This report is part of the evaluation of ReTuren, the near community upcycling (kvartersnära återbrukscentral), a pilot project for a new service for sustainable waste handling driven by Malmö municipal waste department between November 2015 and September 2016.

The report evaluates the process of establishing ReTuren. Such process used participatory design approaches and makers’ culture to establish and develop a co-produced service. The process has been based on the close collaboration between a design researcher (who has been working embedded in ReTuren), the coordinator and the project leader of the centre. The design researcher has been supporting the use of participatory approaches through a process that combined practical activities with ongoing evaluation.

The report evaluates the process within the centre. It looks also at how findings emerging from there have been travelling and getting anchored within the waste department and VASYD.
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1. Structure of the report

The report provides first key findings and then it illustrates the method used to carry out this evaluation. Further on it provides an introduction to the approaches used in the process of establishing ReTuren. Finally it describes how the process and learning developed within ReTuren and then how learnings have been travelling from ReTuren to the waste department and VA SYD. VA SYD is a public organization controlled by several municipalities in the southwest Scania. The organization is responsible for water and sanitation in these municipalities. Malmö municipal waste department (who has been the initiator and main owner of ReTuren) is part of VA SYD.

2. Key findings

When it comes to the process, participatory design approaches allowed to establish strong collaborations with people belonging to different organizations (i.e. co-production). Such collaborations have been important for the establishment and running of ReTuren, since they support fruitful synergies with local actors’ and citizens’ interests. They also showed how waste management and waste minimization can be integrated in a broader frame of holistic sustainability.

Makers’ culture has been an important tool in supporting the establishment and exploration of such collaborations and in engaging citizens and local actors with the question of waste minimization.

When it comes to the organizational learning and, particularly, the relationship between ReTuren and VA SYD, it emerges how the centre has been a very innovative project for the waste department. It required competences and resources that were not present in the VA SYD. Most significantly, the pilot project lacked an explicit plan to support shared reflection and learning between ReTuren and VA SYD. This had a negative effect on the internal learning process across different organizational levels. Additionally, it emerges how within the organization there are very different understandings of what working towards waste minimization might be and what role waste organizations might have in such an effort.

Learnings

- Waste minimization is a completely new area (and challenge) for waste organizations: there should be the possibility to experiment with new approaches and methods.
- Waste minimization pilot projects introduce new ways of working and new understandings of waste departments’ role. For this reason it is important that practical experimentation is paired with a process of ongoing evaluation of processes and outcomes that engages people at different organizational levels within waste departments.
- Participatory design approaches can provide guidance to civil servants working with co-production and the development of new services. However they need to be
adapted in relation to the specific context in which the new service is going to be developed. For this reason it might be useful to engage actors who have competences in relation to such approaches.

- Participatory design approaches require to regularly meet with actors in order to develop mutual understanding, possible activities and future strategies. This requires the allocation of time and resources within pilot projects.

- Researchers can support and facilitate learning processes.

**Suggestions for improvement**

- When driving pilot projects about waste minimization it is important to allocate resources for experimentation and learning, particularly it is important to formulate an explicit plan/goals in relation to learning focusing on both outcomes and processes;

- It is crucial to ensure that the learning process involves not only the people working on the ground but also key people within the organization, and thus having regular meetings which are focusing not only on updates about the project but also on shared reflection and mutual learning across organizational structure;

- In such learning process close external collaborators should be also involved;

- When using participatory design approaches, it is important that the pilot project is flexible so that it can be adjusted in relation to the learnings that emerge along the way;

- The engagement of one researcher in a pilot project is quite resource demanding. Thus, it might be of value of considering how the researcher can be involved in facilitating and supporting organizational learning in relation to different pilot projects or other processes within the same organization. This would entail to support both horizontal learning (learning across pilot projects and processes) as well as vertical learning (learning across organizational structures).

**3. Evaluation aim and methods**

The aim of the evaluation was to understand what kind of specific findings were developed on the ground and how such findings would be anchored and eventually integrated in the organization. Three aspects were investigated:

1. how participatory design approaches, makers’ culture contributed to the development of ReTuren;
2. what kind of learnings were developed among the core team (the coordinator and the project leader) and how those learnings have been spreading and getting anchored within VA SYD.
3. how the embedded researcher support the process and learning among the core team (the coordinator and the project leader).
Data have been collected through two rounds of interviews involving: the coordinator, the project leader, the closest manager from the waste department, the head of the waste department, the head of VA SYD communication department; VA SYD general director. The interviews have been carried out right after the opening of ReTuren and its closure. These data have been further integrated with researchers’ observation from participating to meetings and in the everyday running of the ReTuren.

The interviews have been carried out by Mette Agger Eriksen and Anna Seravalli.

4. ReTuren: basic information about the process

This section provides some basic information about the process of ReTuren.

4.1 People and organizations involved

The figure provides an overview of the people and organizations involved in ReTuren.

![Figure 1: At the centre of the figure is positioned the core-team, around them all the different people and organizations who got involved in the development of ReTuren.](image)

The establishment and development of ReTuren was guided by the project leader, the coordinator and the embedded co-design researcher who formed the core team. It is important to highlight that during the running of ReTuren several people got an important
role. For example, the second person working as staff in the centre and the closest managers from VA SYD who assisted the project leader in dealing with questions about staffing. Local civil servants from the area did also play an important role in supporting the coordinator and the project leader in their work.

However, when looking at process and organizational learning in ReTuren, the decision has been to focus on solely people from the waste department and VA SYD. This entailed that the people interviewed has been the project leader and the coordinator (on an operational level), the closest manager from the waste department, the head of the waste department, the head of the communication department and VA SYD general director (on a managerial level).

4.2 Timeline

This timeline reports the key happenings in the development of ReTuren.

2012: first formulation of ReTuren as a concept by the project leader and the waste department
autumn 2014: beginning of the collaboration between the project leader and the participatory design researchers
spring 2015: further development of the concept, beginning of the collaboration with makerspace STPLN and the municipal agency JobbMalmö. VA SYD and Malmö University write a joint application to Vinnova. The location for the pilot project is assigned to Lindängen.
August 2015: the coordinator is employed as a research assistant by Malmö University. Together with the embedded participatory design researcher she starts a process of infrastructuring in Lindängen, by organizing makers’ activities and events in collaboration with local actors.
November 2015: ReTuren is officially opened
December 2015: first round of interviews
May 2016: workshop with VA SYD and local organizations representatives to discuss the future of ReTuren
September 2016: The pilot is terminated before scheduled
October 2016: The pilot is second round of interviews

5. Participatory design and makers’ culture for co-production towards sustainable waste management

This section provides an overview of the approaches used in the development of ReTuren.

5.1 Co-production: collaborations across departments and citizens’ engagement towards holistic sustainability

The notion of co-production appeared firstly in the 1970’s to describe informal collaborations of citizens and public sector in the delivery of public services (Ostrom 1996). 40 years later, the idea of co-production describes the emergence of new public services that build on the explicit collaborations between public providers citizens and societal actors. Such collaborations are seen upon as a way to deliver services that respond better to specific local

Co-production is part of a broader discourse that is exploring new ways to organize the public sector based on closer collaborations with citizens and other societal actors (Bryson et al. 2015). Such discourse frames co-production as a way to bring together different kinds of competences and perspectives and to share responsibilities in addressing the issue of how to work towards holistic sustainability (Hermant-de-Callataÿ and Svanfeldt 2011).

The spreading of co-production is overlapping with and supported by ideas and models coming from the innovation discourse, where users' participation and collaboration across sectors have been discussed as approaches to boost both technical as well as social innovation (Chesbrough 2003, Etzkowitz & Leydesdorff 2000, Von Hippel 2005, Murray et al. 2010). Some of the models and methods developed within the innovation discourse have been directly transferred to the public context, where ideas about triple/quadruple helix and Living Labs¹ are increasingly diffused.

On a local level, the Commission for a Social Sustainable Malmö (2013) presents the idea of knowledge alliances, (i.e. collaborations across departments and between the public sector, citizens and other societal actors) as key approach to tackle social inequalities in the city.

It is important to distinguish between practices of collaboration and practices of co-production. It can be said that the former focus more on exchange of information between actors (or even “extraction of information” for example through citizens’ consultation). Co-production instead is about involvement on equal terms with shared responsibilities among actors who engage together in creating and delivering a possible solution to a specific challenge. In such a process mutual learning and the generation of shared knowledge plays a central role.

In this perspective co-production is often framed as a potential transformative process in relation to practices, structures and decision-making processes within the public sector (Boyle and Harris 2009, Stigendal and Östergren 2013). Sharing of responsibilities and mutual learning require horizontal structures for coordination and decision-making. Thus, co-production is considered a way to experiment with and promote more democratic forms of governance (i.e. how decision are taken) that include a broader range of actors (Bryson et al. 2015, Stoker 2006).

5.1.1 Returen: co-production as an approach towards waste prevention?

The field of waste handling is facing the challenge of working towards waste prevention. Such a goal has been established on a EU level and then adopted on a national level by all European countries. In Sweden it is represented as a matter of “climbing up the waste hierarchy”, where landfill, burning and recycling represent the lower steps and reusing and waste prevention the higher ones (Naturvårdsverket 2016).

¹ Triple Helix entails to establish hybrid organizations of academia, government and industry to boost cross-sector collaboration. Quadruple Helix includef citizens and civil society in such collaborations. Living Labs are one of the ways in which triple/quadruple helix are implemented. There is no clear consensus of the definition of what a Living Lab is, but most describe them as long-term environments for cross sector innovation including also final users/citizens, and driving activities in real contexts. (Følstad 2008).
Acting towards waste prevention represents a break in traditional waste management (Corvellec & Czarniawska 2014). It challenges existing views and practices within waste handling organizations since it entails to shift from organizing material flows (of waste) and informing citizens; to work (even more) with behavioural change and with new services, procedures and networks for reusing and upcycling.

In the establishment and running of ReTuren the close collaboration with different actors and the engagement of local citizens and initiatives has been a way to explore new practices and procedures towards waste prevention. Particularly, collaborations played a key role in supporting the establishment and running of ReTuren.

5.2 Participatory design approaches for sustainable waste handling

Already in the first steps of ReTuren concept definition, it strongly emerged the importance of engaging actors from different sectors and local citizens to explore a new service for sustainable waste management.

In order to do so, the pilot project relied on a participatory design approach. Such an approach entailed to work in a collaborative and iterative way based on ongoing experimentation and mutual learning. The decision to work with such an approach came through the meeting with the participatory design research group at Malmö University. Particularly one of the researchers has been working embedded in ReTuren and supporting the coordinator and the project leader in adopting such approaches and learning/evaluating the process.

5.2.1 Prototyping, iteration and ongoing learning to tackle complex issues

This section looks first at what are the characteristics of a design process, while the next one focuses on the specific participatory design approaches that have been used in ReTuren.
Design is characterized by a specific kind of process that intertwines ongoing experimentation on the field (prototyping) with continuous reflection and evaluation of such experiments (Schön 1983). Thus, the design process does not rely on technical rationality and prescriptive methods, but it is rather described as a **reflective practice**. This means that the process is highly dependent on the specific context in which it is unfolding. Ongoing prototyping and reflection allow to **continuously consider the process in relation to the context and progressively refine the former in relation to the latter** (Schön 1983).

Particularly, in the last years, design as a method is increasingly applied in processes dealing with complex issues in the private (Brown 2009, Verganti 2009) as well as in the public sector (Bason 2010).

Complex issues are often characterized by context- and inter-dependency, which makes difficult to come to a definitive and stable formulation of the issue and to perform an exhaustive analysis of it (Rittel and Webber 1973). Waste minimization represents a good example of a complex issue: it depends upon different technical, policy and socio-cultural aspects and its formulation may vary in different contexts.

Traditional project planning - where analysis is followed by planning that is followed then by execution and evaluation - is often struggling in dealing with complex issues, because of the impossibility to come to a stable definition and to perform a complete analysis of the considered issue (Rittel and Webber 1973). It has been argued that a design process might be more equipped to deal with this kind of issues since it operates in a different way that allows to consider both context- and inter- dependencies (Buchanan 1992). Rather than working according to a linear process, design entails a circular and/or a spiral process (see figures below), where ideas/proposals are quickly and roughly tested in the real context (prototyped) in order to evaluate them but also better understand the context in which the project is operating (Schön 1983). This process is thus iterative and continually refined through the learnings and inputs that are progressively acquired through ongoing prototyping.

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**Figure 3:** the iterative nature of the design process
Design has been described as a matter of problem setting rather than problem solving (Schön 1983). The iterative process allows to test different ways of understandings (and thus approaching) a specific issue. The design process entails to establish a "conversation with the situation" (Schön 1983), where different framings and approaches are tried out and their appropriateness is evaluated in relation to the specific context.

A designerly approach is better equipped to deal with complex issues since it allows for ongoing adjustments in relation to new insights which might emerge along the way. Moreover, the centrality of learning by doing and experimentation in the real context allows consider different perspectives and interests a round a given issue.

Designerly approaches are increasingly used in innovation processes in the public sector and particularly in projects with a strong focus on citizens' perspective.

5.2.2 Participatory Design at ReTuren: mutual learning, infrastructuring and commoning

In order to work with cross-sector collaboration and citizens’ involvement, the design process has been taking a collaborative and participative nature. This entailed to design with rather than for the different actors and citizens who were involved, by engaging them in prototyping and learning about ReTuren. In doing so the pilot project relied on principles and approaches coming from the Participatory Design field and particularly the ones of mutual learning, infrastructuring and commoning.

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2 See for example the work of Experio Lab in Sweden that uses design approaches in innovating services in the health sector with a focus on patients’ needs (http://experiolab.se/). Or the work of MindLab in Denmark that uses design approaches to involve citizens in developing new public services and policies (http://mind-lab.dk/en/). Another example is the 27th Region in France (http://www.la27eregion.fr/en/) an itinerant design lab that supports innovation processes in the public sector considering the perspectives of the different involved actors. Design approaches have been also used by Helsinki Design Lab (http://www.helsinkidesignlab.org/) to tackle different kinds of complex matters.

3 The field of Participatory Design (PD) has over 40 years of history of working with and theorizing on collaborative design processes bringing together actors with diverse interests. Initially the focus has been on collaborative design processes for the
Gathering different actors in the same design process entails the opportunity of bringing together different knowledge and perspectives, but also the certainty of disagreements and the risk of possible conflicts (Sjöberg 1996, Gregory 2003). Participatory Design underlines the importance of respecting and considering actors’ diversity (Simonsen and Robertson 2012). This means to focus on how the collaborative design process can support actors in recognizing and understanding their different perspectives about a specific issue. In this way, differences can become a resource (rather than a threat) to the process, providing a more holistic understanding of the issue at stake. In this perspective co-production becomes not only a matter of developing solutions together, but also a matter of mutual learning (Simonsen and Robertson 2012).

In the development of ReTuren the involvement of different actors favour mutual learning about how to work towards holistic sustainability and sustainable waste management in an urban context.

The involvement of these different actors has been guided by the approaches of infrastructuring and commoning.

In the Participatory Design field, infrastructures are understood not only as technical artefacts but also as a matter of competences and knowledge that make possible to support and organize specific practices. The approach of infrastructuring (Hillgren et al. 2011, Karasti 2014) focuses on aligning and connecting people, resources, knowledge in order to support and organize new practices.

Understanding ReTuren as an infrastructure for sustainable waste management entailed to take care not only of creating the material infrastructure but also engaging the competences and knowledge to establish a public service and support the emergence of new practices about sustainable waste management. Infrastructuring in and for ReTuren meant to align different people, resources and knowledge that would made possible for the centre to be a space where to dispose garbage, exchange things and participate to activities and events to spread knowledge and gain skills about for waste minimization.

The notion of infrastructuring highlights how this alignment requires time and negotiations among the different involved actors. Such negotiations are a matter of experimenting with possible roles and practices as well as reflecting and learning together about such experimentations. As already pointed out, ReTuren has been involving a number of actors in and outside Lindängen. The engagements have been often focusing on prototyping ReTuren and reflecting together about issues related to the running of the centre. Additionally, the local network has been contributing with experiences and knowledge about driving public services in the area, and it has played also an important role in dealing with safety issues that emerged along the way.

These engagements made possible not only to test and further refine the functions of ReTuren but also to develop shared learnings in relation to how an infrastructure for sustainable waste management could be organized and driven (and what kind of challenges it entails).

As already pointed out, co-production entails shared responsibility among actors for collaborative value generation. In order to foster shared responsibility and shared ownership in and over ReTuren the approach of commoning (Marttila et al. 2014, Seravalli et al. 2015)
has been used. Such an approach builds on the concept of commons, which are arrangements for shared ownership, use and maintenance of resources. The approach of commoning favours actors' appropriation over processes, by providing them the possibility to influence (and even set) agendas as well as involve them in decision-making processes.

Infrastructuring activities have been aiming not only at testing activities and negotiating roles but also developing local co-ownership among citizens and local actors. They provided the opportunity to explore how question of waste minimization could be integrated with ongoing local efforts towards holistic sustainability. In this way, ReTuren became quite quickly part of neighbourhood, with different actors (and citizens) feeling a sense of co-ownership over the centre. Working with and towards local co-ownership has been important in facing and resolving conflicts with some users during the running phase, but it also played an important role in ensuring the long-term sustainability of ReTuren. After the pilot project was terminated, the involved actors worked together to develop a new organizational model based on shared responsibility.

Infrastructuring and commoning have been overarching approaches. More concretely, makers’ activities have been playing a key role in supporting alignment with different actors and developing co-ownership around ReTuren.

5.3 Makers’ culture for waste minimization

The notion of makers’ culture is used to describe initiatives and activities where non-professionals engage in making, repairing, upcycling things by sharing knowledge, tools, materials and by collaborating. These initiatives may have very different focuses: from projects dealing with the design and production of open-source prosthetics; to repair workshops which are social gatherings where people meet and help each other in fixing things. The makers are people who engage in making and repairing in their free-time. They can be driven by curiosity (exploring technology possibilities), ethical/political interests (criticizing mass-consumption and the actual production system) but also just by the fulfilment that making something together with others generates.

Makers’ culture is characterized by three distinctive traits:
- **Learning by doing.** Makers’ activities entail a strong learning component. By engaging in making and repairing participants learn about materials, production processes but also about coding, physics etc. etc. This “learning-by-doing” dimension has brought makers’ culture into schools, where different projects are experimenting with new ways of teaching and learning (see for example http://makerskola.se/).
- **Do-it-together.** The other central aspect of makers’ culture is related to sharing and collaboration. Makers’ culture is characterized by the sharing of knowledge and resources as well as the collaboration among participants. This attitude entails that makers’ activities are often creating social connections among participants as well as facilitating processes of mutual learning.
- **Users become producers.** Participants in makers’ activities are not just passive consumers but take an active role by creating/repairing objects. This shift questions the traditional division of roles between users and producers, with citizens becoming active actors who are shaping services and products in relation to their own and their communities needs.

Makers’ culture can thus play a role in promoting upcycling and waste minimization by providing inspiration and favouring the spreading of practical skills and competences about making and repairing. But it can also represent a cultural framework to further discuss what production is, who is driving it, what kind of needs it satisfies and what value does it generate.

Particularly in ReTuren makers’ activities have been used with three different aims
(1) inspire to upcycling and as pedagogical method for waste prevention
(2) as way to bring together different actors and citizens and explore possible collaborations (infrastructuring)
(3) to create opportunities for citizens’ and other actors’ appropriation of ReTuren (commoning)

More details on the activities can be found in the report “Erfarenheter från ReTuren”.

5.4 The embedded researcher: a support for experimentation and mutual learning

Such a complex methodological frame has been support in practice by the presence of a participatory design researcher, who has been working embedded in ReTuren. This meant that she spent half of her working time at ReTuren. She supported the coordinator and the project leader in tailoring and using participatory design approaches and makers’ activities. A particular effort was put in supporting and facilitating ongoing reflection and learning in the development of ReTuren.

The collaboration with the participatory design group at Malmö University started already in autumn 2014. Initially, the relationship focused on further developing the concept of the upcycling centre by integrating makers’ culture as well as the idea of using participatory design approaches for its development. The research group had been carry out research about makers’ culture in the past years and they had a project in Lindängen exploring how makers’ culture can contribute to social sustainability in Malmö.

Through financing from Vinnova (first through Innovation Platform Malmö Syd Ost and then the Social innovation Program) it has been possible to engage one of the researchers in the running of ReTuren. Part of this financing has been also used to employ the coordinator as a research assistant from August to December 2015, and start to work already before the opening of the centre with infrastructuring and prototyping through makers’ activities.

The presence of an “embedded researcher” in ReTuren, has been not only a support for reflection and learning but it also provided opportunity to tap into an existing local network and knowledge from previous research projects. Moreover the researcher has been also assisting the coordinator in organizing and driving some of the creative activities and ensuring financing for driving them

6. Process and organizational learning at ReTuren

This first section brings forward the insights about the process and the learnings that were developed on an operational level by the coordinator and the project leader (from now on the core-team).

6.1 Participatory design at ReTuren: infrastructuring for prototyping and mutual learning

A participatory design approach allowed for an ongoing refinement of ReTuren through continuous collaborative experimentation and mutual learning with other actors. In interviews, the core-team discussed how the development of ReTuren focused on continuously prototyping and progressively refining the service in relation to the specific questions and challenges that emerged along the way.
Through prototyping, it was possible to explore the opportunities and limits of the service. For example, when it comes to makers’ activities the core-team pointed out how the experimentation with different formats allowed to develop an understanding of which activities were or not suited for ReTuren. By trying out different focuses and themes (but also engaging with an ongoing reflection and evaluation over them), it was possible to adjust/refine along the way the content and format of the makers’ activities.

The core-team stated how the process of ongoing refinement involved people from other organizations, not only in the prototyping but also in the evaluation. In their words, infrastructuring was an important approach not only for gathering people, competences and knowledge but also for experimenting and learning together. Both the coordinator and the project leader pointed out the importance that the local network in Lindängen and the researcher had in the development of ReTuren. The coordinator highlighted how the researcher supported her in reflecting on the functioning of ReTuren and on the relationships with local actors. She also emphasized the importance of the local actors in finding solutions about specific issues related to Lindängen. Local civil servants were important also for the project leader as a support for reflection and learning, and in finding ways to deal with issues that were met along the way. She also discussed the role of the researcher as a support in the development of the concept and in discussing possible future plans for ReTuren.

They also highlighted how the close and ongoing involvement with these actors was important in fostering a sense of co-ownership of ReTuren. Such co-ownership played a fundamental role in the continuation of ReTuren after the termination of the pilot. The involved organizations developed a new organizational model where responsibilities and duties are shared.

**6.2 Time for infrastructuring and learning needed**

However, they also underlined how time for infrastructuring, evaluation and learning was often quite limited. The coordinator highlighted how she got more time during the spring for reflection and for meeting with the different actors, when the opening times of ReTuren were reduced. This provided her with some dedicated time for evaluation and infrastructuring, but also for properly meet users during opening hours and convey information and knowledge about waste handling and waste minimization.

The coordinator highlighted how, for example, before the spring, it was difficult to have an ongoing dialogue with STPLN (who was employing her) since she had very few occasions for being there. Infrastructuring requires, at least in the beginning, the possibility to meet actors on a regular basis in order to explore together possibilities for collaboration. This demands time and a certain flexibility.

In a similar way, the project leader mentioned how, due to the fact that operational aspects became more demanding, she did not have so much time to meet with possible new actors. Additionally, she had very little time to work with more strategic aspects of the pilot -project, such as spreading learnings within VA SYD and grounding the co-ownership model developed on the operational level at different levels within VA SYD and among managers of the over involved organizations.

**6.3 Co-production and citizens’ participation from means to key features of ReTuren**

Something that emerged quite strongly in the interviews with the core team was the shift of the role of co-production and citizens’ participation in ReTuren. Initially, collaboration with local actors and the engagement of citizens were mainly understood as a matter of
facilitating the quick establishment of ReTuren in Lindängen and of integrating competences related to makers’ culture. In the interviews after the termination of the pilot, it emerged how co-production and citizens’ participation progressively assumed a key role in ReTuren, becoming central features in the upcycling centre. This is due to the fact that close relationships with local actors and citizens delivered much more than just users and competences to ReTuren. They allowed dealing with issues related to operating an open/public service (such as occupational health and safety) but also, by establishing mutual trust, to easily work with and towards behavioural change.

Through co-production the question of sustainable waste management got integrated with local interests about social and environmental sustainability. As some of the Lindängen civil servants pointed out, Returen became a platform for collaborative experimentation with and towards holistic sustainability in Lindängen.

In such respect, during a workshop in May 2016 focusing on possible future organizational models of ReTuren, the coordinator has been formulating the idea of ReTuren as a communication project. She meant that relationships and communication with different actors and people locally in Lindängen, in Malmö and within VA SYD had a fundamental role for the well-functioning of ReTuren. But she wanted also to highlight that good relationships and trust between ReTuren, local citizens and other actors played a fundamental role to integrate waste handling and efforts towards waste minimization in a broader network of actors and activities striving for sustainable urban development.

7. Process and organizational learning inside VA SYD

This section focuses on the process and the organizational learning from a VA SYD perspective. It is based on data collected in the interviews with the core team and some managers from the organization.

7.1 A very innovative pilot project

Something that emerged quite strongly from the interviews is how ReTuren represented a very innovative project within VA SYD in relation to different aspects. It was the first time VA SYD was driving a pilot project dealing mainly with upcycling and waste minimization. It was also the first time that VA SYD was working in such close collaboration with NGOs and citizens. Moreover according to the waste managers and the project leader it was also the most complex project that was driven so far by the waste department, who previously had been mainly engaging with communication projects.

It is important to underline how the novelty of ReTuren was not just related to VA SYD as an organization but to the entire waste branch in Sweden. As pointed out by the waste department managers in the first round of interviews, the pilot project was a complete novelty both in terms of concept as well as methods. During the pilot project, ReTuren was in contact with and visited by numerous representatives of waste organizations and municipalities from all over Sweden (see rapport 2.6.1.1). Researchers focusing on waste handling and policy makers working with circular economy visited also ReTuren.

7.2 From external to internal challenges: a demanding but isolated project
In the first round of interviews with the waste department managers, it emerged how the main challenges for the pilot project were related to external factors, and more specifically, to questions about fair competition and political support. These two issues were framed as: to ensure that ReTuren would not compete with existing business initiatives working with reuse/upcycling (e.g. second-hand shops); and to get support from politicians for a new service concept within waste handling.

In the second round of interviews, it emerged how the main challenges were internal and related to the fact that ReTuren became progressively more demanding in its everyday running, particularly in relation to questions of staff management and occupational safety and health. As highlighted by both the project leader as well as the waste department managers these topics required competences and working routines that were not present within VA SYD.

These two questions became a growing challenge, as stated by the core team and the waste managers. The project leader highlighted how the meetings with the closest manager increased from once a week to every second day just to discuss how to handle staffing and work environment issues. She also reported how, in the early spring 2016, her closest manager took over the responsibility for the staff since she was working already too much overtime. Issues in relation to the project being too demanding emerged also in relation to the coordinator position. In the spring 2016, coordinator’s tasks had to be scale down and ReTuren opening times got reduced, since it was difficult for her to both run the service as well as work with its development from a practical and strategic point of view.

At the same time it emerged how ReTuren was a quite isolated project within VA SYD. In describing, with whom they were in contact about the running of ReTuren within VA SYD, the core team named a relative small group (one-two people from the communication department, the persons responsible for occupational safety and health, someone from the IT department, someone from the economic department and the two managers from the waste department). They described how such relationships were focusing mostly on managing the everyday running of ReTuren and on dealing with the operational problems that emerged along the way. The managers from the waste department also gave a similar picture. Additionally, in the interviews with the managers, it emerged how ReTuren was framed and understood within VA SYD as a project whose responsibility was solely of the waste department.

7.3 A weak structure for internal reflection and learning

From the interviews with the core team and the different managers it was revealed how learnings from ReTuren did not travel so much within the organization. Further, there was a lack of time and structure to support common learning and reflection between the core team, the managers from the waste department and other functions within VA SYD. It is also important to highlight how, from the start, the pilot project did not have a plan or goals for spreading learnings and engaging different people from VA SYD in mutual reflection. The only occasion in which that happened was in May 2016 when a workshop about the future organizational model of ReTuren was organized. The workshop brought together different key persons from VA SYD, representatives for the involved organizations, the participatory design researchers and the core-team.

Initially, it was mainly the project leader that was taking responsibility for spreading results and fostering reflection within VA SYD particularly by discussing more strategic aspects with the waste department managers. She also updated her colleagues during internal staff meetings and engaged them before the opening with helping preparing the space. However,
as already pointed out, with operational aspects becoming more demanding, internal communication and anchoring activities increasingly diminished.

The meetings between the core team and the waste managers progressively focused on the everyday operations at ReTuren and there was not so much time to discuss and reflect together about the learnings emerging from the pilot project and about long-term strategies. Additionally, the project leader described how the meetings with ReTuren board were often short and mainly focusing on updating about the status of project and not so much about discussing more strategic and broad questions.

The interviews with the waste department managers provided further details on this. When addressing what kind of support the managers got internally to face the challenges and issues of ReTuren they described mainly operative support coming from other functions. When it comes to the relationship with VA SYD management, they presented it as a matter of reporting and updating about the status of pilot project but not as a possible arena for sharing and discussing strategic issues.

The lack of opportunities for confrontation about learnings and future strategies for ReTuren led to the fact that, at different levels within the organizations, there were different understandings of ReTuren activities and aims.

### 7.4 Climbing up the waste hierarchy: what is the role of waste organizations?

More in general, the interviews emphasized that how to work with/towards waste minimization and the role of waste handling organizations in this effort represent open questions for VA SYD and for the entire branch. While there was a common understanding that climbing up the waste staircase is a central concern and responsibility for VA SYD as the organization hosting Malmö waste department, ideas about how to work with and towards such a goal seemed to vary.

In all the interviews ReTuren is recognized as project who had positive impact in relation to "climbing up the waste hierarchy", however there is no shared view if that actually might be the way for VA SYD to work with and towards waste minimization. While the project leader describes ReTuren as a pilot project combining a new service for waste handling with upcycling and waste minimization, other managers in the organization describe it mainly as way to improve current waste collection system.

Moreover, in all interviews it was stressed the value of ReTuren as a project that created close collaborations with other departments and close contacts with citizens and especially with a user group who is usually difficult to reach. All interviews did also mention the fact that VA SYD and the waste department was missing the competences to run a public service. While some managers suggested the importance of further developing shared responsibility among different city departments as a way to address this issues, others suggested that perhaps it might be more appropriated to have a service that does not require staff on the ground, for example, by creating an automated centre. Even when it comes to the idea of shared responsibility among different actors there seemed to be very different understandings of VA SYD’s role. The managers stated that the waste department should focus only on the waste handling part; while the core-team highlighted the importance of partially engaging also with the others functions in order to support efforts towards waste minimization.

Additionally, also within the waste department, there were different understandings of ReTuren. The interviews reported a general consensus about the fact that the pilot project proved that ReTuren was a successful concept and the importance of close relationships
with citizens and other actors. However, there were very different perspectives about how the centre could be replicated in different neighbourhoods. The coordinator and the project leader stressed the importance of working with an iterative approach that considers local conditions. The managers highlighted the importance of formulating a standard concept that could be replicated in different locations.

The presence of different understandings and interpretation across organizational levels can be partially explained by the lack of a learning process bringing together people across the organization. However it seems also to reveal a difficulty for waste management organizations in defining the boundaries of their mandate and responsibilities when it comes to address the highest levels of the waste hierarchy.

In the final interviews with the general director and the communication department manager, they both expressed how they thought that some aspects of ReTuren lay outside VA SYD mandate. Particularly the idea of ReTuren as a meeting space and the work with makers’ activities were framed as a matter of creating social sustainability and, thus, being not VA SYD’s responsibility. At the same time, in the interview with the project leader and the coordinator, it emerged how framing ReTuren as a meeting space and working with makers’ activities were important in working towards waste minimization and in ensuring the well-functioning of the service.

From the interviews it emerged how working towards waste prevention entails the need to reconsider the role and mandate of waste departments. This is in line, for example, also with the findings of a recent national investigation about circular economy driven by the Swedish Economic Department (Alterå et al. 2017). Such investigation proposes to review the framework of the waste fee. Particularly the suggestion is to modify its description so that it can be used to finance activities related to waste minimization (particularly information towards citizens and the preparation of waste for reuse and upcycling). Such changes would provide a broader mandate for waste departments to engage with efforts about

8. The “embedded participatory design researcher”: supporting learning but only on the ground

When it comes to the embedded participatory design researcher as an approach, it has been fruitful in terms of supporting learning on the ground but it missed supporting learning within VA SYD and across the involved organizations.

On the operational level, the embedded researcher supported a process of joint articulation and appropriation of participatory design approaches. Such a process intertwined practice with ongoing reflection and evaluation over activities at ReTuren. In the interviews with the project leader and the coordinator they highlighted how the role of the researcher has been crucial in developing the concept of ReTuren, but also in supporting along the way the pilot project when it came to reflection and learning.

In the spring of 2016, the embedded researcher together with her colleague proposed to organize a process of joint evaluation and articulation of ReTuren, which would have engaged the closest managers of the waste department and the core team. The managers, however, decided to postpone the process, arguing that the evaluation should be made after the pilot project had run its course.
In future pilot projects it might of value to engage researchers in supporting and facilitating learning processes; however it is important that such engagement supports learning across organizational levels.

Additionally, it is important to highlight how, while giving both in terms of practical development and research outcomes, the close engagement of one researcher half-time in a single project is quite resource demanding. Thus, it might be giving to consider how the researcher might support organizational learning in relation to different projects or processes within the same organization. This would entail to support both horizontal learning (across the different projects and processes) as well as vertical learning (across organizational structures).

References


