Connected City – Source: 5G PPP
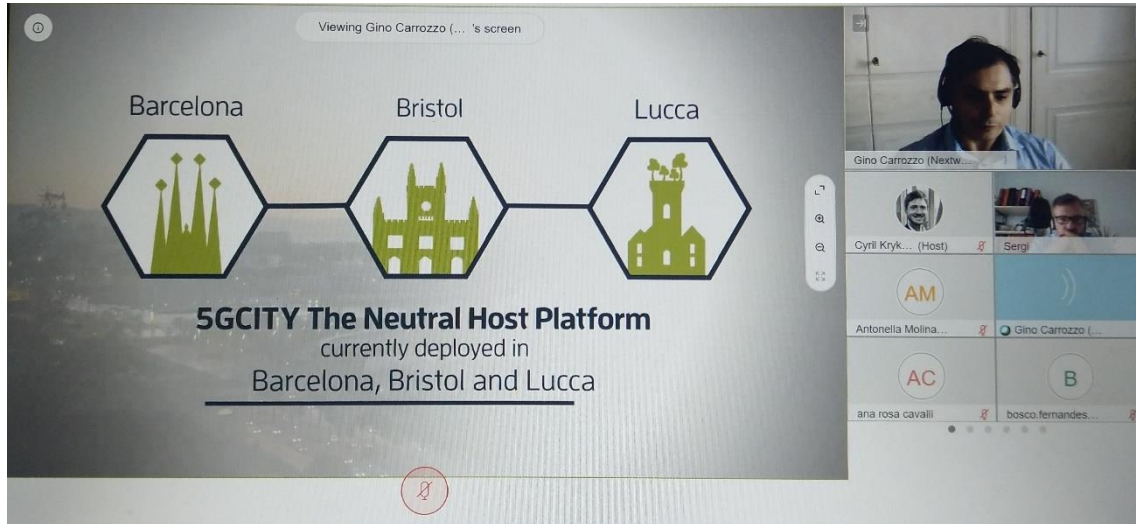
5GCity Project Final Review & Expected Results

5GCity Final Review Meeting- Source: 5GCity

July 2020 - As many events of the last few months impacted by COVID-19 restrictions, **5GCity project had its Final Review** with EC on last May 25th, 2020, in a virtual meeting format from remote. Organized by the EC Project Officer, **Cyril Krykwinski**, and the 5GCity Consortium, the last results and overall achievements have been successfully presented to the team of technical experts selected by the Commission, complemented by a rich video overviews of the six use cases trialled in the three city pilots of Barcelona, Bristol and Lucca.

Despite the limitations of the virtual presentation, above all for running live demonstrations of the 5GCity platform in action, the Consortium has been evaluated as originator of **outstanding results for the 5G research**, thus completing with great success a path of research and development on Neutral Hosting business models and orchestration platform.

The meeting started at 9:00am and lasted until 7:00pm with an intense agenda, scheduling 10 presentations from project coordinator, technical manager, and

WP Leaders. During the meeting 14 videos were shown with project's achievements, equipment deployed in the cities of Barcelona, Bristol and Lucca, the UCs demons, pilots, and tests outcomes. The project's outputs were carefully screened by EC Reviewers with extended Q&A sessions between presentations and videos.

The General Project Review Consolidated Report arrived some weeks later, underling project outstanding results. These the EC main considerations:

1. Overall assessment

Project has fully achieved its objectives and milestones for the period.

2. Significant results linked to dissemination, exploitation, and impact potential.

UC ID	Use Case	City		
		Barcelona	**Bristol**	**Lucca**
UC1	Unauthorized Waste Dumping Prevention			✔
UC2	Neutral Host	✔	✔	✔
UC3	Video Acquisition and Production	✔	✔	
UC4	UHD Video Distribution and Immersive Services		✔	✔
UC5	Mobile Backpack Unit for Real-time Transmission	✔		
UC6	Cooperative, Connected and Automated Mobility (CCAM)	✔		

5GCity use cases in the three cities: Barcelona, Bristol, Lucca

5GCity live use cases in three cities trials (Barcelona – ES, Bristol – UK and Lucca - IT)

*made the **project particularly unique in the 5G community** and raised continuous attention activities and produced outstanding results that can be summarised in the following figures: 26 scientific papers published or accepted (2 journal papers, 24 conference papers); presentations, keynotes and panels have been given in 47 key international events; 19 demos at various events with Verticals and 5G Community; actively contribution to 11 among **5G IA** and **5G PPP** Working Groups; 2 open source projects linked to 5GCity activities (**Unikraft** and **fogØ5**); 6 contributions to standards and quite unique impact on socials with 2,188 followers on Twitter; contributions to Open Source community with KVM hypervisor patches, **ETSI OSM VIM** connector for Eclipse fog05, ETSI OSM Support of multiple VIM accounts.*

Furthermore, 5GCity partners have detailed individual and final exploitation plans which cover activities after the end of the project in deliverable D6.5 and go beyond those in the DoA.

***Outstanding are two major results of the 5GCity project** that fit into the innovations for NFV management and orchestration layer: namely, the **5GCity SDK** and the **5GCity Orchestration Platform**.*

Contribution to standardization and open source communities made in the areas of Edge Computing, 5G RAN, Cloud Orchestration, and Media & Broadcasting.
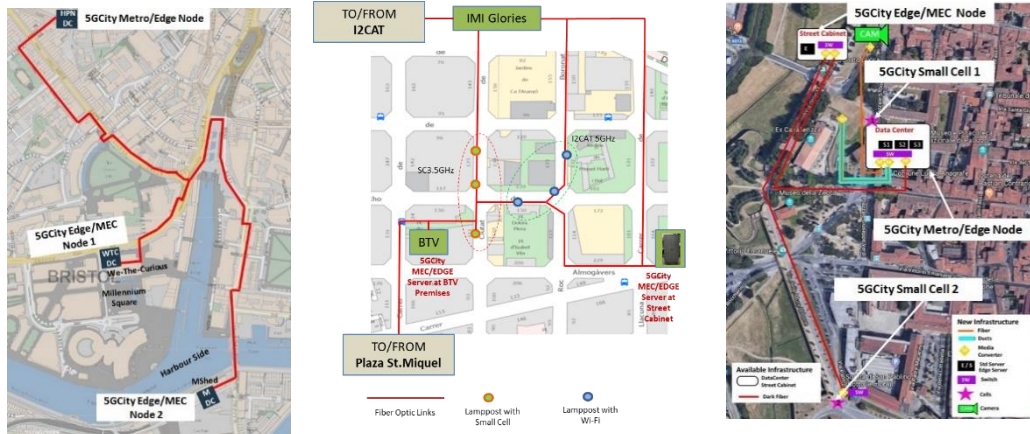
3. General comments

The project has globally achieved all its challenges, objectives, and milestones, and implemented convincing adjustments to plans by means of amendments.

5GCity Activities - Source: 5GCity

Partners' involvement and commitment were continuous; this allowed the project to achieve successful use cases and to reach important results from development while handling the complexity of deploying scenarios in real live trials.

5GCity physical infrastructure Pilots in Bristol, - Source: 5GCity

5GCity live use cases in three cities trials (Barcelona – ES, Bristol – UK and Lucca - IT) raised high continuous attention to activities and results, especially those deriving from live in-street sessions.

Five specific innovation items have been selected as candidates for the final [Innovation Radar](#) initiative from the EC. Two of which could be considered as major results.

5GCity contributed to four 5G-PPP core KPIs summarized tables, reported in deliverable D6.5.

*Besides, the consortium have **two patents** related to **VirtualOpenSystems**, one is already accepted, while the second is still pending.*

Joint Exploitation Action	Description	Partners
Smart Lamppost	Commercial street urban furniture supporting EV charging and Telco modules	A((elleran ubiwhere
Common Wireless Interface	SDN-based wireless controller including cellular small cells and WiFi access	A((elleran i2cat
Barcelona TV Video acquisition	TV platform for real-time video acquisition and distribution using Neutral Host environment	Barcelona betevé retevisión
New H2020 Joint Initiatives	• 5GZORRO: AI for network management and orchestration • 5GaaS: decentralized market-place for Telco ecosystem	A((elleran i2cat NEXTWORKS ubiwhere

5GCity Joint Exploitation Actions – Source: 5GCity

***Ubiwhere** and **Accelleran** have jointly created a product called "[Smart Lamppost](#)" , a new kind of multi-tenant and multi-technology street urban furniture, offering Neutral Hosts the chance to use common multipurpose streetlight poles to provide cellular infrastructure and connectivity.*

***Accelleran** and **i2CA**T have defined a common **NETCONF** management and control interface to control both Wi-Fi and small cell radio access.*

IMI, BTVE and *Cellnex* are elaborating a plan for the commercial use of video acquisition based on 5G dedicate slices in a *Neutral Host* environment.

i2CAT, Nextworks, Ubiwhere and *CoDi* have been awarded of a new 5G PPP Phase 3 project, called **5GZORRO**, which will use cognitive network orchestration and management for Zero-Touch Automation of multi-operator 5G networks.

i2CAT, Nextworks, Ubiwhere, and *Accelleran* have been awarded of a new FTI project, called *5GaaS* under fast Track to Innovation, which will develop and launch a new Neutral Host product in the form of a decentralised marketplace for the telecom ecosystem.

CONCLUSIONS:

In conclusion, **5GCity partners** can proudly announced that the **H2020 project**, funded by the **European Commission** to work on convergent technologies for flexible 5G network applications, ***has designed and developed a distributed cloud and radio platform for municipalities and infrastructure owners acting as 5G Neutral Hosts***.

With great satisfaction, ***the outcomes for the six Uses Cases, and all the relevant activities of 5GCity project were successfully achieved***.

Concluding with i2CAT Chief Technology and Innovation Officer- **Sergi Figuerola**'s words: "***Globally, I have to say that all the great work done is recognized and all the work accepted...Thanks to all for you contribution.***"

More info:

www.5gcity.eu
@5gcity info@5gcity.com
Gino Carrozzo
g.carrozzo@nextworks.it
Shuaib Siddiqui
shuaib.siddiqui@i2cat.net
Carla Bressan
bressan@comunicaredigitale.it

5GCity Consortium

Ajuntament de Barcelona · University of BRISTOL Smart Internet Lab · Città di Lucca

A(celleran · ADLINK · betevé · cellnex · Comunicare Digitale

i2cat · inCITES Consulting S.A.R.L. · ITALTEL · MOG · NEC

NEXTWORKS · Rai · ubiwhere · Virtual Open Systems · WINDTRE