C-ITS Architecture

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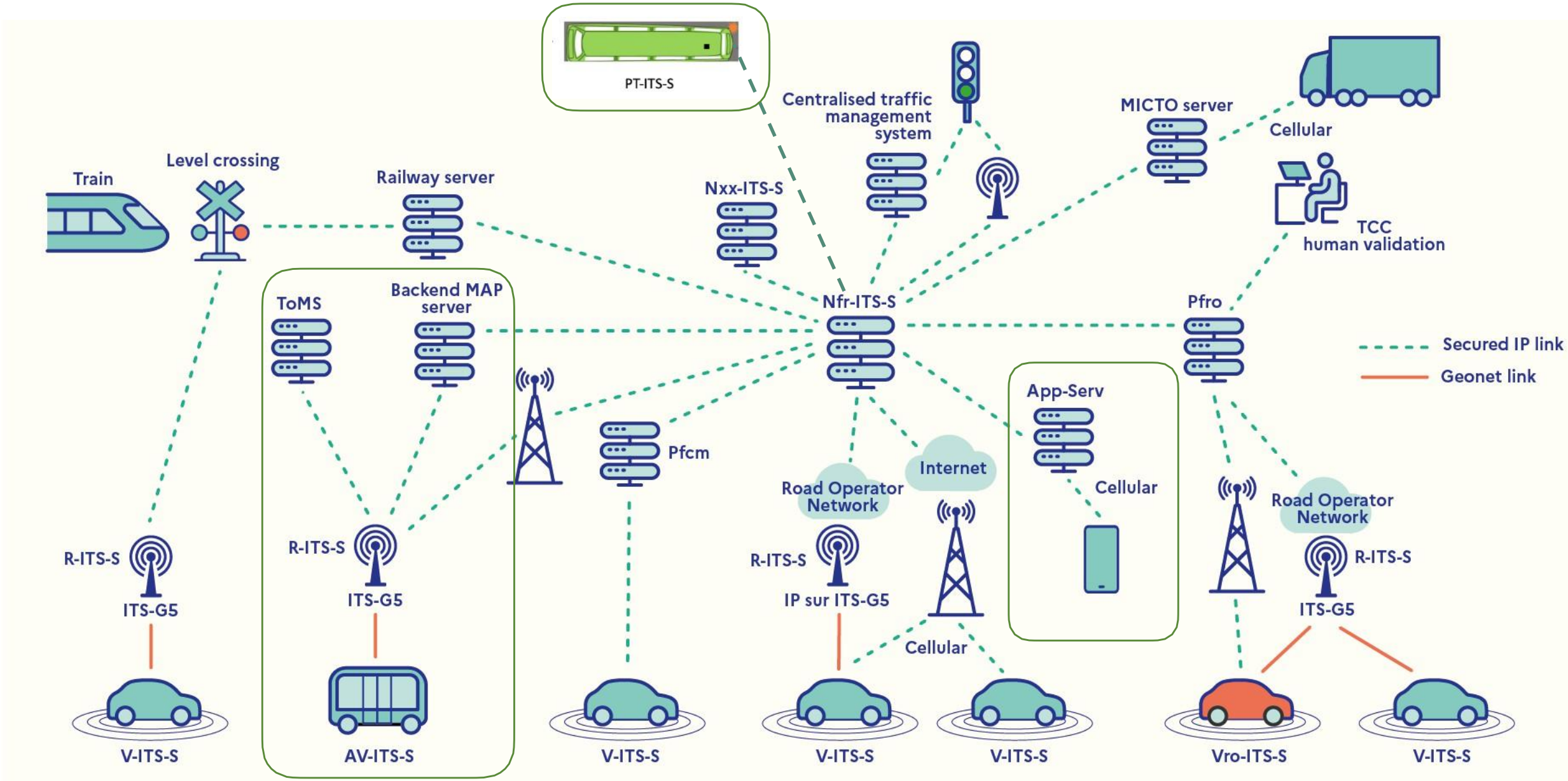
Architecture



Architecture

- ITS-
- G5/4G/5G/Hybrid
- Seamless
- connectivity
- Security on geonetworking layer

  Equipment are most of them on the C-ITS trust domain

  Except equipment of road operators like TMS and the smartphone but with secured links

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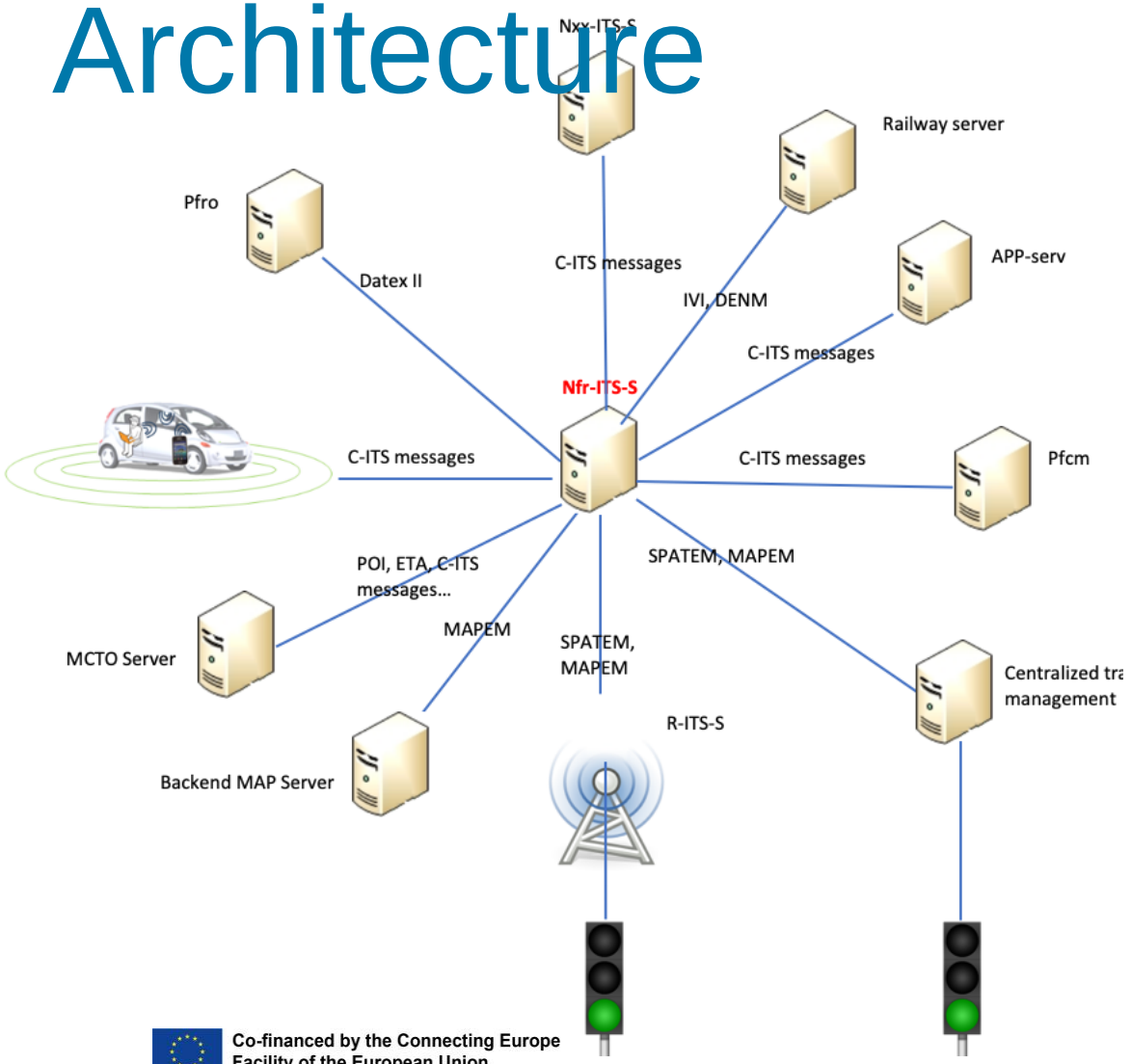
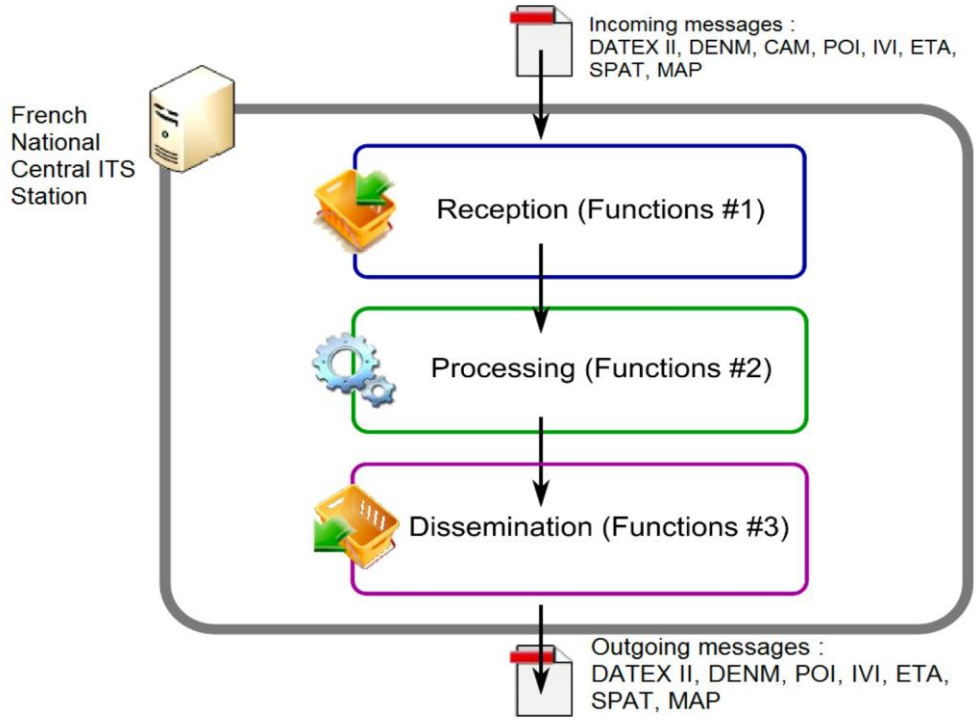
Technical Architecture





From French architecture point of view : Super R-ITS-S From European point of view: Broker

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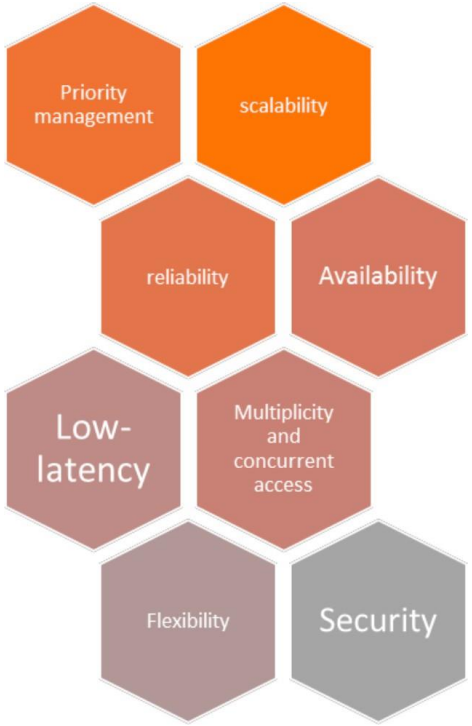
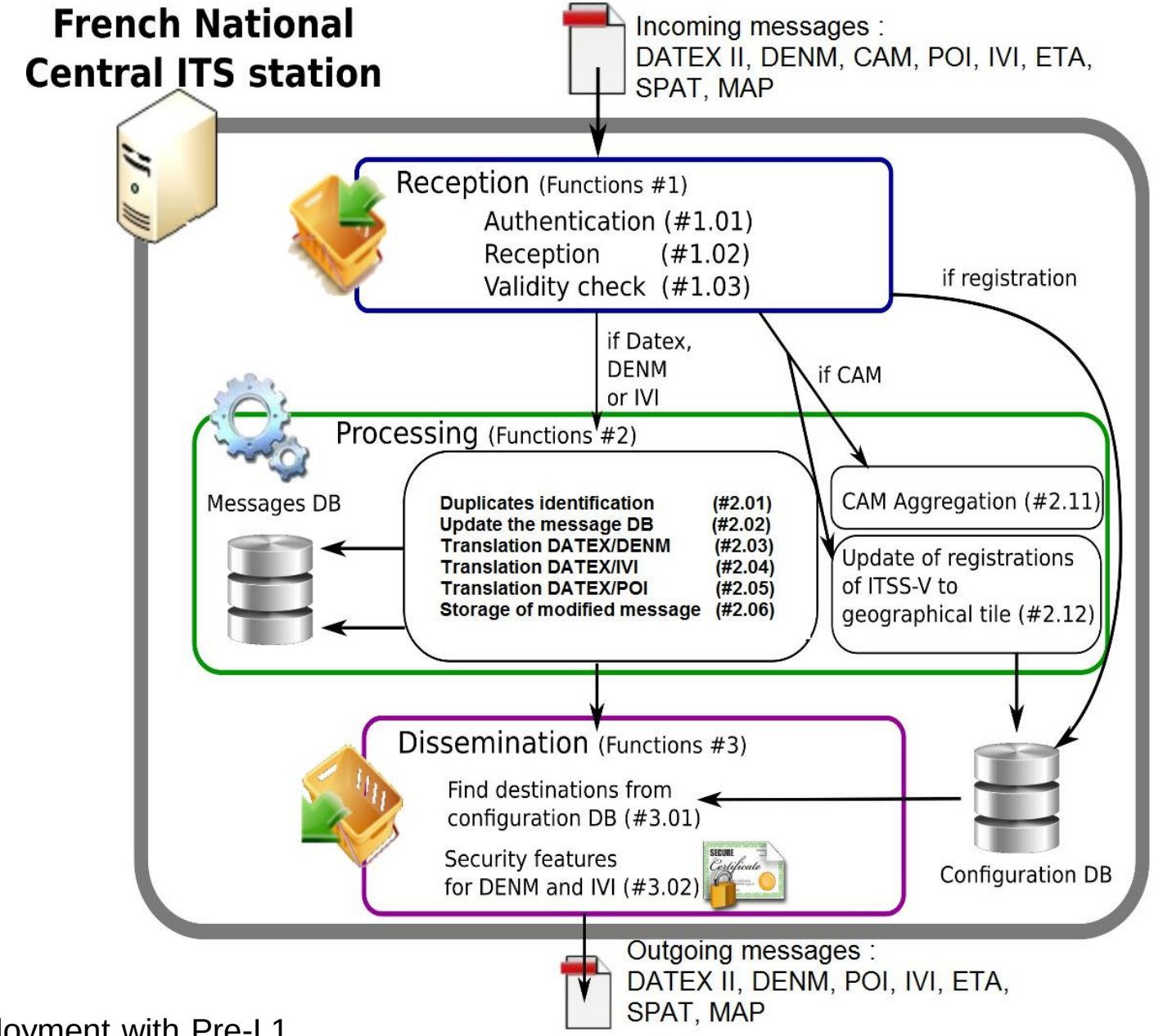
Nfr-ITS-S



The Nfr-ITS-S **shall** forward DEN, IVI, POI, ETA, SPaT and MAP messages contained in a Geonet secured header as it is.

The Nfr-ITS-S **shall** sign with appropriate certificate any unsigned **IVI** message**, POI** message or **DENM** generated locally from **DATEX II** message



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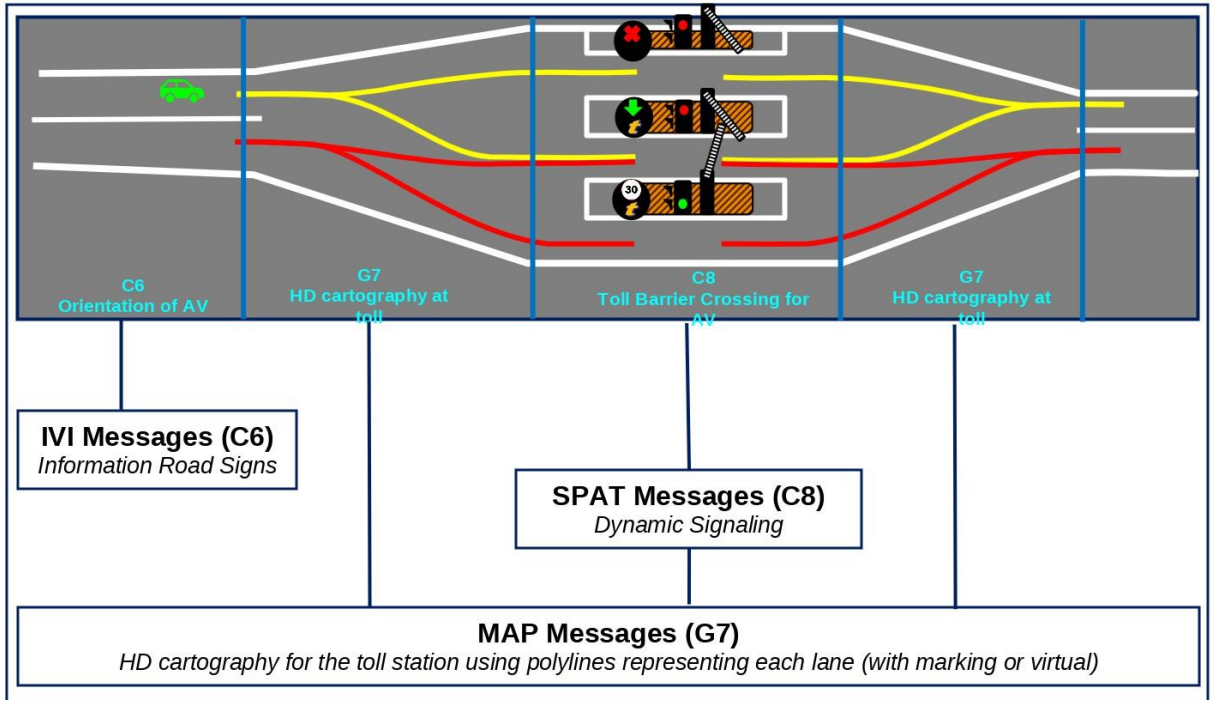
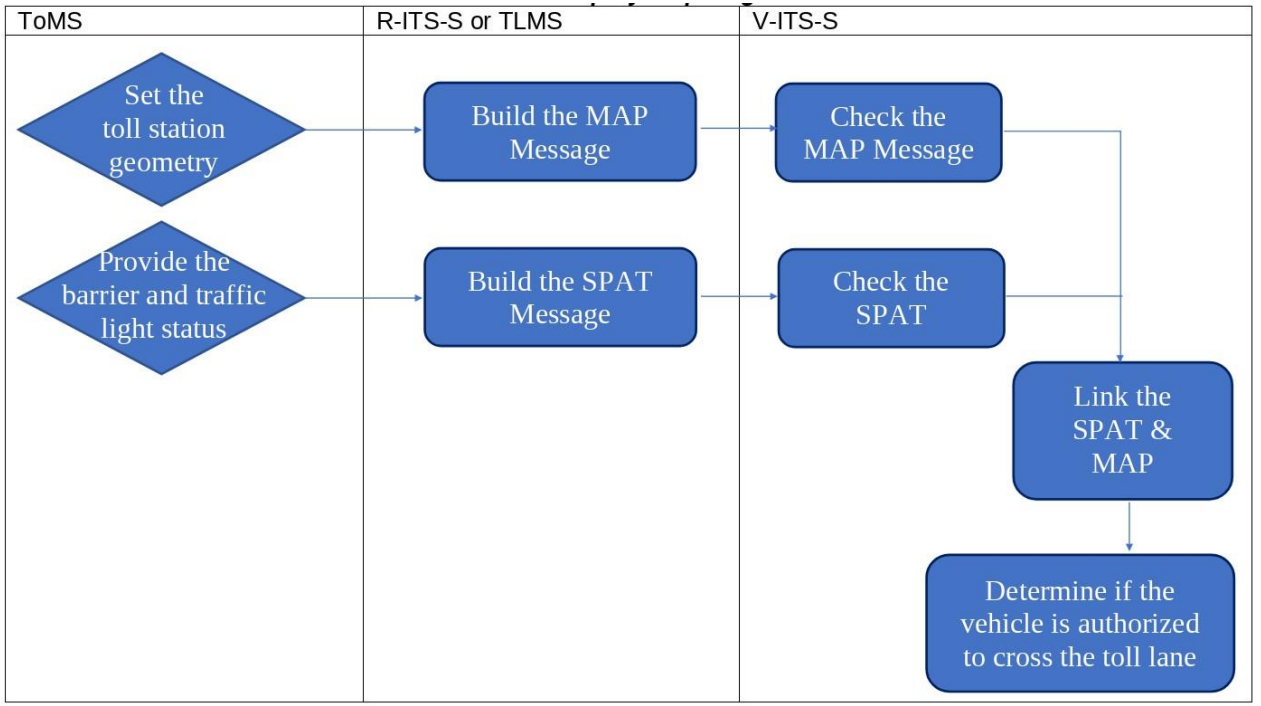
Testing with L0. Deployment with Pre-L1

ToMS: Toll Management System

ToMS: new fonctionnality of the TMS





Toll Barrier Crossing for Automated Vehicles

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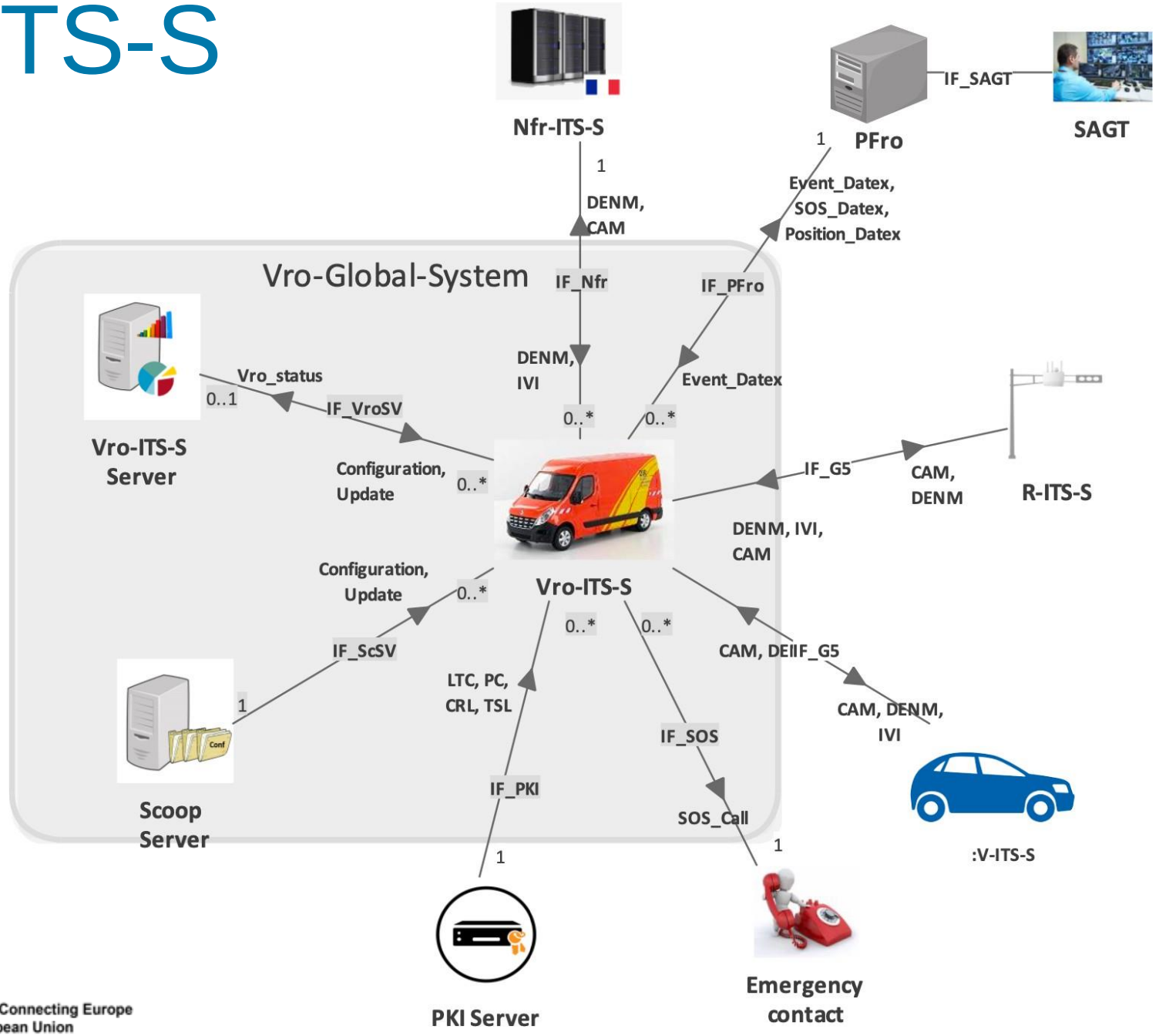
Vro-ITS-S



- Hybrid connectivity
- Road operators work functionalities

- User Mode
- Operator Mode

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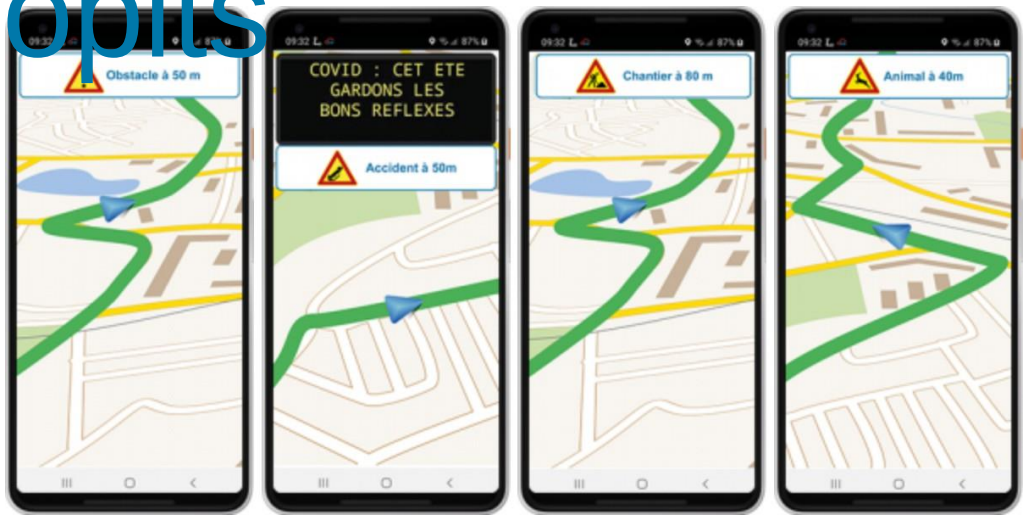
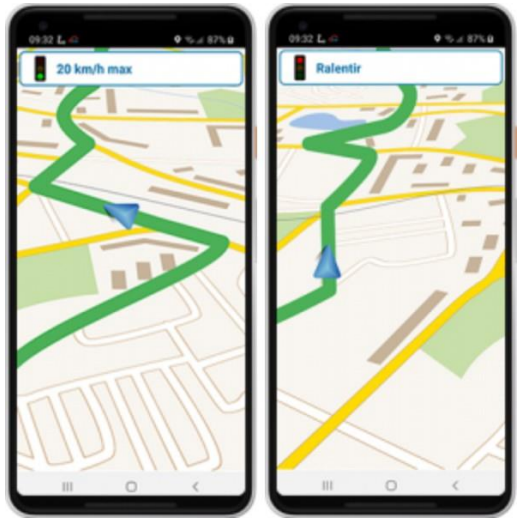
Smartphone application: Coopits





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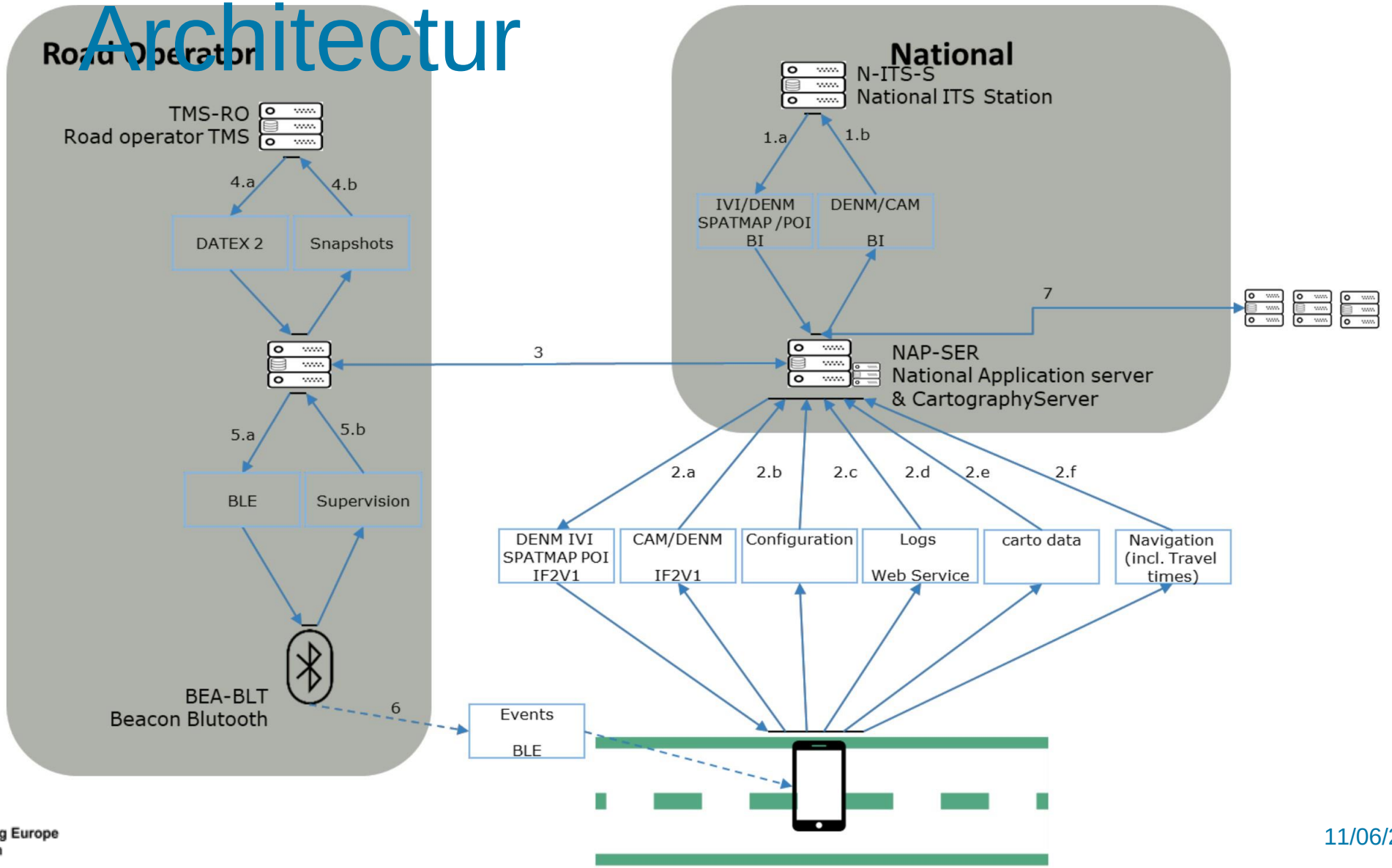
Coopits Architecture



Conclusion

- Complexe, functional et full operational Architecture
- Multiples actors
- Fully Hybrid
- An architecture that has grown with each project, enabling the integration of new actors and services

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Thanks!

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