Presentation 6

Project: 5G4ASSAC

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€ 4 MILLION
EU CONTRIBUTION

€ 5.3 MILLION
TOTAL BUDGET

36 MONTHS
DURATION

5G4ASSAC

Research, healthcare

Call 1 projects ● EU countries

5G FOR A SMART SICILIAN ACADEMIC CAMPUS (5G4ASSAC)

LOCATION: PALERMO (IT), TRAPANI (IT)

This project (5G4ASSAC) focuses on education and healthcare while addressing social and geographical exclusion. It aims to create a smart academic campus operating a Mixed Reality Learning Platform to allow immersive education experiences and telemedicine. The project will deploy a 5G Mobile Private Network in the university campuses of Palermo and Trapani, in Sicily (Italy), allowing them to offer new approaches to medical learning, research and information sharing, as well as the remote management of patients.

COORDINATOR
VODAFONE ITALIA SPA

PROJECT PARTNERS
UNIVERSITA DEGLI STUDI DI PALERMO

European
Commission

5G4ASSAC - Project Overview

CEF first Call

Flanders Smart Fields

Hi5

5G4ASSAC

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5G for a Smart Sicilian Academic Campus.
This project is a groundbreaking initiative that uses 5G technology to transform higher education in Sicily, aligning with Europe's goals for digital advancement and fostering an inclusive, tech-enabled academic environment.
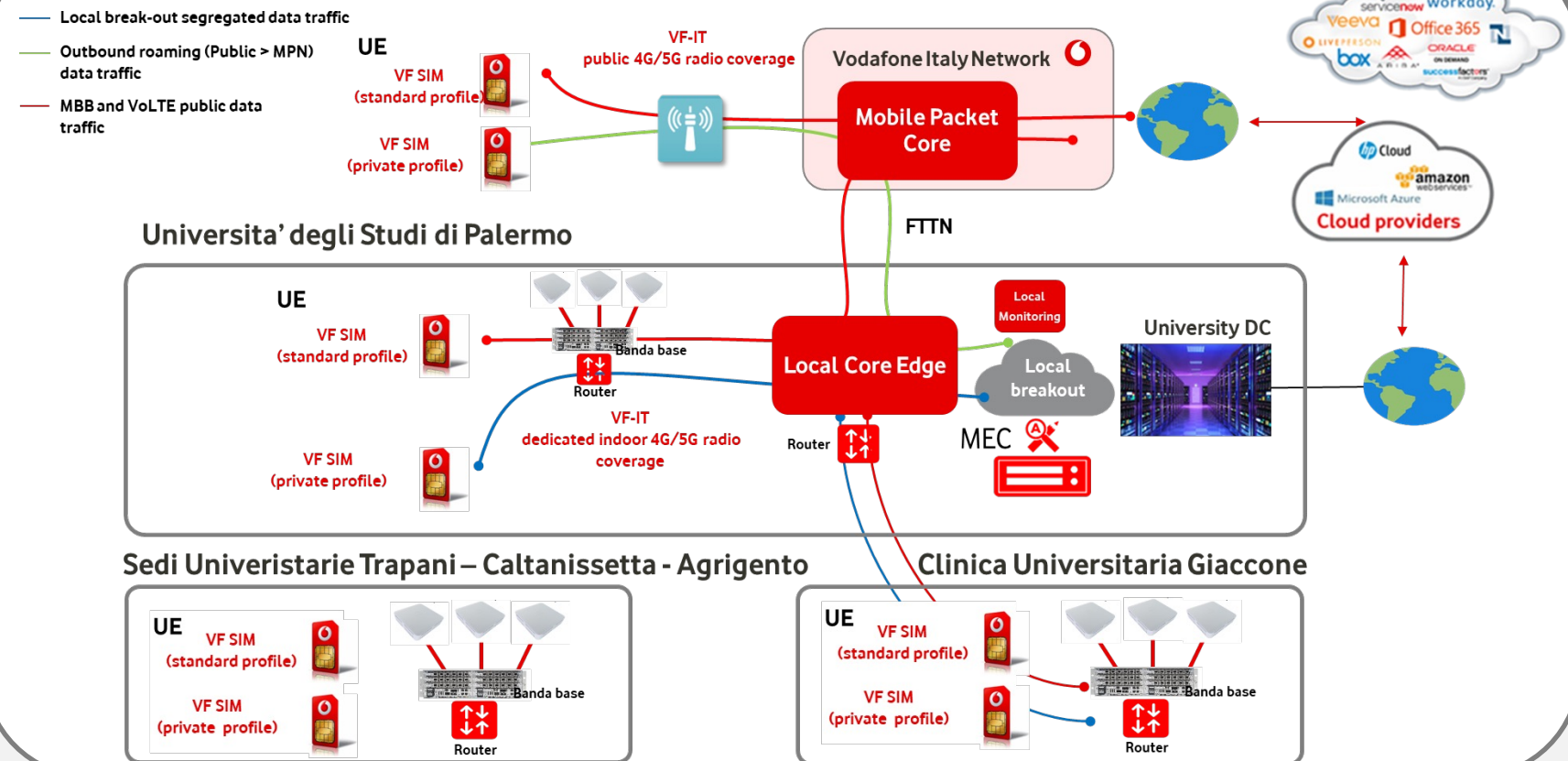
COORDINATOR
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PROJECT PARTNER
UNVERSITA' DEGLI STUDI DI PALERMO

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5G4ASSAC - Infrastructure

- **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

ARCHITECTURE

GOALS

The core of **5G4ASSAC** is our **hybrid 5G MPN**, which delivers **high-speed, secure, and extensive coverage** across the main campus in **Palermo** and the remote site in **Trapani**. This advanced infrastructure guarantees seamless connectivity for students and faculty, both **indoors and outdoors**, ensuring they can access learning resources anywhere on campus—or even remotely.

5G4ASSAC XR LEARNING PLATFORM

One of the flagship applications enabled by this 5G MPN is **the XR Learning Platform**. Designed to revolutionize how students engage with complex subjects, this platform integrates Augmented Reality (AR) and Mixed Reality (MR) to provide immersive, hands-on learning experiences.

In an **urban planning** and **architecture lab**, a professor and students explore a CAD-based augmented reality model of a building. With AR headsets, they examine different design layers, discussing structural and spatial elements. The collaborative session encourages critical thinking and creative problem-solving, making use of the AR model to visualize and refine design ideas.

5G4ASSAC LEARNING BY CARING PLATFORM

The second key application is the **Learning by Caring Platform**. This platform is tailored specifically for **healthcare education**, creating a bridge between academic study and practical healthcare training. By **connecting students, professors, and healthcare professionals** across University and Policlinic, this platform provides a collaborative space for skill-building in a range of medical scenarios.

VIDEO

USE CASE

In a **high-tech medical lab**, a student collaborates with a surgeon to analyze a **3D augmented reality model** of a patient's heart in preparation for surgery. Wearing AR headsets, they simulate each step of the procedure, using real-time diagnostic imaging data—such as ultrasounds and X-rays—overlaid on the model to highlight critical areas. This interactive planning allows them to anticipate challenges and refine surgical strategies.

5GASSAC – A Smart Sicilian Academic Campus

Cinzia Campanella, Head of Innovation &Vertical Solutions Vodafone Business