



# **SUSTAINABLE BUSINESS MODEL FOR SECOND-HAND TEXTILES**

**AN ANALYSIS OF THE PUBLIC AND PRIVATE SECTOR  
ON THE MUNICIPAL LEVEL**



By Tina Sendlhofer

A research project financed by Vinnova, Sweden's Innovation Agency

# PREFACE

This report gives an account of a study on the obstacles and opportunities in the transition to a circular economy, with a specific focus on the organization of the textile market on a municipal level. The study constitutes one part of a larger project, 'Hållbar affärsmodell för hantering av förbrukade textilier - En analys av offentlig & privat sektor på kommunal nivå'. The broader aim of the research is to contribute to knowledge that can support policy and market development towards a transition to a circular and bio-based economy.

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# 1. SUMMARY

This report draws on a qualitative study that aims at identifying models of collaborations for second-hand textiles among Swedish actors. Specific attention is paid to the opportunities of current models to transform the second-hand textiles market into a more sustainable and circular market. The municipality's experiences are in focus, since they are ordered by-law to collect public waste. For gaining a broader understanding, also other actors' experiences are considered, namely waste collectors, non-profit organisations, commercial organisations, and retailer organisations.

The study draws on 12 interviews with the intention to obtain an initial insight into the current second-hand textiles market in Sweden. The main findings demonstrate that the models for handling second-hand textiles vary; depending on size, geographical location, or personal involvement of the municipality's clerk. All actors agree on two outlooks: first, they are positive toward introducing a nation-wide regulation for second-hand textiles; second, they are positive toward introducing a specific extended producer responsibility by the Swedish legislator.

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## 2. TERMINOLOGY

Second-hand textiles. These are pre-owned textiles (clothes, linen, towels, etc.) that the owner gives away with the purpose to be either re-used, recycled, down-cycled, or incinerated.

Non-profit organisations. In Swedish *ideella organisationer*. These are organisations that are dedicated to furthering a particular social cause or advocating for a shared point of view. In economic terms, they use their surplus of revenues to further achieve its ultimate objective, rather than distributing their income to the organisation's shareholders, leaders, or members. Non-profit organisations are tax exempt or charitable, meaning they do not pay income tax on the money that they receive for their activities. They can operate in religious, scientific, research, or educational settings.

Sustainable business model: Is a business model that contributes to a societal transition to a circular economy.

## 3. BACKGROUND

The global textiles production is forecasted to increase rapidly: from 90 million tonnes in 2015 to more than double by 2030 (Textile World, 2015). Recent developments in Sweden confirm this trend. 140,000 tons of new textiles entered the market in 2018 (EPA, 2019) and the textile consumption is expected amounting to 14 kg per person in 2020 (Elander et al., 2014).

This development has not remained unnoticed and producers have started to take actions for promoting a sustainable consumption of textiles, such as through investing in sustainable cotton, phasing out chemicals, or reducing waste water. Many of these activities were devised in self-governing industry-led initiatives. This form of privatisation has been looked upon critically, since it may lead to standards and implications, which were set to continue business as usual (Machek, 2018).

The question about how the textiles consumption, such as second-hand textiles, is best organised has not been prioritised in Sweden for many years (IVL, 2015). During the past few years, however, a small number of research institutes has scrutinised the issue of second-hand textiles in Sweden. These reports are either mapping reports (IVL, 2015), or evaluation reports to support decision-makers with necessary knowledge about possible ways about how a second-hand textiles market can be organised (Naturvårdsverket, 2016). The latter focuses on generating alternatives for collecting second-hand textiles by including an extended producer responsibility (EPR) (Naturvårdsverket, 2016). The topic EPR is gaining importance and is evidenced in point 38 of the Collaboration Agreement from January 2019 of the Swedish Parliament. In this agreement, the four parties mention explicitly that an EPR for textiles will be implemented (Januariavtalet, 2019). Yet, it remains ambiguous to which degree and in which phases of a textile's life-cycle an EPR will be effective.

The recent involvement of the Swedish Government in the second-hand textiles question has, therefore, triggered spark and confusion among actors. To-date, the second-hand textiles market has been rather unregulated, hence, various forms for handling second-hand textiles on the municipal level have developed (IVL, 2015). For instance, municipalities may not be actively engaged in the collection of second-hand textiles, or they may collaborate with actors, or they may take care of the collection themselves (IVL, 2015).

This report presents a more fine-grained overview about the current collection systems in place, opportunities and challenges that come with these, as well as potential changes to improve the collection of second-hand textiles in the future. Notably, there may be lessons learned about how to organise second-hand textiles and what factors promote a circular textiles market.

## **4. PROJECT GOALS**

Project goal 1 intends to generate knowledge about obstacles and opportunities in order to promote policy development and/or a behavioural change that drives a circular economy. Furthermore, it aims at contributing to a societal transition into a circular economy by generating knowledge about obstacles and current or potential factors that promote this transition at the municipal level. Furthermore, it is intended to create a greater understanding of the actors who interact in the industry: the public (i.e. municipalities), the private (i.e. commercial, non-profit organisations) actors, and households (i.e. consumers).

Project goal 2 intends to develop a plan for how new solutions and strategies should be developed and utilised nationally and/or internationally. More specifically, conditions are addressed to be able to work together in a way that favours sustainable second-hand textile management for both public and private sector at the municipal level.

## **5. METHOD**

This study utilises a qualitative case study method (Marshall and Rossman, 2014), given the dearth of studies about second-hand textiles models at the municipality level. A qualitative case study method is a research strategy that allows gaining insights into the focal phenomenon and access idiosyncratic qualities of the studied unit (Maxwell, 1992; Yin, 1981). The data collection of cases is then usually purposeful, according to certain criteria. Furthermore, the selection of informants who have been personally involved in the focal phenomenon gives rise to a qualified data set and is key for this study (Ghauri, 2004).

## 5.1. CONTEXT

The Swedish second-hand textiles market has existed in various forms for many years (Appelgren, 2019). Over time, different models and systems to process second-hand textiles have evolved (ibid). Since January 2019, the Swedish legislator has published a Statement of Government Policy (Januariavtalet, 2019), of which point 38 states that an EPR will play an increasing role for the future waste collection, while non-profit organisations will remain in the market. Waste collection should aim, thereby, at developing models that promote sustainability and circularity.

The Swedish legislator classifies second-hand textiles as waste; however, with the aim of promoting sustainable and circular systems, the legal development is expected to impact the future classification of second-hand textiles. To date, the models for processing second-hand textiles depend on contextual factors and vary across Sweden. The decision to introduce an EPR, may predict that the second-hand textiles market will undergo a legal and structural change in the upcoming years. In spite of an EPR, keeping non-profit organisations in the market as well as promoting sustainable and circular systems, the extent and directions of these changes remain unspecified.

The lack of a clear system that is backed by laws and regulations has created uncertainty and contributed to the fact that the Swedish second-hand textiles market has formed predominantly through voluntary collaborations between municipalities, waste companies, non-profit organisations, and commercial organisations. The greatest uncertainties are two-folded: To what degree will the current systems need to be transformed? To what extent will the roles of participating actors change?

## 5.2. DATA COLLECTION

The data were collected through informal and formal dialogue with representatives of municipalities, non-profit organisations and private organisations between June 2019 and September 2019. Both primary and secondary data were collected through: (1) 12 semi-structured interviews (13 informants) with an average duration of one hour ([see Table 3 in Appendix A](#)); (2) archival data, such as organisation-specific reports and industry-specific reports ([see Table 4 in Appendix A](#)).

It can be beneficial to select informants who are personally involved in the phenomenon since these are presumably best qualified to answer questions. This was, therefore, considered when reaching out to organisations. In practice, informants were contacted who have a job role either concerned with the collection of waste, or specifically concerned with the collection of textiles. For instance, in municipalities with smaller population densities, the informants did not have a specific job task related to textiles, while in municipalities with larger population densities, the informants had a specific job task related to textiles collection. This may have implications for the interpretation of the quotes.



The interview guideline was inspired by the two project goals of the study, namely to identify current models for second-hand textiles, challenges and opportunities of these models, and suggestions for the future handling of second-hand textiles with special focus on promoting sustainability and circularity. Main topics included the experiences about collaborations between different actors, the position toward an EPR, the current and future role of municipalities and non-profit organisations in the second-hand textiles market, as well as potential strategies for organising a second-hand textiles market in the future.

## **5.3. DATA ANALYSIS**

The first step was to transcribe the recorded interviews. Then the entire primary and secondary material was coded with the support of the Nvivo data-management program. The initial focus was on primary data sources, as they were expected to provide the most valuable insights into the challenges and opportunities of the Swedish second-hand textiles market. Furthermore, this material was open-coded, such that the analysis concentrated on the “identifying, categorising, and describing of phenomena found in the text” (Gibbert and Ruigrok 2010, p. 721).

In practice, every line of the transcribed material was open-coded. More specifically, the data was reviewed for information on how informants experienced collaborations in the second-hand textiles market. For instance, the following statements were coded as “campaigns directed at the public”: “That is a big struggle, no matter what kind of information we want to get out. It is how to reach people. Everything is so fast, you look at things for a second and decide if you find it interesting or not. If you are not, you do not read it. Even if you are interested, you still spend such a short amount of time reading it.” (Municipality 3) and “If you use the word klädinsamling, it means clothes collection. But it is not clothes collection. It is textiles collection and that is something that we will have to be better at saying.” (Waste collector 1). Then, secondary data were used as background data and for triangulation (Jick, 1979). At this point, the conceptual model for reuse-based clothing value chains developed by Paras and colleagues (2017) was added. The model identifies the main factors in a reused-based clothing value chain (Ibid). Adding the model gave rise to 27 segments that provided the basis for the concluding discussion.

**“The perceived most common challenges regarding the collection of second-hand textiles are the unspecific responsibilities and rules among the different actors.”**

## 6. RESULTS

The analysis reveals three widely-used models for second-hand textiles collection(1). The largest share is facilitated by non-profit organisations, who either collaborate with municipalities, municipality-owned collectors, or private actors. These current models are playing, indeed, a crucial role: they fill the market void of rules and regulations about specified responsibilities. While collection models vary across each collaboration, the opportunities and challenges with these models are reported to be quite similar across the municipalities, waste collectors, and non-profit organisations. The informants experience an uncertainty due to the fact that Sweden lacks clear directives and laws for how second-hand textiles should be processed. Furthermore, even though most of the informants are satisfied with the existing forms of collaborations and the second-hand textile flows are organised, all are positive toward introducing an EPR. These results largely reflect the findings from the IVL report in 2015. The herein study, though, provides more fine-grained insights.

The first part of this section maps the roles of actors in the second-hand textiles market: municipalities, waste collectors, non-profit organisations, and retailers. Supportive quotes are presented with the purpose to contextualise the actors' perceived roles.

Next, the current models for collecting second-hand textiles in which the above actors are involved in, are mapped: recycling centres, recycling stations, private properties, curb side, second-hand stores and retail stores(2).

In this study, the focus is on the second-hand textiles collection that is facilitated on the municipal level. This focus is relevant since the predominant way for collecting second-hand textiles is organised through collaborations between municipalities and non-profit organisations. The smaller share of second-hand textiles collection is facilitated by municipalities themselves, or by commercial organisations.

The mapping of both the actors' and the second-hand textiles collection systems provides the basis for contextualising the ensuing discussion about challenges and opportunities ([see 6.3.](#)) with the current systems in place. Then, a future outlook ([see 6.4.](#)) about perceived potential strategies for organising the second-hand textiles market follows.

(1) The list of current models of textiles collection is limited to the informants' information.

(2) The reader should be aware that other types of second-hand textiles distribution, such as through online market places are not considered in this study.

# 6.1. MAPPING ACTORS IN THE SECOND-HAND TEXTILES MARKET

## 6.1.1. MUNICIPALITIES

Swedish municipalities are ordered by-law and, therefore, are the owners of waste. This means that a municipality has to take care of public waste. All municipalities work with the directive “waste hierarchy” (Swedish: avfallstrappan) (Avfall Sverige, 2019). The waste hierarchy priority is: 1) waste prevention, 2) reuse, 3) material recycling and biological treatment, 4) other recycling, e.g. energy recovery, 5) disposal. How the collection of waste is organised, though, varies across municipalities: collecting waste themselves, owning waste collectors, and contracting commercial organisations. Notably, the specific role of each municipality with regard to second-hand textiles remains ambiguous and is predominantly limited to the administrative part of providing collection points for non-profit organisations (Avfall Sverige, 2013). Municipalities, therefore, perceive their role in the second-hand textiles question differently: their strategies for second-hand textiles range from proactive to passive ([see Table 5 in Appendix B](#)).

It appears, that municipalities set rather soft than hard goals concerning textiles. Soft goals are goals that are general and vague, while hard goals are specific and challenging. For instance, a soft goal is that the collection of second-hand textiles should be facilitated, but does not explain how, when, where and from whom.

Interestingly, also the personal involvement of the clerk varies across municipalities. Non-profit organisations report that whether a municipality aims at improving the collection of second-hand textiles depends heavily on the personal interests and involvement of the clerk. This is also reflected in the responses by the clerks; only two mention to personally drive the issue of collecting second-hand textiles.

## 6.1.2. WASTE COLLECTORS

Waste collectors can be either private organisations, municipality-owned organisations, or the municipalities themselves. Waste collectors facilitate the infrastructure for waste to be picked up at one location and transported to another location for further processing. Also, waste collectors may run recycling centres ([see 6.2.1.](#)) where households can leave their waste.

## 6.1.3. NON-PROFIT ORGANISATIONS

Municipalities are generally responsible for receiving waste. Yet, as described under point [6.1.1.](#), the majority of municipalities solely administers the infrastructure for collecting second-hand textiles, such as permitting containers or collection points. This void is filled by non-profit organisations.

Many non-profit organisations use the reselling of textiles to finance their charity projects. Hence, the collection of second-hand textiles can be considered to be largely in the hands of non-profit organisations (Thidell et al., 2019).

The individual business models of non-profit organisations vary; however, some share similar strategies about how second-hand textiles are processed<sup>(3)</sup>: Non-profit organisations accept textiles that can be reused and textiles that are damaged. After an initial sorting, the usable textiles are separated for sale, while the damaged textiles are sent to sorting facilities located within the EU. Reusable textiles are further sorted into textiles that can be sold on the Swedish market and textiles that can be sold within the EU. Non-profit organisations treat second-hand textiles as resources and, therefore, aim at collecting the highest quantities possible.

Insight from Non-profit organisation 1:

“Reuse and recycling are key words for our operations. The basic idea has since the beginning been to collect used but functioning materials and send it to those in need. Through textile collection, old clothes and household textiles can get “new life” through new users. Reusing textiles is a benefit to the environment and saves on earth’s resources such as water and energy and it also reduces the use of chemicals. ”

Insight from Non-profit organisation 2:

“Do you want to donate clothes and textiles? You can leave both non-tattered and tattered clothes and home textiles at all our collection points. You cannot submit badly soiled, smelly, wet or moldy textiles. Because they can contaminate and destroy many other textiles. We collect free of charge what is completely non-tattered and clean.”

Insight from Non-profit organisation 3:

“We take care of soft goods: All clothing, shoes and textiles that are not damp or destroyed by oils or chemicals. We reuse your gift to create resources for our solidarity efforts. What we cannot reuse will be recycled in the form of material recycling or new textiles. ”

(3) The strategies about how second-hand textiles are processed are limited to the interviewed non-profit organisations.

## 6.1.4. RETAILERS

There exists no specific role for retailers in the second-hand market. Some retailers, though, act as both donators and collectors. In the latter case, they collect second-hand textiles in their stores and process these further. With the upcoming legislative change – the EPR – the retailers expect playing a larger role in the second-hand textiles market in the future. The current engagement of retailers is looked upon critically by other actors; these wish for a greater engagement before the legislative change becomes effective.

Insight from Retailer organisation 1:

“We have had this group for a long time. So, we have tried to build knowledge about the EPRs and producer responsibilities. We also try to imagine how the Swedish model for textiles would look like. But it is so complicated, because we do not really have the technique to recycle. We do not have the fibre to fibre recycling. Unless, you do it with wool, or you do it with polyester. But this is not really on a big scale.”

Insight from Non-profit organisation 3:

“I am guessing that some of the retailers would want to contribute to a better environment, but as long they are owned by shareholders who are expecting a ROI (return on investment), then we have a problem.”

Insight from Non-profit organisation 2:

“When we are talking about an EPR, I can understand the retailers’ concern. The retailers can actually not really collect them, because we are having textiles classified as waste, instead of resources. For example, when HM collects them in their stores, then it is actually wrong. When it is classified as waste, then it is the municipalities’ responsibility. The stores would have to make a deal with municipalities.”

## 6.1.5. HOUSEHOLDS

Households are the main donator of second-hand textiles. Besides this, they also purchase second-hand textiles in stores. Therefore, they have the role as suppliers and customers at the same time. In the role of suppliers, Swedish households are donating a relatively small number of second-hand textiles, when compared to other EU states.

Insight from Non-profit organisation 3:

“We are collecting 20% of all the textiles that go to recycling or to waste in Sweden. All of this is collected by NGOs or non-profit organisations like ours. If you compare that to Germany, they collect around 75% of textiles.”

These numbers are confirmed by recent studies, which states that 38,000 tons of second-hand textiles were collected through non-profit organisations in 2018 (Belleza and Lukka, 2018). Out of the 38,000 tons, approximately 29,000 tons were reused (Sweden and abroad), while 6,800 tons were sent to recycling (Fossilfritt Sverige, 2017). Hence, the most common waste management treatment for second-hand textiles is incineration with energy recovery. In fact, 72,000 tons of second-hand textiles were incinerated in 2014 (Hultén et al., 2016).

The low collection rate can be ascribed to many reasons, as informants suggest: 1) collection systems are not covering the entire country, 2) collection is not available at curbside, 3) the challenge to communicate to households about which types of textiles can be donated.

Next, when households are considered as customers of second-hand textiles, then it is reported that the number of households willing to purchase such is very small. This, again, can be ascribed to many reasons, according to the informants: 1) high demand on style and quality, 2) prejudices about the cleanliness and, therefore, attractiveness of second-hand stores, 3) the alternative to buy new for equal prices.



**“The second-hand textiles market is perceived as a rather unserious market in which participating actors experience uncertainty about how to improve the current systems.”**



## 6.2. MAPPING SECOND-HAND COLLECTION SYSTEMS

### 6.2.1. RECYCLING CENTRES

Recycling centres are either run by municipalities, municipality owned companies, or private companies. These are larger facilities, where the public can leave different types of waste, such as metals, woods, plastics, glass, electronics, textiles, or durables. The purpose is that every item can be disposed into the best suitable category.

With regards to textiles, non-profit organisations usually have a contract with the owner of the recycling centre that allows them to put up containers. Containers are regularly serviced and regularly.

Insight from Waste collector 1:

“A consumer does not care about the system. A consumer wants to go to a recycling centre, where they can leave everything you have. They do not want to be bothered with: “No, this is milk carton. Then there is a production responsibility for a milk carton, so it is this box, this is clothes, so another one is responsible, so I put it in this bin. But not this cord, because that is over there, because that is another producer.” They want to come to a recycling centre and sort it as easily as possible. Then the company or municipality should fix this for them.”

Insight from Non-profit organisation 3:

“In a recycling centre you drive up on a ramp and you can dump the goods in big containers. Just before you get to that point, we have our own little station, like a small house. There we can meet them and ask them if they have something we can send to our stores. They can leave textiles, furniture, books lamps, and household goods. We collect items there and do a first sorting. We keep things that we think can be used in our stores. Is there anything that is maybe impossible for us to sell through our second-hand stores, we can advise them what bins to leave their waste in. We can do a first sorting and we can help the givers to basically teach them what is possible to sell through second-hand stores. But for textiles, we take everything.”

## 6.2.2. RECYCLING STATIONS

Recycling stations are located in neighbourhoods where the public can leave recyclable packaging material, such as newspapers, carboards, plastics, metals, and glass. A contract between municipalities and non-profit organisations allows the latter to place their collection containers in close proximity of the recycling stations. Containers are regularly serviced and emptied.

## 6.2.3. PRIVATE PROPERTIES

Second-hand textiles are also collected on housing owners' private properties. A contract between the non-profit organisation and the housing owner allows the former to place their collection containers on the housing owner's property. Containers are regularly serviced and emptied.

Insight from Non-profit organisation 1:

"Containers and the service to keep the boxes fresh and clean as well as to empty them in time. That is the deal. This is for free for the housing companies. You have a contract and then you have regular meetings to follow-up on results. We send regularly statistics about how much we have collected."

## 6.2.4. CURB SIDE

The curb side collection is technically similar to the collection on private properties. The main difference in this study is that curb side collection is organised at public space. Second-hand textiles are collected only in a small number of municipalities. This is the collection system with the shortest distance from the households and, therefore, the most convenient system for donors of second-hand textiles.

## 6.2.5. SECOND-HAND STORES

Non-profit organisations may have their own second-hand stores, in which second-hand textiles are collected and sold. Stores offer either exclusively clothes, or also other goods, such as furniture, disposables, and books.

## 6.2.6. RETAIL STORES

Retailers collect used clothes through their retail stores. Customers can leave their used clothes in boxes and receive a discount on their next purchase in the stores. A retailer clothing collection may be the only system for collection in rural areas. In urban areas, with more actors being present, the rewarding of consumers through receiving vouchers for their new purchases, is looked upon critically.

Insight from Waste collector 1:

“Retailers do exactly as we do at our sites. But they do it in their shops. And they give you 50 SEK. Why do they give you 50 SEK? Because you will spend it in their shops. They make money, because they drive traffic into the stores. I say they can make money; I am not judging at all. But it is just, they are doing exactly the same thing like we do. If they do not give them to non-profit organisations, they probably burn them. Because there is no other option today.”

Notably, only one municipality has mentioned retail stores as a commercial collecting system, while the other municipalities have not considered this collection method to be a complementary system.

## 6.3. CHALLENGES IN THE SECOND-HAND TEXTILES MARKET

Considering that 85% of municipalities who collect second-hand textiles, collaborate with other actors, and only 15% collect second-hand textiles themselves (IVL, 2015), this section is specifically focused on – but not limited to – the challenges when municipalities collaborate with other actors.

The perceived most common challenges regarding the collection of second-hand textiles are the unspecific responsibilities and rules among the different actors. Therefore, the second-hand textiles market is perceived as a rather unserious market in which participating actors experience uncertainty about how to improve the current systems. This ambiguous situation also affects the question of necessary investments for improving current systems. Finally, the relatively low collection volumes linked to geographical location and the availability of private and public space, are experienced to be major challenges when transforming the second-hand textiles market into a more circular system.

The informants report five impact areas, with eight specific challenges. These areas are listed in Table 1 and discussed in the following.

Table 1

AREA	CHALLENGE
System	Geographical location of a municipality Availability of private and public space Lack of recycling industry in Sweden
Legislation	Lack of specified responsibilities Varying requirements for non-profit organisations
Design	Demands by Swedish consumers
Information	Communication campaigns directed at the public
Consumer attitude	Current consumption model promotes consumption

## 6.3.1. SYSTEM

### Geographical location of a municipality

Sweden has a North-South divide in its population density. The greater majority of the population lives in the South of Sweden, including the larger cities. This North-South divide is, therefore, also an urban-rural divide, exposing municipalities and non-profit organisations with the challenge to organise second-hand textiles collection efficiently.

As one municipality reports, non-profit organisations mainly operate in the South of Sweden, while municipalities in the North have difficulties to attract potential collaboration partners

Municipality 2:

“We had no contact with non-profit organisations, because of the distance and they do not seem to be interested in helping us. [...] I know that Luleå had Myrorna, but that is not any more: They left Luleå. Why did they leave Luleå and Norrbotten? Because it is too far away. It is not a business for them collect in places with long distances.”

Interestingly, the quality of clothes is reported to be better in the Northern municipalities. Due to the lack of non-profit organisations operating in the North of Sweden, these municipalities rely on retailers to collect second-hand textiles. Yet, the municipalities lack knowledge about how the retailers are further processing collected second-hand textiles.

Non-profit organisation 1:

“From what I remember, when you come high up in the North, then it is a climate that makes it necessary to have decent clothing. So, you really need to have good stuff there. The quality of the clothes and the winter clothes is usually high; higher than in the rest of the country. And the material and choice of material is that there is more wool for example. Wool is also attractive for recycling.”

Municipality 2:

“We have retailers, such as HM and Lindex, who collect textiles in their stores. But we do not know what they are doing with the textiles once they have them collected.”

## **Availability of private and public space**

If second-hand textiles should be collected closer to households, then several municipalities have expressed their concern regarding the limited space available for placing containers. Apartment complexes are built space-efficiently providing only small spaces for the collection of waste. Therefore, it will be difficult to find space for additional containers as one informant states:

Municipality 3:

“I think what is really hard too is that waste has never been prioritised. When you are building new buildings, you take as little space as you can for the garbage room. Especially in Municipality 3 it is very very small. It is hard to put up all the different bins that you want. Even if it is all in one bin, it is still the same amount. But is going to take more space if you are going to have five bins instead of one.”

The collection of second-hand textiles from curb side implies a similar challenge since many apartment complexes – especially in urban areas – do not have any space outside of the buildings for extra containers.

## **Lack of recycling industry in Sweden**

While some EU states operate large sorting and recycling facilities (e.g. The Netherlands, Germany, Belgium, Poland, United Kingdom, etc.), Sweden lacks larger sorting facilities for processing collected second-hand textiles. Therefore, non-profit organisations sell the non-reusable second-hand textiles to other EU states with the claim that in these countries industries are taking care for the recycling textiles material. If Sweden wants to keep collected second-hand textiles as resources within borders, most actors agree on the need for building an own recycling industry with larger sorting facilities.

To-date, it has remained the responsibility of non-profit organisations to provide sorting facilities for second-hand textiles. Reasons for why Sweden does not have sorting facilities, are high investment costs for non-profit organisations for building these facilities, the relatively high maintenance costs, and the lack of potential buyers for recycled material. Furthermore, the quantity of collected second-hand textiles is too low for an industry to be established.

### Non-profit organisation 3:

“We are looking into the possibilities of updating the sorting facility into a sorting facility which is on a European scale of sorting facilities. But it is a huge investment; especially for a non-profit organisation. We have a 90 account, that means that 75% or more of our profit needs to go to the charities that we do. This is super important! At the same time, we need to build up an investment possibility – we are talking about a few million Euros.”

### Commercial organisation 1:

“The problem today is that it is difficult to find the volumes. I can give an example: We have a customer who wants a specific kind of fibre. We have found out that we can make a really good product, we have tested it, and it looks very good. The customer wants to launch the new product with reused textiles fibres. But they need high volumes from us. We cannot find these volumes today since we do not have the necessary logistics for clothes in Sweden.”

## 6.3.2. LEGISLATION

### Lack of specified responsibilities

The issue of who owns the question of second-hand textiles remains unresolved. While the municipalities have an indirect role by being responsible for waste collection in general, all other actors can operate freely. This is basically not a problem since non-profit organisations have been able to develop their business models around second-hand textiles for financing their charity projects. However, it also leaves other actors, such as retailers, to decide for themselves to what degree they engage in the second-hand textiles market. While some retailers have started to collect second-hand textiles in their stores, others do not; yet, how collected material is treated after collection is up to the individual retailer.

One concern is that due to the ambiguous legal situation, some municipalities do not work actively with second-hand textiles, such as implementing a system, or improving current systems.

The fact that some municipalities are waiting until the Swedish Government has decided about specific laws about collecting second-hand textiles has been already problematised in earlier reports (see IVL, 2015). This can be interpreted that municipalities and other actors have been experiencing great uncertainty about their future responsibilities.

## Non-profit organisation 2:

“Before the January Agreement, some of the municipalities said that maybe there will be producer responsibility – so we will wait. This waiting position has been there for so long. I think what we want is clarity. How will it be? One also notices that not everyone knows about it. There is no decision about textiles: How and when to do it.”

## Varying requirements for non-profit organisations

The second-hand textiles market is perceived to be rather unregulated. It has remained to the municipalities to permit second-hand textiles collection systems. This leads to varying requirements on non-profit organisations across the country. Hence, municipalities who have been relatively interested in the question of collecting second-hand textiles have had agreements of different kinds with non-profit organisations. Some agreements are made without public tenders.

## Municipality 3:

“It was the non-profit organisations who contacted us and explained who they are, what they do, and how they do it. For example, they gave us a proof of how they handle their organisation – I think they have to have the ‘90 konto’. They can track what they do, where they send the textiles, and what they do with them. That is much better than all the companies that just want the textiles for selling them in second-hand stores. They go through the proper channels, and we look them up. We look for legitimacy and transparency about what they do. This is how these agreements have started and continued.”

Recently, municipalities have started to contract non-profit organisations through public tenders. Public tenders come with specified requirements about how second-hand textiles have to be collected and processed. These requirements are exemplified in Table 6 in Appendix C).

A report by IVL (2015) states that less than 20% of all municipalities have a formal agreement (i.e. written agreement) with collaboration partners. This study, though, indicates that municipalities do have formal agreements and are moving towards introducing public tender agreements in the future. Launching collaborations through public tenders might also impact a more standardised list of requirements across the country, as well as attract a more diverse group of organisations.



## 6.3.3. DESIGN

### Demands by Swedish consumers

Municipalities and non-profit organisations perceive that Swedish consumers are positive toward donating their second-hand textiles (see 6.1.5). However, the majority of Swedish consumers are rather sceptical toward buying second-hand textiles. Swedish consumers are said to have relatively high demands on second-hand textiles, such as look and quality. This is said to be not the case for other EU states. In addition, a study by Municipality 5 illustrates the general positive attitude of Swedish consumers to donate second-hand textiles, but their aversiveness toward purchasing second-hand textiles.

#### Non-profit organisation 3:

“The public in Sweden is kind of – let us say – demanding – they do not want to buy anything: it has to be of quite high quality, it has to be in a quite good condition. Even if a shirt is actually wearable, but it is a bit worn out, or the colours are damp, then the Swedish consumer does not want to buy the second-hand textile. But there are other markets where people do. Therefore, we need to make the decision what should be sold locally and what should be sold to another part of Europe.”

#### Municipality 5:

“Today we have an attitude survey and then households say that: Yes, I would like to leave textiles, furniture, and everything for recycling. But I’m not interested in buying. 90% say: I like to leave for reuse which is great. But then only 50% say: I would consider to buy second hand.”

## 6.3.4. INFORMATION

### Communication campaigns directed at the public

In the past second-hand textiles in flawless condition were accepted by non-profit organisations. Nowadays, however, also damaged second-hand textiles, including underwear, linen, and towels, are accepted. The general public is not always aware of this possibility. One informant explains that from a communication perspective it is quite challenging to make the public understand that flawless and damaged second-hand textiles can be collected in the same containers.

Indeed, from a municipality's perspective, the communication to the public is generally challenging. According to one of the informants, the public tends to neither inform themselves about how to dispose their garbage on traditional media, nor on online media. Even direct communication activities through flyers in apartment complexes has only limited effects since only a small number of the public will read the information.

Municipality 3:

"Communication to the public is a big struggle, no matter what kind of information we want to get out. How do we reach people? Everything is so fast, you look at things for a second and decide if you find it interesting or not. If you are not, you do not read it. Even if you are interested, you still spend such a short amount of time reading it."

The issue of communicating to the public may be partially ascribed the unresolved responsibility question. Not knowing who owns the question of collecting second-hand textiles makes it difficult for all actors to become active with concrete and strategic communication campaigns.

## 6.3.5. CONSUMER ATTITUDE

### **Current consumption model promotes consumption**

Some of the actors have questioned whether the focus when introducing an EPR should be on collecting second-hand textiles, or on the production and consumption problem of fast fashion. Consumers are accustomed to buying new products for relatively cheap prices.

Even though Swedish consumers have increased their second-hand textiles consumption, the overall consumption of textiles has not decreased. This indicates that Swedes buy second-hand textiles in addition to the normal consumption.

Non-profit organisation 1:

"If you look at the statistics how much textiles that have been sold in Sweden in the last years: consumption has not decreased. It is at the same level, but second-hand has increased. What is the result? That you are consuming even more textiles, because "ok you get another for 50 or 20 SEK - it does not matter, since it does not affect your wallet." We have the same level of consumption, plus second-hand."

**“Even though Swedish consumers have increased their second-hand textiles consumption, the overall consumption of textiles has not decreased.”**



## 6.4. FUTURE OUTLOOK: QUO VADIS?

The future outlook for making the second-hands textiles market more circular brings forward that (1) an EPR will play a crucial role and, (2) collaborations among existing actors need to be improved, while (3) core competences should be strengthened at existing actors. These three goals may trigger for instance, an enhanced collaboration among actors and an increasing volume of collected second-hand textiles.

The informants reported 19 specific opportunities for promoting a circular second-hand textiles market, which are listed in Table 2. Each opportunity is explained in the following.

Tabel 2

PERSPECTIVE	OPPORTUNITY
Municipality	Elevating the issue of second-hand textiles.
	Introducing a law for second-hand textiles.
	Strengthening core competences by integrating UN Development Goals.
	Extended producer responsibility should concern production and design.
	Including more private actors in the collection of waste.
	Increasing curb side collection of second-hand textiles.
	Collaborating on collecting second-hand textiles at retail stores.
	Keeping core competences as a strength.
	Decreasing amount of second-hand textiles in household waste.
Non-profit organisation	Regulating consumption to incentivize the second-hand consumption.
	Professionalising the non-profit sector.
	Strengthening collaborations through sharing knowledge.
	Investing in larger sorting facilities.
	Increasing the focus on the recycling of second-hand textiles.

PERSPECTIVE	OPPORTUNITY
Waste collector	Increasing curb side collection of second-hand textiles.
	Introducing a law for second-hand textiles.
	Integrating digitalisation into existing collection models.
Commercial organisation	Increasing collaboration between commercial organisations to achieve volumes.
	Acquiring information through transparency, traceability and documentation.

## 6.4.1. MUNICIPALITY PERSPECTIVE

### Elevating the issue of second-hand textiles.

Not all municipalities feel comfortable in solving the issue of second-hand textiles collection and processing. Since municipalities are mainly concerned with collecting waste, the complex issue of collecting and processing second-hand textiles are perceived to be better solved on the national level.

Municipality 3:

“I think it is so difficult to know how to start this! We need to elevate the question. The question is too big and too broad to handle every little piece by ourselves. It needs someone to help raising the question. I think it might be a good result as well. Even if it is not a specific solution, this is what we think we should do. Elevating the problem and saying that it is much bigger than we can handle on our own.”

### Introducing a law for second-hand textiles.

Municipalities are not required to collect second-hand textiles separately. With a legal support some municipalities believe that they would be able to develop a system for collecting second-hand textiles. This, however, needs to be facilitated through a waste fee for households.

#### Municipality 1:

"I think if this will have a future, you need to compensate them [voluntary collectors]. This is a little bit problematic, because then we need to prepare a "underlag" for the city council to decide about this. This is nothing that we can just do. It is the "avfallstaxa". If we want to raise the fee for the households, then we need the city council to support this. If we want to do that we must know for certain that this is something we can do and that we have a legislation that gives us the opportunity. Today, we do not have a legislation for textile collection."

#### Municipality 5:

"It's one thing I definitely think we should work on. And it is in a new waste plan, but it has not been any specific campaign. The question is of who should run this campaign then? Our responsibility is to collect the waste. We are financed through the waste tariff. There are currently no resources for our municipality to do so. We have to bring it up to politics and say: Hello, that's one thing municipalities should work with, but then we need more tax money."

### **Strengthening core competences by integrating UN Development Goals.**

Municipalities may find support by the United Nations Sustainable Development Goals (UN SDGs) to strengthen their core competences. The goal 12.8. in the UN SDGs specifies that the public shall have the relevant information and awareness for sustainable development and lifestyles in harmony with nature. Working with the UN SDGs is one way for municipalities to assume responsibility by actively engaging in the second-hand textiles market.

#### Municipality 5:

"Maybe you should work with sustainable consumption in the right way. I think you can link it to the global 2030 goals. Among them, there are some goals - I think - for working with informing households and so on about sustainable consumption. So, that would be a way so municipalities cannot distance themselves, because then there is a goal that would direct them to work with it: to run the campaign for households on how to live more environmentally friendly. But we can't do that in the waste department. We must find someone within the municipality who wants to work on this. Then we have to work with politics. I think it's important, to work with influencing."

### **Extended producer responsibility should concern production and design.**

The EPR is discussed in positive light. From a municipality's perspective, the EPR could contribute to drive innovation for recycling material. Furthermore, the EPR is perceived to be an opportunity to re-think designs, i.e. material composition of the product. Much of the today's textiles are so-called mixed-fibre textiles, which means that they are resource-intensive and

difficult to recycle. One of the informants reflects that an EPR is most effective in the design stage since it could trigger producers to start producing mono-material textiles.

Municipality 5:

“I think it’s good that there will be producer responsibility. You also have to talk about material and textile recycling. This is very difficult because textiles are made of so many different materials. So many technologies are needed. Textiles are so resource-intensive and energy-intensive to recycle. It is not so easy to recycle blended materials; everything is almost mixed. You will find almost no mono material. And that you have to have – and that producers have to think about. You may not be able to have complicated materials that cannot be recycled. One should soon require of manufacturers to produce textiles that can be recycled, in a way that’s good.”

Mono-material textiles are mentioned to be a specifically potential contributor to solve the current recycling challenges. Most of the second-hand textiles which are sent for recycling are downcycled, which means that these are used for other purposes, such as roof insulation.

### **Including more private actors in the collection of waste.**

The current collection systems that are based on collaborations with non-profit organisations are perceived to work well. Some municipalities, though, wish for an open competition by inviting other actors, such as private actors. This can be facilitated through public tenders in which all applicants have the same chances to get a contract.

Municipality 4:

“There are several more actors in the area. I would probably do some kind of public competition for the contract. Depending on the cost. They should probably still – well it depends on how the market will look like – I do not know if we can have the collection for free in the future. I think we have quite a good deal with our contract today. It will probably be the same as we do with public procurements. I think that would be fairer to the market. Probably we can have some better and clearer demands on how we can follow up contracts. That is the only way to do it. We are such a small organisation. That would be a time efficient way to manage textiles in the future. If we are still going to be responsible for the collection of it.”

One informant adds that despite the fair competition, inviting private actors, may trigger innovative organisations to find solutions for increasing the volumes of collected second-hand material.

Municipality 1:

“The ‘90 konto’ is just for welfare organisations. I think we decided to withdraw that demand, because we also want to give entrepreneurs who want to collect textiles a contract. We must open up for them.”

### **Increasing curb side collection of second-hand textiles.**

With the new EPR for packaging materials, it is expected that these materials will be collected closer to households. This means that recycling stations, which are placed in neighbourhoods, will slowly disappear. The question arises, therefore, where to place the containers for collecting second-hand textiles. Some municipalities imagine that one of the solutions might be introducing the collection of second-hand textiles simultaneously to the upcoming change of packaging materials.

Municipality 5:

“If you will not have so many recycling stations anymore, the idea is that you should leave newspapers and packaging where you live. It will be a collection on premises.”

### **Collaborating on collecting second-hand textiles at retail stores.**

Even though the collection of second-hand textiles in retail stores is not seen in an entirely positive light, some municipalities can imagine an opportunity by working closer together with retailers. For instance, if retailers could also accept damaged textiles and develop a transparent system about how the collected second-hand textiles are processed further.

Municipality 5:

“You can imagine that you can, to a higher degree, be able to leave your textiles directly in the store to the retailer.”

### **Keeping core competences as a strength.**

Municipalities have been responsible for collecting waste, such as household waste, for a long time. This means that they have developed a competence in developing systems either as collectors, in running companies for collecting, or in contracting private actors. Municipalities are specifically knowledgeable in collecting waste from curb side. Hence, some municipalities are quite positive, when asked to assume this responsibility also for second-hand textiles.



#### Municipality 4:

“We have to focus on what can we actually do and what are we good at. What have we been doing for almost 50 or 60 years. We are experts in collecting garbage from curb side. That is our key business idea. We can set the local rules and goals for how we want to handle it in our region. If the government believes that we can do it better than the other organisations, maybe that is what we should focus on. Would that take us towards an EPR? No, not really.”

#### **Decreasing amount of second-hand textiles in household waste.**

Increasing the reuse rate of second-hand textiles is one important aspect for promoting circularity of textiles fibres. A complementary opportunity resides in decreasing the amount of second-hand textiles in regular household waste. While municipalities, indeed, claim to run information campaigns for the public about avoiding throwing away their textiles in the household waste, the amount of second-hand textiles in household waste counts over 8kg per household per year. The household waste is not sorted and, therefore, these second-hand textiles are sent to incineration for energy recovery. By working with the waste hierarchy, municipalities, though, see the opportunity to improve.

#### Municipality 4

“We believe that the biggest impact during the next 12 years will be to focus more on the reusing and make sure that the households are not throwing away the reusable clothes in the household waste. From our own analysis is that the average households are throwing away about 8kg clothes per year, just the household waste. That is a bit more than the national average. If you add it up to 500,000 citizens in the Waste collector 1 area, and then multiply it by 8kg per year: That is a lot of textiles.”

**“Strengthening collaborations plays an important role for the future organisation of the second-hand textiles market.”**



## 6.4.2. NON-PROFIT ORGANISATION PERSPECTIVE

### **Regulating consumption to incentivize the second-hand consumption.**

Currently, the amount of collected second-hand textiles is still too small to meet the “potential” demand of second-hand textiles material, either second-hand clothes, or in form of recyclable material. One informant casts doubt on the fact whether all the material would be used if it could be collected. An example is given based on the current amount of collected glass and glass products. According to this informant the collected amount of glass would be sufficient to supply the demand in Sweden:

Non-profit organisation 3:

“You can twist and turn so much when it comes to recycled goods. Sweden does not have to import one single glass/drinking glass for water, wine, or so. Nothing needs to be imported to Sweden, for several years, because we have enough on the market to supply the demand to all restaurants, schools and households. But still, we import it.”

### **Professionalising the non-profit sector.**

Swedish non-profit organisations have become more professional in running their organisations. This reported professionalism relates to different aspects of the organisation: certification, union contracts, 90 konto, reporting tools, and second-hand stores.

Non-profit organisation 3:

“In Sweden, most of the charity organisations are run by people who are not employed, they are volunteering. I think that the charity organisations have had a hard time working professionally. But for us it is totally different, we are over 200 employees. We have union contracts for all people who work for us, we have a union-controlled pay, we have a health care program so everyone gets a certain amount of money each year to put in any type of health care program, e.g. gym, tennis, and massage. I think that we are the first in the world among ISO certified charity organisations. We are ISO certified both with environment and quality (9001 and 14001). It is not a problem to have all of this and still run a non-profit organisation. I think we are the first who is doing this professionally and we are succeeding with it. This means that even if this is run mostly by charities in Sweden who are the ones who collect the most textiles, it can be done in a professional way.”

Some second-hand stores have adapted to the Swedish consumer's demands.

Non-profit organisation 3:

"We have a new store in Malmö, where we actually took over HM's location. We have a store that is on the walking street in Malmö, it is 1,450 square meters. It actually does not look like a second-hand store. It looks like a Zara Home, with an HM store, and a book store."

In the past municipalities have experienced that the collection of second-hand textiles functions well; yet they would like to receive more statistics from the collection partner (IVL, 2015). In this study, however, all informants report that they feel to be well informed about how much of the second-hand textiles are collected, reused within or outside of Sweden, and sent to recycling. This example can be interpreted as a sign for an ongoing increasing professionalisation of the non-profit organisations.

### **Strengthening collaborations through sharing knowledge.**

Sharing knowledge about existing systems and focusing on the competence of existing actors is reported to be one of the major opportunities for a future model of second-hand textiles collection. Yet, one main aspect to facilitate this is quite weak, namely the collaboration between all actors.

Non-profit organisation 2:

"It is to work more across industries together to find a solution. Also, being better at lifting the good examples. There are so many innovation projects and different solutions regarding the prolonging of the life of used clothes. Also, with the municipalities as they are working in different ways. Why inventing the wheel all over again? It is better to learn from each other."

One specific proposal for strengthening collaborations through sharing knowledge and using existing competences is between the municipalities and non-profit organisations. Non-profit organisations are experts in sorting textiles and processing these textiles further. Based on previous experience by one of the non-profit organisations, they are successfully collaborating with municipalities by equipping these with the necessary knowledge and techniques about how to treat collected second-hand textiles. If the municipality acquires this knowledge, then they can build their own collection, sorting, and processing systems. In this specific example, the municipalities run their second-hand textiles systems as daglig verksamhet.

### Non-profit organisation 3:

“We help them to run ‘daglig verksamhet’. That is for people who are outside the normal job market. We help the municipalities to create small versions of ourselves. Basically, they collect textiles, sort it, and run their own stores. We help them do that and at the same time we take care for the textiles in that specific municipality. We create a possibility for the municipality to have a good and healthy ‘daglig verksamhet’, where people who work there have something meaningful to do. It becomes like a real job for them. The only thing we do is that we help the municipalities in starting up a small facility like that. This is maybe the way that all textiles should be handled in Sweden? The municipality collects the textiles, they take care of them and run their own stores with people that are outside of the job market. They have a partner that collects all the textiles which they can sell through their stores.”

### Investing in larger sorting facilities.

As mentioned earlier, larger sorting and recycling facilities that are comparable to other EU states, would be needed to handle a greater amount of collected second-hand textiles. However, to date, all second-hand textiles that cannot be sold within Sweden, or within the EU, or donated to the Global South, are sent to other EU states. One of the non-profit organisations is currently investing into building a larger sorting facility in Sweden:

### Non-profit organisation 3:

“I think the next step for Sweden is to make sure that we have large recycling and sorting facilities that allow to collect and take care of enormous amounts of textiles. We do not have to export it. Why should we export textiles? They are resources! I think it is insane that we are exporting into other countries. We are so far behind in Sweden with huge recycling facilities. The next step is to make sure that we have it. Right now, we are working towards this goal. We are working towards having a large facility for textiles sorting in Sweden.”

### Increasing the focus on the recycling of second-hand textiles.

One discussion about the second-hand textiles market concerns the reuse of textiles. This is for instance motivated by the waste hierarchy, where re-use should be prioritised over recycling. Yet, some non-profit organisations claim that focusing on the re-use opportunities of collected second-hand textiles should not be the main concern. The current development of the second-hand textiles market indicates that there is an increasing interest by Swedish consumers to buy second-hand textiles; it does not mean, however, that they will cut their regular textiles consumption.

Therefore, the bigger question relates to the recycling issue of textiles. With only a minor share of collected second-hand textiles being sold to consumers, a system ranging from product design to establishing recycling facilities must be established.

Non-profit organisation 1:

“By always concentrating and talking about the second-hand shops, then you always take away the real questions: What do you do with the rest – 99%? Who is going to take care of it? That is my opinion. If you look at the statistics how much textiles that have been sold in Sweden in the last years. Consumption has not decreased. [...] It does not diminish the value of second-hand shops. I think they have a really good purpose. But it is not the big question. This question we should ask ourselves.”

### **Increasing curb side collection of second-hand textiles.**

A small number of municipalities provides a second-hand textiles collection at curb side. These municipalities have been running this type of second-hand textiles collection over a couple of years in collaboration with non-profit organisations. Experiences are reported in positive light. The rolling out to a national solution, however, would require large investments that the non-profit organisations cannot pay. Furthermore, contracts might have to be for a longer time period, in order to decrease the risk of the investors.

Non-profit organisation 1:

“I think that collecting in residential areas will be one of the vital solutions. Waste centres are good, but not everyone has a car and can go there by car to waste centres. Having these recycling spots everywhere will not happen. What is the solution? It is residential areas? Then you have to ask: Okay, who is going to put this investment and risk into the collecting? Who is going to pay for it?”

## **6.4.3. WASTE COLLECTOR PERSPECTIVE**

### **Introducing a law for second-hand textiles.**

Alike to the municipalities' and non-profit organisations' perspective, also waste collectors demand a clear legislation around the collection of second-hand textiles. The ambiguous situation makes it difficult for the actors to develop long-term strategies for the second-hand textiles market. Notably, a legislation similar to existing EPRs is looked upon critically.

Waste collector 2:

“I actually just would like to have more legislation around textiles. Otherwise it is a very very free market that no one controls. That is a little bit tricky. I say yes to a new legislation. It is ok, wherever it would take us. If the legislation would put it on us, or the municipalities, both is ok.”

Waste collector 1:

I do not believe that it [EPR] can work as the legislation we have for newspapers and such. But, I do believe that a legislation would benefit municipalities in the north since it is hard for non-profit organisations to find a business model there that will allow them to generate income.

### **Integrating digitalisation into existing collection models.**

Digitalisation might be an important factor when reconsidering the organisation of the second-hand textiles collection system. While digitalisation already plays a part in the professionalisation of non-profit organisation, i.e. transparent documenting and reporting, it can also play a potentially vital role for waste collection in general. One informant believes that digitalisation, such as ‘geo tagging’, could be used for implementing on-demand service for collecting waste and, and therefore, making collection processes more efficient.

Waste collector 1:

“I believe that right now the plants or the industrial sites are fairly advanced. The collection of waste is like stone age technology. They are not as advanced at all. I think that the digitalisation will create a huge part in the upcoming years. For instance, can we collect waste on demand services? We could have a geo tag on our bins. If the bin stands on one position, it signals that it is empty. If the bin stands on another position, it signals to be fetched.”

## **6.4.4. COMMERCIAL ORGANISATION PERSPECTIVE**

### **Increasing collaboration between commercial organisations to achieve volumes.**

From a commercial organisation’s perspective, also the collaboration between commercial organisations should be improved. Through a stronger collaboration, the needed volumes for supplying a potential demand for recycled fibres can be met.

The non-profit organisations, who are taking care of the major volumes of collected second-hand textiles, cannot facilitate the collection of larger volumes. Therefore, the suggestion is that commercial organisations could complement non-profit organisations by collecting from production sites.

Commercial organisation:

The other challenge is to start gathering all the textiles. Like the non-profit organisations are doing now, but also doing that within the industry and make it collaborative between different companies. This will help to get the volumes needed. Maybe we develop really good products, but we cannot find the raw material [second-hand fibres]. I do not know, maybe Commercial organisation 1 is the company that will gather all the volumes from different production sites. We do not know yet, but nobody is working with it yet. It is a gap today. Instead of collecting the second-hand fibres, we burn them.”


### **Acquiring information through transparency, traceability and documentation.**

Concerning the production phase of textiles, a system to document and trace the material composition of textiles can contribute to an increased transparency about the fibre once it has entered the second-hand textiles market. Recycling companies are struggling with the fact that they cannot fetch all the important information needed to recycle the second-hand textiles. Increased material transparency can combat this issue:

Commercial organisation 1

“I think it is traceability and documentation; they are also very important when you use waste from the production line. Some companies have a good knowledge and good activities, but some companies do not have that. This is a big issue when you want to get control of the raw material and the whole way downstream to the customer to make a new product out of it [second-hand textiles].



A hand with dark nail polish is holding a yellow sticky note. The sticky note has a quote printed on it. The background is a light-colored wall with several other yellow sticky notes attached to it. A vertical black line is on the right side of the page.

**“An establishment of a recycling industry in Sweden would require a re-thinking of design for facilitating a recycling process, increase the demand for recovered fibres - and it should not remain to be solved by non-profit organisations.”**

# 7. CONCLUDING DISCUSSION

This study brings forward that the lack of an established path for the handling of second-hand textiles compels municipalities to rely on collaborations with non-profit organisations. In cases when these collaborations are not possible, then municipalities have to rely on commercial actors, such as collection facilitated in retail stores. Furthermore, municipalities are generally aware of the social and environmental impacts by the textiles industry. Therefore, most of the municipalities have in their current or future waste plans a goal for second-hand textiles. Yet, these goals are rather soft goals, which can be interpreted to be a reflection of lacking clear guidance from the national level. Four themes are concluded in the following:

- 1. Extended producer responsibility**
- 2. Core competences**
- 3. Collaborations**
- 4. Recycling instead of reuse**

## 7.1. EXTENDED PRODUCER RESPONSIBILITY

The idea about introducing an EPR in Sweden is not new. Early attempts to promote an EPR for textiles was proposed by the EcoCycle Commission in 1994 (Kretsloppsdelegationen, 1997). In this proposal, the EPR was concerned with the upstream of textiles, such as phasing out hazardous substances. In 2012, the Nordic Council of Ministers (see Tojo et al., 2012) set the goal to generate knowledge about textile flows in society. The findings bring forward that textiles waste can be prevented by creating separate waste streams. Especially the reduction of hazardous substances in the composition of materials was considered to be a promising avenue. Furthermore, the report states that increasing the reuse and recycling of second-hand textiles is one indirect pathway to reduce the demand for producing new textiles into the market (Tojo et al., 2012).

However, the EPR has remained a discussion without concrete measures in the proposal by the Naturvårdsverket in 2016. Instead, principles of responsibilities and collection are discussed. Furthermore, this report does neither bring forward specific suggestions for upstream effects through an EPR system, nor discusses the potential environmental benefits from such EPR systems when compared to leaving waste collection to the municipalities.

In this study an EPR is perceived positively, for instance collecting second-hand textiles in retail stores. However, different ideas about second-hand textiles collection in retailer stores were raised:

1. Increasing costs, by introducing an additional step in the current second-hand collection systems.
2. Promoting consumption, if consumers continue to get rewarded for returning their second-hand textiles.
3. Promoting consumption, by providing a convenient return option for consumers.
4. Transparency about how second-hand textiles are reused, or recycled within Sweden/abroad.

If retailers have to assume a greater responsibility, then one way is to put requirements on retailers' transparency, i.e. how much textiles are collected, are sold within Sweden or the EU, is recycled, or donated to the Global South. This would increase the trust of other actors, including the public, in collecting organisations.

Despite these concerns, an EPR is considered most effective in the upstream phase<sup>(4)</sup>. In a recent report, stakeholders agree that upstream effects would positively impact the waste hierarchy and circularity principles; however, this would mean that job creation through second-hand collection systems would not be in focus (Ljungkvist Nordin et al., 2019; [see 7.2.](#)).

Repeatedly, the EPR is connected to the issue of promoting overproduction/-consumption and the material composition of textiles. The current challenge to recycle second-hand textiles is treated as the main problem when addressing the "bigger picture" of improving circularity in the textiles market. While, indeed, second-hand textiles for reuse make an important contribution, the bigger challenge is to make sure that second-hand textiles can be recycled in a way so that fibres can be used again. Hence, the EPR has been considered most valuable in the recycling of second-hand textiles, than in the reuse of them ([see 7.4.](#))

An EPR focusing on the upstream than on the downstream processes of textile flows is mentioned to require a radical rethinking of current design and production materials. An increased transparency by developing systems that provide full information about the composition of textiles materials is reported to be one of the major opportunities when improving the recycling rates of textiles. As found in a recent report (Ljungkvist Nordin et al., 2019), many stakeholders call for clear quality and transparency requirements in reporting. Full transparency, certification systems and third-party audits are mentioned. Ljungkvist Nordin and colleagues (2019) suggest that the reporting format and criteria suggested by Fråne and colleagues (2017) provides a good basis to start from when developing requirements. However, there is a concern among producers that reporting transparency could come at a very high administrative cost. In this context, the importance of governmental audits and control mechanisms is viewed as promising, especially to avoid free riders who would benefit from avoiding the administrative burdens of transparency.

Next, a meaningful EPR concerns the establishment of a local recycling industry. It is currently up to the non-profit organisations to invest in larger sorting and recycling facilities. Non-profit organisations have only limited investment possibilities due to the nature of their business. Including retailers in this matter may contribute to a faster development of a Swedish recycling industry for textiles. A local industry is needed, if textile materials, i.e. resources, should not continue to be exported to other EU states.

(4) Elander et al. (2017) have designed an assessed a detailed extended producer responsibility programme for textiles in Sweden, covering both upstream and downstream effects.

Finally, the second-hand textiles market is exposed to the North-South divide, meaning that the collection of second-hand textiles in urban areas is well established. Rural areas, however, are not serviced by non-profit organisations. An EPR can potentially fill this market void, by complementing existing collection systems through systematically collecting second-hand textiles. Ljungkvist Nordin and colleagues (2019) finds that collection does not have to be permanent to be successful, specific collection times may work with sufficient information.

## 7.2. CORE COMPETENCES

The national waste programme from 2013 (Naturvårdsverket, 2013) has brought forward seven suggestions about how public actors, such as municipalities, regions and county councils could take to help the prevention of waste. The four recommendations directly concerning the purpose of this report are:

1. Inform households about what to do with their textile waste and about the environmental benefits of reuse.
2. Organise collection systems and bins for textiles at recycling centres in collaboration with second-hand actors.
3. Set up user-friendly collection systems for textiles for households for instance by permitting second-hand actors to place collection bins at locations closer to households and ensure serious handling of textiles by the collectors.
4. Develop and include objectives and measures for collecting textiles to increase reuse and material recycling in the municipality waste plan.

Based on the findings in this study, it can be contemplated that the municipalities are, indeed, working with this recommendation list and have built core competences around different areas. However, not all recommendations have gained foothold across all municipalities, because of the perceived uncertainty about the future organisation of the second-hand textiles market.

Furthermore, some municipalities may have developed competences based on the clerk's personal interests. Therefore, the above list has not been interpreted as a holistic list, but rather as orientation of possible activities. Certainly, core competences are not solely dependent on the clerk's personal interests, but can be related to other contextual conditions, such as geographical location or population size of the municipality.

The strengthening of core competences is also applicable to non-profit organisations and retailers. For instance, non-profit organisations play a vital role in the collection and sorting of materials, while filling an important societal role through their caritative activities. Many textile projects support the work of charity and social organisation. They are economically successful while creating opportunities for job training for people far from the labour market. Furthermore,

some non-profit organisations have improved the transparency of their collection systems, which has increased public confidence.

Next, retailers are experts in the production of textiles and, therefore, the core competence may lie in the development of materials that are recyclable to greater degrees. If an EPR system is implemented, then some issues regarding the collection efficiencies (i.e. municipality's competence) interests of existing actors (i.e. non-profit organisation's business) need to be considered (Tojo et al., 2004, Elander et al., 2017).

Finally, the informants in this study are satisfied with current collection systems and emphasise the importance of keeping core competences. It can be concluded that opening the second-hand textiles market to a broader set of actors, i.e. including more commercial organisations, is perceived as one promising avenue to promote innovation and, ultimately, to collect higher quantities of second-hand textiles.

## **7.3. COLLABORATIONS**

The strengthening of collaborations plays an important role for the future organisation of the second-hand textiles market. Not only collaborations between municipalities and non-profit organisations should be strengthened, but also include commercial organisations into future collaborations.

Collaborations between municipalities and non-profit organisations can be strengthened by making municipalities to a greater degree part of the collection systems, through establishing more facilities, such as a daglig verksamhet. Non-profit organisations could act as expert consultants and at the same time benefit from receiving second-hand textiles which were collected and sorted by municipalities.

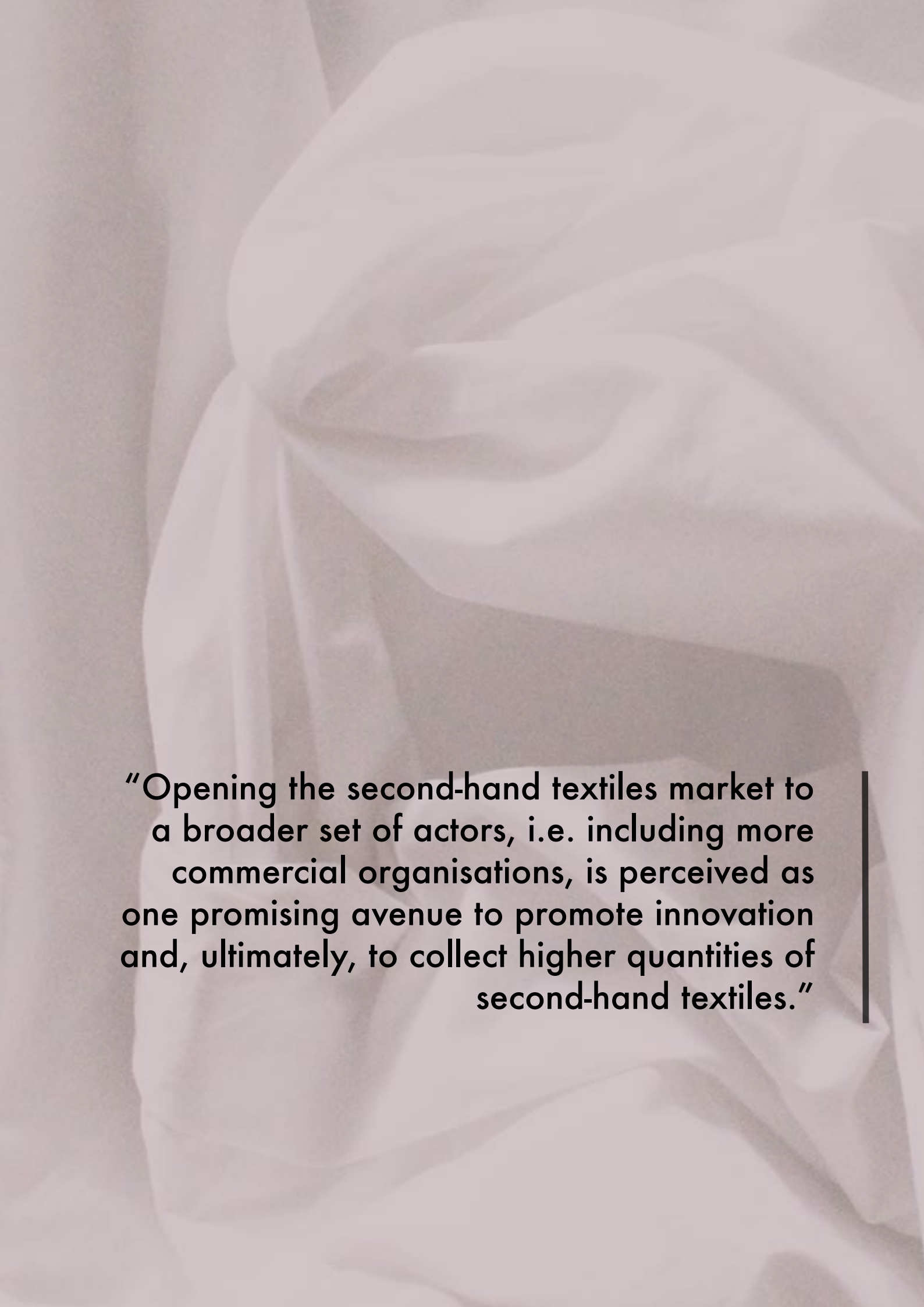
Furthermore, the collaboration between municipalities and commercial organisations may be strengthened through inviting potential collectors of second-hand textiles through public tenders that are not limited to the "90-konto". This may drive innovative business ideas. Lastly, if the new legislation is going to include in the EPR the responsibility to collect second-hand textiles, then the retailers would replace the municipal waste collection monopoly. This form of EPR could give rise to the forming of new collaborations and business opportunities.

## **7.4. RECYCLING INSTEAD OF REUSE**

Due to the lack of legislation, the second-hand textile market has not yet matured. For instance, relatively small amounts of second-hand textiles are collected and a substantial part of the Swedish population is not willing to purchase second-hand textiles. It can be contemplated that the reuse rates are one important aspect when regulating the second-hand textiles market. Yet, as this study brings forward, most actors agree to the fact that the focus should be on the recycling of second-hand textiles than on the reuse of them.

Indeed, this confirms a finding by a recent report (Ljungkvist Nordin et al., 2019), which finds that improving the recyclability of fibres, funding research and innovation, or using an item-based fee with levels depending on garment size can potentially contribute to a greater circularity and improve transparency in the second-hand textiles market. However, one major drawback reported in this study is that the options for economically feasible textile recycling is still underdeveloped, ranging from using virgin materials (i.e. mixed materials instead of mono-materials), to lacking technology for recycling in a way that fibres can be reused for same purposes, to lacking a recycling industry in Sweden (i.e. recycling facilities and buyers).

An establishment of a recycling industry in Sweden would require a re-thinking of design for facilitating a recycling process, increase the demand for recovered fibres (Watson et al., 2016), and should not remain to be solved by non-profit organisations.



**“Opening the second-hand textiles market to a broader set of actors, i.e. including more commercial organisations, is perceived as one promising avenue to promote innovation and, ultimately, to collect higher quantities of second-hand textiles.”**

## 8. RECOMMENDATIONS

Introduce an EPR in the upstream phase of a textile's life-cycle. Focusing on the retailer's core competence, i.e. production of textiles, could stimulate a shift towards greater transparency about material compositions that would make the recycling of second-hand textiles easier.

Connect an EPR to the establishment of a local recycling industry. This could create a market in Sweden for the recycling of second-hand textiles and materials could be kept within Sweden.

Strengthen core competences of clerks to drive holistic solutions for second-hand textiles.

Support business development of non-profit organisations, since these have the core competence of collecting and sorting second-hand textiles.

Expanding collaborations to the private sector could foster innovation and new business models that promote the collection of second-hand textiles.

## 9. IMPLICATIONS FOR FUTURE RESEARCH

The findings of this study largely confirm the findings of previous reports, published between 1995 and 2019. This report, however, offers a more fine-grained picture of the Swedish second-hand textiles market. Given the similar findings, future research is needed to investigate into greater breadth and depth various possible systems for a future collection of second-hand textiles. The majority of actors experiences a great uncertainty about their future roles and, therefore, many of the current systems scratch rather on the surface of the second-hand textiles issue, than develop holistic solutions for Sweden, including particularly rural areas.



# 10. APPENDIX

## Appendix A

Table 3. List of interviewed organisations

ORGANISATION	TYPE OF ORGANISATION
SÖRAB	Municipality-owned waste collector
Göteborgs Stad	Municipality
VafabMiljö	Municipality-owned waste collector
Human Bridge	Non-profit organisation
The Loop Factory	Commercial organisation
Kiruna Kommun	Municipality
Solna Stad	Municipality
Vallentuna Kommun	Municipality
Svensk Handel	Retailer organisation
EMMAUS Stockholm	Non-profit organisation
Nacka Kommun	Municipality
Björkåfrihet	Non-profit organisation

Table 4. Secondary data

ORGANISATION-SPECIFIC REPORTS	INDUSTRY-SPECIFIC REPORTS
“Riktlinjer för upplåtelse av kommunal mark för klädinsamling”, Municipality 5 Kommun (2012)	“Föreslag om hantering av textilier – Redovisning av regeringsuppdrag”, Swedish environmental Protection Agency (2016)
“Avfallshantering”, Municipality 5 Kommun (2018)	<a href="https://www.naturvardsverket.se/upload/miljoarbete-i-samhallet/miljoarbete-i-sverige/regeringsuppdrag/2016/redovisade/redovisning-regeringsuppdrag-hantering-textilier-2016-09-26.pdf">https://www.naturvardsverket.se/upload/miljoarbete-i-samhallet/miljoarbete-i-sverige/regeringsuppdrag/2016/redovisade/redovisning-regeringsuppdrag-hantering-textilier-2016-09-26.pdf</a>
“Department presentation” Göteborgs Stad (2018)	“Information om hållbar konsumtion av textilier”, Swedish environmental protection agency (2019)
“Göteborgsregionen minskar avfallet”, Göteborgs Stad (2019)	“Den svenska avfallsmarknaden”, PWC (2006)
“Text av fastighetsnära textilinsamling”, Göteborgs Stad (2018)	<a href="https://www.pwc.se/sv/energi/assets/rapport-svenska-avfallsmarknaden.pdf">https://www.pwc.se/sv/energi/assets/rapport-svenska-avfallsmarknaden.pdf</a>
“Department presentation”, SÖRAB (2018)	<a href="https://www.government.se/48f689-globalassets/government/dokument/regeringskansliet/statement-of-government-policy-20192.pdf">https://www.government.se/48f689-globalassets/government/dokument/regeringskansliet/statement-of-government-policy-20192.pdf</a>
“Statement of Government Policy” (2019)	

# APPENDIX B

Table 5. Example quotes and perceived roles for municipalities

MUNICIPALITY	PERCEIVED ROLE	EXAMPLE QUOTE
Municipality 1	This municipality has a rather active role by setting specific goals with regards to the handling of second-hand textiles.	"This new waste plan runs for the next 10 years and we have specific goals for reuse and one specific goal for textiles actually. But it is still a proposal."
Municipality 2	This municipality has a rather passive role, no specific goals are set.	"Textiles is a specific challenge for us."
Municipality 3	This municipality takes care of textiles as part of their general waste responsibility and the waste hierarchy. The role is rather passive, since there are no specific goals set.	"Overall, the waste hierarchy is this: Reuse and recycle. From that side, textiles are part of our goals. But right now, we do not have any specific goals about how we are going to handle textiles."
Municipality 4	This municipality has a rather active role by setting specific goals with regards to the handling of second-hand textiles.	"We had this extra focus on the waste plan, that we are forced to have. We have actually picked up the textile in the late period of the project. Namely, to increase the focus on it. We are setting goals to show the vision in what direction we want to go."
Municipality 5	This municipality takes a rather active role. The new waste plan is planned to specify two textiles related goals: 1) the number of reused textiles should increase, 2) the public is willing to donate and buy more second-hand textiles.	"Vi har ju en avfallsplan idag som innehålla lite mål angående textilier. Jag tror att det inte är – det som är bara skrivit är att återanvändningen ska öka. Det är inte en siffra satt. Sen så står också att antalet av behållaren för textilinsamlingen ska utökas gärna via fastighetsnära insamling. Jag tänkte när vi ta fram den här nya avfallsplanen så vill jag ha med ett mål som ska säga att hushållen med högre grad ska vilja köpa begagnade textilier."
Municipality 6	This municipality has a rather passive role, no specific goals are set.	"I ägarkommunernas avfallsplan finns ingenting skrivet om hantering av textilier. På SRV:s hemsida hänvisas textilier till grovt avfall. Det var som jag anade – vi har inte påbörjat detta arbete än – att återvinna textilier."

# APPENDIX C

Table 6. Example quotes for collaboration requirements

REQUIREMENT	EXAMPLE QUOTE
Serviced containers	"The service, to keep the boxes fresh and clean and to empty them in time. That is the deal. [...] We have regular meetings to follow-up on the results." Non-profit organisation 1
Statistics/transparency	"They mention that there was a lot of mistrust from municipalities towards the non-profit organisations. [...] I think that has changed a lot, because of what I hear from the municipalities is that we have a collaboration with is that they are very satisfied. We are very transparent. We measure everything that goes in, we weight the textiles, and everything that goes out. We know exactly how much goes to reuse in our shops, and how much is sent abroad. Also from the companies we send it to we get figures about how much is been reused and how much is recycled." Non-profit organisation 2
"90 konto" (5)	"When we put up agreements with these organisations, we have demands; one of them is a '90 konto'." Municipality 1
Accepting damaged textiles	"The textiles do not have to be whole, they can also be broken. We can take them anyway. And that makes it easier for us, because then we do not have to teach the end consumer" Waste collector 1
Ensuring priority of waste hierarchy	"We want to work high up in the waste hierarchy. The most important thing is to reuse the textiles. Only if it is not possible you have to recycle them." Municipality 1

(5) The "90 konto" is a non-profit organisation that aims at ensuring that public fundraising for humanitarian, charitable, cultural and other non-profit purposes takes place under control, that fundraising is not burdened with unfair costs, that sound marketing methods are used, and that appropriate methods for fundraising are developed (Insamlingskontroll, 2019)

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