

# LL #6 Rail-road Terminal Collaborative Decision Model

## FACTSHEET

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### A. GENERAL (BUSINESS CASE)

#### 1. Objectives

- Cargo and transport tracking
- The use a digital data sharing platform (Deplide) to demonstrate the concept of Collaborative Decision Making (CDM) for the import and export flows at two intermodal terminal Solåsen, located in the region of Jönköping.
- The development of process descriptions that identify physical/administrative events and coordination points as well as the information need by the actors involved, to create consensus.
- Improve coordination capacity at the intermodal terminal and increase efficiency and transparency amongst customers and operators of intermodal transports (asset and infrastructure use optimization)
- The platform will create conditions for reliable situational awareness of what is planned, what is happening as well as what has happened.
- Compliance monitoring (sustainability)

#### 2. Main emphasis

The exploration of solutions for digital collaboration regarding track and trace functions and/or the forecasting of available capacity for collaborative decision-making at intermodal rail-road terminals. By introducing an automatic and digital data exchange, opportunities are created to enable effective cooperation between the intermodal terminal, the port, shipping companies, train operators and lorry operators as well as enabling a better use of capacity. A better capacity utilisation could contribute to reduced emissions by shifting freight from road to rail.

By introducing the CDM concept for intermodal terminals it is possible to identify processes and requirements for digital tools in order to create a business canvas.

### **3. Challenges**

- Lack of real-time information about delayed or cancelled trains creates unnecessary waiting times.
- Customers experience lack of real-time information regarding the location of containers/goods.
- The profitability of an intermodal terminal is affected by the number of containers loaded on the train. Shuttle trains often run with less than full capacity due to lack of efficient and flexible solutions.

### **4. Transport modes**

Rail, with input from sea and road.

### **5. EU Map Focus**

Scandinavian-Mediterranean corridor.

### **6. Geographical coverage**

Sweden. Intermodal freight rail transport between the port of Gothenburg and intermodal terminal Solåsen located in Jönköping. Events in other European ports needs to be considered.

### **7. Actors/SMs**

- CLOSER
- RISE
- Transab
- GDL
- Port of Gothenburg
- Last/first mile lorry operators
- Swedish Transport Administration
- Shipping companies

### **8. Forecast scaling outside LL**

The Collaborative Decision Making (CDM) concept has been implemented in different areas, such as for airports, seaports and passenger railway stations. The results from completed port CDM projects have for instance proven a more efficient overall port call performance, e.g. improved processes by enabling operators, terminals and the

other parties involved in the intermodal transportation chain to keep each other informed of progress and take appropriate actions as soon as any delays or changes to the existing plan become known. The Living Lab becomes a basis of understanding for the CDM concept at intermodal terminals, thus enlarging the previous CDM concept. The expected outcome of the Living Lab is to increase the coordination capacity of various transport hubs as part of an efficient multimodal transport system.

## **B. TECHNICAL SETTING**

### **9. ICT vs physical**

The CDM solution involves development of a process description identifying important physical and administrative events and coordination points which will be used as a basis for a standardised exchange of real-time information within the sub-ecosystem. In order to reduce the administrative burden and to improve efficiency it is deemed necessary to develop and implement automatic connectivity using an information sharing platform utilising relevant data streams originating from actors' own operating system.

The CDM concept implies an iterative process and the data set will be developed during the Living Lab. In order to identify and define the basis for coordination using digital information sharing, we need to:

- List requirements for the information sharing based on the analysis of the current physical flow.
- Create a “metro map”, in order to visualise points where information sharing is required.
- Create a timeline based on the metro map to visualise the timing of each process as well as how each process is dependent of other processes.
- Produce a state logic to visualise the communication plan.

This Living Lab will use the data information sharing platform Deplide.

- Connect different data flows to the data sharing platform
- Identify requirements for front end applications to be used for data visualization and for data sharing

This Living Lab deals with the following FEDeRATED global features:

- Language
- Access
- Findability
- Identity

## 10. DTLF implementation option:

- B. Single Platform
- C. Multiple platforms (Possibilities to connect to multiple platforms)

## C. ORGANISATIONAL ASPECTS

### 11. (Potential) Impacts

- Efficient system reducing the administrative burden
- Accessibility of real time information of location of containers/goods
- Enabling estimation of updated timetable
- Secure information sharing

### 12. Risks

- Lack of stakeholder engagement in the Living Lab
- Lack of knowledge on how to share data
- Lack of available data on time

### 13. Timing

	2019				2020				2021				2022				2023			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preperations				■	■															
Planning and scoping						■	■	■												
Stakeholder workshops				■	■	■	■	■	■	■	■	■	■	■	■	■				
Metro map													■	■	■	■				
Identification of data sets															■	■				
LL infrastructure development															■	■	■	■		
Preliminary testing																	■	■	■	
Feedback & scaling																			■	■
Operational testing																				■
Result report																				■

### 14. Contact

Daniel Moback, CLOSER / Lindholmen Science Park AB,  
 daniel.moback@lindholmen.se