5G-IANA: 5G Intelligent Automotive Network Applications

The 5G-IANA project: What's in it for SMEs?

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About 5G-IANA

- H2020-ICT-41-2020
- June 2021 to November 2024
- 16 partners from 8 EU countries
- 10 SMEs

From ICT-41-2020 call scope to 5G-IANA

- *Provide enhanced experimentation infrastructure on top of which third party experimenters will test their applications.*
- *Provide an integrated, open, cooperative and fully featured network platform tailored to specific vertical sectors.*
- *Design an open experimental network platform to allow SMEs to experiment.*
- *Create 5G open source repositories for wide use and towards standards development.*
- *Typical vertical use cases include connected and automated mobility, ..., PPDR, ...*

5G-IANA objectives relative to SMEs

- Provide an Automotive Open Experimental Platform (AOEP) at the disposal of “third parties”.
- Implement an open repository environment for nApps and VNFs to ease the design and chaining of new automotive-related services of SMEs.
- Implement and trial Connected and Automated Driving relevant Use Cases to validate and assess the AOEP suitability.
- Create new business opportunities and boost market for start-ups and SMEs with Automotive nApps.

We invite you to leverage our platform!

Motivation for SMEs

The intended audience is any legal entity in the form of a Small and Medium-sized Enterprise (SME / start-up), which is working with the concept of Network Applications (nApps) in the automotive vertical, and which is already developing or is willing to develop a product or service or functionality that leverages 5G capabilities through the 5G-IANA platform.

- ✓ How can you benefit from leveraging our platform?
- ✓ What do we offer to you?
- ✓ What do we expect from you?
- ✓ How can you practically get involved?

Potential SME profiles

- Service Creators: all types of service creation entities such as software developers.
- Service Providers: who are responsible for providing a service to end users (for example Intelligent Driving, HD maps, etc.).
- Application and Network Functions Developers: who develop Virtual Network Functions (VNFs), i.e., Application Functions (AFs) and/or Network Functions (NFs) that can be used as building blocks for creating nApps.
- Application and Network Functions Providers: who are responsible for providing AFs and NFs to be on-boarded through the functionalities provided by the 5G-IANA platform.
- Network Application Developers: who are responsible for the development of Network Applications (nApps).
- Network Application Providers: who provide the nApps either to end users or service creators/providers.

Expected gains by SMEs

- Gain access to a “canvas” to develop new functions and services in the automotive 5G landscape
- Test and validate their existing or new services in real-time using 5G connectivity
- Gain access to real-life 5G resources (vehicles, OBUs, RSUs, EDGE/MEC Server(s))
- Get continuous mentorship and support from network and automotive experts
- Explore/Build new business models within the 5G ecosystem
- Gain visibility towards the EU, the 5G community and the automotive community

What we offer to you: Tools

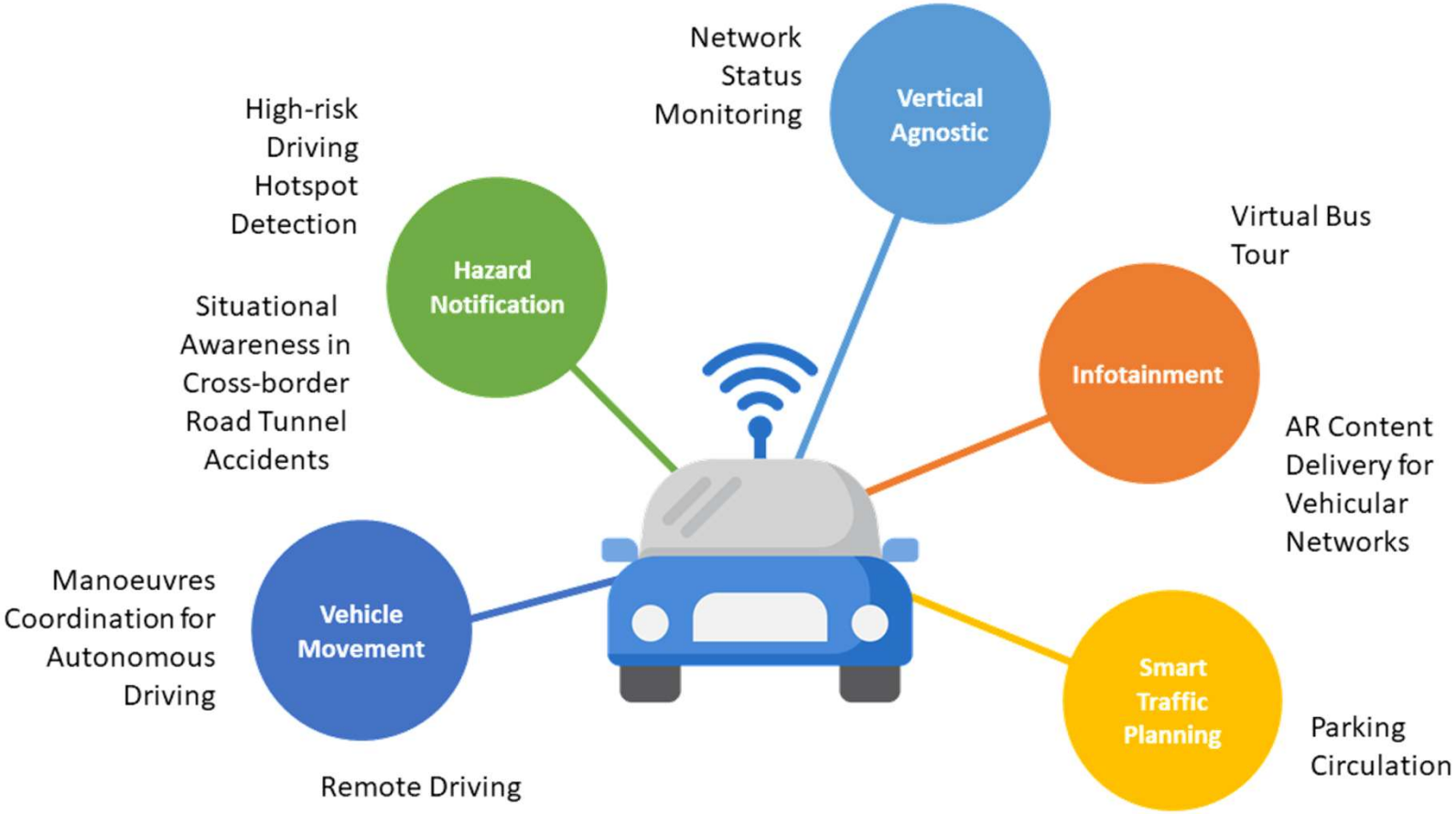
We are offering you the mechanisms to easily design distributed intelligent services, which span from the remote cloud to the far-edge segment, and request their provisioning on top of 5G-enabled infrastructures

- ✓ Access to our platform to develop, deploy and test your services
- ✓ A catalogue of available AFs/NFs (~*70*) and Network Applications (nApps) (>*25*)
- ✓ Tools to prepare & onboard your own AFs, NFs or nApps on the 5G-IANA platform
- ✓ Indicative examples regarding the actual deployment of 5G-IANA use cases
- ✓ Remote accessibility to 5G resources
- ✓ Accessibility to OBU/RSU resources, real and virtual vehicles (digital twins)
- ✓ Support to AI/ML-oriented services (2024)

What we offer to you: Support

- ✓ Technical support material:
  - Technical manual (user guide)
  - Manual of the AFs, NFs and nApps provided by the platform
  - Webinars
  - Public deliverables
- ✓ One on one mentorship, training, and technical assistance and support:
  - Pre-testing phase
  - Experimentation & validation phase
- ✓ Business model mentoring
- ✓ A monetary award to the best-performing experimenter of **15000 euros**

Automotive application (nApp) categories



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Use cases

UC1

Remote driving

UC2

Manoeuvres coordination for autonomous driving

UC3

Virtual bus tour

UC4

AR content delivery for vehicular networks

UC5

High-risk driving hotspot detection

UC6

Network status monitoring

UC7

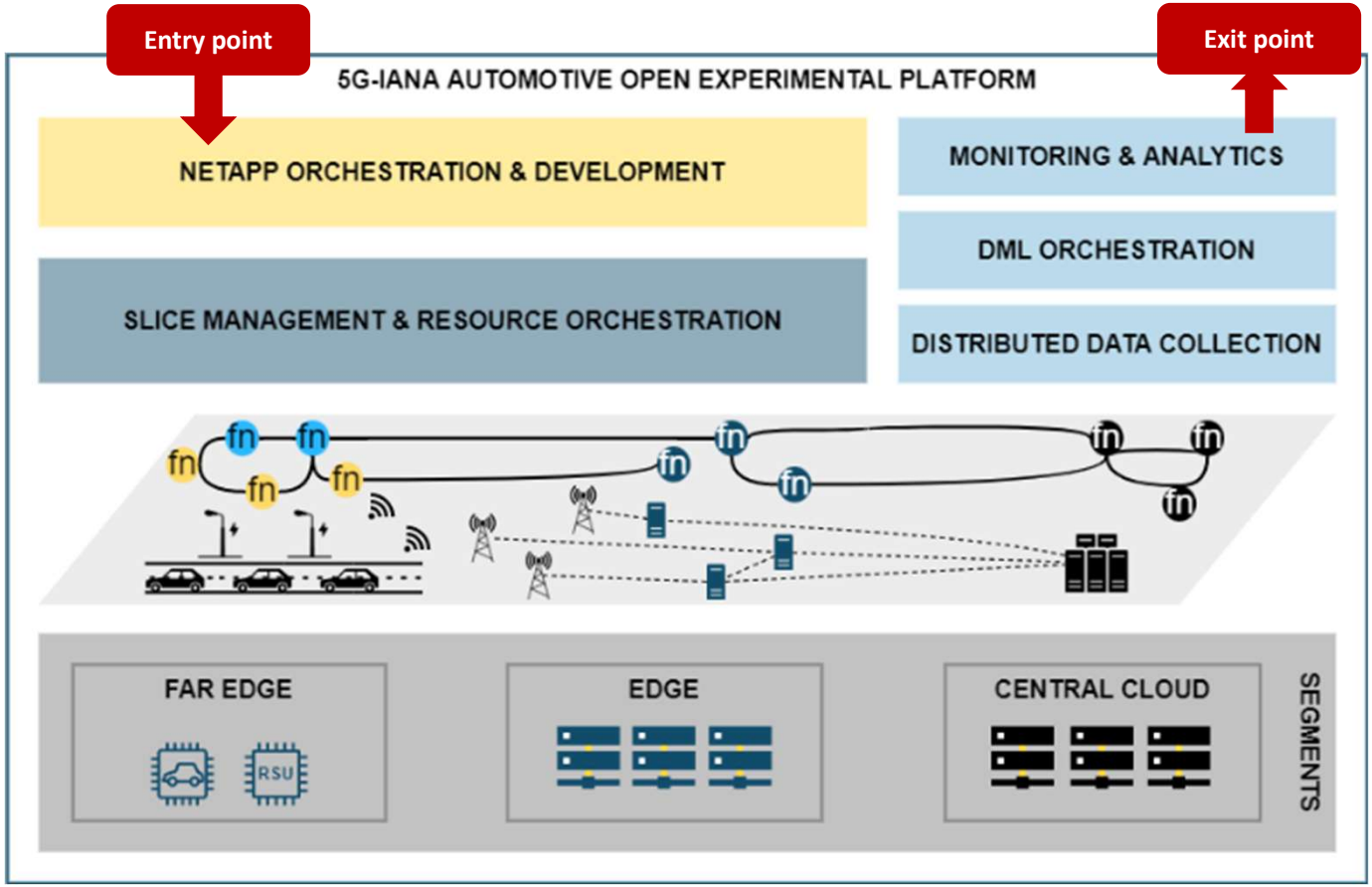
Situational awareness in cross-border road tunnel accidents

Testbeds

5G-IANA will utilize 2 different 5G SA test networks:

- One in City of **Ulm (Germany)** operated by **NOKIA**
- One in **Ljubljana (Slovenia)** operated by **TS**

The enabler: 5G-IANA platform



www.5g-iana.eu

Thank you for your attention!

Any questions?

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