



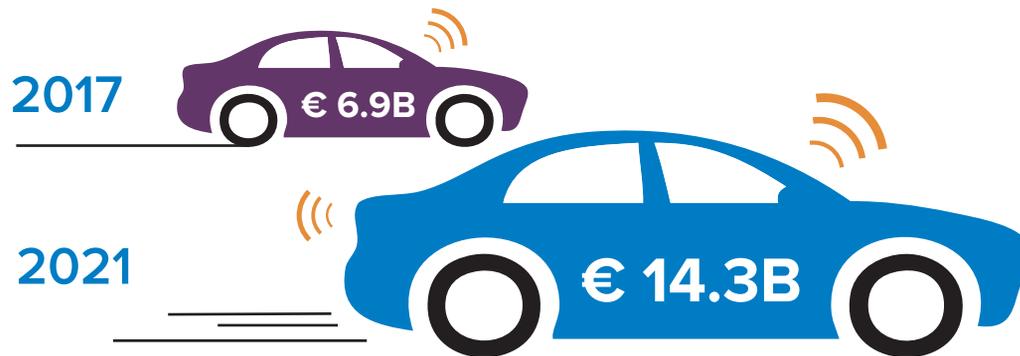
CONNECTED VEHICLES

TOWARDS A DATA-BASED MOBILITY & TRANSPORT PARADIGM

Market Drivers and Potential Value

Connected Vehicles Spending Value in the EU (2017-2021)

Source: IDC Worldwide Internet of Things Spending Guide, 2018



The European Transportation and Vehicles digital journey is moving toward a mobility paradigm centered on multi-modal, on-demand, low-carbon, and personalized travel services enabled by real-time and accurate access to information. This has led to expenditures of €7 billion in 2017 on technologies related to connected vehicles. The market is expected to double by 2021.

The concept of transport is rapidly changing, overcoming the traditional approach based on individual ownership of vehicles, rigid separation between public and private transport, and limited insights on optimal journey choices. Automotive players are heavily investing in full digitalization of their products and services, with regulators and providers in the sector promoting the adoption of common data management rules and data platform design principles in order to cultivate an open and competitive connected vehicles data marketplace. This has enabled a safer, faster, and better travel experience for drivers, while fostering new business models and opportunities in the broader sector ecosystem.



AUTOMATED DRIVING PROGRESSED BY INTERNET OF THINGS

AUTOPILOT will develop an IoT connected vehicle platform and IoT architecture based on the existing and forthcoming standards, as well as open source and vendor solutions. The IoT ecosystem will accommodate vehicles, road infrastructure and connected IoT objects, with particular attention to safety critical aspects of automated driving.

The IoT Programme - Added Value for Europe



With more than €100 million of EU funding, the goal of the IoT Large Scale Pilots (LSP) Programme is to foster the deployment of IoT solutions in Europe, demonstrate their feasibility and benefits and promote the development of a sustainable IoT ecosystem. The projects in the LSP Programme design and apply IoT approaches to real-life challenges of high relevance, and analyse technology readiness and the potential socio-economic impact for Europe. The five focus areas include IoT-enabled smart cities, smart living environments for ageing well, smart farming and food security, wearables for smart ecosystems and autonomous vehicles in a connected environment.



All the LSPs include multi-national consortia and pilots, taking advantage of the Digital Single Market perspective. By focusing on building value chains with advanced technology solutions, solving trust, security and privacy issues and validating the emerging business models, the LSPs will provide successful, feasible and replicable models of IoT ecosystem deployment already scaled at the EU level, improving European competitiveness.



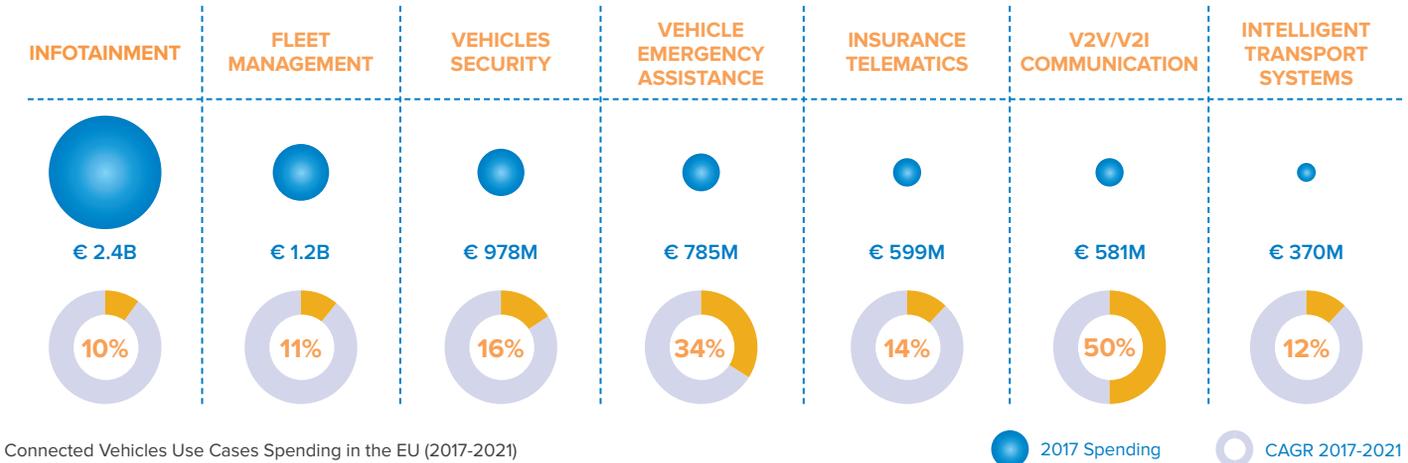
In the case of connected vehicles, the IoT Large Scale Pilots (LSP) programme will prioritise on:

- ▶ Testing real-life scenarios of deployment of safe and fully autonomous vehicles in various use cases;
- ▶ Exploiting core technologies including real-time platforms, advanced sensors and application layers where value-added apps may be built to ensure efficient navigation, interconnectivity between cars, vehicle-to-infrastructure communication etc.
- ▶ Developing proofs of concepts to demonstrate benefits for users on a daily basis;
- ▶ Creating an open service platform granting access to all in-vehicle embedded information sources and to information surrounding the vehicle.

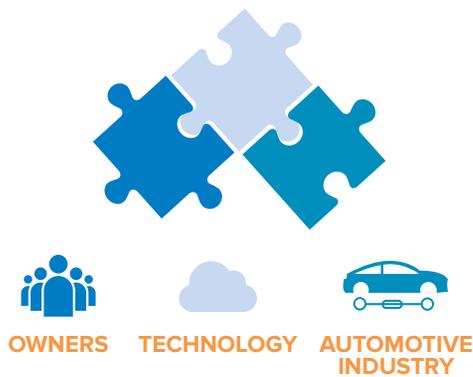


How Connected Vehicles are using IoT

According to IDC, infotainment vehicle solutions, fleet management, and vehicles security drive European expenditures in the connected vehicles domain, representing more than €4.5 billion spending in 2017. EU connected vehicles' investment priorities in the coming years will focus on vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) solutions and infrastructure, focusing on increasing situational awareness and reducing road risks and crashes.



The Connected Vehicles Ecosystem



PLAYERS	EXAMPLES
Drivers	Consumer drivers, commercial drivers
Automotive Players	Auto OEMs, dealers, after-market services
Technology Providers	Hardware, software, connectivity, services providers
Digital Services Providers	Insurance, urban information, safety & security assistance, diagnostics support, infotainment
Digital Regulators	Government, public organizations and non-governmental bodies
Transport Infrastructure Providers	Roads & highways providers, public transit providers

ROLES & BENEFITS

- | | | | | | |
|---|--|--|---|---|---|
| <p>DRIVERS</p> <ul style="list-style-type: none"> Higher safety and security Seamless and less stressful travels Enhanced in-car entertainment experience | <p>AUTOMOTIVE</p> <ul style="list-style-type: none"> More attractive and safer products Better customer assistance and after-sales support & services | <p>TECHNOLOGY</p> <ul style="list-style-type: none"> New market and partnership opportunities Cross-fertilization and enablement of connected solutions in other industries | <p>MOBILITY SERVICES</p> <ul style="list-style-type: none"> New business models and services using IoT enabled automated vehicles Enhanced customer interaction and satisfaction | <p>REGULATORS</p> <ul style="list-style-type: none"> Data access Fostering citizens' mobility, digitalization, safety and environmental benefits Networking and collaboration opportunities | <p>TRANSPORT INFRASTRUCTURE</p> <ul style="list-style-type: none"> Reduced travel time and better safety conditions Insights into maintenance operations and infrastructure alerts |
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Contacts

- www.european-iot-pilots.eu
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- IoT_euLSP

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- UTOPILOT
- www.autopilot-project.eu
- AUTOPILOT Project EU
- AUTOPILOT_EU

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