



5G Smart Communities Breakout Session

11th October 2023

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5GASSAC winner of 5GSC Call#1

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5GASSAC – A Smart Sicilian Academic Campus



**Università
degli Studi
di Palermo**

5G4ASSAC - Project Overview

SCOPE

5G4ASSAC implements a **5G MPN** to unlock innovative and unique services based on AI, ML, AR/VR technologies, allowing intense **Adaptive Learning** and **Higher Student Engagement** and **Telemedicine Services development**.

Supporting new functional approaches to education and training, the Project develops the **Mixed Reality (XR) Learning Platform** and the **eHealth Learning Management System** that, running on the 5G MPN, will enable immersive education experiences in both universities and hospitals and create interactive clinical scenarios based on IoT and Analytics for a 'Learning by Caring' approach thanks to the eHealth LMS.

STAKEHOLDERS



Coordinator



Università
degli Studi
di Palermo



Beneficiary

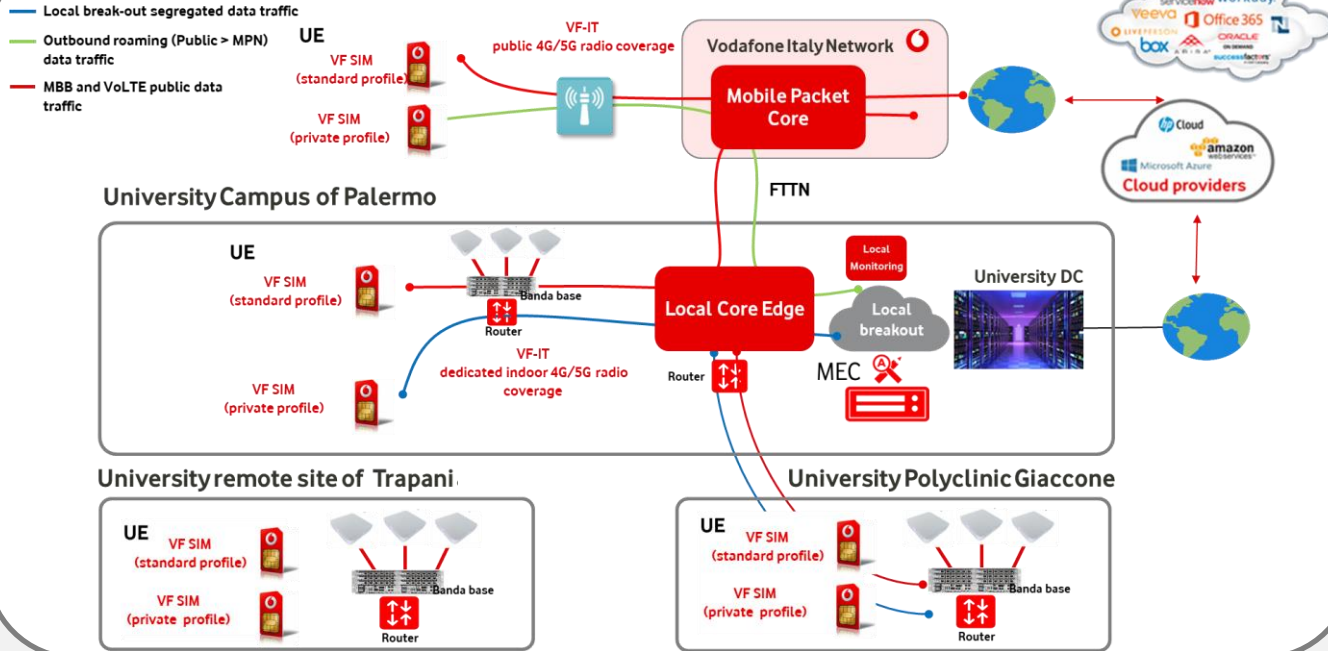


Subcontractors



5G4ASSAC - Infrastructure

ARCHITECTURE



KEY FEATURES



- **Data transmission speeds up to 10x faster** than current ones
- **30x to 50x lower latency** than current services
- **Limited energy consumption**
- **Massive machine communication**
- **High reliability** and security
- **Seamless access from remote** to the Campus applications

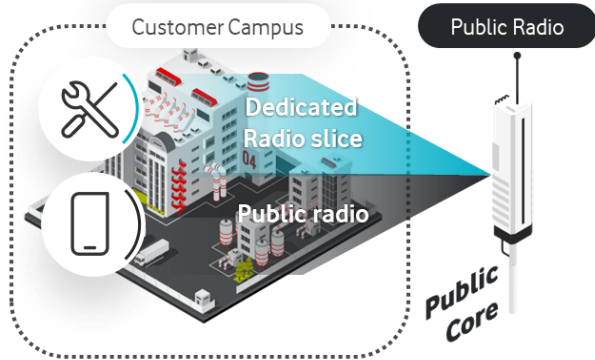


5G4ASSAC – MPN

MPN Segregated

High flexibility
(integration with the public grid)

Cost-performance balance

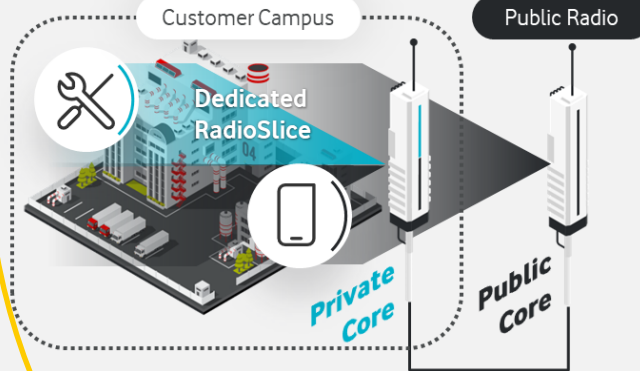


- dedicated spectrum portion
- dedicated (public) coverage – optional
- public core
- integration with public VF network

MPN Hybrid

High flexibility
(integration with the public grid)

High performance



- dedicated spectrum portion
- dedicated coverage
- private core
- integration with public VF network

MPN Dedicated

Service bubble
(data always remain within the local network)

High performance



- dedicated spectrum portion
- dedicated coverage
- private core



5GSC - Key Learnings

02



5G for Smart Communities

Main Steps

- End User better if Coordinator
- Private Companies as beneficiary or affiliates with a business interest in the project

WHO? ...
Defining the Consortium

WHAT? ...
Defining the Project Idea

- Use case with proven benefit to the end user
- Design of the 5G infrastructure based on use cases
- Tech & Bus experts

- Business models:
 - Resale of services
 - Partnership with Private partners,
 - MNOs Co-financing for Hybrid architecture

WHY? ...
Project's sustainability after 3-year trial period



5G for Smart Communities

Administrative



- Endorsement required at national/local level
- Budget allocation based on outline planning
- Very complex reporting
- Set up phase is turning out to be longer than expected
- Project management is fundamental and needs to be engaged since the submission phase



5G fo Smart Communities

Technical challenges



- **Security Guarantees (ban Huawei/ZTE)**
- **Energy Consumption**
- **Stand Alone + Microwave**
- **Use of “Immature” technologies**
- **Flexibility in High Level Design during submission phase is mandatory**



Innovations to bring to European citizens

Good practices

UNIVERSITIES

Education and Health

**Public
Use
Cases**

Entities

HOSPITALS

Smart Mobility

MUNICIPALITIES

Logistics and Drones

**Private
Use
Case**



ARTINESS Use Case

Digital Health



Filippo Piatti
CEO & Co-founder





SMART-I Use Case

Smart Mobility

Mauro Di Giamberardino

CEO & Founder



Q&A





Thank you!