

# 5GCity Newsletter # 5 - July 2019



*5GCity: Developing and deploying 5G neutral hosts with municipalities, ICT-infrastructure owners, Telco for new 5G-powered Smart Cities.*

A colorful banner for the "5GCity Hackathon Lucca". The banner features a central illustration of a person sitting on a bench, holding a smartphone, with large, colorful "5G" letters behind them. The text "5GCity HACKATHON LUCCA" is prominently displayed. Below this, it says "18-22 NOVEMBER 2019" and "REGISTRATION NOW OPEN! www.5gcity.eu". The banner also includes the "5GCity Consortium" logo and a grid of member logos: Acelleran, ADLINK, Anemone Barcelona, betevé, cellnex, CITA @ Eures, Nextworks, Rai, ubiwhere, University of Bristol Smart Internet Lab, ITALTEL, MCG, NEC, and Virtual Open Systems. The banner is set against a background of teal, pink, and blue geometric shapes.

**5GCity**  
www.5gcity.eu  
@5gcity

**5GCity HACKATHON LUCCA**  
18-22 NOVEMBER 2019  
REGISTRATION NOW OPEN!  
www.5gcity.eu

**HACK THE 5GCITY: NEW SMART APPS IN 5GCITY SLICES**

Project Funded  
5G PPP  
PUBLIC-PRIVATE PARTNERSHIP  
5g-ppp.eu

5GCity Consortium

Acelleran, ADLINK, Anemone Barcelona, betevé, cellnex, CITA @ Eures, Nextworks, Rai, ubiwhere, University of Bristol Smart Internet Lab, ITALTEL, MCG, NEC, Virtual Open Systems, WIND

Don't miss it!

[REGISTRATION NOW OPEN](#)

---

## TECHNOLOGY NEWS

---

### The Unveiling of 5G Ready Smart Urban Furniture and Deployment of a Media Use Case



Source: Ubiwhere

On June 06th, **Ubiwhere and Accelleran**, partners of the 5GCity consortium, have jointly installed, in the city of Guimarães, Portugal, a new kind of **multi-tenant and multi-technology street urban furniture, offering Neutral Hosts** the chance to use common multi-purpose streetlight poles to provide cellular infrastructure and connectivity. The Smart Lamppost (<http://smartlamppost.com>) solution, co-developed by Ubiwhere, has integrated both an Electrical Vehicle Charging Station, alongside a fully functioning LTE network, made possible **by Accelleran's E1000 Small Cells and Accelleran RAN/vRAN solutions.** [MORE](#)

---

## Best practices and rationalisation in the 5G mobile networks deployment

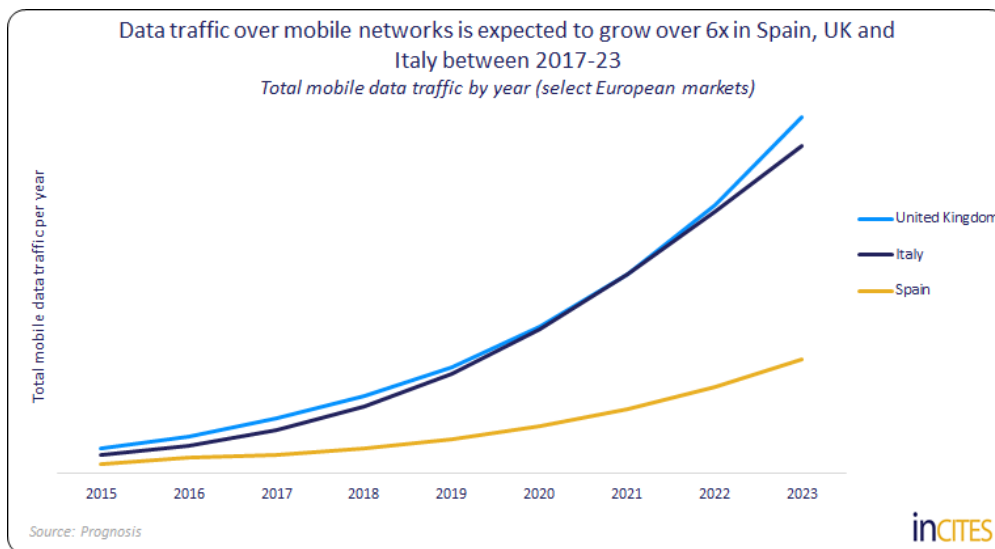


Source: Cellnex

5G is the fifth generation of mobile internet connectivity that stands out for its greater bandwidth, ultra-reliable communications, low latency and massive communications Machine to Machine. It will enable a lot of future applications in different sectors such as education, health, mobility, industry and leisure. It is also expected to reduce the digital gap, referring to the differing access to information between the ones who have a good internet connection and those who do not. Moreover, 5G deployment is expected to foster the industrialization processes by empowering the key reference businesses in every country.

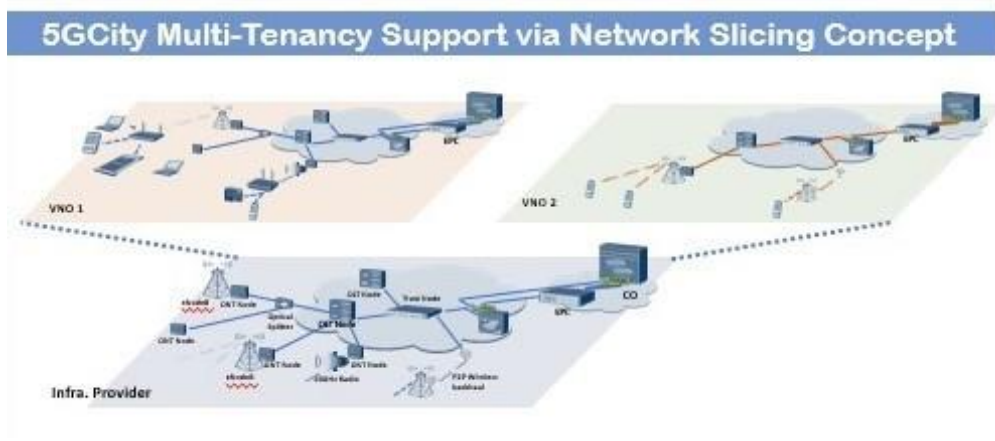
[\*\*MORE\*\*](#)

## The 5GCity Neutral Host Model



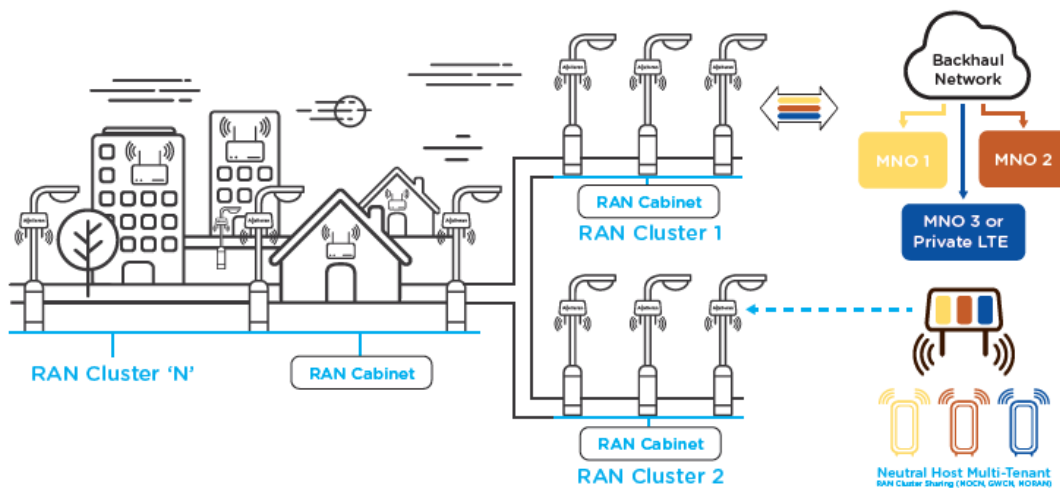
Traditionally, mobile networks are designed as a set of macrocells that provide radio coverage to a large area. In the last years, however, mobile data traffic is experiencing an explosive growth stemming from the use of bandwidth-starving applications driving the evolution of mobile networks and vice versa. inCITES Consulting estimates that mobile data traffic is expected to grow at a CAGR of 36.2%, 35.5% and 39.7% in UK, Spain and Italy (countries hosting 5GCity deployments), respectively, between 2017-23. [\*\*MORE\*\*](#)

# The Neutral Host model: some considerations from the TELCO point of view

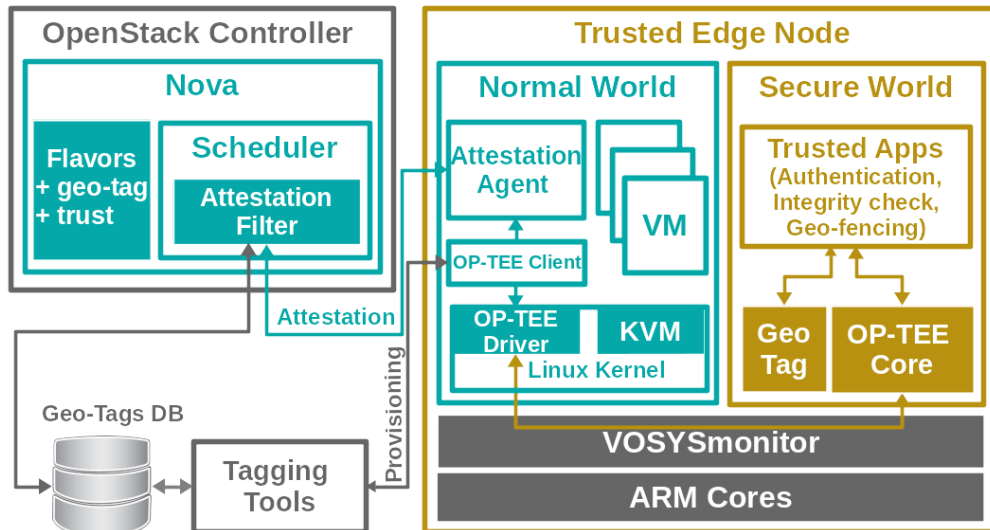


Source: 5GCity partners

The proposed model in 5GCITY consists in managing a network infrastructure to host (without imposing technical and economic constraints) any entity that uses it to provide its services to its end users. In the model, the Neutral Host (the infrastructure owner) is the Operator who develops and manages the network and offers network capacity slices to the various 5G service providers, which can be TLC retail, OTT, Industries, the same Public Administration. [MORE](#)

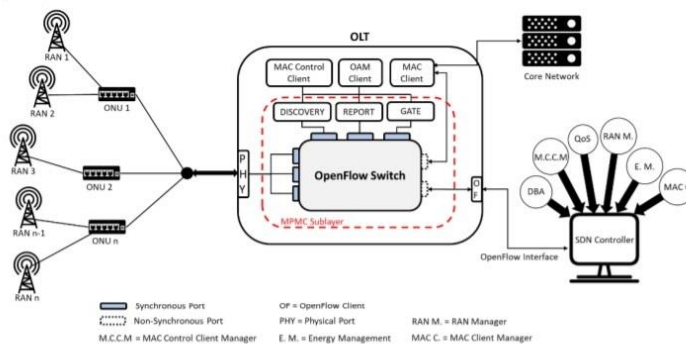


# PUBLICATIONS



Source: VOSYS

- Secure location aware VM deployment on the edge through OpenStack and ARM TrustZone.** At EuCNC 2019, was presented the paper on the location-aware capabilities of a trusted EdgeVIM, work done by Virtual Open Systems as part of the 5GCity project. The goal of developing a VIM with integrated security features is to build a trusted edge based on the hardware isolation of ARM TrustZone. On top of that, the trusted VIM is used as a secure foundation to perform location-aware virtual machine deployment utilizing the dispersed nature of the infrastructure. [MORE](#)



SDN-based 5G EPON Architecture

Source: 5GCity partners

- Network Slicing-aware NFV Orchestration for 5G Service Platforms**  
 Presented at EuCNC 2019, the paper is a survey of how various network virtualization solutions address slicing, reviewing the management and orchestration tools available to implement network slicing, and describing the slice-aware orchestration platform designed for 5GCity. The 5GCity “Slice Manager” enables the virtualized and non-virtualized network elements and function to be easily logically segmented, configured and reused in order to meet various demands. [MORE](#)

---

## HIGHLIGHTS ON PAST EVENTS

---



From 11-12 June 2019, the [5GCity](#) Consortium has organized in Bristol at the suggestive location of M-Shed, the 1<sup>st</sup> **5GCity Hackathon**. The 5GCity project, in its last year of execution, focuses on live demonstration of 5G services in three cities already going through digital transformation: Bristol, Barcelona, Lucca. 5GCity consortium was involved in the organization and implementation of the 1st 5GCity Hackathon.



Source: Smart Internet Lab

...and the winning team was **e-HEALTH Team** with their **Air Quality service**. Congrats **Brendon, Lewis, Hilary, Ka Hu!** [MORE](#)

---

## 5GCity 6h F2F Meeting in Bristol







Source: Smart Internet Lab

In Bristol, from 9 to 11 June, an intense 6th GA meeting took place, where the outcomes strength Consortium commitment and determination to achieve the project results.

Co-located with  
the 7<sup>th</sup> GLOBAL 5G EVENT  
17-18 June 2019

**EUCNC**

**EUROPEAN CONFERENCE ON NETWORKS AND COMMUNICATIONS**

VALENCIA (SPAIN)  
18-21 JUNE 2019

VALENCIA CONFERENCE CENTRE

European Commission iTEAM EUNASHIP IEEE IEEE ComSoc



Source: 5GCity partners



Source: 5GCity partners

Last 18-21 June 2019 in Valencia, the **5GCity Consortium** was heavily involved in the EUCNC 2019 event with multiple activities: participation to panel discussions and special sessions with the 5G scientific community convened in Valencia, presentation of results and achievements, showcasing of demos and a live outdoor trial with important speakers. [MORE](#)

---



Source: Forum Lucca

Last 6-7 June 2019, the 16th **European Digital Forum of Lucca** hosted the most important themes that will influence the future of the European and global technological market.



Source: Forum Lucca

One of the main topics: the **5G**, a new boost to the evolution of the infrastructure; how it will affect citizens. A strong contribution to the event was given by 5GCity Consortium with Lucca deployment and the analysis of new verticals in the media industry. [\*\*MORE\*\*](#)

---

## UPCOMING EVENTS



## 6th OSM Hackfest in LUCCA!

ETSI's Centre for Testing and Interoperability and the OSM community are organizing the 6th OSM Hackfest next 18-22 Nov. 2019. The event will be hosted by 5GCity Consortium in Lucca, co-located with the 5GCity Hackathon. The event will offer a great opportunity to share and learn with OSM developers and module leaders, and explore further opportunities for synergy and collaboration with 5G research activities. Full information and registration will be published soon on [OSM](#) and [5GCity](#). [REGISTRATION NOW OPEN!](#)

[MORE NEWS HERE](#)



We are very excited about the progress of **5GCity** project.  
We will keep you informed of future results and innovations through our newsletters.

---

#### 5GCity Consortium



5GCity project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 761508

---

*Copyright © 2018 5GCity, All rights reserved.*

**Our mailing address is:**  
[info@5gcity.com](mailto:info@5gcity.com)

Visit our website:  
[www.5gcity.eu](http://www.5gcity.eu)

Twitter [@5GCity](https://twitter.com/5GCity)  
LinkedIn [5GCity](https://www.linkedin.com/company/5GCity)