



5GIA-TSDSI Webinar on “5G Trials and Pilots”

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5GIA-TSDSI Webinar on “5G Trials and Pilots”

Smart City

5GENESIS Malaga platform

Pedro Merino

ITIS Software, University of Malaga

5GIA-TSDSI-5Genesis.pptx



Overview of the talk

The focus is to present lessons learnt from 5GENESIS project with trials

Content:

- 5GENESIS objectives and context
- Project architecture
- The 5 experimental platforms for 5G
- Malaga platform
 - Deployment area
 - Technologies
 - Example of trial in the city
- Lessons learnt

5GENESIS Project

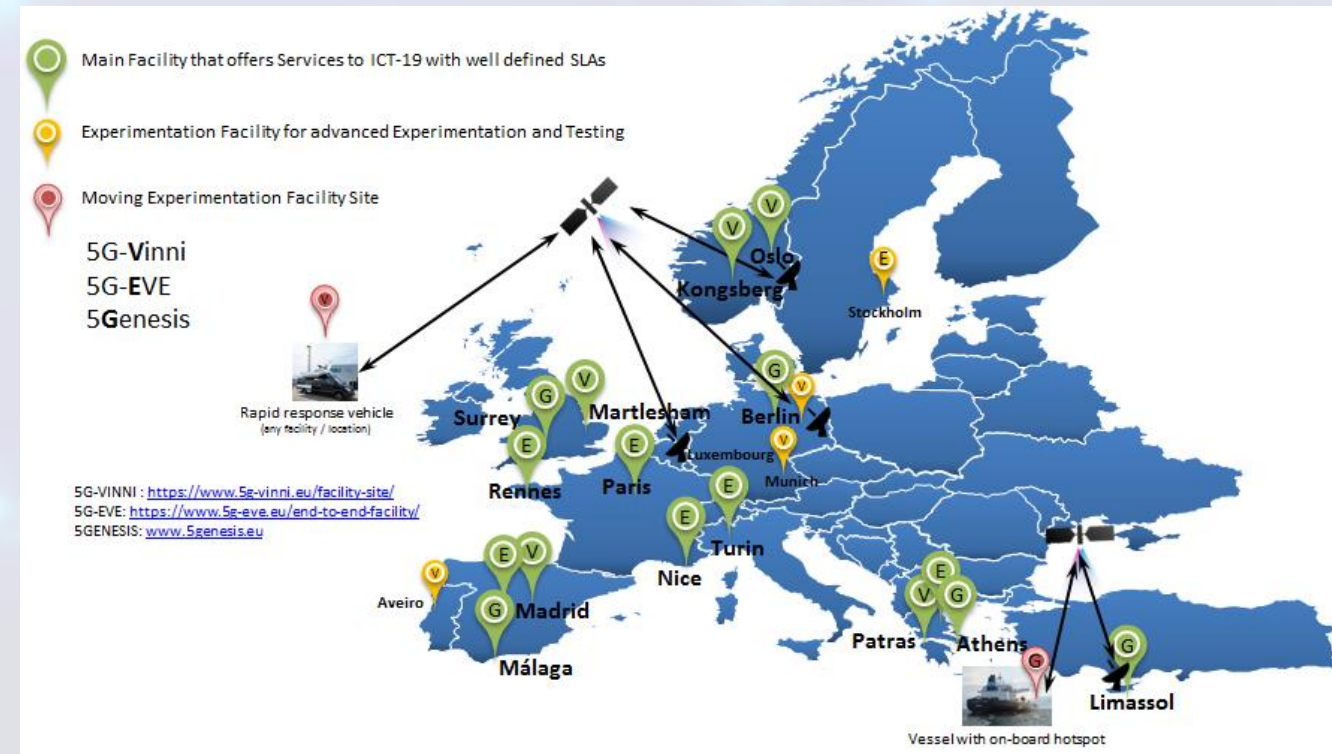
Objectives and context

The main objectives:

- To build 5G experimental platforms
- To support trials
- To validate concurrent experiments with slicing

Context:

- One of the three main infrastructure projects in 5G PPP to support trials
- 29 partners, 15M€, 40 Months

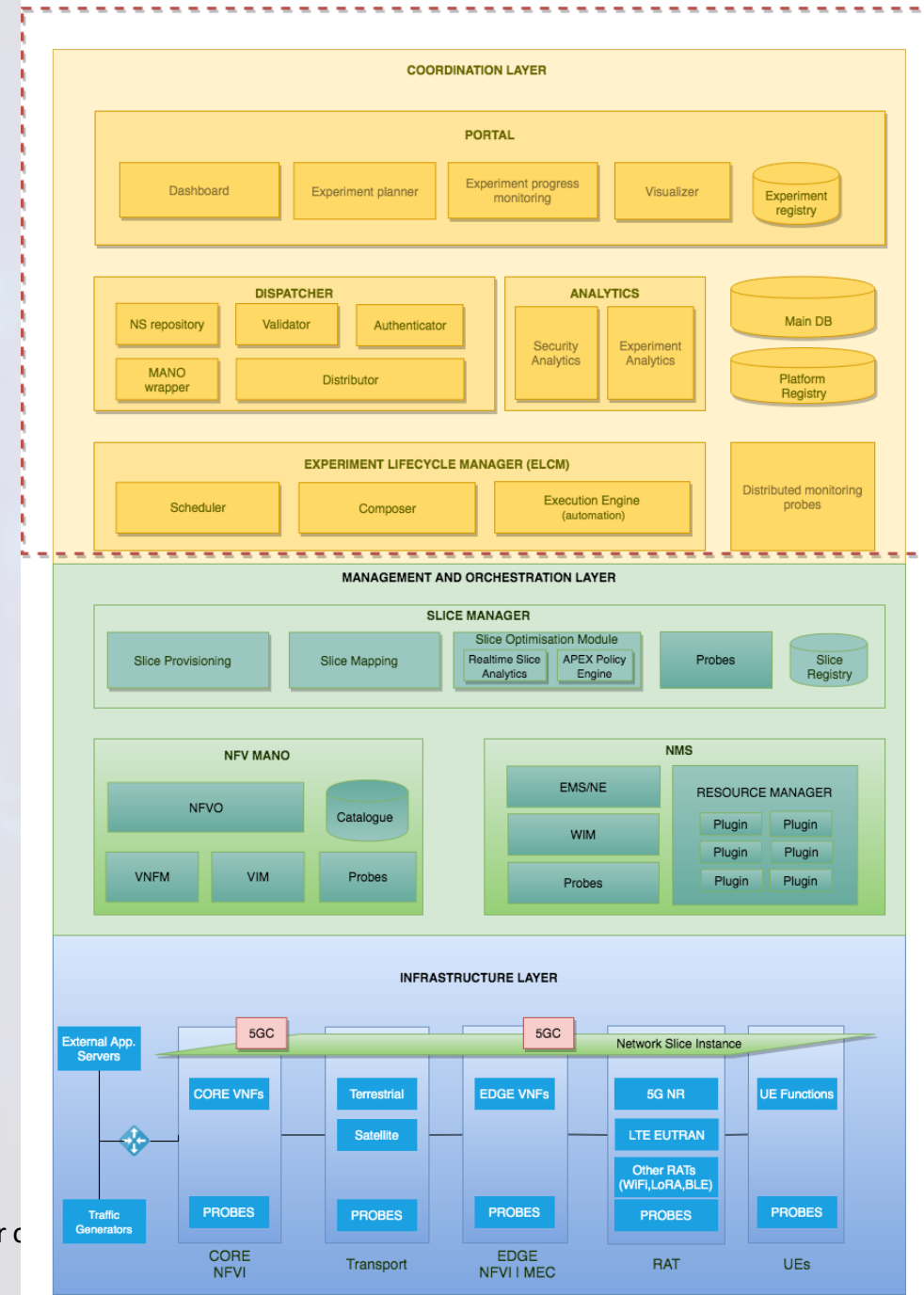


5GENESIS Project

Project architecture

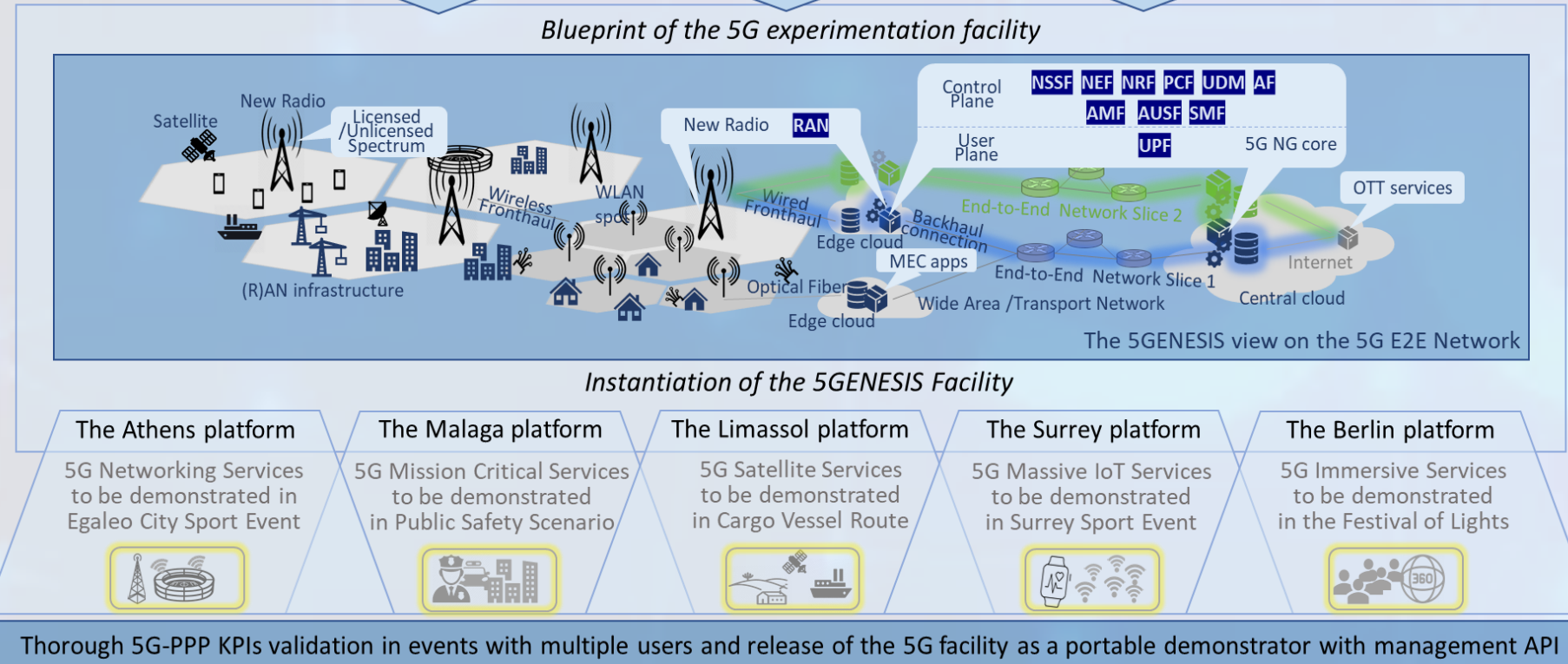
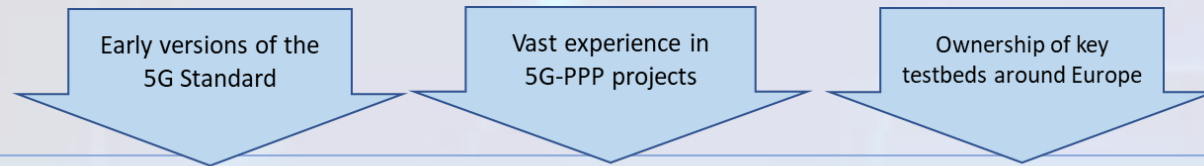
The main ideas:

- Functional 5G network
- Support for automation
- APIS for experimenters
- Same blueprint to be instantiated in each platform

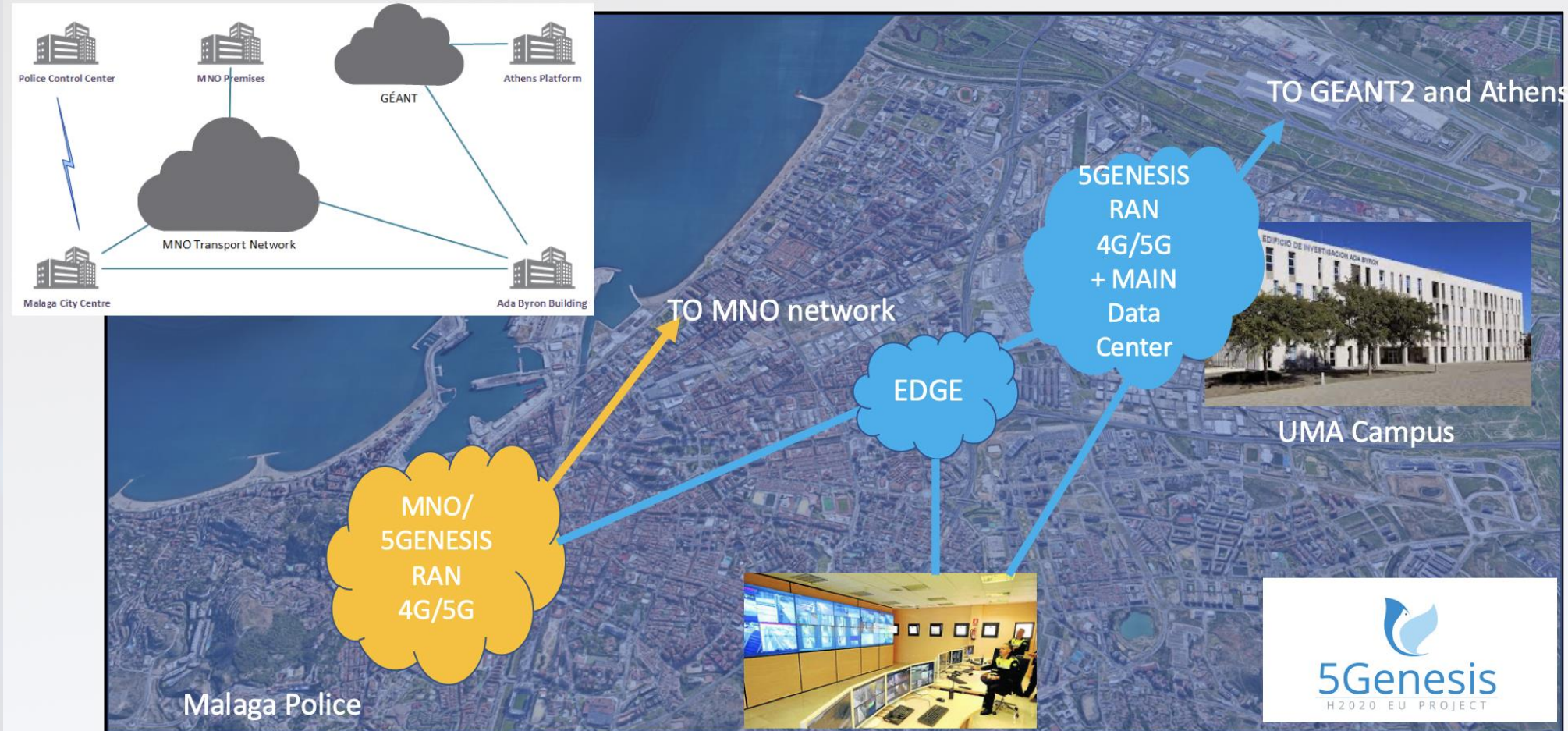


5GENESIS Project

5 platforms with specific features

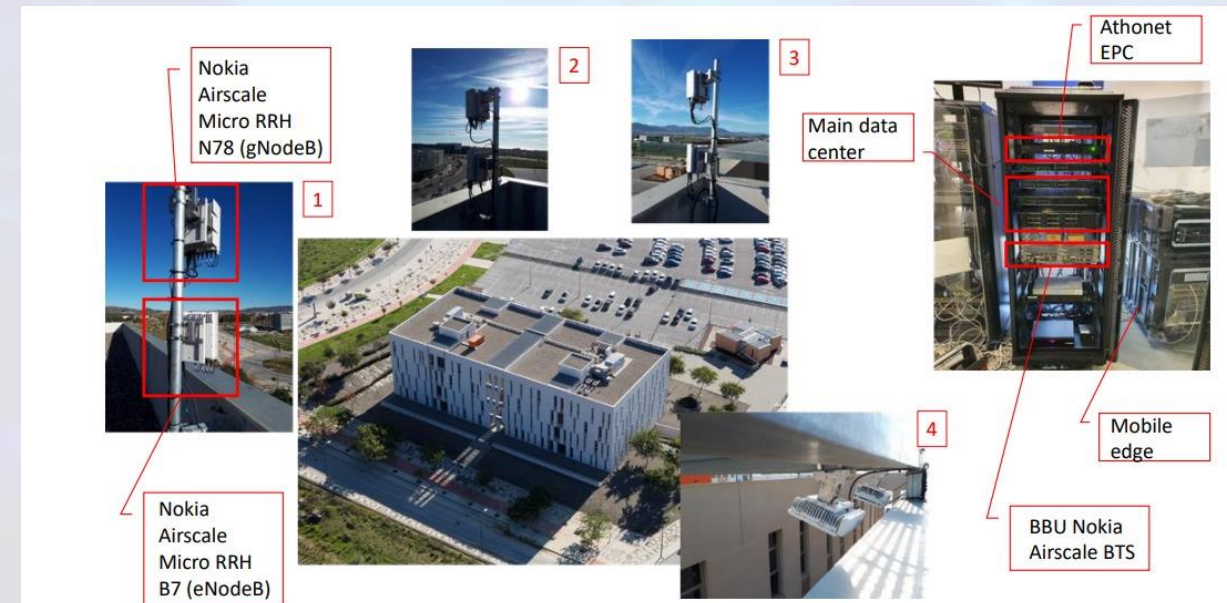
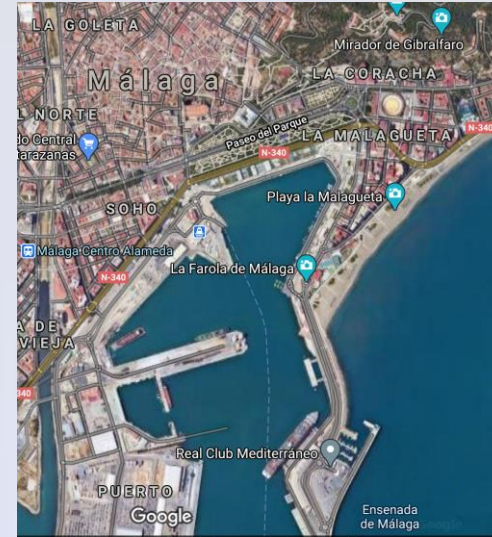


5GENESIS Malaga platform Deployment



5GENESIS Malaga platform Technologies

- Nokia AirScale BBU NSA & SA
- micro RRH AHHA 4G 2600MHz (20Mhz)
- micro RRH AWHQF 5G NR 3500 MHz (50Mhz)
- 5G mmWave Outdoor Solution AEUB
- MOCN support, Telefonica new PLMN+ test
- EPC Rel. 15 supporting NSA at UMA
- 5G Core supporting SA at UMA
- Provisioning of SIM cards



5GENESIS Malaga platform

Example of trial

Mobile video for security in the city

- Access to fixed and mobile video cameras by police officers
- 3GPP mission critical communications (MCS)
- Service validation
 - Operation in the Police protocols
 - Objective KPIs to compare 4G vs 5G



5GENESIS Malaga platform

Example of trial

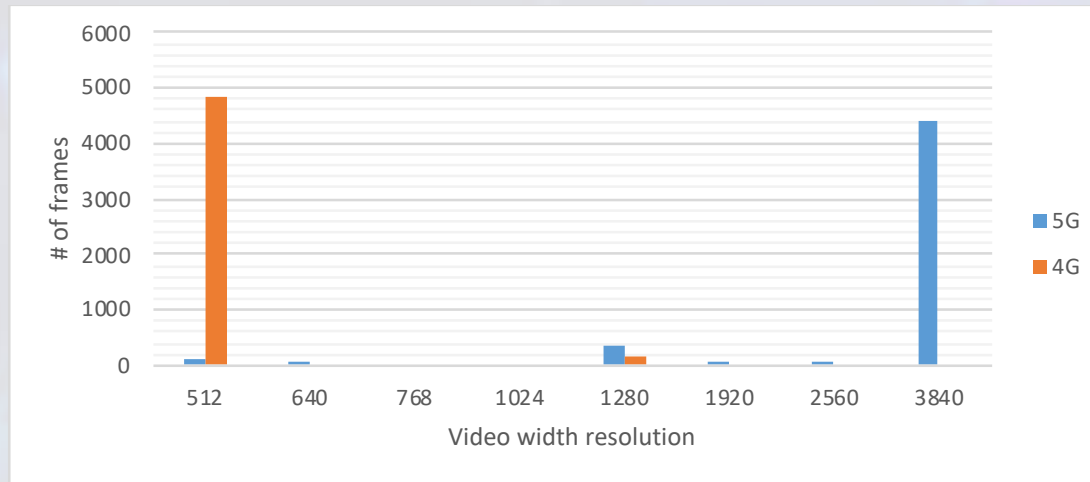


Figure 1 Video resolution in 4G vs 5G

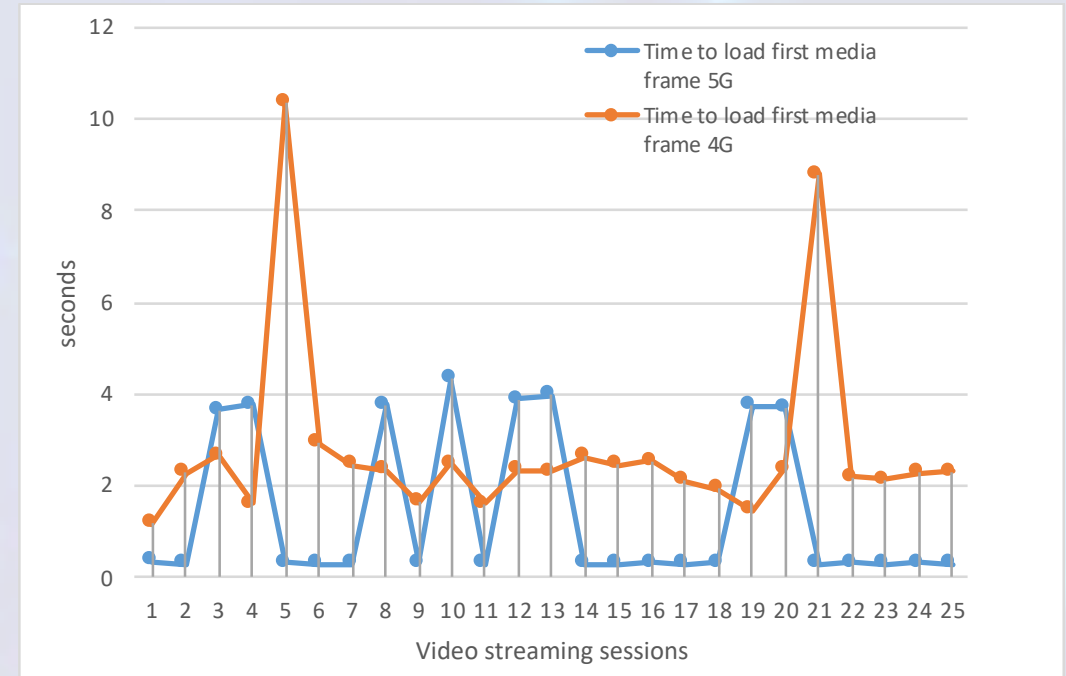


Figure 1 Time to load first media frame 4G vs 5G

Lessons learnt

For 5G researchers and service developers:

- Early validation with testbeds is a must
- Testbed expert operators make a difference

For experimenters:

- Repeatable test campaigns
- Minimize human user interaction and automate as much as possible

For Smartcities testbed builders:

- Sharing spectrum with MNOs is a good option (MOC)
- Exposing remote access to testbeds increase users

Thank You

Pedro Merino, pmerino@uma.es