



Getting things rolling again

A talk with Vanja Carlén & Daniel Moback from CLOSER, and Cecilia Strokirk from RISE on LLs #6 and #8¹

Vanja and Daniel work at CLOSER, the Swedish organization that coordinates projects in which academia, industry and public sector collaborate in order to make freight transport more efficient. Vanja has been the project manager of Living Lab#8 Multimodal Information Sharing III since Aug 2021, and is now in the process of handing over the project to Daniel, who just started working at CLOSER in February '22. Daniel has not yet been fully settled into his new role, so he leaves most the talking on LL#8 to Vanja. The third interviewee is Cecilia, who works as a project leader at RISE. Cecilia's coordinating role especially focuses on the implementation of research platform Deplide, the interoperability solution which is now used in Living Lab#8, after Ericsson pulled out of the project last summer. In close collaboration with the CLOSER-team she also coordinates the cooperation with Sandvik Material Technology, the business stakeholder whose 'case' is worked out in LL#8.

The business case of LL#8 MMIS III is large scale. It is based on an intercontinental maritime supply chain, which starts at the factory of consigner Sandvik Material Technology, an important and globally operating producer of steel products. From there it runs by road to the port of Gävle, the largest container terminal on the east coast of Sweden; then by ship to the German transshipment port of Bremerhaven, and onward across the Atlantic Ocean to New York in the USA. There, delivery by road to the final destination should ultimately also be incorporated into the project.



Within LL#8 MMIS III Sandvik is not the only influential actor. The Swedish Transport Administration and the Swedish Maritime Agency are involved, just like research institute RISE. The projected data exchange is first of all B2B, but once that has been realized, B2A/A2B data exchange with for example Customs and Port Authorities should be integrated as well.

Vanja Carlén

But Living Lab #8 had been dealing with some serious setbacks. Of course, there were two years of Covid-pandemic, which meant that live meetings, which are important in the set-up and organization

¹ Interview by Minne Buwalda





of such projects, were often cancelled. And on top of that, the cooperation with telecommunications and ICT company Ericsson, which initially was responsible for the IT-platform and software of Living Lab #8, was cancelled. Vanja: “Ericsson has this Internet of Logistics, which was our original solution for the interoperability setup, but that stopped last year.” So, they had to start working on the technical solution from scratch. But Vanja got help from Cecilia and the platform team at RISE.

Concerning the business interests at play in LL#8, Vanja explains it is mainly about creating supply chain visibility for consigner Sandvik: “Sandvik wants alerts when there are delays. They want to get efficient information on where goods are in transit, in order to be able to inform their customers in advance of any delay. So, what we aim to do is connecting and integrating the different IT-systems from the different actors in this supply chain to Deplide, the research platform of RISE. In order to get there, we also need to integrate the IT-system of Geodis, the freight forwarder of Sandvik, which is the present collector of location data from the road transport, the shipping companies, etcetera.”

The Deplide platform

So, since last summer Deplide came in as the alternative interoperability solution for LL#8. Cecilia zooms in on what she and Vanja have been working on these past months: “We have been mapping the operations and information structure of this use case in flow charts. Now these flow charts are finished, we are putting the IT-flows from the Deplide-platform on top of that in sequence charts.” Cecilia comes with an example: “Take AIS-data on the location of vessels at sea. RISE already worked with these data in their prior systems, but now they are being connected to the Deplide-platform.”

According to Cecilia, working with existing maritime data is quite easy for those who develop the Deplide-platform: “The hard thing in this Living Lab is how to make the data sources throughout the whole supply chain interoperable. Sandvik not only wants ETA’s, but also ATA’s, and alerts when there are delays or other deviations.”

Deplide is built on top of maritime data exchange models and standards. Cecilia: “A lot of my colleagues at RISE are acquainted with Maritime Informatics. They worked extensively with ports systems, vessel information, and so forth. That’s the easiest part for us. The difficult part is integrating other standards, for example those used in road transport. We would like to integrate global standards, like GS1 and maritime standards.”

Cecilia continues: “The present problem is how to get the needed data from all these different stakeholders, so Deplide can make the data readable –both front-end the back-end– and create interfaces. When we have the sequence charts ready, we can actually make interfaces to forward the data to the next client in the supply chain, create alerts in case of delays, etc.”

It is not that stakeholders do not want to share their data, but the organization of the data exchange





has to be arranged by Sandvik. Vanja explains: “This is all customer driven. Because involved stakeholders do not want to lose an important client like Sandvik, I do not expect that much problems with the willingness to share data. But Sandvik had a company reorganization going on last fall and winter, which slowed down the process of getting stakeholders involved and getting everything up and running.”

How things started rolling again

But since the reorganization at Sandvik was completed in spring 2022, things started rolling again. About the old situation, Vanja says: “Until now, Sandvik gets data from Geodis, their freight forwarder, but both Sandvik and Geodis would like to find new technical solutions, with more actors in the supply chain connected and filling the information gaps. Besides, some parts of the supply chain are still missing data-wise, for example because they are not digitalized yet.” This explains Cecilia and Vaja’s focus on the creation of ‘user views’, interfaces that structure the information and give Sandvik overview, because they show at a glance the location of the shipment, including ETA’s/ATA’s, delays etcetera. Alerts when shipments are delayed or having other deviations also need to be created, according to Cecilia.

Sandvik’s aims are ambitious. Ultimately the last mile delivery in the USA should also be included in the data exchange, in order to get end-to-end visibility. But that seems out of reach for the present FEDeRATED Living Lab. So, now the ambitions are set more realistically. Vanja explains: “We take it step by step. Sandvik first of all wants to know what containers get on the intercontinental vessel at the transshipment port of Bremerhaven, for at the moment that important information is still missing. That’s how stakeholder involvement is prioritized at the moment.”

Asking about the planning, Vanja states: “I expect Sandvik to get some more actors involved, in order for us to be able to realize and test the demonstrator, and let Sandvik do the analyses of it, to see if it works and is worth to continue building on.” According to Vanja, the actors that can realistically be included before the end of 2023, are European road and sea transporters, terminal operators, Port Authorities and Customs.

Asking about the foreseen involvement of Port Authorities and Customs, the same organizational problems pop up. Cecilia: “It is really hard to get around the table on short notice, to get these organizations to prioritize this project.” She adds: “Vanja and I had this idea to start the demonstrator before this summer, but we now realize that we have to postpone it till after the summer.” But when Sandvik keeps working on stakeholder involvement and Vanja and Cecilia finish the sequence chart, the trials with data exchange can start.

LL#6 Rail – Road Terminal Collaborative Decision Model

When we are finished talking about *LL#8 MMIS III*, it is time to discuss *LL#6 Rail-Road Terminal CDM*. Vanja and Cecilia step out of the meeting here, to join other meetings, and they leave the talking on LL#6 to the new project leader, Daniel.





The main objective of LL#6 is: “The use of data sharing platform Deplide to demonstrate the concept of Collaborative Decision Making for the import and export flows at a rail-road terminal in the region of Jönköping.” Asking what the Collaborative Decision Making has to do with platform Deplide, Daniel says: “The Collaborative Decision Making *is* platform Deplide in the case of LL#6. Deplide is a platform that can extract and push certain data to stakeholders in the supply chain. In this case it is a hinterland railroad terminal in the central part of Southern Sweden, where trains from the harbor of Gothenburg arrive. Their challenge at the moment is that, information-wise, it is a bit of a black hole. They have little information on when trains are supposed to arrive at the terminal. This kind of information would be very useful, as it can be used to adjust work shifts in order to adapt them to train arrivals, thus reducing personnel costs.

Legacies and incentives for change

Talking about rail transport, Daniel continues on the Swedish system. He admits his knowledge is not from his experience with LL#6, but from earlier professional experience: “The system is pretty static, with rail transporters having to apply for time slots long in advance, while a lot of slots are not actually used in the end. Of course, we need a more dynamic system. The Swedish Transport Administration is working on that problem now.”

Daniel continues on the proceeding in Living Lab#6, as far as he understands them as he is new to the project: “There have been workshops with GDL, the train operator, and Transab, the terminal operator, while the port of Gothenburg and Bring Line, the vessel operator, are also involved in the discussions.” And: “At the moment we are mapping the data exchange in order to see if they need more information, because there are all kinds of other data that could be used, e.g. from shippers, the vessel operator, the port operator, or the Swedish Transport Administration.”

Yet, at the moment there does not seem to be much incentive to share more data. Daniel: “In the case of *LL#6 MMIS III*, shipper Sandvik is very focused, because they really want this. While in the case of *LL#6 Rail-Road Terminal CDM*, the actors are not that forward leaning. I guess we simply have to build it and then show them what they can get out of this, except for the times of arrival of the trains at the terminal.”



Daniel Mobach

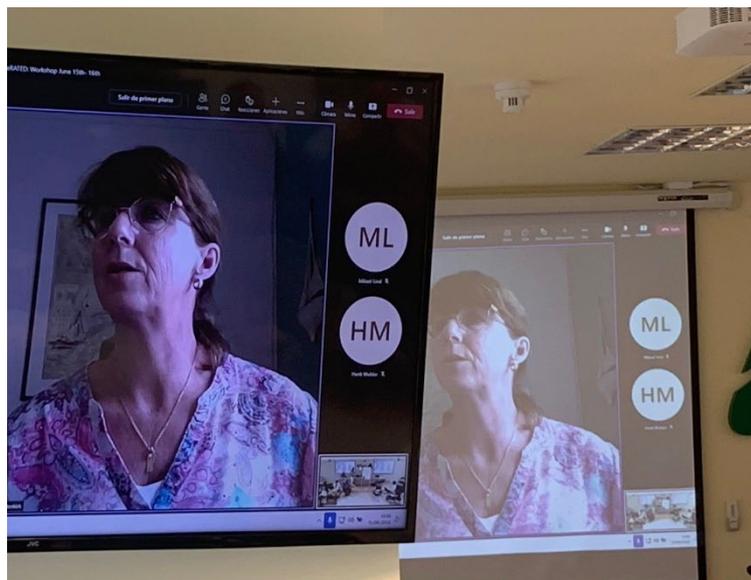
In another FEDeRATED-interview, the one with RISE's senior strategic research adviser Mikael Lind, other, more ambitious possibilities for data exchange within Living Lab #8 popped up. Mikael Lind: “One of the first explorations in *LL#6 Rail-Road Terminal CDM* was about how to handle the fact that some 20% of the trains from the port of Gothenburg up to the terminal in mid-Sweden, is empty. The





reason for this is that the predictability for the vessels to arrive in the port of Gothenburg is so low, that shippers could not really plan the utilization of the train. So, with the railroad company we discussed the possibility for other cargo owners to jump on the train and use the empty spots. This needs data sharing between the railway company and cargo owners, truck operators and freight forwarders.” Maybe the sequence chart that is now developed by RISE will convince stakeholders there is something to win for them too.

Asking about the planning, Daniel concludes: “We need to move up a gear. We are a bit behind schedule, but if we have one and a half year to finish it, we can make the testing of this use case in time. At RISE they are working on Deplide, while we at CLOSER are working on other aspects of Living Lab#6 at the same time.” And those ‘other aspects’ are aspects like Collaborative Decision Making and stakeholder involvement.



Cecilia Stokirk





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