Paper ID#67: Innovative business models in ports' logistics: the 5G-LOGINNOV project

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5GLOGINNOV in a nutshell

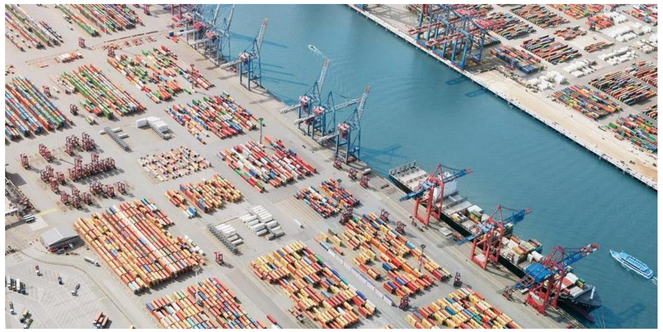
- H2020 Innovation Action with 39 months duration (started September 2020)
- 15 partners (BE, ES, FR, IT, RO, GR, SI, DE)

+ 5 new actors!!!

The 5G-LOGINNOV central ambition is to build a **first-class European industrial supply side for 5G core technologies**

LL Athens
Greece

LL Hamburg
Germany



LL Luka Koper
Slovenia

5G-LOGINNOV Living Labs overview

- ***Athens LL*** mainly deals with technologies for real-time tracking and enhanced visibility of 5G yard-trucks for **service optimization, job allocation and predictive maintenance**
- ***Hamburg LL*** addresses the usage of 5G to improve port operations, specifically for **connecting the Hinterland to the port's facilities**
- ***Koper LL*** focuses on 5G-enabled technologies to improve the **automation of logistics processes** in ports and to support mission critical services in the port area

Common objectives:

- better **monitoring** of the logistics processes,
- resource **optimization**
- higher **service quality**
- **costs reduction.**

Common risk:

- **low trust in data sharing technologies**

Expected impact of 5G-LOGINNOV innovations: ATHENS

Main Needs addressed by 5G-LOGINNOV

- Introduction of **AR** assisted guidance to **speed up repairs** in port assets,
- **Increasing quality** in **manual production** tasks
- **Lowering** the chance of **errors in warehouse** operations,
- **Reducing training** time at port operations

Expected impact of 5G-LOGINNOV

On operations

- Provision of **alert systems to detect human presence** and detection of **drivers' health status.**
- Improved **monitoring of container seals**
- Easier **prediction of possible breakdowns**
- Improved **maintenance capacity.**

On business models

- **Better utilization of resources** and a better ability to operate on risks
- **Reduction of operating costs**

Expected impact of 5G-LOGINNOV innovations: HAMBURG

Main Needs addressed by 5G-LOGINNOV

- **Fully exploit available data from CAN-Bus and other sensor data** which can be transferred from the vehicle to the MEC (**from Floating Car Data to Floating Truck and Emission Data**)

Expected impact of 5G-LOGINNOV

On operations

- More **accuracy of data**
- More efficient and more **environmentally friendly traffic flows**
- **Easier decision-making** process
- Easier planning of innovation introduction (**truck platooning**)

On business models

- **Costs minimisation**
- **More safety and better health** of the users of the area

Expected impact of 5G-LOGINNOV innovations: KOPER

Main Needs addressed by 5G-LOGINNOV

- **Security and environmental** aspects of port operation **related to UAVs (Unmanned Aerial Vehicles, e.g., drones**)
- **AI-assisted video analytics deployed in cloud**

Expected impact of 5G-LOGINNOV

On operations

- **Improved ability to analyze** information
- **Communication speed**
- **More capillary monitoring** of the port operations
- **Improve safety** parameters

On business models

- Better **resilience and adaptability** of the port infrastructure
- Optimization of **resources**

5GLOGINNOV LLs Business Models: common features and remarks

- A common objective: **collect and share data → 5G infrastructure is the backbone**
- **Port authorities** are the most impacted stakeholders, but also **yard personnel and yard truck operators**
- Main costs: **development costs, implementation costs** and **administrative costs.**.
- Main revenues (during the project): **European funds**. In general: **economic gains to to cost savings due to the optimization** and **improvements of the safety and working conditions.**
- **Greater flexibility** and **resilience** expected to last after the end of the project.
- 5G-LOGINNOV= opportunity to **test innovations and evaluate their effects in a small scale**
- Clear **relationships and collaboration** methods
- **GDPR and data confidentiality issues** are **vital to be agreed**
- Beyond the end of the project, other sources of revenues must be considered

If you want to support 5G-LOGINNOV…

- Visit our website: https://5g-loginnov.eu/
- Follow us on social media: LINKEDIN, TWITTER
- Fill the 5G-LOGINNOV Survey for Replicability Assessment

Notice: FINAL EVENT at the beginning of November 2023, at Koper LL!
Stay tuned…

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Thank you!