

THE INFRAMIX PROJECT

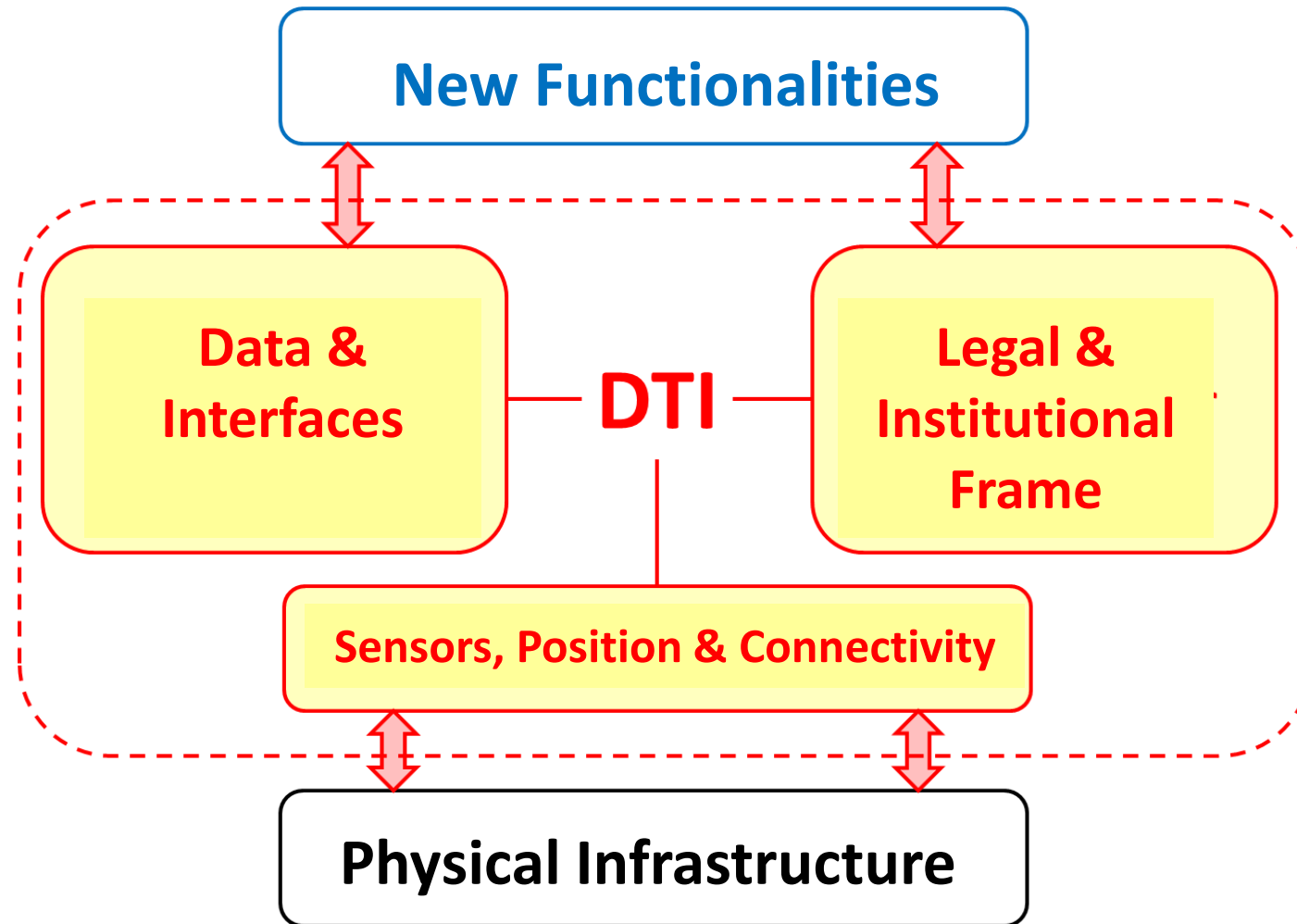
SIS 36 - ICT Serving Automated Road Transport

Martin Russ, AustriaTech



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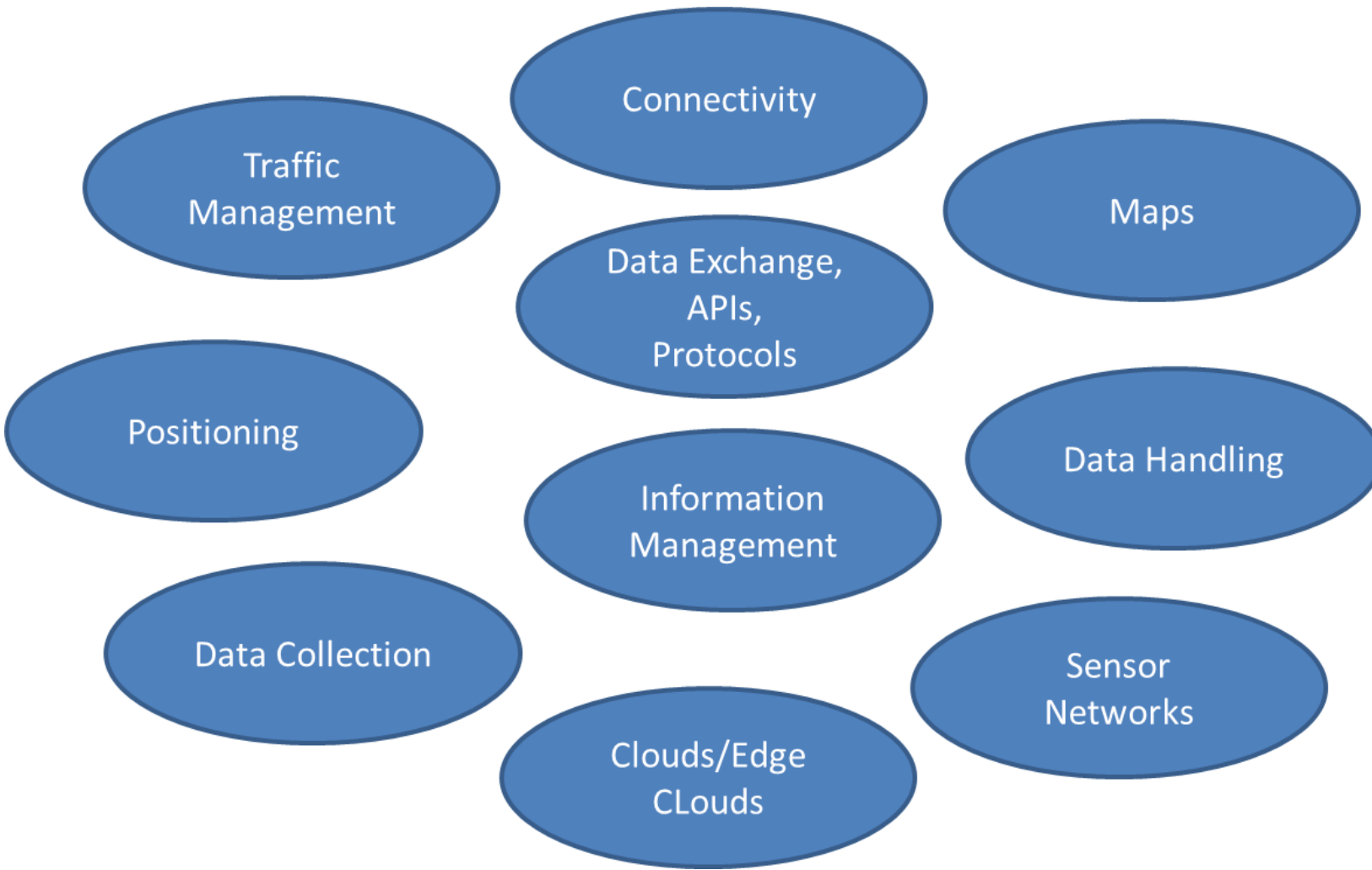
A common DTI perspective



Some next steps for CCAD in general:

- Agree (with OEMs) on **DTI elements** and other attributes which are relevant for level /use cases of CCAD
- **Standardize use** of attributes and provide electronic repository
- **Quality of Service (QoS)** with impact on functional possibilities, infrastructure systems and regulatory requirements

Elements



- Use Cases
- Technologies
- Services
- Functional requirements
- QoS
- Redundancy
- ...



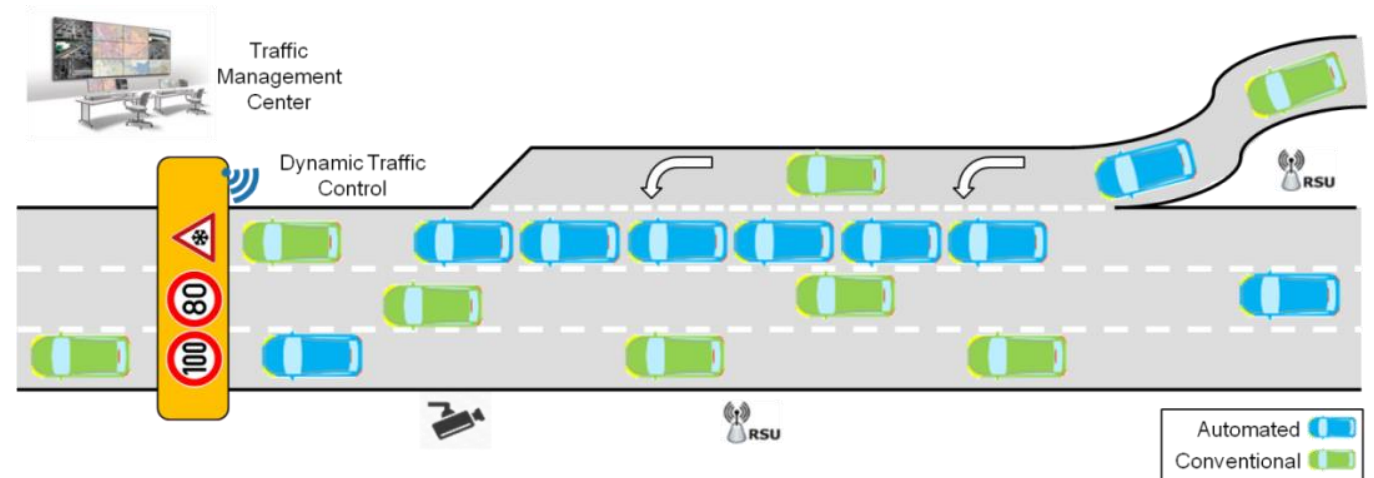
PREPARING ROAD INFRASTRUCTURE FOR MIXED VEHICLE TRAFFIC FLOWS



- **Aim:** help to prepare road infrastructure to support the coexistence of conventional and automated vehicles
- **Key outcome:** “hybrid” road infrastructure
 - able to handle the transition period and
 - become the basis for future automated transport systems
- **Start und duration:** 1 June 2017 - 31 May 2020
- **Partners:** AustriaTech (Coordinator), ICCS, ASFINAG, Fraunhofer, Siemens Austria, VIRTUAL VEHICLE, Technical University of Crete, Abertis Autopistas España, Enide Solutions, TomTom Germany, BMW

COEXISTENCE OF CONVENTIONAL AND AUTOMATED VEHICLES

- Develop, implement and validate **traffic control algorithms** for mixed vehicle traffic
- **Design, adapt** and **test physical** and **digital** elements of the road infrastructure
- Development of an **infrastructure classification scheme** for ART



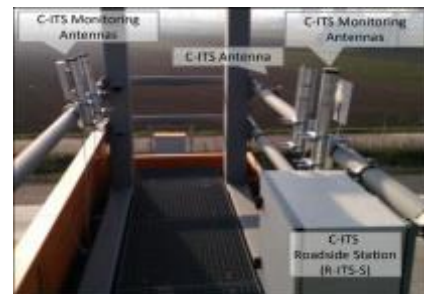
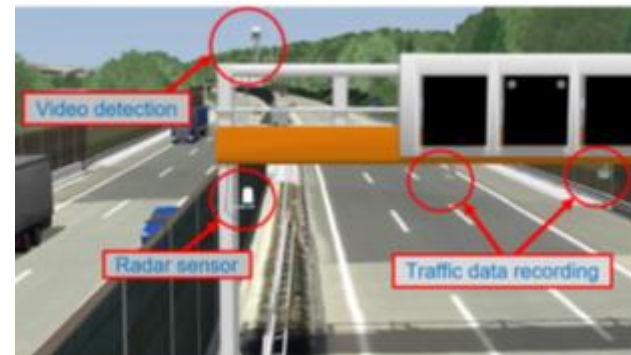
Scenarios:

- **Dynamic lane assignment**
- **Roadworks zones**
- **Bottlenecks**

“Hybrid” road infrastructure

Physical road infrastructure

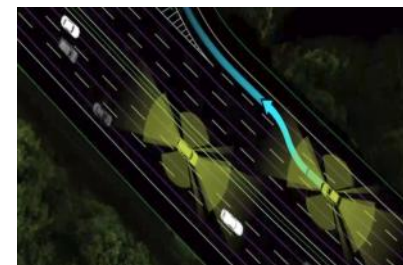
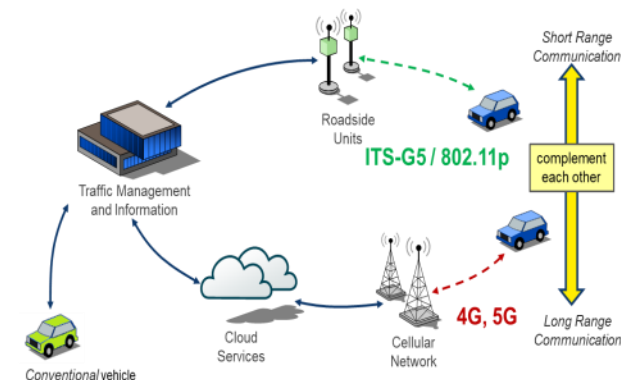
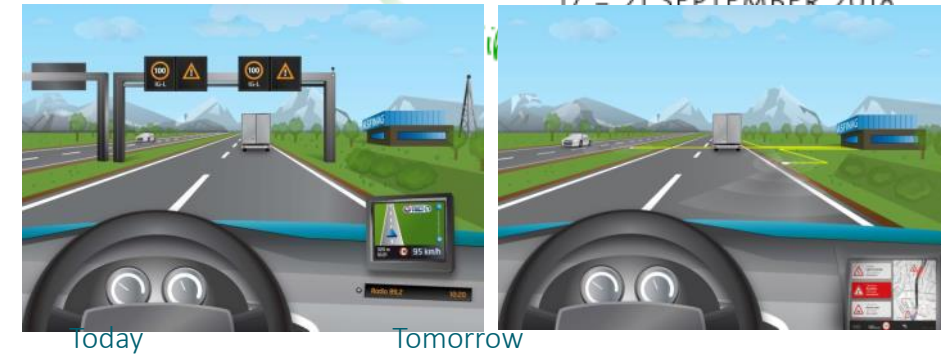
- Visual and electronic signaling to inform and guide both conventional and automated vehicles
- Road side elements and related upgrades of today Traffic Management Centers (TMCs).



“Hybrid” road infrastructure

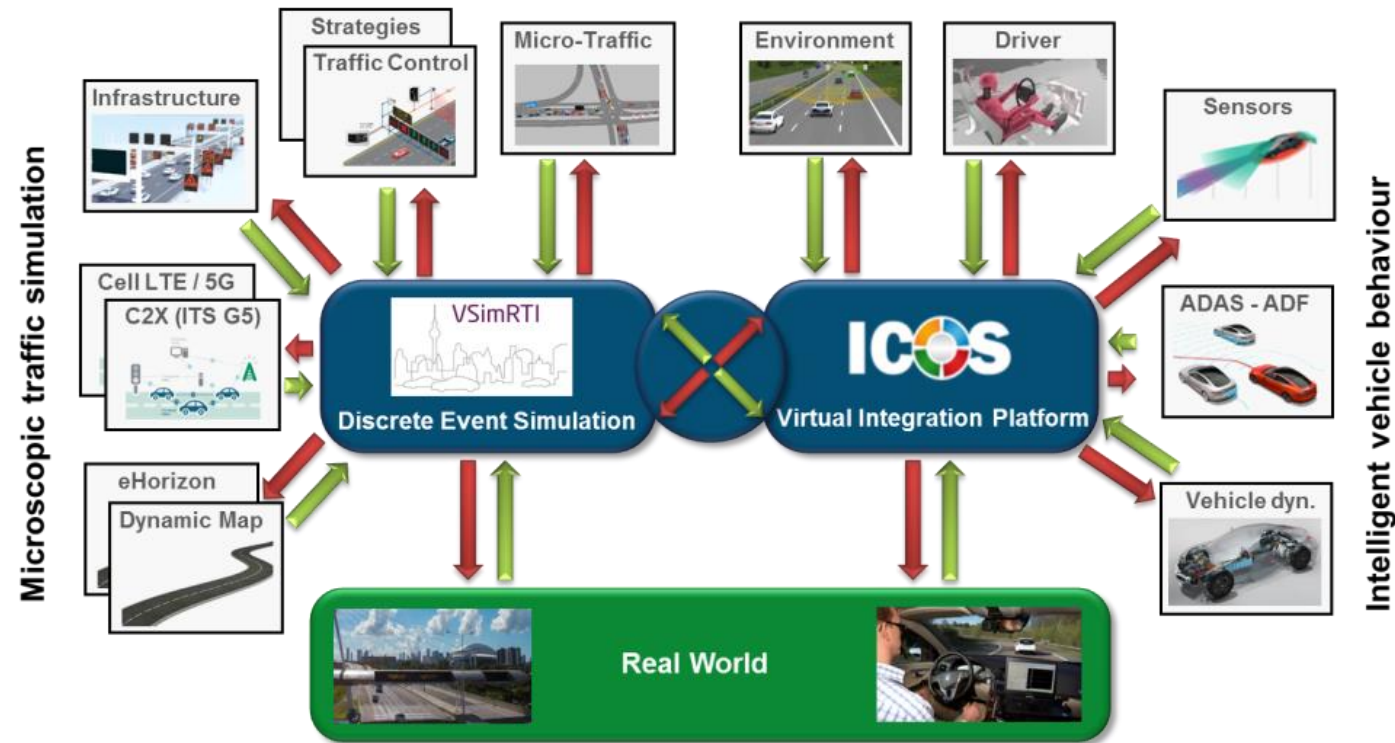
Digital road infrastructure

- Highly accurate digital maps
- Traffic flow estimation methods for mixed traffic
- Investigation of different novel traffic management architectures and combinations
- Individualized speed and lane recommendations
- Definition of dedicated ITS specific messages
- Usage of short range (e.g. ITS-G5, WiFi) and long range (cellular) communication



EVALUATION OF INFRAMIX DEVELOPMENTS

- **simulation environments for mixed traffic scenarios**
- **Linking simulation environments to real traffic test sites**
- **Evaluation via simulation and on real stretches of advanced highways in Austria and in Spain**
- **Evaluation of users' appreciation and acceptance**



ADDITIONAL INFORMATION

- Website: <https://www.inframix.eu/>
- Twitter: @inframix
- LinkedIn: [inframix project](#)

- Sign up to our newsletter: <https://lists.inframix.eu/wws/subscribe/news>

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