



Logistics Clusters - Key drivers for the European Green Deal

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 723265.



Agenda

- › Webinar presentation on Logistics Clusters - Key drivers for the European Green Deal
 - KPIs and performance: how CLUSTERS 2.0 has demonstrated concrete results
 - The wider impact of CLUSTERS 2.0
 - Bringing CLUSTERS 2.0 innovations on the market: approach and business models
 - Future challenges and opportunities
- › Q&A-session



KPIs and performance: how CLUSTERS 2.0 has demonstrated concrete results

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Clusters 2.0 in a nutshell

- › The use of intermodal services could be substantially enhanced by fostering collaboration and pooling of freight demand.
- › Within the project the potentiality of intermodal transport has been capitalised through different concepts:

1. CLuCS - Cluster Community System



Living Lab 1 - Proximity Terminal Network & Cluster Community System

2. Massification methodology

3. Quick check tool

4. X-Intermodal

5. Slot Booking App



Living Lab 2 - Symbiotic Network of Logistics Clusters

6. NMLU - New Modular Loading Unit

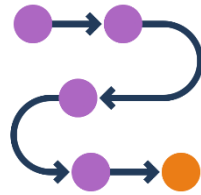


Living Lab 3 - Innovative Cluster Handling Technology

How to evaluate the project?

› The different and complementary Living Labs have been assessed by considering three main elements:

1. Process analysis



2. Outcome measurement



3. Observational system



The road towards the 34 Key Performance Indicators

Impact areas

Preliminary list of indicators

Interactive process with LLs

Final list of 34 KPIs

Living Labs impact areas

Living Lab 1



- ✓ Increased added value of hubs, integrating manufacturing and sharing resources.
- ✓ Less emissions and land-use.
- ✓ Improved door-to-door logistics performance.
- ✓ Increased inter-modality.

Living Lab 2



- ✓ Increased inter-modality.
- ✓ Sharing resources to create logistics clusters with higher impact on local economies.
- ✓ Less congestion and emissions.
- ✓ Improved door-to-door logistics performance.

Living Lab 3



- ✓ More efficient goods handling.
- ✓ Improved door-to-door logistics performance.

CluCS performances

Increase of activities implemented by terminal operators to manage PTN and related ICT solutions.

+12,5%

Decrease of emissions in door-to-door selected connections centered on cluster terminals.

-24,8%

Increase intermodal split in door-to-door selected connections centred on cluster terminals.

+30%

Symbiotic Network of Logistics Clusters performances

Number of lanes in X-Intermodal Tool.

31'322

Reduced CO2 emissions resulting in volume shifted to intermodal solutions and/or bundling in the same roundtrip.

-14,4%

Reduced congestion resulting in volume shifted to intermodal solutions and/or bundling in the same roundtrip.

-14,6%

Symbiotic Network of Logistics Clusters performances

Efficiency performance ground handler. Average length of a slot.

52 min

Decrease in waiting time freight forwarders.

15÷45 min

Cost reduction in the air cargo supply chain.

-40€ to
-60€

Innovative Cluster Handling Technology performances

Handling time saved at warehouse - pallet NMLU.

-80%
(NMLU
plate)

Handling time saved at warehouse - bottom NMLU.

-10%

Picking time saved at warehouse - loading unit.

-12,5%

Innovative Cluster Handling Technology performances

Truck Loading/unloading time saved at warehouse - pallet NMLU.

-31,7%

Truck Loading/unloading time saved at warehouse - bottom NMLU.

-33,3%

Truck Loading/unloading time saved at warehouse - bottom NMLU with use of rollerbeds.

-10,4%
loading

-9,8%
unloading

Innovative Cluster Handling Technology performances

Increased loading capacity of truck.

+13% ÷
38%

Increased volume-weight utilization of truck.

+13% ÷
38%

Time saved for Cross-Docking.

-36,2%
to
-73,3%

The main challenges sorted out by Clusters 2.0

Need for well coordinate terminals and hubs

- Connectivity and visibility of intermodal services in place have been improved through CLuCS.
- Only 1% of unexpected delays in the rail connection Bologna-Piacenza.

Need of freight consolidation and bundling increase

- All LLs have fostered an improvement of door-to-door logistics performance.
- Massification workshops increased collaboration and community building among clusters.
- More efficient goods handling so stimulating multi-modal transport solutions has been achieved.

The main challenges sorted out by Clusters 2.0

Overcome barriers preventing the use of multimodal solutions

- Improved visibility on existing transport flows (Quick Check Tool tests).
- Existence of intermodal shift potential (60% of potential intermodal shift).
- Outcomes show the Clusters 2.0 contribution to increase multimodal solutions implementation.

Cover the existing gaps between standard transport units

- The NMLU concept has shown significant results in terms of reducing time required for terminal operations and waiting time in terminals.

Increase management capacity of terminals and hubs

- The efficiency performance of ground handler increased (52 min vs. more than 1 hour) while the waiting time of freight forwarders decreased (-45 min) thanks to the implementation of the Slot Booking App.
- A more efficient goods handling has been demonstrated thanks to the introduction of the NMLU.



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