



# Measuring Key Performance Indicators of 5G Networks

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5G-Tours project has received funding from the European Union’s Horizon 2020 Research and Innovation Programme under Grant Agreement No 856950

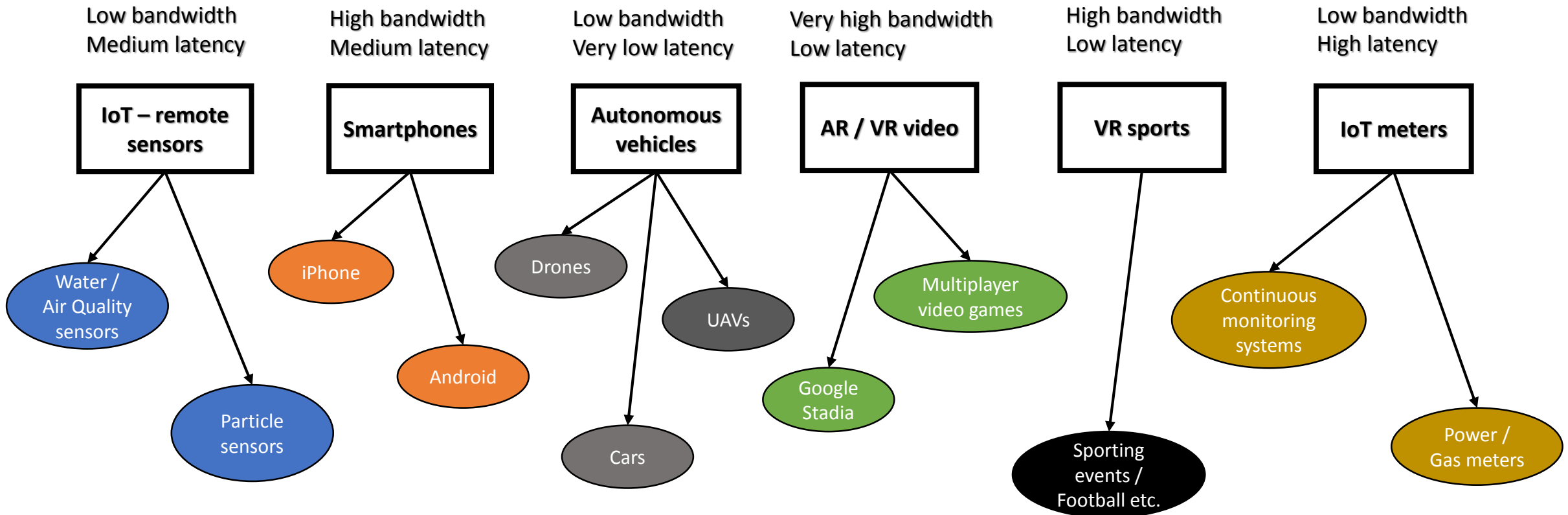
The **5G-TOURS project** is **one of the main ICT19/22 projects** that will deploy full end-to-end trials to bring 5G to real users

The project will provide efficient and reliable close-to-commercial services for tourists, citizens and patients in three different types of cities:

- **Rennes**, the safe city where e-health use cases will be demonstrated;
- **Turin**, the touristic city focused on media and broadcast use cases;
- **Athens**, the mobility-efficient city that brings 5G to users in motion as well as to transport related service providers.

5G-TOURS will fully demonstrate pre-commercial 5G technologies at a large scale, showing the ability of the 5G network to meet extreme and conflicting KPIs while supporting very diverse requirements on the same infrastructure.

# 5G Network Slicing Systems



# Economic objectives

## Strengthen European industry by:

- Reinforcing European leadership in those areas where Europe retains a strong position
- Improving its position in those areas that are currently dominated by other world regions
- Contributing to Europe's positioning in the new opportunities and ecosystem that will be created around 5G technology



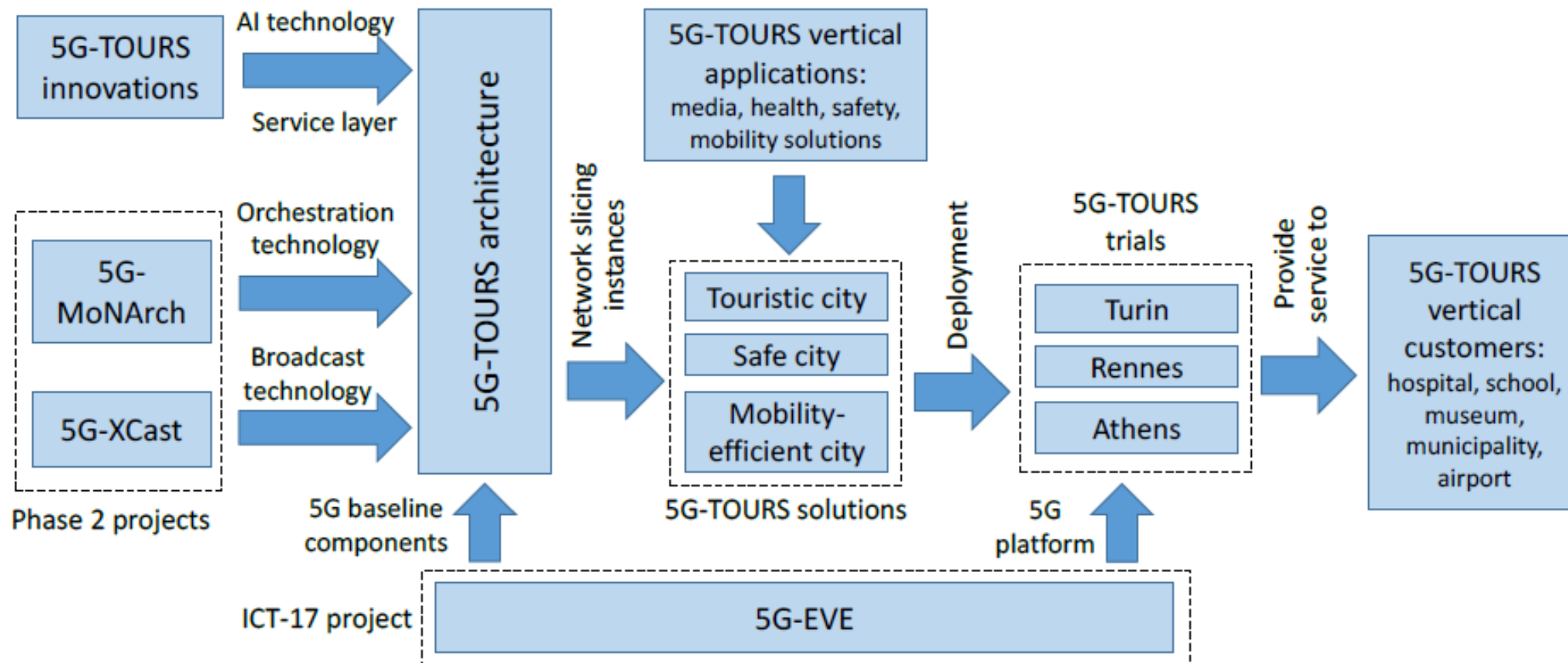
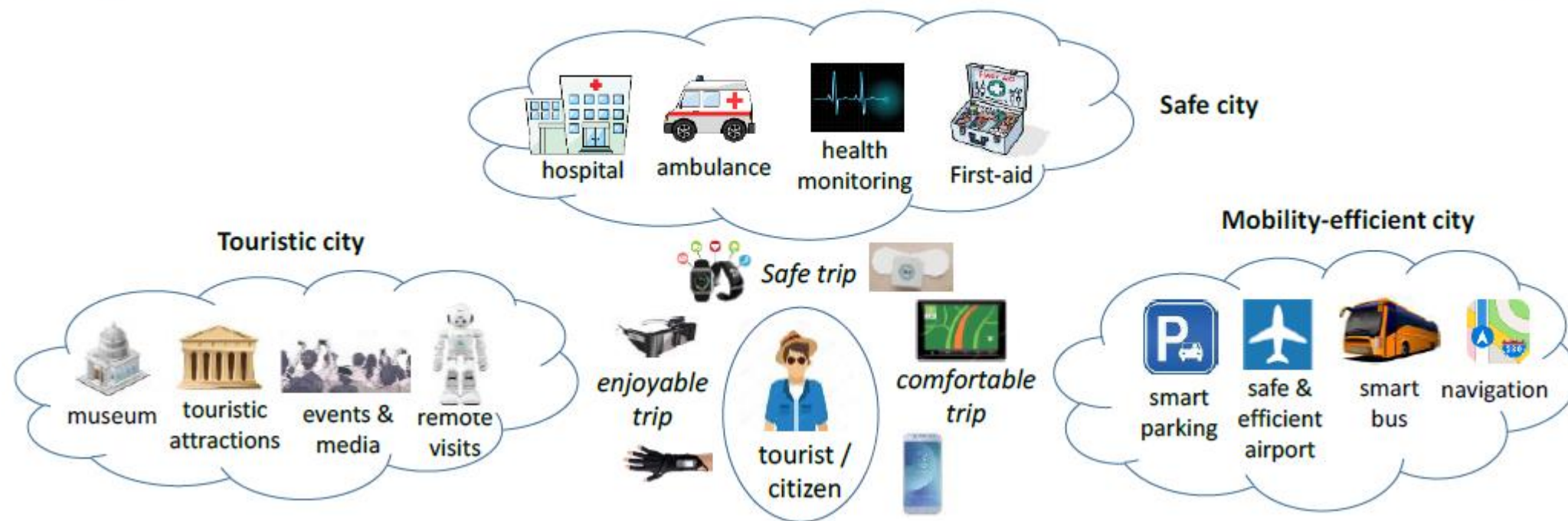


Figure 2. Approach followed by the 5G-TOURS project.

Most of the efforts conducted so far to evaluate 5G, have focused on individual vertical use cases.  
**5G-TOURS aims to fill this gap by demonstrating the ability of 5G to support multiple vertical use cases concurrently on the same infrastructure**

ICT-19-2019

5G-TOURS





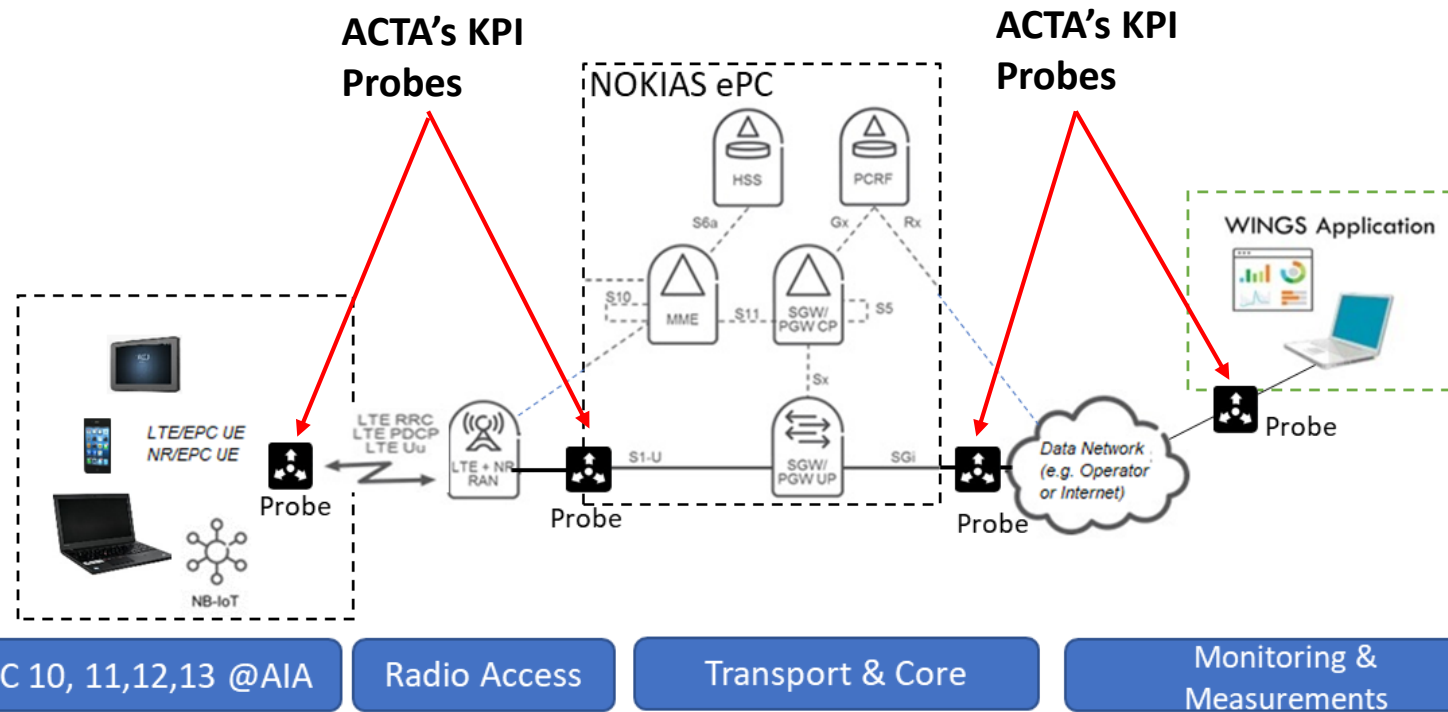
# 5G slices



## 5G applications / slices that will be tested in AIA include:

- Parking monitoring
- Traffic monitoring
- Communications (e.g. data collection and transmission)
- Analytics and decision making (e.g. Airport evacuation)
- Data monitoring and visualization

# Athens Site Facilities



## ACTA will measure 5G Network KPIs that include:

- Latency - round trip
- RAN latency
- Max/Attainable/Min BitRates (Data Rates)
- Jitter
- Packet Loss
- Throughput – sustained demand
- Availability



# Handheld devices

Airport terminals are very large and complex public venues

During the peak traffic it can reach approximately one hundred thousand visitors and employees.

## 5G infrastructure will allow:

- The processing of this crowd in an efficient and safe manner
- Efficient and effective evacuation in security incidents or even in the case of fire, gas leakage, etc.

**Naturally, such an emergency will call for low latency communications with high reliability of being realized.**

Network slice type(s)	URLLC (Ultra-Reliable Low-Latency Communication)
General requirements	Low-latency and high-reliability communications for notifying all travellers about the emergency and providing evacuation continuous guidance in real time
KPIs	Reliability > 99.99%, location accuracy $\leq 1\text{m}$ , density of several devices per m2



<http://acta.com.gr>

<http://5gtours.eu/>



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