

NL-trials in relation to challenges for 5G CAM

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5GMOBIX



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5G Strategic Deployment Agenda

- Testing and pre-deployment
- Indicative 5G corridors for CEF funding
- Horizon 2020 5G cross-border corridor trial projects

First wave of cross-border corridor projects started in 11/2018:

- 5GCroCo
- 5G-CARMEN
- 5G-MOBIX

Second wave of cross-border corridor projects started in 09/2020:

- 5GMED
- 5G-Blueprint
- 5G-Routes

- Shared vision of wide group of stakeholders
- For Connected and Automated Mobility (CAM)
- To have uninterrupted 5G coverage along main transport paths by 2025
- Supported by the CEF funding program
- Developing a 5G CAM ecosystem together with road operators, OEM's, service providers and network providers



5G-MOBIX Trials



LOCATIONS

- 2 Cross-Border Corridors (CBC)
- 4 complementary European Trial Sites (TS)
- 2 complementary Asian Trial Sites (TS)



NETWORK

- 30 5G gNBs
- NSA Architecture (potential for evolving to SA)



VEHICLES

- 24 SAE L4 automated vehicles



USE CASES

- 5 use case categories based on 3GPP TS 22.186, focusing on x-border operation

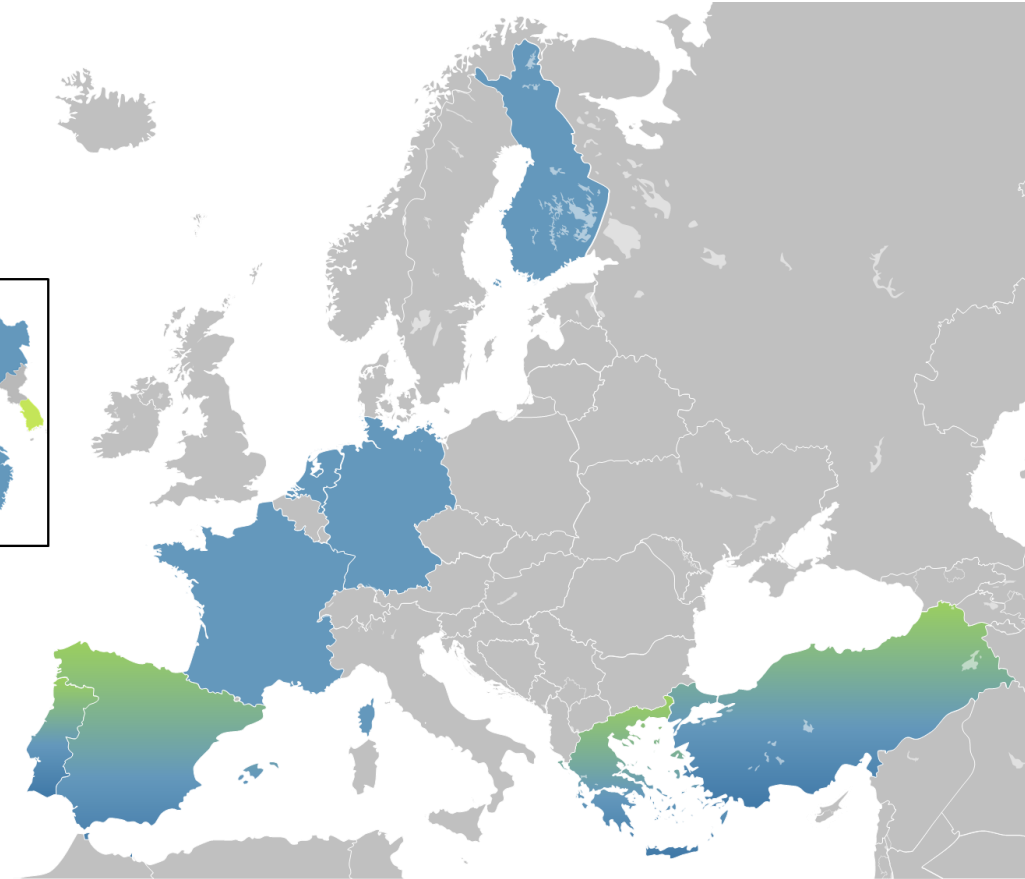
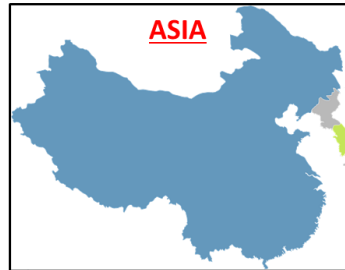
Advanced
Driving

Vehicles
Platooning

Extended
Sensors

Remote
Driving

Vehicle QoS
Support





Main challenges for 5G CAM

Roaming
interruption

(Roaming)
Latency

Low
coverage

Service
Continuity

Position
accuracy

Main challenges for 5G CAM

Seamless
handover

NL

Local breakout,
regional
peering & edge
computing

...more
infrastructure

Slicing, SSC &
appl.
integration

NL

5G positioning

NL



5GMOBIX

Use Cases in NL trial site

Advanced
Driving



Collision Avoidance: Manoeuvre coordination by exchanging vehicle's intent

Vehicles
Platooning

Extended
Sensors



Extended Sensors: Enrichment of the scenario assessment by sharing sensor data

Remote
Driving



Remote Driving: Controlling automated vehicles by remote operator

Vehicle QoS
Support

NL-Trial 5G-network with 3 SA cores

