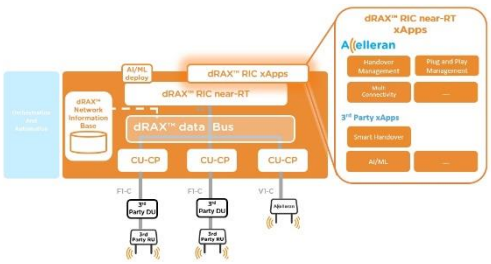
NetWorld2020 SME Working Group

SME Success Story

Accelleran

Accelleran participation in several national and European RIA and IA H2020 5G-focused projects enabled the different consortia involved to leverage on Accelleran's RAN/vRAN Software Solutions and Small Cell products to enable new 5G architectural paradigms (virtualisation, slicing, edge computing,…) and advances required in future networks. The participation of Accelleran in some of these projects also distilled into the launch of Accelleran ORAN-aligned Cloud Native Virtualised dRAX Open Interface RAN Intelligence enabling AI/ML xApps in an open, scalable and interoperable RAN platform. Beside the pilot deployments where operators are currently evaluating the use of Accelleran dRAX Open Interface RAN Intelligence to enable the new 5G paradigms, one of the most important reference deployment cases for dRAX, focused on the Smart Cities vertical, is the Distributed Cloud and Radio Platform for 5G Neutral Hosts envisaged by the H2020 5GCity project, with deployments in Barcelona, Bristol and Lucca. 5GCity has designed, developed, deployed and is demonstrating, in operational conditions, a distributed cloud and radio platform for municipalities and infrastructure owners acting as 5G neutral hosts.



The following are some of the projects where Accelleran has participated and is participating with its RAN/vRAN Software Solutions and Small Cell products:

- **5GUARDS**: Flanders (Belgium) based imec.ICON collaborative project involving the major Flemish universities and industry partners (SMEs, big infrastructure provider and big mobile operator). The goal of the 5GUARDS project was to investigate, evaluate and demonstrate how various services with

diverse requirements could be simultaneously supported by the future 5G network based on the concept of network slicing. 5GUARDS envisioned three building blocks will contribute to the realization of services with diverse requirements: core slicing, RAN slicing and dynamic software reconfiguration.

- **5GRuralFirst**: 5G RuralFirst is a co-innovation project led by Cisco and a consortium of other partners from across business, government and academia. Its first goal is to create rural test-beds and trials for 5G wireless and mobile connectivity across three main sites in the Orkney Islands, Shropshire and Somerset.
- **5GCity**: 5G-PPP Phase 2 project (call H2020-ICT-2016-2) in which Accelleran is participating with the goal of enabling a distributed cloud radio platform for neutral hosts. To do so, 5GCity's main aim is to build and deploy a common, multi-tenant, open platform that extends the (centralized) cloud model to the extreme edge of the network, with a demonstration in three different cities (Barcelona, Bristol and Lucca), and thus advance the state of the art to solve the main open research challenges in the 5G-based edge virtualization domain, including the neutral host perspective in dense deployment environments such as cities. Accelleran´s dRAX Open Interface RAN Intelligence with Neutral Host and Network slicing functionality is used in 5GCity virtualized platform together with with Accelleran Small Cells in different bands.
- **5G-Enhance**: joint EU H.2020 (call H2020-EUJ-2018) and Japanese research project looking at testbed development for advanced 5G topics like eMBB in dense urban areas with high mobility. Establishing long-term research collaboration between EU/Japan research institutes, Accelleran's small cell technologies are being leveraged for infrastructure deployments.
- **UNICORE**: (call H2020-ICT-2018-2) with the ICT focus on lightweight Unikernel VMs. These software technologies will be vital for VNF IaaS deployments allowing quick deployment and high scalability in the future VNF IaaS networks. Accelleran participates with the migration of dRAX Open Interface RAN Intelligence from Kubernetes Docker containers or Openstack VMs frameworks towards lightweight Unikernel VMs.
- **5GClarity**: (H2020-ICT-2018-2020 call): 5G multi WAT system with 4G, 5G-NR, WiFi and LiFi technology.
- **5GComplete**: (H2020-ICT-2018-2020 call): 5G framework for secure computing nodes.