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CRF

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LINKS
ISMB STT

NOKIA

SEAbility

swarco

Stadt Ulm
ulm

T··

ulm university universität uulm

Urban Foresight

WIND 3

THE PROJECT

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ICT4CART

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ICT4 CART

A connected future for Automated Driving

THE PROJECT

ICT4CART intends to address the ICT-related challenges of road automation and telecommunications that are linked with connectivity, data management, interoperability, cyber-security, privacy and ICT architecture.

ICT4CART aims at creating an ICT infrastructure to enable the transition towards road transport automation, adapting and improving technological advances from different industries, mainly telecom, automotive and IT.

CHALLENGES

- Limited availability of short range communications
- Network overload in high crowded environments
- Lack of hybrid connectivity development
- Lack of EU cross-border testing activities
- Lack of standards for vehicles Environmental Perception Model
- Non interoperable and standard data exchanging system
- Lack of a pan-European cyber-security mechanism for connected and automated driving
- Insufficient data privacy mechanisms
- Scarce availability of finance and land use limitations for upgrading civil infrastructure

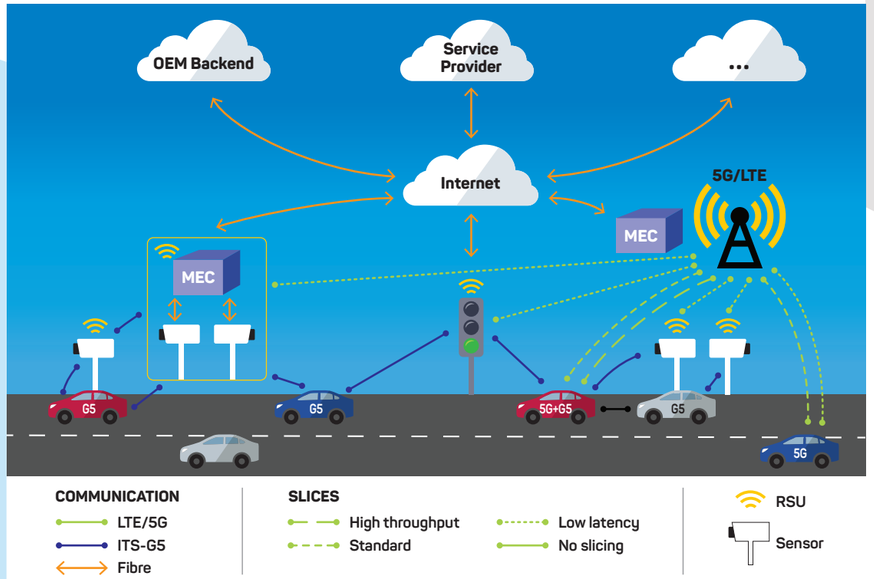
ICT4CART SOLUTIONS

ICT4CART builds on four specific high-value use cases, which will be demonstrated and validated under real-life conditions at project test sites.

ICT4CART adopts a hybrid communication approach where all the major wireless technologies, i.e. cellular, ITS G5 and LTE-V, are integrated under a flexible "sliced" network architecture. This architecture will ensure performance and resilience for different groups of applications according to the needs of higher levels of automation.

A distributed IT environment for data aggregation and analytics will be implemented. This offers seamless integration and exchange of data and services between all the different actors.

THE ARCHITECTURE



TEST SITES

Austria

Germany

Italy

Italian-Austrian border

IMPACT

- A performant and resilient architecture for different groups of applications
- Seamless integration and exchange of data and services
- Cyber-security and data privacy
- Accurate localisation services
- Standardisation and interoperability
- Enabling the transition to higher levels of automation
- New business opportunities