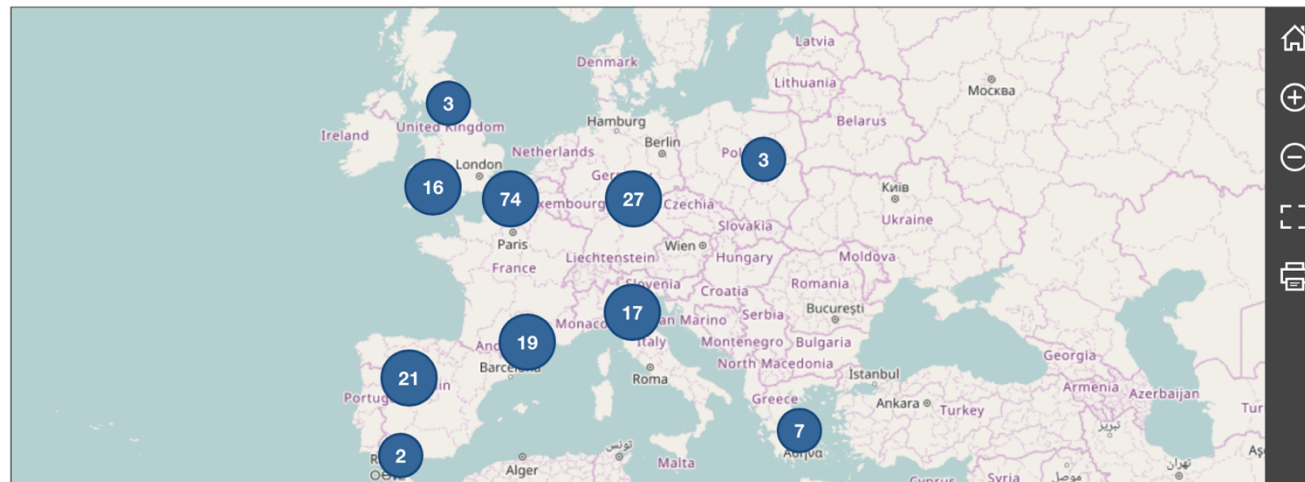INPUT TO THE 5G PPP PROGRESS MONITORING REPORT 2018

## 5G PPP Phase 1 and 2 Projects in the EC Innovation Radar

On 10 April 2018, the European Commission launched the Innovation Radar: a data-driven online tool which provides easy access to innovations supported by EU funding and the innovators behind them https://www.innoradar.eu/

➢ **Searching "5G", 128 innovations are displayed (shown on the map and on the first page of the list below)**

128 Innovations found relating to (5G)!

**(developed by 111 Innovator organisations)**

Leaflet | © OpenStreetMap contributors | Disclaimer

# 5G PPP

## PUBLIC-PRIVATE PARTNERSHIP

128 Innovations found relating to (5G)!

**(developed by 111 Innovator organisations)**

[⊕ Map] [☰ List]

Show [10 ▾] entries

| Innovation | Maturity ❓ | Project | Topic | |
|---|---|---|---|---|
| Open Source light RINA implementation | Exploration | ARCFIRE | Enabling tech & components | 🔍 |
| Simplified management system for RINA network configuration management | Exploration | ARCFIRE | Enabling tech & components | 🔍 |
| 5G core network design | Exploration | 5GPagoda | Secure Networks & Computing | 🔍 |
| CDNaaS - Platform for CDN slicing across multiple domains and its integration with ICN | Exploration | 5GPagoda | Secure Networks & Computing | 🔍 |
| Programmable RAN OpenAirInterface | Exploration | 5GPagoda | Secure Networks & Computing | 🔍 |
| Container Plug-in for FPGA-based Acceleration of network and IT functions provided as a service | Exploration | NGPaaS | Secure Networks & Computing | 🔍 |
| Dev-for-Operations methodology for enhanced DevOps and CI/CD models in Telecommunication markets | Exploration | NGPaaS | Secure Networks & Computing | 🔍 |
| Enhancement of MicroVisor Hyper-converged Infrastructure platform for Telco-grade accelerations solutions like high-quality, high-performance, and high availability | Commitment | NGPaaS | Secure Networks & Computing | 🔍 |
| Next-generation Telco-Cloud Platform as a Service-oriented platfrom for mixed networking and application services built to order for a variety of stake holders | Exploration | NGPaaS | Secure Networks & Computing | 🔍 |
| vFPGA: a virtualization framework for enabling acceleration of any type of virtualization elements. | Exploration | NGPaaS | Secure Networks & Computing | 🔍 |

Showing 1 to 10 of 128 entries

[Previous] [1] [2] [3] [4] [5] […] [13] [Next]

All innovations listed above are ranked by **freshness of data**, i.e. the innovations most recently analysed by Innovation Radar appear at the top

> **Among these 128 innovations, 75 are from 23 5G PPP Projects (phase 1 and 2). They are listed in the table below[1]**

| 5G PPP PROJECT | INNOVATION | LINK |
|---|---|---|
| **CHARISMA** | Carrier Ethernet VNF (Virtual Network Function) Acceleration | https://www.innoradar.eu/innovation/19605 |
| **CHARISA** | An open virtual switch for HW acceleration, providing low latency and increased security | https://www.innoradar.eu/innovation/19603 |
| **CHARISMA** | A novel Edge router-processor for content caching in wireless mesh and mobile networks | https://www.innoradar.eu/innovation/19604 |
| **SESAME** | Evolution of the Small Cell concept | https://www.innoradar.eu/innovation/19440 |
| **METIS-II** | A Radio Access Network (RAN) architecture for 5G | https://www.innoradar.eu/innovation/19839 |
| **METIS-II** | Enhanced Paging Principles | https://www.innoradar.eu/innovation/23174 |
| **METIS-II** | New Connected Inactive State | https://www.innoradar.eu/innovation/23177 |
| **5G-ENSURE** | Several Security Enablers for 5G networks, each with its own owner (implementor) | https://www.innoradar.eu/innovation/19513 |
| **5G-ENSURE** | 5G Security Testbed | https://www.innoradar.eu/innovation/26356 |

[1] Situation as of 17th July 2019.

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|---|---|---|
| **5G-ENSURE** | Device Based Anonymisation | https://www.innoradar.eu/innovation/26352 |
| **5G-ENSURE** | Flow Control enabler | https://www.innoradar.eu/innovation/26353 |
| **5G-ENSURE** | Trust Builder | https://www.innoradar.eu/innovation/26357 |
| **VirtuWind** | SDN/NFV solution with QoS guarantees for wind park network/compute infrastructure and services | https://www.innoradar.eu/innovation/29691 |
| **5G-Crosshaul** | XCF (5G-Crosshaul Control Format) | https://www.innoradar.eu/innovation/19634 |
| **5G-Crosshaul** | XCI (5G-Crosshaul Control Infrastructure) | https://www.innoradar.eu/innovation/19631 |
| **5G-Crosshaul** | XFE (5G-Crosshaul Packet Forwarding Element) | https://www.innoradar.eu/innovation/19637 |
| **5G-Crosshaul** | Energy Efficiency SDN Application | https://www.innoradar.eu/innovation/26458 |
| **5G-Crosshaul** | ETSI NFV compliant MANO stack for vEPC | https://www.innoradar.eu/innovation/26457 |
| **5G-Crosshaul** | FH Split on VM | https://www.innoradar.eu/innovation/26454 |
| **5G-Crosshaul** | Latency redcution for mmWave | https://www.innoradar.eu/innovation/26450 |
| **5G-Crosshaul** | Local OAM | https://www.innoradar.eu/innovation/26453 |
| **5G-Crosshaul** | Mini Roadm | https://www.innoradar.eu/innovation/26449 |
| **5G-Crosshaul** | SDN WS-WDM-PON fully compatible with Mac-In-Mac XCF | https://www.innoradar.eu/innovation/26451 |

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|---|---|---|
| **5G-Crosshaul** | SDN/MANO integration | https://www.innoradar.eu/innovation/26456 |
| **5G-Crosshaul** | TVBA | https://www.innoradar.eu/innovation/26459 |
| **Flex5Gware** | Dual-mode technique for mm-wave Phase-Locked Loops | https://www.innoradar.eu/innovation/22379 |
| **Flex5Gware** | Improve energy efficiency in 5G devices | https://www.innoradar.eu/innovation/22377 |
| **Flex5Gware** | Noise reduction technique for a multi-chain MIMO transmitter | https://www.innoradar.eu/innovation/22378 |
| **Flex5Gware** | Smart HW/SW partitionning for 5G nodes and networks | https://www.innoradar.eu/innovation/22380 |
| **FANTASTIC-5G** | Service-driven frame design and RRM | https://www.innoradar.eu/innovation/22341 |
| **FANTASTIC-5G** | System level integration of MIMO | https://www.innoradar.eu/innovation/22344 |
| **FANTASTIC-5G** | 5G system level simulation platform | https://www.innoradar.eu/innovation/22332 |
| **FANTASTIC-5G** | Harmonized multi-service air interface for 5G below 6GHz | https://www.innoradar.eu/innovation/22335 |
| **FANTASTIC-5G** | New waveforms for 5G | https://www.innoradar.eu/innovation/22338 |
| **5G-XHaul** | Airrays' beamforming radio unit | https://www.innoradar.eu/innovation/19671 |
| **5G-XHaul** | Millimeter wave wireless mesh networking 802.11ad technology (BWT) and wireless SDN (from I2CAT) | https://www.innoradar.eu/innovation/19670 |
| **5G-XHaul** | WDM-PON System with autonomous tuning for mobile fronthaul, backhaul and enterprise access | https://www.innoradar.eu/innovation/19672 |

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|---|---|---|
| **5G NORMA** | A network deployment tool for 5G | https://www.innoradar.eu/innovation/19600 |
| **5G NORMA** | Network Slicing for 5G | https://www.innoradar.eu/innovation/19599 |
| **5G NORMA** | A Stochastic Geometry Approach for Empowering Radio Access Network Slicing Orchestration | https://www.innoradar.eu/innovation/19602 |
| **SELFNET** | Automated 5G Virtualised Mobile Edge Computing (MEC) | https://www.innoradar.eu/innovation/19447 |
| **SELFNET** | Autonomic management framework with tactical action and predictive capabilities | https://www.innoradar.eu/innovation/19444 |
| **SELFNET** | Multi-tenant aware monitoring of virtual-/physical infrastructures | https://www.innoradar.eu/innovation/19446 |
| **SPEED-5G** | Advanced Radio Resource Management | https://www.innoradar.eu/innovation/19584 |
| **SPEED-5G** | Novel Medium Access Control concepts | https://www.innoradar.eu/innovation/19587 |
| **SUPERFLUIDITY** | Virtualised 5G Network Infrastructure | https://www.innoradar.eu/innovation/19557 |
| **COHERENT** | Advanced control features for small cell base station products | https://www.innoradar.eu/innovation/20037 |
| **COHERENT** | Advanced control features for small cell base station products | https://www.innoradar.eu/innovation/29718 |
| **COHERENT** | Control software development kit (SDK) for centralized radio network control applications in 5G systems | https://www.innoradar.eu/innovation/29714 |

| COHERENT | Flexible automatic protocol stack configuration for Coverage Extension & Mobility Management through user equipment relaying and device to device communication (D2D) | https://www.innoradar.eu/innovation/29712 |
|---|---|---|
| COHERENT | Network management framework for coverage extension through multihop device to device communications in 5G | https://www.innoradar.eu/innovation/29721 |
| COHERENT | Open source mobile packet core network gateway VNF with control and user plane separation | https://www.innoradar.eu/innovation/29711 |
| COHERENT | Spectrum management framework for spectrum database and spectrum manager software | https://www.innoradar.eu/innovation/29717 |
| CogNet | Machine Learning in combination with Network Management | https://www.innoradar.eu/innovation/19293 |
| CogNet | Using Social Media for prediction of large scale events | https://www.innoradar.eu/innovation/19295 |
| CogNet | Connected Cars | https://www.innoradar.eu/innovation/26365 |
| SONATA | An integrated NFV-based SDK and Service platform | https://www.innoradar.eu/innovation/19608 |
| 5GEx | Distributed Experimental Environment Interconnecting Testbeds to Orchestrate, Test and Prepare Commercial Deployments of New Multi-Domain Network Services | https://www.innoradar.eu/innovation/19264 |
| 5GEx | Multi-domain service provision architecture | https://www.innoradar.eu/innovation/19261 |
| NGPaaS | Container Plug-in for FPGA-based Acceleration of network and IT functions provided as a service | https://www.innoradar.eu/innovation/31018 |

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| **NGPaaS** | Dev-for-Operations methodology for enhanced DevOps and CI/CD models in Telecommunication markets | https://www.innoradar.eu/innovation/31017 |
| **NGPaaS** | Enhancement of MicroVisor Hyper-converged Infrastructure platform for Telco-grade accelerations solutions like high-quality, high-performance, and high availability | https://www.innoradar.eu/innovation/31019 |
| **NGPaaS** | Next-generation Telco-Cloud Platform as a Service-oriented platfrom for mixed networking and application services built to order for a variety of stake holders | https://www.innoradar.eu/innovation/31014 |
| **NGPaaS** | vFPGA: a virtualization framework for enabling acceleration of any type of virtualization elements | https://www.innoradar.eu/innovation/31020 |
| **IoRL** | 5G Indoor System Architecture and Intelligent Home IP | https://www.innoradar.eu/innovation/31047 |
| **5G-Xcast** | LSA dynamic spectrum management with SAS-CBSD protocol | https://www.innoradar.eu/innovation/29793 |
| **5G-Xcast** | Public warning alerting using 5G multicast | https://www.innoradar.eu/innovation/29792 |
| **5G-Xcast** | Seamless combination of DVB Multicast ABR technology with 3GPP eMBMS technology | https://www.innoradar.eu/innovation/29789 |
| **5G-Xcast** | Service Router to deliver video content based on the user context and device capabilities | https://www.innoradar.eu/innovation/29788 |

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|---|---|---|
| **5GTANGO** | Network slicing mechanism for Multi-PoP NFV orchestration environments | https://www.innoradar.eu/innovation/30613 |
| **5GTANGO** | Validation and Verification (V&V) of network services as a key element for a full DevOps approach in NFV environments | https://www.innoradar.eu/innovation/30616 |
| **5G-MoNArch** | Analysis toolset for 5G specific business cases implementations | https://www.innoradar.eu/innovation/30832 |
| **5G-MoNArch** | Analytics enabled AI/ML Elasticity Algorithms for optimal management of 5G networks | https://www.innoradar.eu/innovation/30835 |
| **5G-MoNArch** | Network Slicing enabled Base Band Unit for 5G Base Station | https://www.innoradar.eu/innovation/30831 |
| **mmMAGIC** | Mobile Radio Access Technology in the 6-100GHz frequenciy range | https://www.innoradar.eu/innovation/19545 |