

5G Smart Communities

5G for Industry Working Group

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Connectivity as a key enabler for EU's competitiveness

- ❑ “Universality” of EU Digital Decade targets as opportunity to foster competitiveness
- ❑ “Ecosystem” approach: bundling connectivity with cloud&edge to enable use cases
- ❑ Security and resilience across the “stack”
- ❑ Connectivity ↔ Tween transition ↔ Rural Development



The 3C Network “continuum”

Large-scale 5G deployments

Local 5G systems



Major transport paths



Urban areas



Rural areas



Geographical continuum:

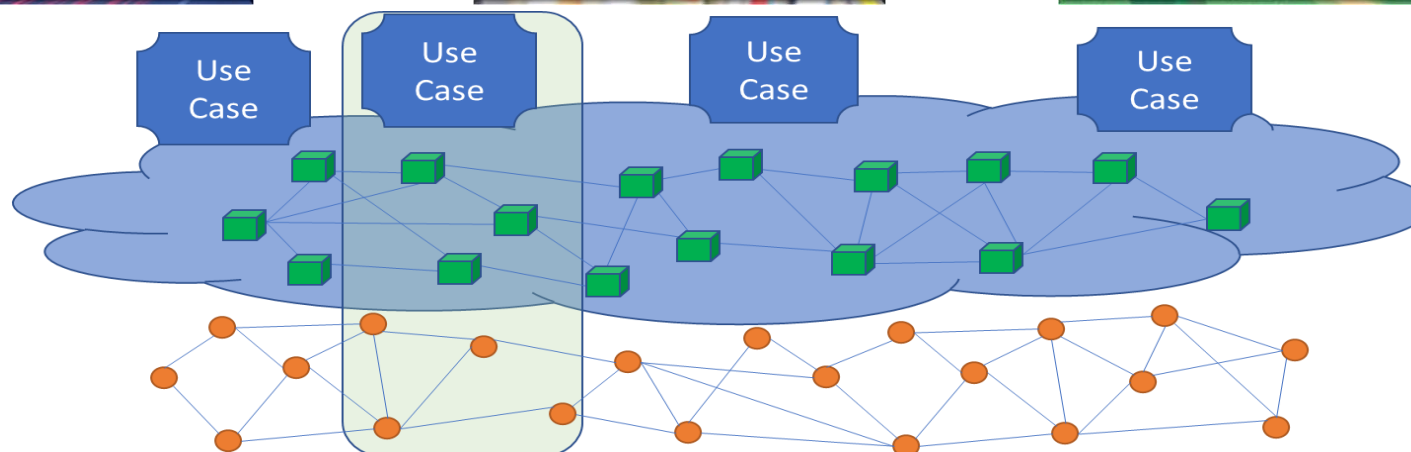
From regions and cities to local communities and villages

Connected Collaborative Computing (3Cs) Technology Continuum:

Application-driven vertical integration, stimulus to EU digital supply chain

Cloud Edge infrastructure

Connected objects and devices (IoT)



5G deployment and take-up (bundling connectivity to applications via cloud-to-edge/data/IoT)

Large scale pilots of end-to-end integrated infrastructures and platforms bringing together players from different segments of the connectivity value chain and beyond: Agriculture, Communities,...

The 5G Smart Communities 2022 – LSP from call 4 on

The 5G Smart Communities call supports the Connected Collaborative Computing (“3C Networks”) vision of the White Paper, with all proposals including edge-cloud capacities bundled with **5G standalone systems to support their vertical use cases.**

Focus/priority:

- **Large scale:** multi-country projects or projects that are large scale in terms of area covered, or number of use cases, that can be widely adopted across Europe, generating spillovers and promoting European competitiveness.
- **Replicability and scalability:** projects that show clear potential for replication in terms of use cases, across multiple country or internationally, promoting innovative 5G business models for the operators.
- **Spillover effects:** projects that offer benefits and impact for stakeholders along the value chain, including operators and edge cloud providers, with a focus on European supply chains.
- **Security:** projects that promote secure European products and solutions, avoiding risks stemming from the integration of the deployed 5G infrastructure with untrusted legacy networks supplied by non-EU high risk vendors.

5G Large scale pilots: call 4

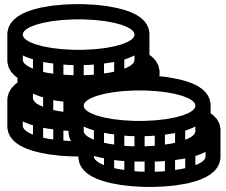
All the projects rely on **5G Standalone** and almost all of them include **edge-cloud integration**. They also leverage on the integration of 5G with other enabling technologies such as IoT, UAV/drones, mixed reality, robotics, etc.

Support innovative use cases, e.g.:

- Enable critical communication services in non-Schengen border areas;
- Enhance staff safety in correctional facilities;
- Provide immersive Virtual Reality experiences for learning;
- Deliver goods through drone-based systems;
- Detect fires early with AI-powered monitoring;
- Improve airport safety with real-time object detection on runaways;
- Explore clinical applications like real-time patient monitoring;
- Advance robotics research through complex experiments;
- Deploy Intelligent Street Lighting that adapts to environmental conditions;
- Implement Smart Waste Management with sensor-enabled bins.



5G national funding

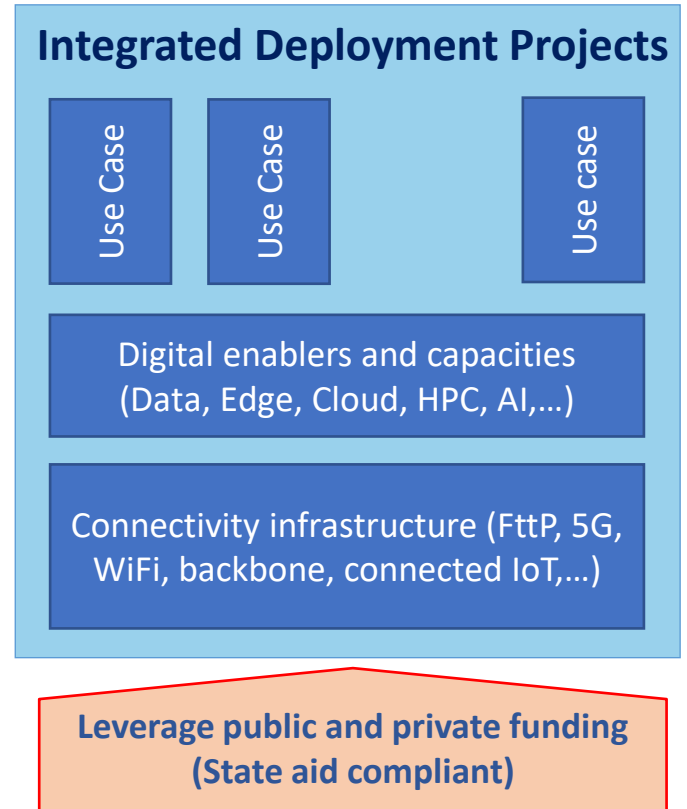
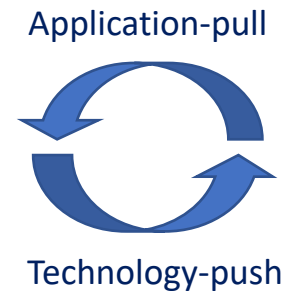


The recently study on **national funding of 5G** identified at least **EUR 2.91 billion public budget** has been allocated during **2022-25** to 5G-related investment at national level (*excluding regional support measures*) amounts drawing on a combination of national and EU funding sources.

This shows that the national recognition of the need to invest.

Our challenge

- Ensure rural inclusion and promote new models to foster innovation and competitiveness
- Bundle deployment with take-up: use cases to better support public services in local and rural communities
- Ultra-secure interconnection of high performance digital capacities
- Promoting European digital value chains across the digital “stack”
- Foster public-private investment models and partnerships



Future

The MFF 2028-2034 envisages a large **EU-wide best practice programme for advanced connectivity infrastructure**, delivering blueprints for NRPPs and other public investments.



*The **European Competitiveness Fund (ECF)** will be characterised by a strong competitiveness-driven focus, in terms of deploying advanced technologies and infrastructures for innovative use cases, powered by secure “**made-in-EU**” technologies.*

*The ECF investments will provide EU industrial stakeholders with the opportunity to **bundle their connectivity offer with cloud and AI**. This will enable them to transform their business models into a forward-looking, open and integrated offer for consumers, businesses and governments.*

*This programme will complement the measures taken in the **European Semester** and will be in line with the **Digital Decade targets**.*

Key messages

- Advanced connectivity (now 5G SA) is necessary for socio-economic progress
- While it must be associated with other digital developments (Cloud, AI...)
- + embedded in transformation of specific sectors (manufacturing, energy...)
- This is facilitated by strong public-private partnerships
- EU support important but bulk of effort is at national/ local level
- Smart communities should keep the momentum from CEF towards next MFF