5G-LOGINNOV - Project Info

5G-LOGINNOV supports the new generation of 5G-CAD terminals, new type of IoT-5G connectivity devices through technical solutions, business models and priority scenarios by deploying new CAD and Logistics as a Service in real-life port-city areas. 5G-LOGINNOV's central innovation is to build a first-class European industrial supply side for 5G core technologies and new IoT-5G devices with global market footprints. The Project contributes to the emergence of global standards and globally harmonised frequency bands for 5G in the context of related developments at the level of global bodies like 3GPP, ITU and, being part of the third 5G PPP phase, it supports the development of a "lead" market involving cooperation models with key vertical sectors.

Project partners

- ✖ ERTICO (Coordinator)

- ✖ AKKA
- ✖ CIRCLE
- ✖ CONTINENTAL
- ✖ ICCS
- ✖ ICOOR
- ✖ INTERNET INSTITUTE
- ✖ LUKA KOPER
- ✖ PCT
- ✖ SWARCO
- ✖ TEC4U
- ✖ TELEKOM SLOVENIJE
- ✖ T-SYSTEMS
- ✖ VICOMTECH
- ✖ VODAFONE

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🐦 **#5GLOGINNOV**

in **5G LOGINNOV Project**

🌐 **5g-loginnov.eu**

5G LOGINNOV

Using 5G technologies to innovate logistics and ports for a sustainable future

Vertical Innovations in Transport and Logistics over 5G experimentation facilities

Living Lab **Athens**

🐦 **#5GLOGINNOV**   in **5G LOGINNOV Project**   🌐 **5g-loginnov.eu**

Living Lab Description

Piraeus Container Terminal (PCT) is a large dynamic company owned by COSCO, located at Piraeus, in Athens. PCT's main activities are the provision of loading/unloading and storage services for import and export containers including cargoes which use Piraeus terminal only as an intermediary station of transport. The strategic location of Piraeus makes it an ideal hub for destinations in the Central/Eastern Mediterranean and the Black Sea. The continuous development of the port in both yard equipment and innovative technological solutions has raised it to rank 4 among the busiest European Ports of 2020, and is expected to rise even more. Three partners, PCT, ICCS and Vodafone will exploit 5G technology focusing in port operations within and outside the port premises, enabling real-time tracking and enhanced visibility of 5G yard trucks for service optimization, job allocation and predictive maintenance services, 5G enabled video analytics targeting safety/security and logistics applications orchestrated as NFV-MANO services to 5G-IoT nodes, and real-time monitoring of the logistics supply chain with live tracking of 5G connected (external) trucks in-bound at Piraeus port.
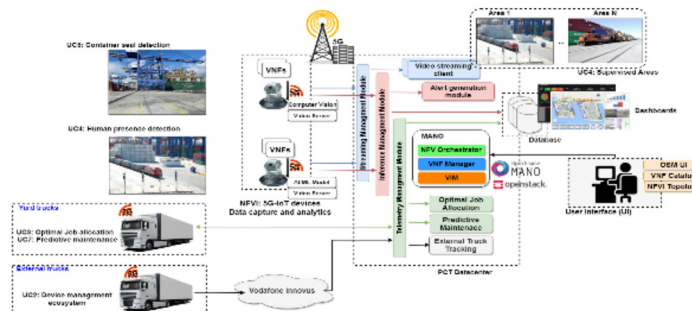
Port of Piraeus - Container Terminal

5G Innovation

The Athens LL will develop a set of use cases and platforms that communicate over the private 5G NSA network with different types of end devices (5G-Trucks, 5G-Cranes, 5G-IoT, 5G UEs). 5G technology will enable the use case innovations exploiting eMBB (Enhanced Mobile Broadband) service, enhanced localization services and low latency transmissions of 5G, including NFV-MANO based applications and service orchestration, pioneering far edge computing solutions, computer vision and AI/ML video analytics. The portfolio of application innovations includes live tracking of 5G truck (yard and external) operations for optimal container job allocation and predictive maintenance services by exploiting telemetry data (from various on-truck sensors) aggregated over the fleet of 5G connected trucks in (near-)real time; UHD transmissions of massive uplink video data from deployed 5G-IoT devices for port operations monitoring, security and video analytics; automation for ports: port control, logistics and remote automation through MANO based far-edge computing service orchestration to distributed 5G-IoT devices tailored to the LL needs at Piraeus port.

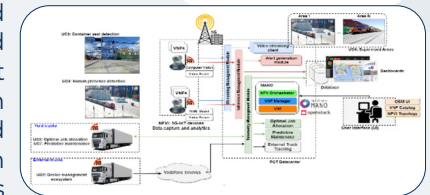**Living Lab Athens - 5G Innovations**

Use Case Highlights

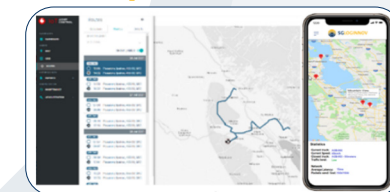### 5G Connected Yard Trucks in Port Operations

Aggregating telemetry data from the fleet of 5G yard trucks enabling real-time tracking and enhanced visibility of truck operations for service optimization, traffic coordination, container job allocation and predictive maintenance services.

5G and IoT (far-edge) Video Analytics with NFV-MANO Support

Remote and automated management and orchestration of end-to-end computer vision analytics services targeting safety/security and logistics applications, orchestrated as NFV-MANO services with 5G network support for lifecycle management of various service components.

5G Connected External Trucks in Port Operations

Optimizing port operations through real-time monitoring of the logistics supply chain with live tracking/positioning of 5G connected (external) cargo trucks in-bound at the port of Piraeus.