Smart Logistics and Freight Villages Initiative (SmartLog)

Programme Priority: P3 Well-connected region

Programme Specific Objective: 3.1. Improved transport flows of people and goods

Sub-programme: Central Baltic

Duration: 01.09.2016 - 31.05.2020

Total funding: 2.191.918 EUR

ERDF funding: 1.700.304 EUR ERDF

Project Summary:

The management of manufacturing, supply chain, logistics, and transportation industries are facing a substantial change, as new technologies are constantly developed. The change will affect how logistics providers of all sizes operate. Transportation cost and delivery time are critical aspects for most manufacturers as well as using technology to make transportation more efficient to help reduce overall costs and delivery time. Hence it is crucial for transportation management services, warehouse management systems, and other aspects of logistics to take Internet of Things (IoT) systems on board.

The project develops and tests IoT-solution within the logistics sector and logistic companies across the two corridors; ScanMed and North Sea-Baltic. The new solution will optimise all aspects of their integrated services (transportation, warehousing, cross-docking, inventory management, packaging, and freight forwarding) by creating a blockchain ledger for sharing the cargo transport status and location information across the transport corridors and giving companies access to vast amounts of anonymized data outside an organization.

This results on decreased operational costs of the companies as well as reduced time of delivery of goods.

Map of Partners

Partners

Lead Partner

Kouvola Innovation

Country: FI

www.kinno.fi [1]

Partner budget: 1.353.067 EUR

Amount of ERDF funding: 1.014.800 EUR ERDF

Project Partners

Region Örebro län

Country: SE

http://www.regionorebrolan.se/ [2]

Partner budget: 275.200 EUR

Amount of ERDF funding: 206.400 EUR ERDF

Transporta un sakaru instit?ts

Country: LV

http://www.tsi.lv [3]

Partner budget: 34.500 EUR

Amount of ERDF funding: 29.325 EUR ERDF

Valgamaa Arenguagentuur

Country: EE

http://www.arenguagentuur.ee/ [4]

Partner budget: 110.100 EUR

Amount of ERDF funding: 93.585 EUR ERDF

Sensei OÜ

Country: EE

www.sensei.ee [5]

Partner budget: 92.366 EUR

Amount of ERDF funding: 78.511 EUR ERDF

Logistika õppetool, Mehaanika ja tööstustehnika instituut, Tallinna Tehnikaülikool

Country: EE

http://www.ttu.ee/ehitusteaduskond/logistikainstituut-2/ [6]

Partner budget: 326.685 EUR

Amount of ERDF funding: 277.682 EUR ERDF

Results

Expected results

Achieved results

Project result in category - Improved transport flow of goods

SmartLog - Prototype created that can improve the supply chain in the transport and logistics industry

The main aim with the project “Smart Logistics and Freight Villages Initiative” (SmartLog) was to develop new Internet-of-things (IoT) solution based on block-chain technology, that would help logistics and transportation companies to improve and make their supply chains more efficient.
Companies from Sweden, Finland, Estonia and Latvia were involved in the project along two TEN-T corridors: North Sea – Baltic and Scandinavian – Mediterranean corridor.
In order to test the new IT solution, in total 648 companies were contacted, and thorough communication with detailed analyses was conducted in 151 companies. The aim was initially to gain input to the companies software development, understand and map their processes, get an understanding on the maturity level of hard- and software and their susceptibility to the new technology.
Detailed process maps and simulations were done in 48 companies.
Finally, the developed software was connected to the IT systems of 12 companies and real time data gathered and analysed.
Within the time of the project, not enough companies started to use the new technology in such extent that measuring of the real impact and decreased transportation time on clearly defined routes was allowed. An important reason is that small and medium sized companies lack trust in new technologies due to security and privacy concerns, and they have low maturity level of digitalization.
However, the modelling shows that the improved cargo handling system would decrease transportation time and can be used and measured in every route or corridor. The time reductions along the two targeted corridors, based on process simulations, made up 6.3% and based on data analyses 3.8%. Larger time reductions can be expected when employees get more accustomed to using the benefits of the new software solution.
The new product is now developed and tested, and with relatively little effort companies if interested can take it into use. It can be accessed via:
https://projectsmartlog.gitlab.io/smartlog-installer/ [7]
https://github.com/project-smartlog [8]
The focus in the next step needs to be on large companies as their processes are better mapped and digitalized, their investment and know-how capability is better and IT systems more advanced.

Project page in database
Smart Logistics and Freight Villages Initiative [9]
At a glance

- A software for improved cargo handling system, with IoT solutions, was developed and tested
- The project had close communication with 151 companies
- Detailed process maps and simulation was done in 48 companies

- The software was connected to the IT systems of 12 companies
- The modelling done shows that the improved system clearly would decrease the transportation time

Files
Final report about the project [10]
Tags
ict and digital society [11]
Logistics and freight transport [12]
Improving transport connections [13]

Project Visibility

Social media links

Lead partner's website about the project [14]

Lead Partner's website [15]

Source URL:https://database.centralbaltic.eu/printview/52

Links
[1] http://www.kinno.fi [2] http://www.regionorebrolan.se/ [3] http://www.tsi.lv [4] http://www.arenguagentuur.ee/ [5] http://www.sensei.ee [6] http://www.ttu.ee/ehitusteaduskond/logistikainstituut-2/ [7] https://projectsmartlog.gitlab.io/smartlog-installer/ [8] https://github.com/project-smartlog [9] https://database.centralbaltic.eu/project/52 [10] https://database.centralbaltic.eu/sites/default/files/Smartlog_scientific_report_202005.pdf [11] https://database.centralbaltic.eu/tags/ict-and-digital-society [12] https://database.centralbaltic.eu/tags/logistics-and-freight-transport [13] https://database.centralbaltic.eu/tags/improving-transport-connections [14] https://kinno.fi/en/smartlog/ [15] https://www.kinno.fi