

ODINS IN THE 5GASP PROJECT

ODINS

5G FOR SMART COMMUNITIES | 07 DECEMBER 2023



5GASP H2020 - ICT- 2020

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5GASP PROJECT

5G APPLICATION & SERVICES EXPERIMENTATION AND CERTIFICATION PLATFORM



Acceleration of the development, testing and certification of NetApps, through the creation of a common platform, DevOps tools and a certification roadmap.



Provide state-of-the-art testbeds where applications for relevant verticals can be tested and validated in a cost-effective way.



Innovate technically by addressing inter-domain use-cases, security and trust aspects associated with NetApp deployment and Operation.



Provide all the community with state-of-the-art tools for test deployment, test automation, continuous integration and monitoring of testbeds, mainly through Open Source Software tools.



Create a practice community, where developers can share knowledge about 5G NetApps



Create a business model around a marketplace of NetApps, by which all stakeholders can share revenue.



ODINS IN 5GASP

Leaders of WP4

In charge of the transformation of applications and services into 5G Network Applications

Agile methodology to ease the adoption of these technologies for newcomers

Help to other SMEs to develop their 5G Network Applications

Paving the way to create test suites to test and validate the applications in the 5GASP framework

Leaders of the Automotive vertical use cases

Coordinators of the Automotive demos presented to EU reviewers during the project

Supporting other partners to deploy their Automotive applications in a real 5G environment

Dissemination coordinators

Showcasing of the project in multiple international conferences



ODINS IN 5GASP

Two services onboarded in the 5GASP ecosystem and transformed into 5G Network Applications

vOBU

Digital twin of physical OBUs to reduce latency and provide robustness

vOBU migration

Migration of vOBUs to follow the cars through the road

Prior to 5GASP

Manual deployments

No testing

No integration with the Wireless network

Heavy reliability on physical infrastructure insights

No monitoring of the network usage



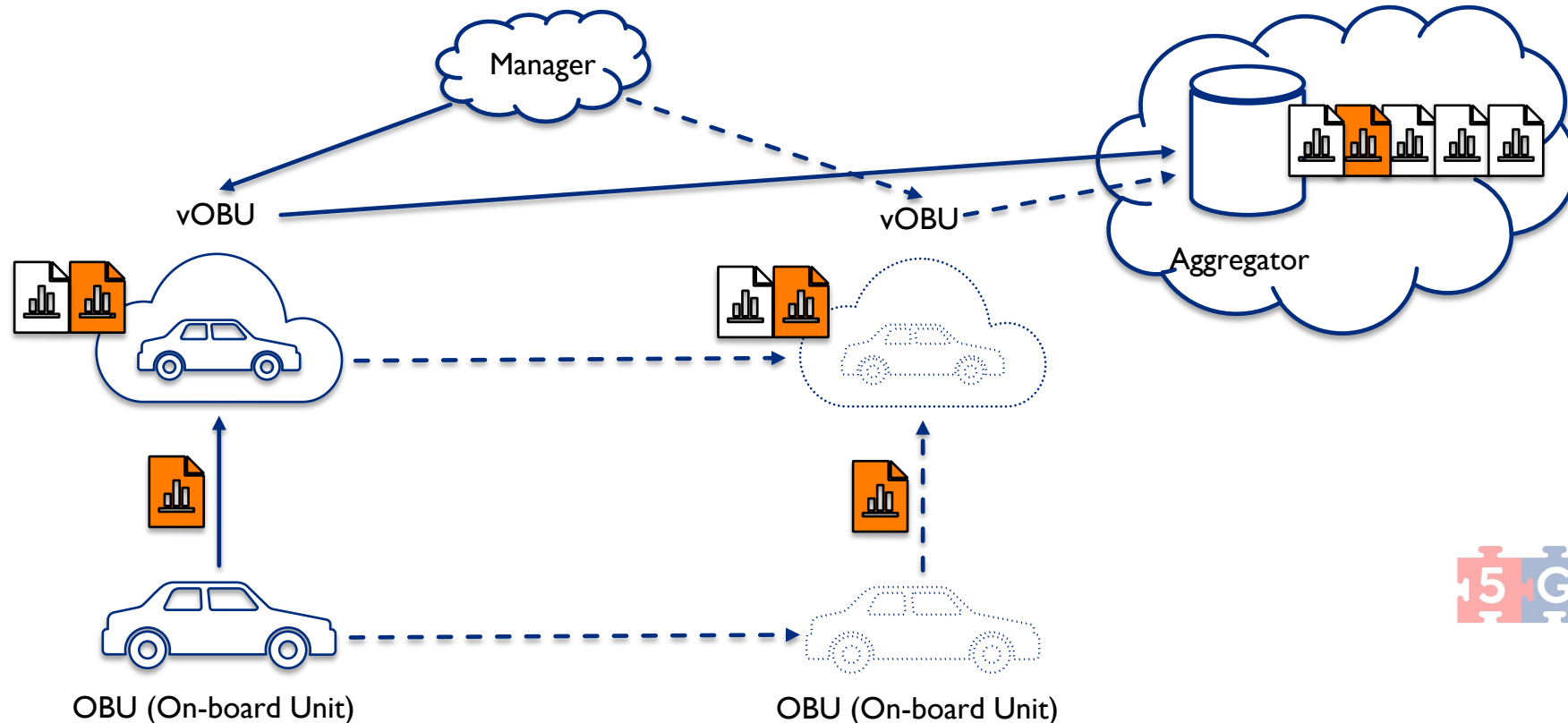
EXAMPLE: THE MULTI-DOMAIN MIGRATION 5G NETWORK APP

Evolution of the vOBU Network Application, which focuses on reducing the time when querying vehicle data

The Multi-domain migration Network App is an application that focuses on **migrating the vOBUs** through different domains so that they can follow the vehicles

Until now it needed insights of the underlying network physical infrastructure to operate

Relied on the access to the SDN controller of the domain



EXAMPLE: THE MULTI-DOMAIN MIGRATION 5G NETWORK APP

Evolution towards a 5G network aware application

Adjusted development process thanks to 5GASP platform

Adoption of 5GASP Methodology

Introduction of tests to validate the functioning, operation, security and 5G readiness of the Network Application

Adaption to CI/CD driven development

Automated deployment in a 5G-ready testbed

Towards the 5GASP certification



ADAPTION OF THE NETWORK APP TO BE 5G AWARE

Before

- Access to the domain's SDN controller

- Knowledge of the physical underlying infrastructure

Solution

- Network Exposure Function (NEF) 5G architecture component

- Accessible to applications using the network

- Offers an API to retrieve network metrics from the 5G infrastructure

 - Network statistics

 - QoS information

 - Location can be retrieved in different ways

- Obtain current cell ID to trigger migrations

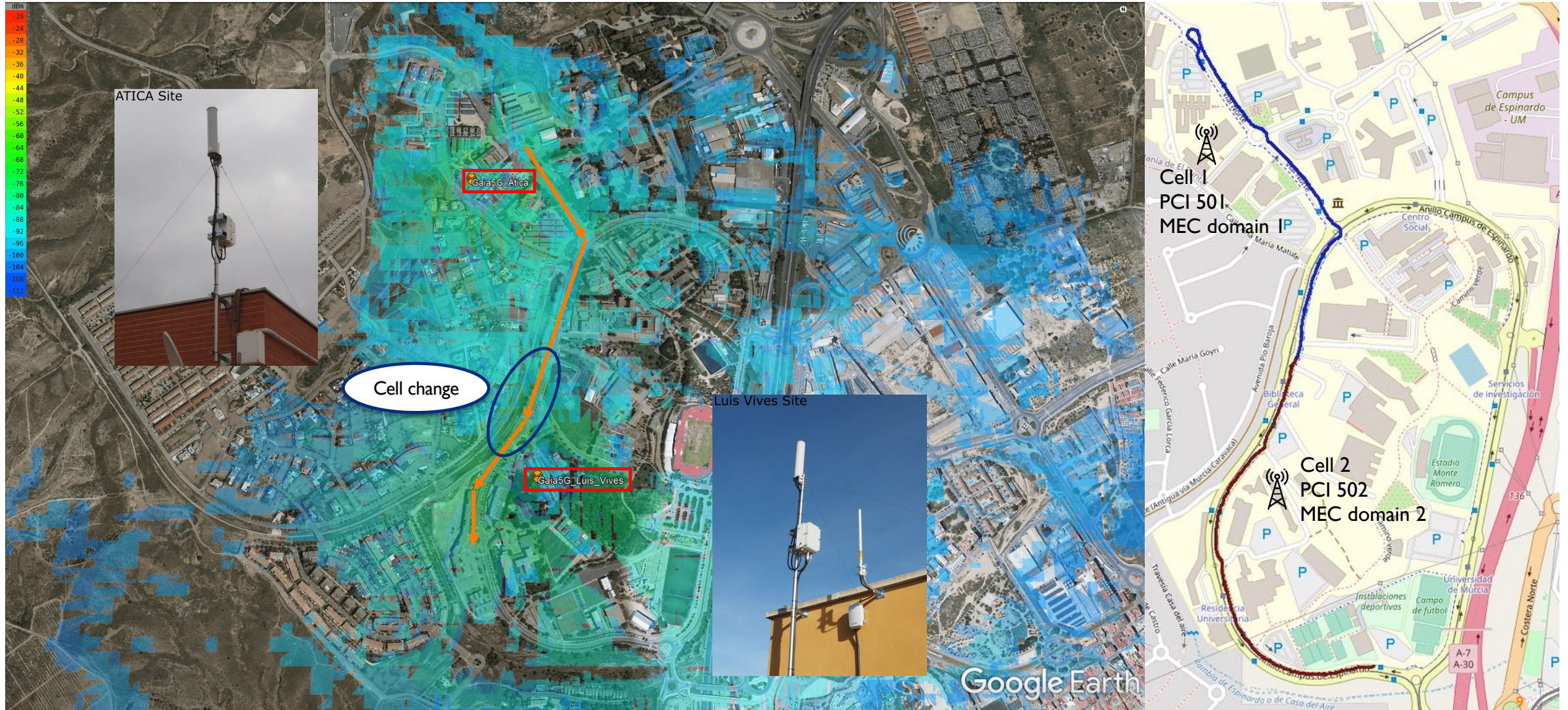
Operation demonstrated and validated last June



VEHICLE AND OUTDOOR EQUIPMENT



VEHICLE ROUTE AND HANDOVER AREA



5GASP

THANKS!



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