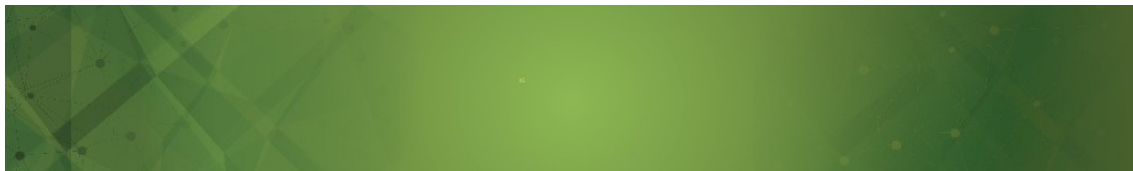




5GCity Newsletter

5GCity: developing and deploying a virtualized neutral host platform for interested parties to deploy smart city services.



The [EU H2020 5GCity](#) project aims to introduce the novel concept of a **neutral host** to smart cities, whereby providers (i.e., municipalities) deploy basic infrastructure that then other parties or municipalities themselves, can use or rent out to implement novel use cases at a fraction of the cost and time.

To do so, **5GCity** is busy developing and deploying a virtualized **neutral host** platform that will allow interested parties to deploy smart city (virtualized) services much like in the cloud domain. In order to cater to the widest possible range of use cases and potential clients, the platform itself will be deployed in a distributed manner. It will go from the very edge of a network in street-side cabinets, running resource-constrained devices, all the way to clusters using standard, off-the-shelf x86 servers. 5GCity targets deployment will take place in three different municipalities: **Barcelona**, **Bristol** and **Lucca**.

TECHNOLOGY NEWS

- **Unikraft - Specialized Operating Systems and Virtual Machines**



One of the main achievements of this period has been the design, early implementation and open source release of **Unikraft**, a tool that allows us to *automatically* build tiny, specialized operating systems and virtual machines targeting specific applications. It can boot in milliseconds, consuming only a few MBs of memory (ideal for edge deployments) and allowing to potentially run thousands of concurrent instances on an x86 server.

Unikraft is there to plug that gap, is already a Xen incubation project under the auspices of the **Linux Foundation**, and constitutes one of the core components of the 5GCity architecture. Unikraft has already been presented at *FOSDEM* in Brussels (the large open-source conference in the world) and was presented at **QCon London** and **Cambridge University** in March; further events are also coming down the pipeline. [More information](#)

- **5GCity: The Run of the Neutral Host in the Cities**

5GCity has been busy implementing also the equipment deployment phase, installing the necessary hardware in the cities to run the neutral host, virtualized platform on top.

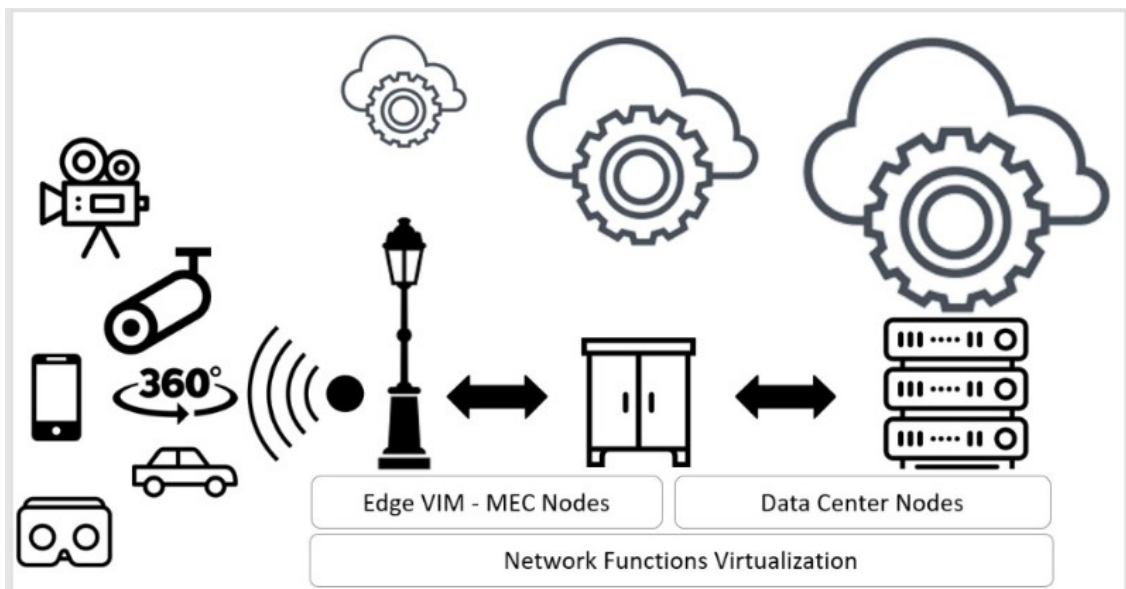


5GCity partner Accellera's Small Cells

5GCity partners have already deployed a small cell in the city of Barcelona that operates live in the commercial LTE 3.5GHz spectrum, streaming content from a local edge server towards LTE 3.5GHz smartphones. A demo of such equipment was presented at the **Smart City Expo World Congress 2017** last November (18,000 visitors from 700 different cities) and during the **Mobile World Congress 2018 in Barcelona** (107,000 visitors).

- **Lucca 5GCity - High-Resolution Cameras**

5GCity has been working on defining its architecture, which will be finalized before the end of the project's first year, as well as its use cases. For instance, in the city of **Lucca**, **5GCity** is deploying high-resolution cameras to monitor and capture illegal dumping, which is critical to the city's municipality, since it hosts multiple large yearly events. Other 5GCity use cases include, but are not limited to, UHD video distribution and mobile backpack units for real-time video transmission.



5GCity use case in Lucca

COMING EVENTS

Presentation of 5GCity first-year achievements on media-related use cases during the [15th European Digital Forum](#) (June 14-15, 2018 – Lucca, Italy)

Participation of 5GCity delegates at the joint Workshop during [EUCNC 2018](#) (June 18-21 - Ljubljana, Slovenia)

PAST EVENTS

- Presentation of 5GCity activities at the Embedded Linux Conference + OpenIoT Summit North America Summit (March 12-14, 2018 - Portland, OR) with a speech entitled "*Mixed Critical IoT Edge Systems Through Virtualization*". Among the 100+ sessions held, the 5GCity speech was promoted by the Linux.com.
- **5GCity use case at Smart Cities- IEEE 5G Summit in Trento**



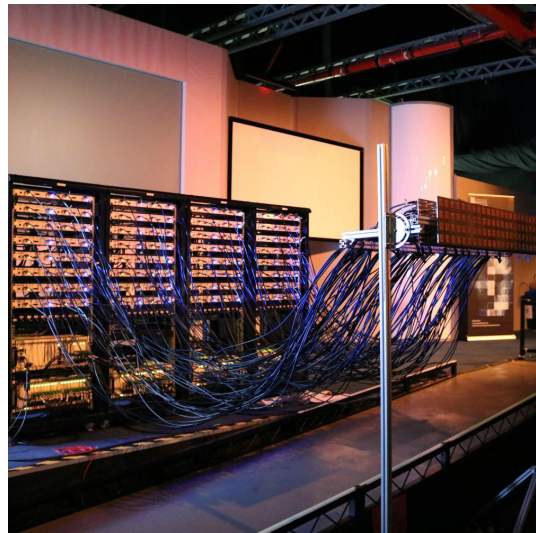
The 5G Summit took place in **Trento, Italy, on March 6, 2018**, with presentation and demos of 5GCity partners [Wind Tre](#) and [Italtel](#). It was the first time the event was organized in Italy. [IEEE 5G Summits](#) are organized by [IEEE Communication Society](#) within a strategic framework based on the principles that embrace Industry's interests and priorities.

- **5GCity partners at the MWC2018**



Accelleran, I2CAT, Italtel, Cellnex/Retevisión took part in the [Barcelona's Mobile World Congress 2018](#). (Barcelona, 26 February -1 March 2018). An important opportunity to meet some of the prestigious partners, to share information and details on the **5GCity** project.



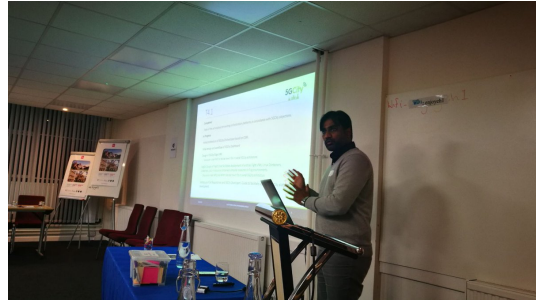


Source: Cellnex/Retevisión, Accelleran, Italtel

- Presentation of the 5GCity project at the Visions for [Future Communications Summit](#), (Lisbon 23-24 October), organized by Network2020 with the support of 5G Infrastructure Association, European Commission, IEEE and National Science Foundation.
- Presentation of 5GCity and its media-related use cases at [BiT Experience 2017](#) (Madrid, 4 – 5 October 2017), including participation in a panel on “5G and new challenges of AV and Media” along with 5GMEDIA project.
- Presentation of the **5GCity** project at [EuCNC 2017](#)'s **5G PPP** Phase 2 Session (June 2017 Oulu, Finland)
- **Project's kick-off meeting took place in June 2017 in Barcelona.**

SOCIAL NEWS

- **A great success of 5GCity 3rd Face2Face meeting in Bristol**



Last 19-20 March, the 5GCity Consortium has celebrated a great 3rd F2F Meeting at Bristol University. 'The meeting was great and intense with positive outcomes and encouraging projections' - said Dr Carlos Colman-Meixner, Senior Research Associate High-Performance Networks Group, University of Bristol.

- **A 5GShowcase: the 'Layered Realities Weekend' in Bristol**



Source: Tim Kindberg

5GCity partner, Bristol University's [Smart Internet Lab](#) has covered an important role during the [Layered Realities Weekend](#) (March 17-18, Bristol.) The world's first public 5G end-to-end trial. Free demonstrations and artistic showcases have run throughout the coldest weekend in Bristol. Demonstrations, talks, and artistic experimentation combined with an exciting blend of technology and expression that have transformed the large Millennium Square. [More information](#)



Source: Fromthelight-Jon



Source: Bristol University

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.

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