5G INDUCE

Open cooperative 5G experimentation platforms for the industrial sector NetApps

www.5g-induce.eu

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Advancing I4.0 with 5G SA, AMRs, VR and ML, at Ford Motors Factory in Valencia (Spain)

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This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under grant agreement No. 101016941

The 5G-Induce project – Helicopter View

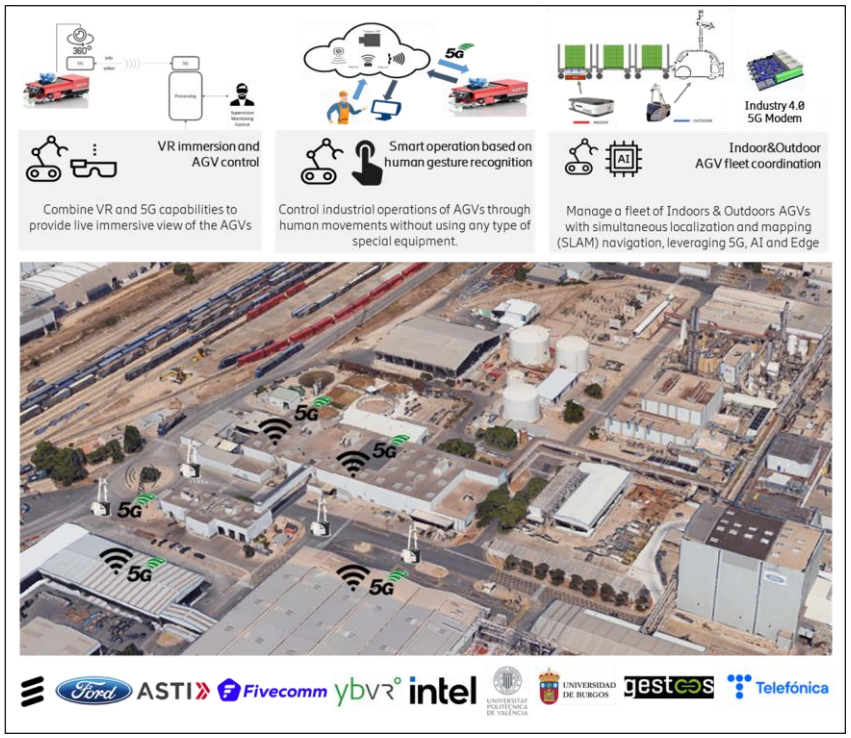
Valencia-Madrid, Spain
Ford factory in Valencia, Spain, interconnected through Ericsson's edge node technology to 5TONIC test-bed in Madrid

Case in focus for this session

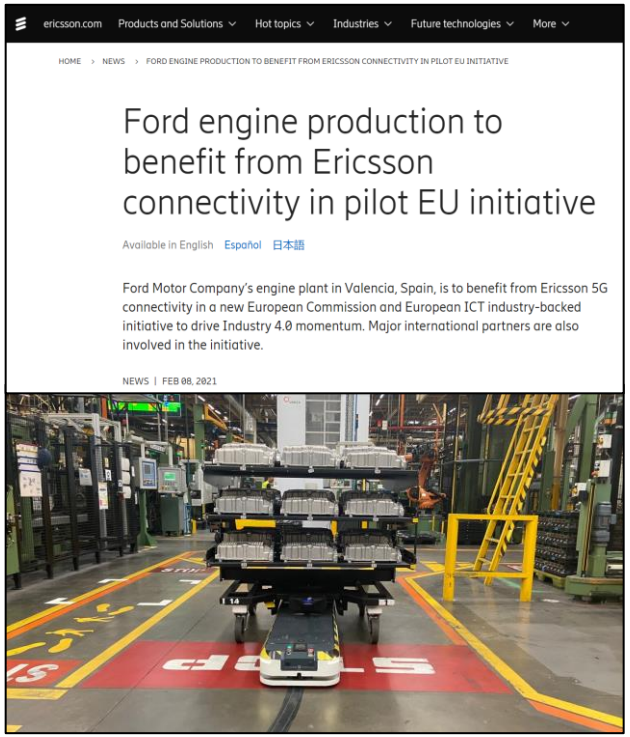
Lavrio-Athens, Greece
Public Power Corporation industrial site in Lavrio, Greece, interconnected to OTE 5G laboratory infrastructures in Athens

Genoa-Biandronno, Italy
Whirlpool factory in Biandronno (Varese), Italy, interconnected to CNIT's lab infrastructure in Genoa through Wind3 network, serving also as the DevOps testbed for new NetApps

Industrial Priorities + Ecosystem = Innovation



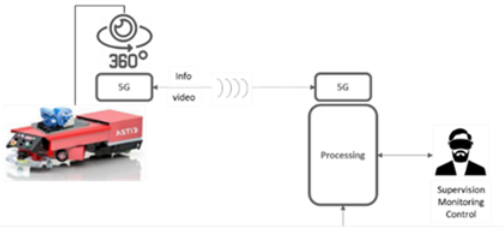
https://www.youtube.com/watch?v=xg2OouRBbRw



https://www.ericsson.com/en/news/2021/2/ford-engine-production-5g-dedicated-network

Use Cases in focus

Augment the quality of monitoring with **AR+5G**



VR immersion and AGV control

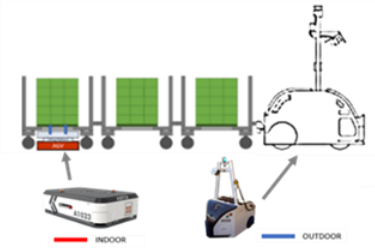
Combine VR and 5G capabilities to provide live immersive view of the AGVs

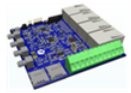
Simplify human-machine interaction with **AI+5G**

Smart operation based on human gesture recognition

Control industrial operations of AGVs through human movements without using any type of special equipment.

Unify connectivity for Indoor+Outdoor with **5G**

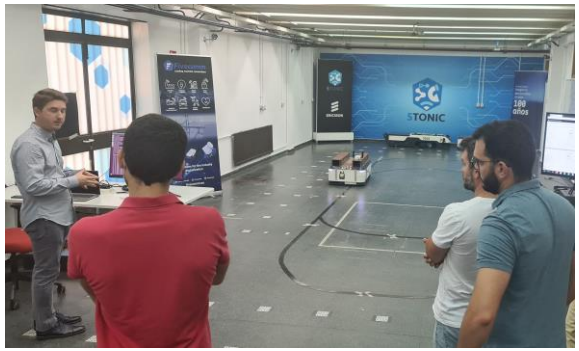


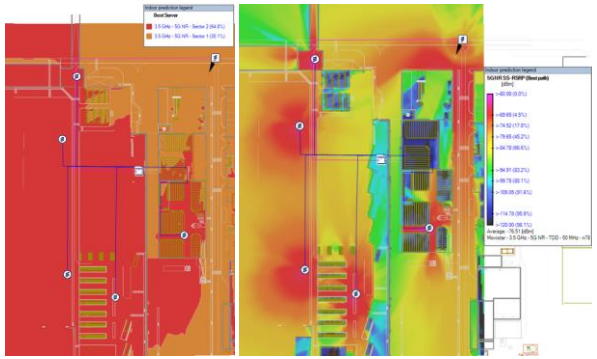


Industry 4.0 5G Modem

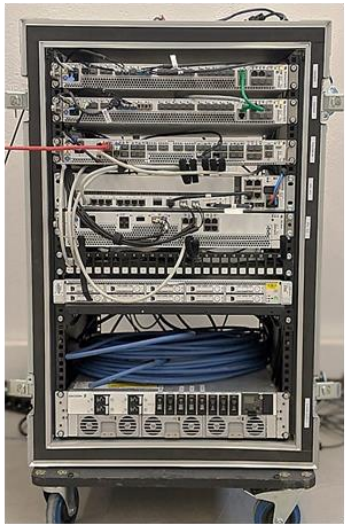
Indoor&Outdoor AGV fleet coordination

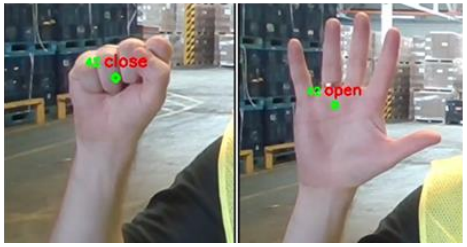
Manage a fleet of Indoors & Outdoors AGVs with simultaneous localization and mapping (SLAM) navigation, leveraging 5G, AI and Edge





From Networks and Devices to Digital Apps

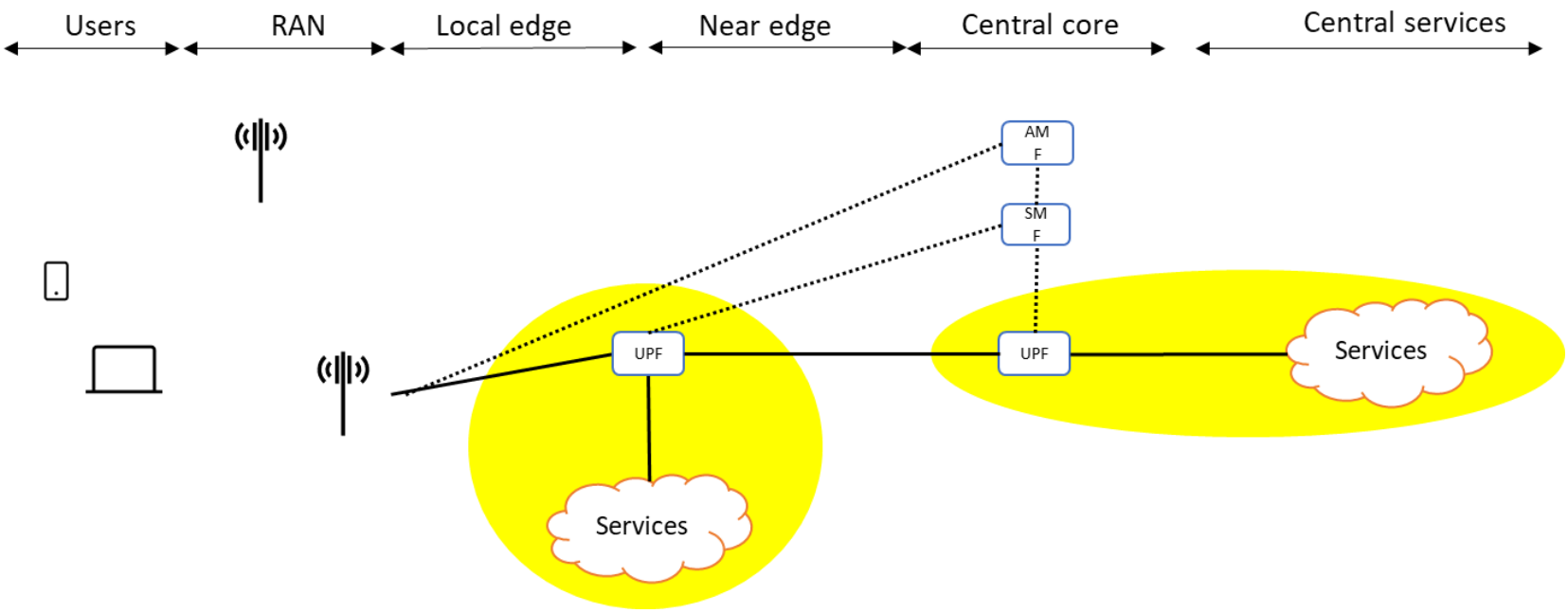




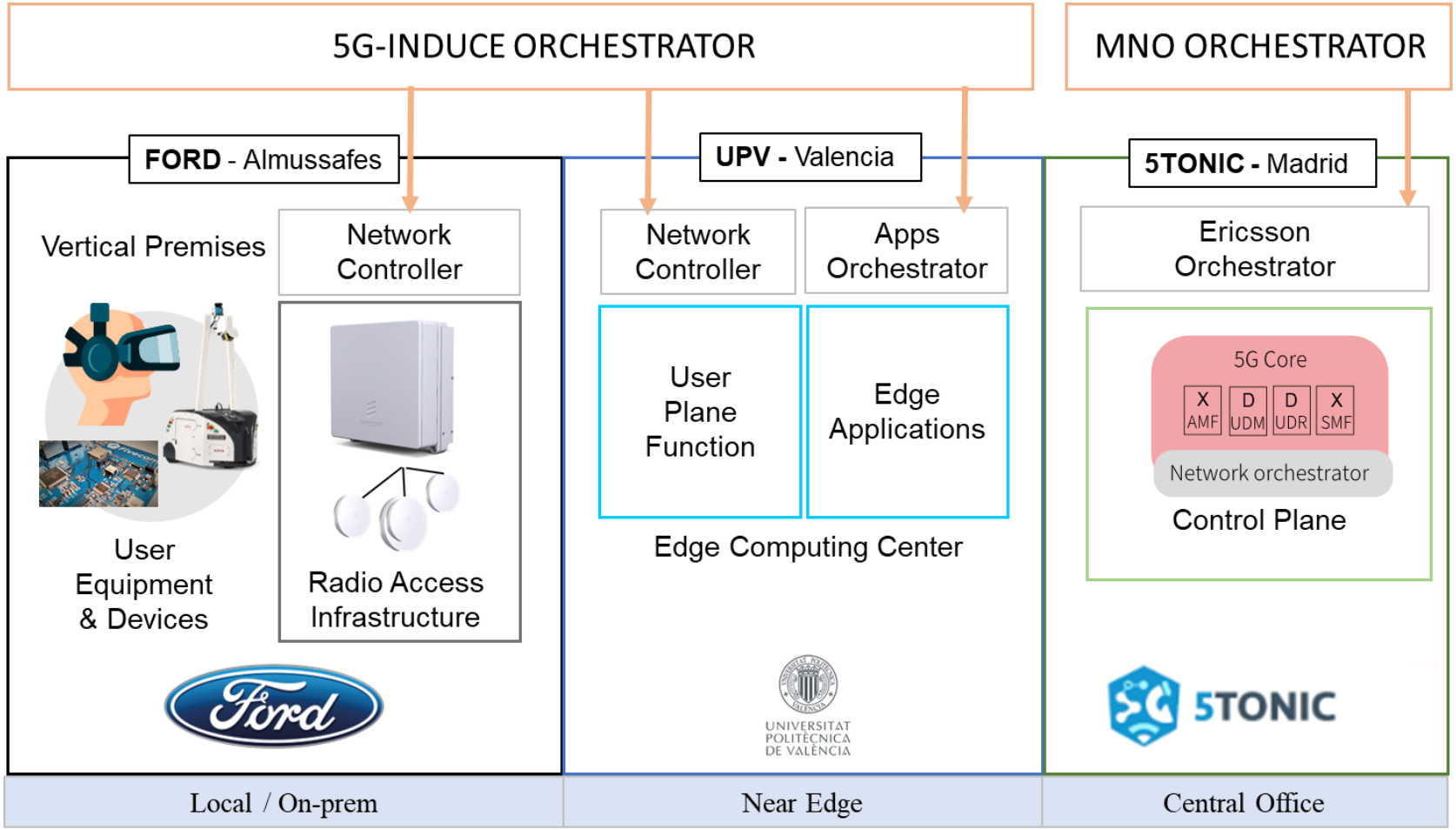
Technology Evolution pace
I4.0 embraces technologies like ML, VR/AR and 5G, in constant evolution

Application Dynamics context
I4.0 attracts more and more innovative digital applications, with variable requirements on performance and deployment models

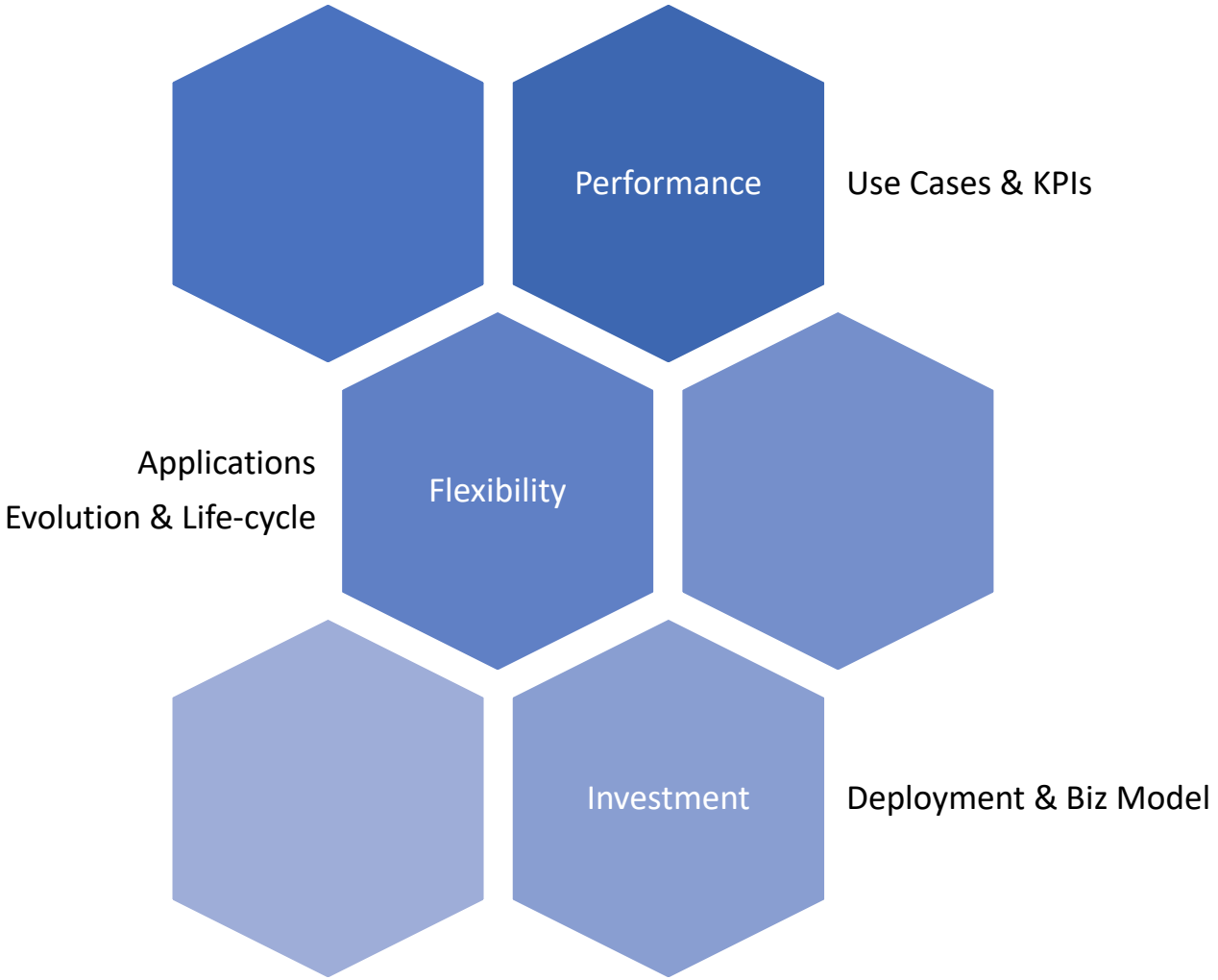
Standard 5G SA model for UP & Services



Creating+Validating Architectures for NPN



Dealing with NPN: Putting it all together



Wrap-up & Invitation

- Unlocking **5G NPN** concepts and architectures into e2e solutions for its technical and business validation is our day-to-day work in 5G-PPP projects like **5G-Induce**

- **5G SA** is, itself, a great platform to innovate upon, enabling the integration and hybridation of transformational technologies such as **VR/AR and ML** with **Edge and Cloud**, for creating brand-new **I4.0** applications

- **We welcome new partners** to experiment and explore new synergies of I4.0 apps with 5G SA, VR/AR and ML

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THANK YOU!

Manuel Lorenzo

Ericsson Spain, 5G-Induce - WP6 Leader

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