COREALIS
THE PORT OF THE FUTURE

COREALIS webinar

Port of HaminaKotka Living Lab

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Kotka Container Terminal (KCT)

Port of HaminaKotka consist of 3 terminals. In COREALIS project we focus on KCT.

KCT is operated by Steveco Oy and the container traffic volume is **650 000 TEU/year**.

Steveco Group provides full logistic services from production site to final destination: vessel loading and terminal services; forwarding and transport services; and ship's clearance.

KCT is the largest container port in Finland and the main export port for Finnish forest industry products and transit traffic to Russia.

5 STS cranes, 95 000 m² warehouses,
quay 1,000 meters, draft 12.5 meters, Navis N4 TOS

See also video at https://www.youtube.com/watch?v=V0KwhmjMVNw&feature=youtu.be

Birds eye view of Kotka Container Terminal

Role of HaminaKotka Living Lab (LL)

Kotka Container Terminal (KCT) is a medium-sized terminal in the COREALIS project.

KCT enables to evaluate COREALIS innovations' applicability for medium-sized ports, .i.e. not only for major European ports.

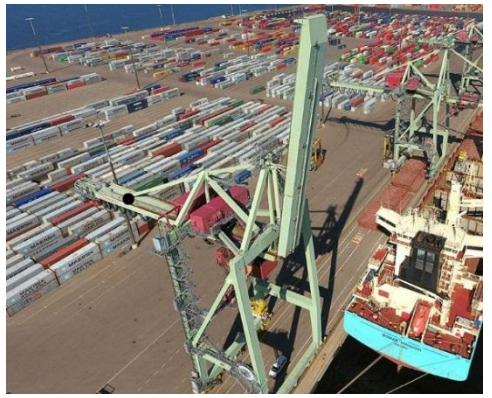
Special characteristics of KCT is that:

- **Stuffing warehouses are in the terminal area**
- **Cold climate conditions**

HaminaKotka LL aims to find pathways to increase automation level in a cost-efficient way for medium-sized terminals.

Scenarios in the Living Lab of HaminaKotka

1) **PORTMOD (VTT)**: a modelling tool that improves Container Terminal (CT) operations by simulation;
   i. Optimize stacking height and location
   ii. Evaluate new equipment solutions
   iii. Evaluate CT yard area layout changes



2) **Light TAS (VPF, SGS)**: a slot based Truck Appointment System
   i. Based on Advanced TAS developed at Valencia LL
   ii. The goal is to allow trucking companies to indicate when they deliver cargo to warehouses located in the port area

3) **Port of the Future Serious Game (PoFSG) (Deltares)**:
   i. Assist in the development of the energy transition scenario of the game: estimate the impact of new technologies and environmental issues.

See also: https://www.corealis.eu/index.php/event/corealis-trello-boards/

HaminaKotka LL contribution to COREALIS goals

COREALIS objective 3: Improve operational efficiency, optimise yard capacity and streamline cargo flows without additional infrastructural investments.

- PORTMOD aims to optimize yard capacity without additional infrastructural investments.
- Light-TAS aims to streamline cargo flows.

COREALIS objective 4: Enable the port to take informed medium-term and long-term strategic decisions and become an innovation hub of the local urban space.

- The work performed for the PoFSG game will enable HaminaKotka port to make more informed medium- and long-term strategic decisions.

6 Conclusions

Main goal: To present new solutions for modern container port challenges and to test them in a real world environment.

1. Improve container yard operation by simulating different container yard layouts with **PORTMOD**.

2. Increase efficiency by enabling a smoother cargo flow with **Light-TAS**.

3. Increase understanding of long term strategic decisions and their environmental impact. Assist in developing the energy transition scenario for the **Port of the Future Serious Game.**

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THANK YOU FOR YOUR ATTENTION

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