

LL #9 Transparent Transport - City of Helsingborg

FACTSHEET

29 SEPTEMBER 2022

A. GENERAL (Business case)

1. Objectives

- Cargo and transport tracking
- Investigate new ways of handling municipal transport, focused on reduction of the amount and frequency of deliveries, using digital tools and data sharing.
- Identify minimum data sets that stakeholders need to access for enabling coordinated transport and monitor progress towards the city's goals.
- Monitoring compliance (public procurement contracts)
- Enhanced safety, increased cost efficiency and lowered emissions by reduction of the amount and frequency of deliveries.
- Developing a conceptual data sharing platform enabling new, collaborative business models.

2. Main emphasis

The City of Helsingborg wishes to collect and analyse the city's goods and transport flows from purchased products to a school - Rönnowska School. Therefore, a conceptual platform will be developed enabling suppliers to coordinate transport in collaboration and possibly develop new business models. The City of Helsingborg is leading and will implement the project, while the Swedish Transport Administration is participating as project manager and project participants.

The first step in creating a conceptual digital platform is to determine what data is needed. The next step is to examine who (suppliers) and which systems handle the identified data. The conceptual platform will consist of a description of how data can be collected, compiled and analysed. The ambition will be to eventually apply the developed models and work processes for additional receiving units in the City of Helsingborg. The knowledge will be distributed to other municipalities and market actors.

The conceptual platform describes facilitation of data exchange on delivery schemes and routes, consignee delivery management load, traffic safety and environmental impacts. By requesting co-loading - while also allowing suppliers and carriers to share order data such as goods type, senders/receivers, delivery window, customer requirements etc. - new business models are given the opportunity to take shape.

The concept will be tested through the research and demonstration platform Deplide, provided by RISE. Tests will be conducted during the fall of 2022.

3. Challenges

- Transition from traditional handling of municipal goods distribution into digital tooling.
- Monitoring compliance in public procurement contracts. This challenge is partly based on the difficulties for the municipalities to access transport and delivery data, as they are not the owners of this data. Municipal units experience several deliveries per day from different carriers, which requires personnel to sign for and handle the goods. Many and frequent deliveries create problems with traffic safety, as they can occur in areas and times where children are present.
- Reduced transport flow, which will result in a lowering of emissions. This will be achieved through joint loading and requirements set by the municipality for the type of vehicle and fuel used for delivery.

4. Transport mode

Road

5. EU Map Focus

Sweden.

6. Geographical coverage

Sweden, City of Helsingborg and surrounding areas.

7. Actors/SMs

- City of Helsingborg
- STA
- RISE
- MobiOne

- Grönsakshallen Sorunda
- Skånemejerier Storhushåll
- Menigo Foodservice
- Tonys Budbilar

8. Forecast scaling outside LL

The conceptual digital platform for sharing of goods and traffic flows aims to create conditions for coordinated transports. If the Living Lab is considered successful, the City's ambition is to include additional receiving units and operating areas in the business model. There is also potential for implementation of the developed working methods and processes in other cities, where the knowledge and experiences from the project can be replicated.

Depending on the outcome of the suppliers' development of business models, coordination can also have an impact on the actors' distribution flows for other customers.

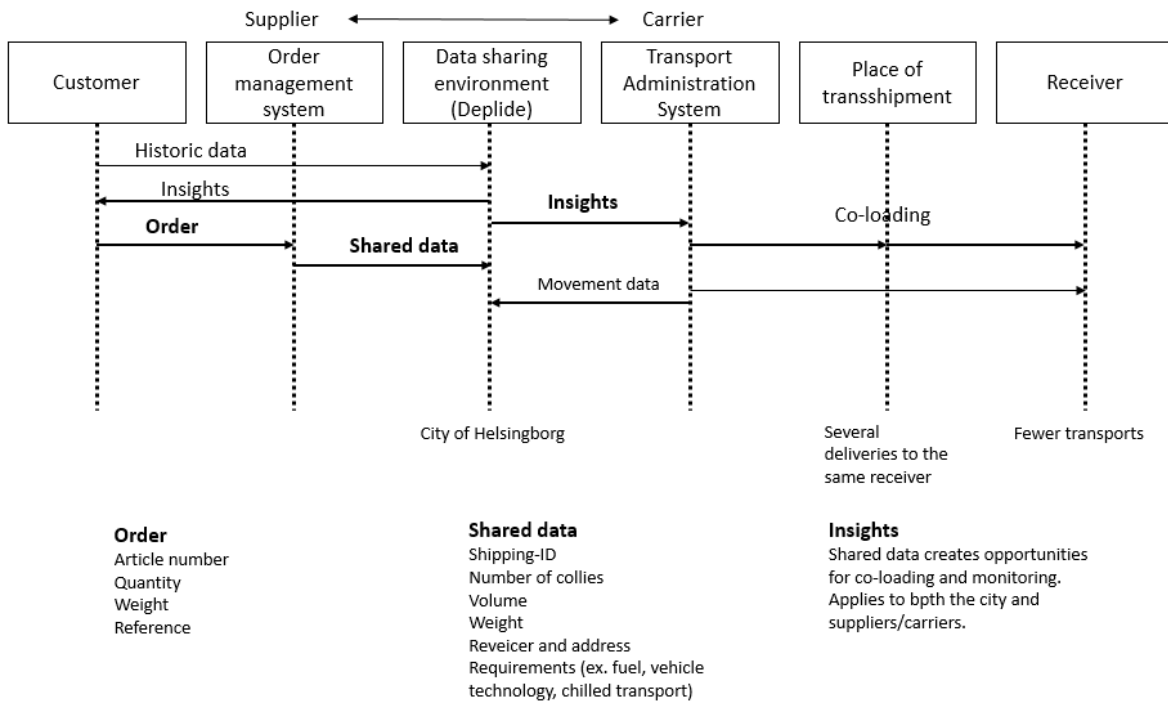
B. TECHNICAL SETTING

9. ICT vs physical

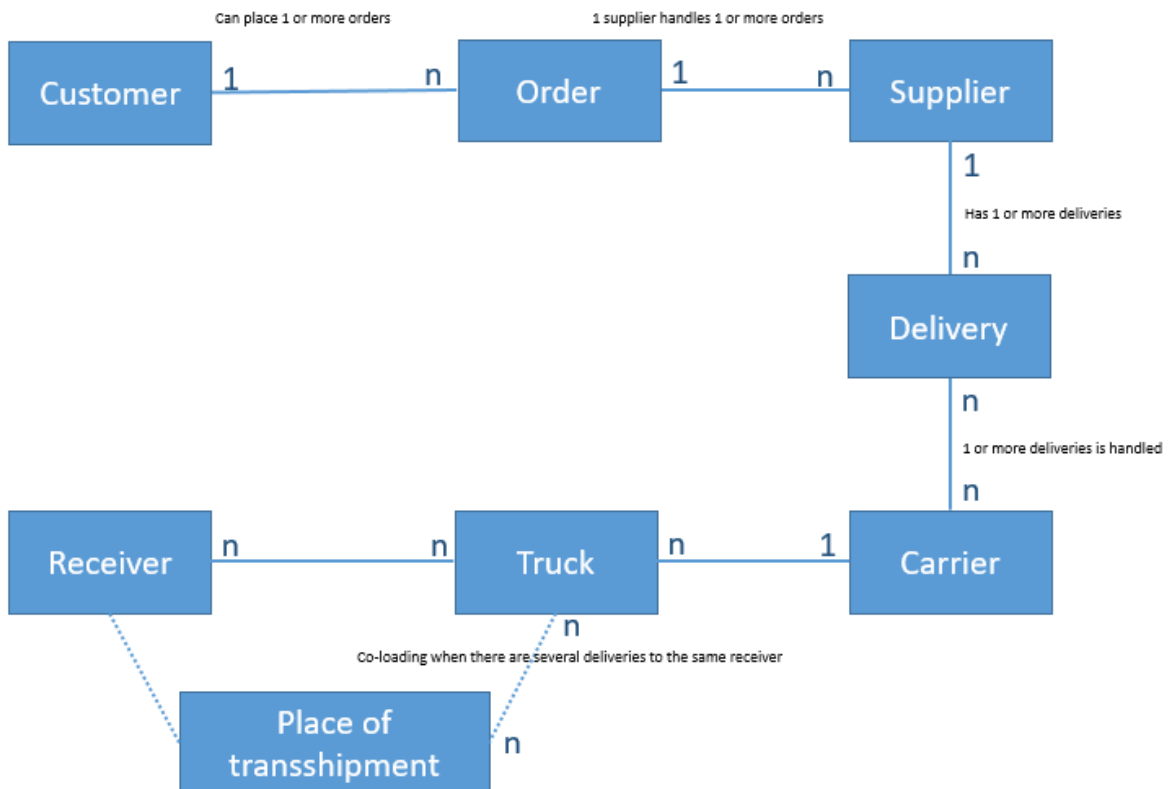
The Living Lab aims at investigating how delivery and transport data shared between customers, suppliers and carriers could facilitate a higher degree of co-loading (coordinated deliveries). This might in turn improve different transport-related factors such as existing delivery schemes and routes, vehicle fill rates, consignee delivery management load, traffic safety and environmental impacts. By requesting co-loading - while also allowing suppliers and carriers to share delivery and transport data such as goods type, senders/receivers, delivery window, customer requirements etc. - new business models are given the opportunity to take form. The concept will be tested through the research and demonstration platform Deplide, which has been developed based on DTLF and FEDeRATED principles. Descriptions of Deplide will not be further elaborated in the factsheet.

LivingLab 9 has developed its own semantic model which will be mapped onto the FEDeRATED semantic model. The semantic model was developed through a process where the goals were specified, then a sequence diagram was developed and finally the unique semantic model was developed. The semantic model is supported by a list of definitions.

The sequence diagram is illustrated hereunder



The semantic model is illustrated hereunder



This Living Lab deals with the following FEDeRATED global features:

- Language
- Access

10. DTLF implementation option

B. Single Platform

C. ORGANISATIONAL ASPECTS

11. Success factors

- The number of deliveries to the school should be reduced by at least 20%.
- Compliance with contract requirements should be at least 80%.
- Developed working method for handling municipal transport where data can be shared between suppliers, carriers and the city.

12. Risks

- Not enough interest from the city's suppliers, lack of willingness to share data.
- Optimization of transports to the school, but suboptimization on a system level.
- Legal challenges related to competition law and the Swedish Public Procurement Act.
- Low willingness and interest in changing purchasing behaviour in the public organizations.
- Lack of digital competence of the stakeholders and lack of knowledge on how to do data sharing, due to different degrees of digital maturity.

13. Timing

LL#09	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
Preparations					■															
Planning & scoping									■											
Stakeholder engagement													■							
LL infrastructure development													■							
Testing & piloting																	■			
Iteration & process analysis																	■			
Feedback & scaling																	■			

14. Contact

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