS service brings new business opportunities and ways to organise and operate the various transport options as a seamless multimodal service. According to market evidence, MaaS has the potential to attract new customers and create demand for public transport where previously it did not exist. Therefore, MaaS has a clear potential to reduce the environmental impact of transport, like CO₂ emission, air pollution and congestion. MaaS aims at optimisation and more efficient use of the city transport system. It aims to solve the mobility challenges of larger cities with soft measures and consequently reduce the need for public funding and subsidies in the transport sector. MaaS can be the mobility sector’s response to the call of the circular economy – it builds on the existing services, but upgrades the ways they are combined, integrated and consumed reducing inefficiencies in the system.

The developments of MaaS market

Around the world, there are currently various MaaS pilots, trials and business cases developed and launched. The Mobility as a Service market is estimated to grow approximately 34% annually and become a market of more than a trillion euros by 2030. Although the MaaS concept was invented in Europe, the market is currently developing the fastest in China, thanks to an extensive boom of shared mobility services providing users with new cost-efficient mobility options.

The content of the MaaS offering varies case by case, in terms of the scope of services, the regional coverage and the business model. At the moment, there is no “killer app” or solution in the market. It is advisable that the market develops an open and roaming ecosystem of multiple service providers instead of a “winner takes it all” vision. The success of a MaaS solution always lies in the use of the best local sourced ingredients and in integration. To develop an intelligent and well-functioning ecosystem, not only new mobility and ICT services are required, but also the mobility system should be taken to the next level. This can be achieved by using the most advanced traffic management system and releasing the full power of data.
The development of MaaS solutions is driven by business, most often by digitally-orientated start-ups endorsed and backed up by OEMs as well as investors already established in the transport market. So far, well-developed, densely populated urban areas have been the most attractive market for MaaS developers. The feasibility of rural MaaS is still a question mark, mainly due to the lack of comprehensive pilots, but presumably there is unmet demand which could be turned into profitable business, especially if combined with automated vehicles and the provision of other, non-transport related services.

The multimodal mobility solution that focuses on goods (sometimes referred as syncromodality or DaaS, Delivery as a Service) and the combination of transport of passengers and goods are still relatively undiscovered fields. The key components in the advancement of DaaS could include the establishment of cargo market places or freight brokerages and building links with on-demand transportation services and sharing economy, namely ride-sharing.

Development challenges and policy recommendations

ACCESS TO DATA FOR BETTER MOBILITY:

The access to secure and high-quality data is one of the key components to foster the development of new services and optimised systems. An improved capability to forecast mobility demand will, moreover, enable the MaaS ecosystem to be prepared with the right capacity of mobility services. It should be acknowledged that in a digital economy, the ownership and access to data determines market dominance, and this should be reflected in business models and incentives for the data-driven MaaS ecosystem. The ERTICO Partnership plays an important role representing widely the main actors in the mobility industry.
The increased dependency on data might also cause new threats to the vulnerability of the transport system, and these risks should be addressed properly. Access to data alone is not enough. In order to be able to bundle different transport services into one offering, the market access of new mobility services and a level-playing field amongst all market players should be ensured.

**INTEROPERABILITY OF SERVICES:**

The transferability and scalability of MaaS services necessitates an extensive assessment of the local transport demand and supply conditions, as well the establishment of a strategy on the interoperability and compatibility of MaaS services from city to city and across borders. That will eventually result in the full roaming of services within the MaaS ecosystem, providing end-users with a similar level of freedom in cross-border mobility than when using their own vehicles. The transport sector could learn from the banking and telecom industries where barrier-free transactions and full connectivity between different operators is no longer an issue. Airlines too, have managed to build an efficient service network and smooth ticketing and payment interfaces. The transport sector can learn from these examples. Industry alliances have also played an important role and the same could be expected from the International MaaS Alliance, within which ERTICO has a dynamic presence. New technologies, such as blockchain, are expected to potentially remove current hindrances by reducing the need to have additional intermediates in transactions as these technologies can provide secure tools for identity management.

**CONNECTED, AUTOMATED, SERVICE-BASED AND ELECTRIC ECOSYSTEM:**

Advanced vehicle connectivity, intelligence and automation will further accelerate MaaS development, providing means to interact with traffic and mobility management and access to a more reliable service. Although automation has been mainly discussed in relation with road transport, it is expected to soon disrupt other modes of transport, opening new opportunities for optimised on-demand delivery across the whole transport and logistics system. MaaS, which should be understood as a service and access-based model in the provision and use of everyday mobility services is often linked with the roll-out of autonomous vehicles and the energy transition of mobility and these progressive innovations should be developed hand in hand. The future of mobility should be seen as a highly intelligent connected, automated, service-based and electric ecosystem deploying the full potential of all these promising technology drivers and having the goal of low-emission (even zero-emission in longer term) transport in mind. ERTICO is widely supporting this aim through individual activities and coordination with its Innovation Platforms.

**PUBLIC-PRIVATE PARTNERSHIP:**

Finally, the increased demand for multimodal transport requires even more cooperation between stakeholders. There is a need for enhanced cooperation between stakeholders in the private and public sectors in order to provide users with a seamless travel experience. This multimodal trend will enhance public-private partnerships and will also support the definition of new roles within public administrations.
ERTICO Partnership's role in the MaaS ecosystem

The role of the ERTICO Partnership in the MaaS ecosystem will be based on its unique strengths: robust knowledge, presence of the whole value chain, public-private-partnership and an international network. On the other hand, a proactive role in the development of MaaS will ensure that the Partnership and its members remain at the core of this ecosystem and shape the mobility landscape of the future.

The most important task of the ERTICO Partnership in supporting the development of MaaS is to engage the entire value chain and help its members to find a thriving position in value creation. ERTICO will maintain its role as a facilitator and a promoter of its members' interest in Mobility as a Service and leave the details how to commercialize the services to its members. The ERTICO Partnership will also explore the advantages of the end-user focused ecosystem approach in the context of urban freight and the logistics.

ERTICO’s Partners include the most advanced companies and stakeholders from all relevant sectors across the MaaS value chain and should thus take a leading role in steering and exploiting this development in the wide collaboration of mobile network operators, service providers, vehicle manufacturers, infrastructure managers and public authorities. ERTICO will use its strategic role in MaaS Alliance to steer the development of the mobility ecosystem, taking advantage of diversity of its Partnership. ERTICO will also use its international dimension to initiate an intercontinental co-operation with parallel organisations around the world in order to provide a platform for high-level international knowledge exchange. It will also steer MaaS developments globally and establish beneficial contacts for its partners in their MaaS projects and build bridges with relevant stakeholder groups.

ERTICO will support the transformation of the industry by being the leading visionary and executive partner and it will advocate the development and adoption of Mobility as a Service by actively harnessing progress in connected and automated transport and exploring the wider potential of MaaS in Europe and at a global level.
ERTICO – ITS Europe is a public-private partnership of 121 companies and organisations representing Service Providers, Suppliers, Traffic and Transport Industry, Research, Public Authorities, Users, Mobile Networks Operators, Vehicle Manufactures. ERTICO embodies Thought Leadership and fosters Stakeholder Engagement; ERTICO innovates, promotes and deploys Intelligent Transport Systems and Services (ITS) through a variety of activities including European co-funded projects, Innovation Platforms, International Cooperation, Advocacy and Events. Our focus is on Connected & Automated Driving, Urban Mobility, Clean Mobility, and Transport & Logistics.