



Tackling the uneven playing field created by third party logistics

A talk with Kenneth Carling and Asif Huq on Living Lab #4¹

Kenneth Carling is a professor in Microdata Analysis at Dalarna University in Borlänge, Sweden, while

Asif Huq assists him in Living Lab #4 Data sharing case for SME, last mile delivery actors. Asif has a PhD in Microdata Analysis with a focus on Accounting and Sustainability Reporting, and Kenneth was his principal supervisor. To make his area of expertise more accessible, Asif sometimes calls it Corporate Communications in our talk.



Asif Huq

Unlike many of the other FEDeRATED Living Labs, Living Lab #4 doesn't directly deal with corridors and hubs, or with ports and terminals. It deals with last mile delivery in a commercial setting. Last mile delivery is often characterized by an uneven playing field, mainly due to a phenomenon called third party logistics, the business model of big multinational logistics platforms. That bothers Kenneth. He is bothered by the bad working conditions of employees of local, subcontracting courier services. He is bothered by the detrimental effects of the information monopoly created by third-party logistics.

Kenneth wholeheartedly adheres to the leading principles of FEDeRATED. In our talks, he refers to these leading principles several times, as he refers to the upcoming updated version of the Masterplan. Kenneth takes FEDeRATED serious.

Leveling the playing field

Kenneth's motivation behind Living Lab #4 is quite personal. He says: "I think it is not good for society how last mile delivery is arranged now, and I want to make a contribution to make it better." He tells how it all started: "In our region, Dalarna in central Sweden, we have a local courier company called Jale, which is a subcontractor of DHL. Jale wanted to improve their last mile delivery, but in order to

¹ Interview by Minne Buwalda





do that, they needed to be better informed by retailers like Ikea, whose packages they deliver.” Yet, these retailers do not work with Jale directly. The order for delivery is given to DHL, which then outsources the fulfillment to subcontractor Jale. Therefore, the data exchange with these stakeholders is done by DHL, which does not share all the available data with their subcontractors. Kenneth: “The companies with the same power are able to collaborate and share data, but DHL wants to keep it negotiating power over Jale. This creates a very strange incentive structure for data sharing, and a very uneven playing field. There are many losers here, due to this hierarchical structure.”

So, Kenneth wants to create a more level playing field, and by doing so, improve the efficiency of last mile delivery by subcontracting couriers. Kenneth: “Last mile delivery amounts to about 50% of the total shipping costs in logistics, and the inefficiencies created by not sharing crucial data with subcontracting parties result in unnecessary losses. The working conditions for subcontracting couriers are terrible. The inefficiencies created by not sharing data with subcontractors result in unnecessary CO₂-emissions, etcetera.”

In the summer of 2021, a logistics platform company called Budbee entered the local market, and it marketed itself as an open platform, wanting to exchange data with all parties involved. So, Kenneth grabbed this chance to incorporate Budbee as a new actor and thus a new research subject into his Living Lab. Kenneth: “We assessed if this platform company wants to subscribe to the FEDeRATED-principles —though they market themselves as an open platform, recent events suggests they have the ambition to monopolize the market. We are still open to engage them to this open data paradigm of FEDeRATED but are not as optimistic as before. Intellectually, I am curious how such a platform company will continue to behave, and what actions the third-party logistics platform (DHL) will take in the meantime. I expect to share insights on this with FEDeRATED-partners, because the same problem exists in many other European regions.”

Ontology for an Augmented Semantic Model

Asif Huq has been involved in *Living Lab #4 Data sharing case for SME, last mile delivery actors* since November 2021. Within the Living Lab he now focusses on gathering data on involved companies’ key competences, and on how their boards are structured, in order to see how this influences their business model and data sharing. Asif: “We look into the networks of the board. Often board members of these platform companies are big institutional investors, including big IT- and telecom-companies. We want to see how this influences the principles of data sharing. A core part of the work involves uncovering the semantic models that are being used by these platform companies, and then use those semantic models to validate the one(s) developed within FEDeRATED.”

Yet, this is not about technical semantics, as practiced by most Living Labs. Kenneth explains: “There is a need for semantic modelling concerned with business incentives, or the motivation of organizations to share data. Within FEDeRATED there is a lot of attention for semantic modelling on a technical level, which of course is important, especially when you deal with multimodal data





exchange. But we also need a semantic model for the business decisions associated with data sharing. The prime contribution we expect to give to the Masterplan is a semantic model that pertains to the decision making of exchanging data. This is because this was identified as a missing piece in many of the other Living Labs.” And: “When it comes to the technical semantic model, it is very likely that platform companies already have a semantic model in place. When the collaboration with this platform works as expected, it will be quite easy to extract this semantic model and compare it with the general semantic model that is developed within FEDeRATED.”

On influencing and monitoring

This Living Lab is not about building interoperability per se, but about investigating how interoperability in commercial last mile delivery is often ruled by third party logistics, and how local players can be influenced to incorporate the FEDeRATED-principle of a level playing field in their business model. It is also about validating the FEDeRATED semantic model in a real-world use-case. Kenneth and Asif did not pick the easiest subject within their Living Lab, but I guess that is what active idealism brings: dealing with the resistance of tough reality.

Important objectives of Living Lab #4 in the present phase are “influencing the platform company to subscribe to the Federated principles” and “monitoring the reaction of traditional actors to this transition”. Asking how one evaluates such objectives, Kenneth says: “Concerning the monitoring of the traditional actors’ reaction to the market entry of the platform company, we study the evolution of third- or fourth-party logistics providers.” Asif adds: “We study how the key competences of these parties influence how they are evolving. For instance, one of the actors that played a key role in the growth of certain third party logistics providers was having in-house IT-architectures and capabilities, while companies that sub-contract such capabilities often do not grow, or they grow much slower.”

Asif continues: “As said before, we also look into the composition of the boards of these companies. Take new platform companies who either work directly with the retailer or through another platform company. They provide services ranging from riders, micro-hubs, fleet, containerization and software (e.g. fleet management or order management software). Take the new platform company in our Living Lab. It was quite similar to another, very comparable new platform company when they started, but it got a lot of big investments recently, about ten times more than that other newcomer. Now we dig deeper into how their board structure and ownership structure evolved, to investigate how that influences their growth and data sharing strategies.”

Kenneth: “Budbee is the company we wanted to influence. We assess now that they are more inclined to monopolise the market. However, there is a chance that they may subscribe to the Federated leading principles.” When I ask ‘what is in it for them’, Kenneth says: “The hypothesis is that their positioning in the market will put pressure on them to be as open a platform as possible, because that is how they market themselves. So, when they want to stay credible in the market, they will have to keep taking this into account. This is the expert area of Asif. They need to reckon with how they are perceived by their clients. And our hypothesis is that they as other actors might need to subscribe to these leading principles of open data sharing and a level playing field to sustain in the market.” Thus, the reaction of other actors in the market, like consumers, e-tailers and couriers,





to Budbee's revised data sharing strategy is also important to monitor.

When I ask if this would still be the case if they were taken over by a bigger, American style platform, Kenneth says: "Yes, that is why I consider this Living Lab important. We are monitoring that evolution within our Living Lab. I believe we will see many similar companies appear in the logistics sector, similar in terms of business model. It is a concept very well fitted for first and last mile delivery. The outcomes of this Living Lab can be used for policy formulation and can be integrated into the Masterplan."

Quantitative results

Wondering if Kenneth, a professor in Microdata Analysis, would settle with only qualitative research and results, I ask if there will also be quantitative results coming out of this Living Lab.



Kenneth Carling

Kenneth: "What we present should also be tangible in a quantitative way, in the sense that we can measure an improved operational efficiency for the subcontractors of third party logistics platforms working with more open data spaces." He continues: "We look at the cost of delivery, compared before and after the introduction of FEDeRATED data sharing principles. Concerning the cost of delivery, on one hand there is the price tag for the customer, and on the other hand there are the operational costs for the subcontractor." He continues: "For example, one of these retail chains now offers Budbee as an option for the customer, and they charge 49 Kroner, while the traditional last mile deliverer, Postnord, charges 99 Kroner for their services. At face value this suggests that the efficiency may be improved by 50%. But since they just entered the market, they might use prices





that are not really sustainable. We will keep monitoring this.”

Talking about ‘trials’, Kenneth says: “In the contract of the subcontracting local courier with the international courier, they work with standardized prices. The actual costs of the delivery are being reimbursed according to a standard list. But because of this uneven playing field, and the lack of insight into the data space of the international courier, the local courier is not able to benchmark the actual costs with the possible optimal costs. If they would be able to access that data, they would be able to set this benchmark. And when things turn out as projected, the new platform company will create the possibility to set that benchmark, so they can start working more efficiently.” Kenneth goes in to greater detail: “You can think of selecting prototypical deliveries for a subcontractor, take their current-delivery-approach- and computer-associated costs, and compare that to a situation where they have more information, in order to see what they can achieve in terms of cost reduction.”

FEDeRATED

First and last mile delivery is automatically tied to the modality road. Asking about possible cooperation with other Living Labs, the road transporters that are engaged as initiators of FEDeRATED Living Labs pop up, companies like Ahola/Attracts and Codognotto. Kenneth: “Their Living Labs are attractive from our perspective, because they are involved in commercial last mile delivery too, although they are more like traditional transport actors. Yet, it seems as if they are trying to transform themselves towards also being logistics platform companies adhering to FEDeRATED-principles.”

Asking when he considers Living Lab #4 a success, Kenneth says: “When platform company Budbee commits itself to the FEDeRATED leading principles, that would be a success. On top of that, having this Augmented Semantic Model would also be a success. But as it seems, on the other hand, we conclude that Budbee does not want to subscribe to these leading principles. We could get more insights into how to influence a platform company towards such principles, even that would be a success.”

Last mile delivery often ties into urban logistics, a discipline where government comes in. Kenneth says that he was “shocked to hear from Italian FEDeRATED-colleagues that the city of Vicenza now obliges private logistics providers to bring their goods to a city warehouse at the border of the municipality, after which the last mile delivery is governed by that municipality.” He wonders: “Is the market of transport and logistics able to self-organize data sharing according to European, federative principles, in order to avoid monopolization by big platforms on one hand, or heavy regulation by authorities on the other? Do we want to regulate transport and logistics on this scale?” Kenneth keeps adding sentences that end with question marks: “How much do we sacrifice by not coordinating the self-organization of data sharing in transport and logistics? And what would be the cost of trying to coordinate it?” He gives the answer himself: “The costs are quite high compared to the direct, pecuniary benefits.”

