

Measuring up

First edition of ZWE's municipal manual for circular textile systems

Guidance for local actors
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Contents

2 Executive summary

3 Introduction

5 Context

6 Legal requirements and framework

8 Door-to-door (DtD) collection

10 Case study: Põlva, Estonia

10 Open containers in public spaces

11 Procurement

12 Locations of containers

14 Design and maintenance of street containers

15 Collection frequency

16 Mobile collection points and days

16 Collection for recycling

20 Conclusion

Executive summary

With the start of the mandate for separate collection for textiles at the beginning of 2025 and Extended Producer Responsibility (EPR) schemes mandated across the EU from March 2028, we are in a moment of time where the way we have previously managed textile waste will change monumentally.

With many actors working on the collection and sorting of textiles [highlighting the imminent crisis they face without further funding](#), the issue of how to implement effective systems that are properly financed, and also follow the prioritisation outlined in the waste hierarchy, is absolutely critical for European municipalities today, who play a frontline role in these systems.

This paper aims to provide an overview of the different collection models and infrastructure on offer for municipalities in Europe regarding textile waste. It showcases that the past approach by many local authorities in the EU to textile waste—which was largely ‘out of sight, out of mind’—can no longer be justified.

Municipalities must take greater control and oversight over the way textiles are managed and prevented from becoming waste, through stronger procurement processes and deeper collaboration with existing actors in sorting, reuse, repair, and recycling.

This includes offering more frequent and accessible door-to-door collection of textiles, and possibly revamping the system to ensure recyclable and reusable textiles are two different waste streams with different collection methods—each therefore receiving a higher quality of material which is more likely to be reused or recycled, respectively. Having greater data collection models in place will not only benefit the performance of local systems but also help ensure that EPR schemes will financially reimburse local actors based on the full costs incurred.

Introduction

The systems and issues surrounding textile waste generation globally are incredibly complex. They cover multiple sectors and workforces, require supply chains spanning multiple continents and exacerbate many social and environmental injustices in our society today.

ZWE and its network of members have a deep, longstanding history of supporting European municipalities in the design and implementation of effective zero waste strategies in their communities. [We recently launched the 'STICT' project](#) to mark a new chapter in our Zero Waste Cities work, focusing specifically on how to create best practices for municipalities in regards to textile waste prevention and management.

When it comes to understanding what a best practice model for textiles looks like for municipalities, there is no one-size-fits-all approach. There are multiple variables—e.g. geography, existing partners actively involved, the composition of local industry and businesses—which significantly impact how a local system should be designed and optimised.

The purpose of textile waste collection has changed in recent years and continues to do so due to the increased production of cheaper, lower-quality garments. Historically, textile collection has focused on sourcing as much reusable clothing as possible, as the basis of securing finances to sustain the business activities of social actors. Increasingly, we are seeing a greater shift towards textile collection as a waste collection service—formalised in [the EU Waste Framework Directive \(WFD\)](#) requirement to separately collect textiles from 1st January 2025. This aims at reducing textile waste being landfilled or incinerated, with greater volumes of collection sought not only for reuse but also for recycling. As of March 2028, EU Member States have to implement EPR systems, which will increase the funding available for textile waste management, including collection, but also grant certain decision-making powers to the producers who are financing the system.

At ZWE, we aim to increase local actors' knowledge and understanding of what is possible when it comes to textile waste prevention and management. We want to showcase best practices where they exist, or provide inspiration and support the implementation of best practice measures where there are not currently many examples. At the same time, we also set out to provide a guiding framework on the different considerations and steps every municipality should address if they want to reduce the volume of textile waste created in their community.

In this paper, we focus primarily on post-consumer textile (PCT) waste, which refers to textiles discarded after they have been purchased and used for their original purpose. This is the waste stream most commonly addressed by municipalities, compared to pre-consumer textile waste, which is primarily generated during the manufacturing stage, although the two waste streams could be examined together when discussing how to support the scaling up of textile-to-textile (T2T) recycling.



Les Petits Riens sorting centre in Anderlecht, Belgium.

Given the complexity of textiles—from the materials used in their production to the variety of actors involved in their sorting—over the coming years, we plan to publish a multi-edition '*Municipal Manual*' for circular textile systems. Editions will be added over time, building on each other, focusing on one key topic at a time to make each one as accessible as possible. We hope that over time, these documents will become a suite of helpful resources to inspire municipalities to take bold action tackling textile waste generation, building on the growing volume of existing materials ZWE and others have published on the topic.

Over time, the manual will have editions covering the following chapters to address the core functions of a circular textiles system:

- Incentivising citizens to rethink the purchasing of new items
- Getting textiles repaired rather than disposed of
- Getting textiles reused, both for their original purpose and for a different purpose (repurposed or remanufactured)
- Getting textile materials recycled rather than disposed of
- Getting textiles that have previously been put in the residual waste recovered
- Ensuring the local system is fair and inclusive of all social actors

This first edition of the *Municipal Manual for Circular Textiles* will focus on **what infrastructure municipalities can introduce to maximise both the volume and quality of textile materials collected for reuse**. It takes a deeper dive into the collection infrastructure and operations that can deliver the best results, based on the learnings gathered so far from working with partners and municipalities within the STICT project. It also builds on [previous guidance](#) done by Zero Waste Europe on how to collect, sort and reuse textiles locally. It also

provides a brief overview of future legal provisions of textiles EPR for municipalities to anticipate the change in the system.

This report has been designed primarily for city and waste company officials, as well as other actors working at the local level, for example, NGOs, repair services, reuse operators, and social enterprises, who are interested in improving their textile collection system to maximise reuse and recycling, and minimise textiles ending up in landfills or incineration. It also includes interesting considerations for T2T recyclers who seek to work with municipalities to increase the volume of recyclable materials being collected for their operations to grow worldwide.

Context

According to [a 2025 ETC report](#) looking at the EEA's Circularity metrics for textiles, the amount of textile waste and shoes that are not separately collected **is more than twice the amount of what is reported to be separately collected**. In some EU Member States, the collection of used textiles is not considered waste collection, and these materials are therefore not reported as waste, meaning they are not subject to regulations and processes for data reporting. With the revision of the EU WFD approved, these items will now have to be reported, which will most likely result in an increase in the reported amounts of separately collected textiles and a rise in the reported generation of textile waste.

The majority of separate collection systems in Europe focus mainly on capturing reusable textiles, and there is vast room for improvement in most of these systems, as the average capture rate stands at just 15% [according to 2022 EU data](#). With the start of the mandate for separate collection at the beginning of 2025, and many actors working on the collection and sorting of textiles [highlighting the imminent crisis they face without further funding](#), the issue of how you implement effective systems that are properly financed and follow the prioritisation of the waste hierarchy is absolutely critical for European municipalities today.

When examining the options for textile waste collection, here are some core questions that each municipality should first consider:

- What are our objectives with this system—do we want to minimise environmental impact or are we focused primarily on delivering economic results?
- Where do we want the collection to happen? Where is it feasible?
- Who is the most appropriate entity to be responsible for collection?
- How often should, and can, the collection service happen?
- What options do we have for working with partners for collection, sorting, reuse and recycling of textiles?
- What data do we want to be collected to inform the performance of this service? Who is best placed to collect this data?

There are, of course, more components and factors that contribute to effective collection systems. More broadly, cities have a wide range of tools available to them that can meaningfully increase the prevention and reuse of textile waste locally, such as communication activities, target-setting, economic incentives and inclusive policymaking. However, this report focuses purely on the collection infrastructure and operations as these form the backbone of effective local systems. Future editions of the manual will be developed to examine best practices for the topics mentioned above and more.

The infrastructure and operations behind a collection system form its backbone because they provide the major touchpoints for users when engaging the system. Where, how often, and how convenient it is for individuals and organisations to use these textile collection methods is vital in determining the effectiveness of a system that should aim to minimise textiles found in residual waste streams.

The majority of EU textile collection today is done via large open bins on the street or so-called ‘bring points’ that can either be located across a municipality or within a specific recycling or waste disposal centre. The variety of actors responsible for managing these points is one of the many complexities within European textile waste systems today. For example, in a single municipality, several different entities operating the collection of textiles can be present—from charity organisations, to social enterprises or even private companies. Clothing shops may also be offering take-back schemes in their own stores, while the municipality would collect a broad range of textiles (not just clothes) at specific bring points/recycling centres.

Therefore, the picture can be, and often is, very complex. In this paper, we aim to simplify the core decisions and approaches available to municipalities that can help them optimise the way they collect textiles, reducing the environmental footprint of this waste stream. It will also strengthen the support local authorities can provide to existing actors working in this sector, and help provide clear oversight of a system that will be critical if EPR schemes are to deliver on effective environmental performance and fair economic reimbursement for actors along the value chain.

Legal requirements and framework

The EU provides certain details about waste management requirements for textiles and a certain level of operational standards to be observed by actors operating within the future EPR system. For example, Article 22d of the WFD specifies that Member States must ensure, among other things, that:

- The collection, transportation and storage infrastructure are protected from adverse weather conditions and contamination;
- The collection is subject to sorting operations to ensure the treatment is in line with the waste hierarchy;
- Separately collected textiles are subject to a professional screening at the separate collection point or the sorting facility to identify and remove non-target items and sources of contamination;

- Separately collected textiles are considered to be waste upon collection unless directly handed over by end users and directly professionally assessed as fit for re-use at the collection point by the re-use operator;
- Different fractions of textiles materials and textile items are kept separate at the point of waste generation, where such separation facilitates subsequent re-use, preparing for re-use, or recycling;
- Sorting operations comply with the certain requirements;
- They carry out a compositional survey of collected mixed municipal waste to determine the share of waste textile by 1 January 2026 and every five years thereafter.

Member States may mandate additional requirements and interpret the requirements of the directive differently. We strongly advise that local decision-makers engage where they can in the EPR design phase at their national or regional levels, establishing positive relationships with textile PROs once they have been established. This is because, according to Article 22a (8) of the revised WFD, producers are mandated to cover the costs of the following:

- Separate collection of waste products for preparing for re-use, and for recycling;
- transport of collected used and waste product;
- sorting, preparing for re-use, recycling and other recovery operations and disposal;
- carrying out a compositional survey of collected mixed municipal waste;
- providing information;
- data gathering.



Les Petits Riens sorting centre in Anderlecht, Belgium.

Door-to-door (DtD) collection

DtD collection involves households and businesses leaving separate bags or bins of textile items outside their apartments or homes on designated days. It is often also referred to as kerbside collection. It is not yet commonplace for European municipalities to conduct door-to-door collection of textiles, unlike other municipal waste streams. Yet, these examples are beginning to emerge across certain contexts in Europe, especially since the EU mandate to separately collect textiles began on 1 January 2025.

These collection systems can be organised by having a regulated frequency, such as one day every month, or an on-demand service, where users request collection. For the latter, an appropriate communication channel needs to be established where users can easily request a collection that is tailored to the community context – whether by email, phone, app, or website. Guidance should be given from the municipality to the user on how to organise the collection, such as:

- Where to leave the bag;
- What kind of bag or container to leave textiles in and guidance on its use (e.g. how to close it properly);
- At what time of the day to leave it outside the home;
- The minimum or maximum amount of bags or the weight of each bag/bin that can be collected;
- What materials should and should not be included (e.g. just clothes or inclusive of shoes, curtains, towels, etc) and what to do for any wet or dirty textiles, if there is the possibility for separating these items

The answer to these questions will depend on the municipality's agreements with sorters and any services that have agreed to deliver on reuse, recycling, or repurposing of these materials.

Adding more collection opportunities around certain times of the year, when people change their wardrobes most often (e.g. "spring cleaning"), is an advisable step to further minimise waste. Furthermore, the collection system can be made more efficient if textile DtD collection is done alongside other items that are not collected in a vehicle that crushes waste to reduce its size, for example, by collecting textiles alongside WEEE or bulky items. For recyclable textiles, this may not apply, and recyclable textiles could be collected with the same type of vehicle as plastics or metals, which we explore in more detail at the end of this paper.

Adopting a door-to-door collection model for different waste streams has proven, time and time again, to provide the highest quality and quantity of collected materials versus other systems. Yet they do require greater investment to begin with, and the ongoing operational costs - staff, transport, etc - are higher. Often, these extra costs are offset for local authorities through the extra savings that occur from having less residual waste to dispose of and a more optimised collection system, or from the implementation of a Pay-As-You-Throw (PAYT) system locally, which would increase fees on citizens and businesses that generate above the average amount of waste.

Adding extra opportunities to separately collect textiles, if communicated clearly, will help reduce residual waste generation for municipalities. DtD collection for textiles also provides potential benefits for extra job creation in local businesses or in the waste sector. The model helps ensure that the quality and quantity of the materials collected remain high, and reduces the need to find extra space within already crowded public streets.

One of the key questions for municipalities when considering DtD collection of textiles should therefore be: **at present, what percentage of the residual waste, that is burnt or incinerated, is made up of textiles? And, what costs could be saved if this fraction was instead collected for reuse or recycling?** Knowing this will help define the economic feasibility of offering DtD collection.

Research into the costs versus benefits of DtD collection for textiles is still in its infancy. In most places where it is being introduced, including cities such as [Barcelona](#), DtD collection supplements existing textile collection infrastructure, such as street containers and recycling centres/bring points. Textiles are also not being collected as frequently as other waste streams. The service providers, those running the collection from households, differ a lot across the existing systems. In some cases, it's the same waste company that does the regular waste collection, whereas in other contexts, it is social enterprises that offer the collection and then take it to their own sorting centres. There is no data that concludes a preferred option for who should operate the collection. The considerations should be rather on who has the capacity and who can deliver the best performance, as well as who brings wider benefits to the local community.

Who should conduct the collection? Key considerations:

- If it is an existing social enterprise already active in textile waste management, do they have the capacity, funds, and skills to continue running the system effectively or to expand it? Can any further support be provided to them via the public tender for this collection service? This can often be a good way of supporting socially-minded organisations that, for example, provide employment opportunities to previously unemployed or marginalised groups.
- If the decision were to add textile DtD collection on top of the existing service provided by waste companies, how can this be effectively integrated into the existing collection model (e.g. which trucks and bins/bags will be used) and frequency (adding onto existing collection days or creating new ones)?

ZWE would strongly encourage any municipality to consider extending its ability to collect textiles from households via door-to-door collection, given the positive impact this would have on reducing residual waste volumes and the Greenhouse Gas (GHG) emissions of managing this waste stream. Additional collections can be adapted easily into existing systems or offered by a separate entity. The success of this depends heavily on the awareness and understanding of citizens to use the system properly, which means that investment in communications is paramount to educate and inform households. Any collection of textiles from households should be done using a colour distinct and different from other waste streams for the textiles bags/bins used for collection. This will be vital for citizens to recognise and comply with the additional material stream for separation.

Case study: Põlva, Estonia

In mid-2025, our member Zero Waste Estonia supported a door-to-door collection model pilot scheme over 4 months in the town of Põlva. The Tekstiilitakso Pilot Project showcases the economic viability of DtD collection for textiles. Four collection rounds took place between April and August 2025:

- 82 collection stops across the municipality
- 174 households participated
- 3.6 tonnes of textiles were collected, an average of 20.7 kg per household

Analysing the textiles collected, pilot results showed:

- 45% wearable (reuse-ready), which is above the Estonian average of 30-35%;
- 37% for up/downcycling;
- 18% home textiles (bedding, towels, blankets, curtains, etc.).

The average cost per kilogram collected was €0.82/ kg. If a more local storage hub could have been found, the costs were estimated to potentially drop to €0.55-0.60/kg. Even at 82 cents/kg, this is below the average collection scheme costs for small European municipalities, between €1.00-1.20/kg. If wearable textiles (45%) were sold at €1.50-2.00/kg, revenues could reach €2,400-3,200, covering almost all operational costs. In a future expansion of the system, increasing the collection of reusable clothes will offset the extra costs, making the system cost-neutral.

One of the key learnings from the pilot was that local sorting and redistribution points dramatically improve cost efficiency, reduce emissions, and enhance community participation. Trained sorters, compared to beginners, were also identified as a key factor behind the efficiency of the system. A skilled sorter was able to process an average of 85-100 kg of textiles per hour, correctly distinguishing quality categories and colour codes on the first inspection. Whereas a novice sorter could process only 40-60 kg an hour, often requiring a second round of inspection.

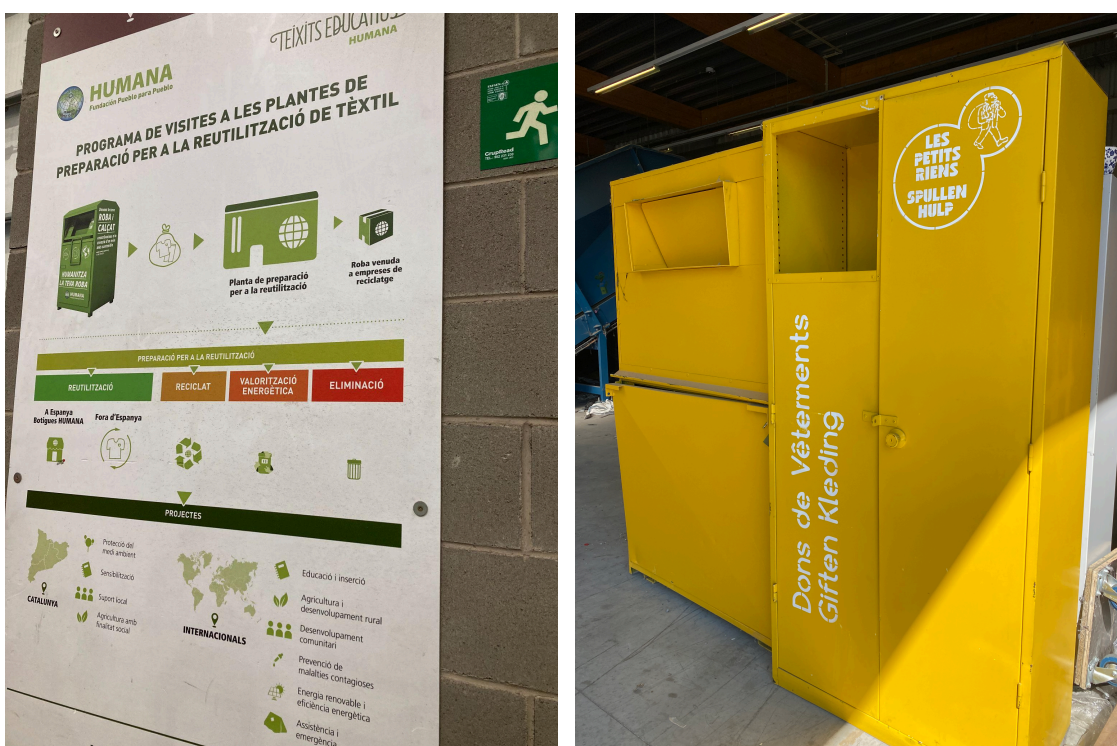
Open containers in public spaces

The most common method for textile collection across Europe today is to have open containers in public spaces. In the majority of cases, it is external actors—whether social enterprises or private businesses—that offer these services, not the municipality. The collection of textiles and their reuse often provides the backbone of the business model for these actors, by generating revenue from the textiles they have collected and then resell. Although in recent years, the increase in textile waste generated by EU citizens, and the poor quality of textiles put on the market, has meant these actors are having to spend more time dealing with more items, a decreasing percentage of which can be resold. This trend in recent years poses a risk to the operational and financial stability of such organisations.

The degree of power municipalities have over how these systems operate is quite widespread and differentiate a lot. In some cases, it is just a simple case of approving applications from an organisation to host a container in a public area. Whereas in other municipalities, better practices exist where a broader public tender mandates certain coverage and service provisions.

The key considerations here for municipalities when examining the effectiveness of public containers:

- Procurement guidance or contractual requirements for companies operating the service
- Location of containers within the municipality (to maximise collection and ensure accessibility);
- The design and usage of the bins (how safe they are and how friendly they are to use);
- Collection frequency (how often they become full).



Left: Humana sorting centre in Barcelona, Spain. Right: Les Petits Riens sorting centre in Anderlecht, Belgium.

Procurement

For municipalities wishing to minimise textiles being burnt or landfilled, the priority action would be to examine the existing contracts with partners operating locally. Key considerations would be whether the contracts can be amended to include performance-based targets or to add certain minimum service standards. This is not to assume that existing local service providers do not share the same goal as the municipality of reducing textile waste, but rather to harmonise the entire system in the attempt to improve performance, reduce costs, and increase transparency.

Procurement contracts and calls for tenders can also be great opportunities to add requirements for winning organisations to comply with minimum standards on data sharing and reporting, so that the municipality and community members have ongoing access to waste data flows, which can help optimise policymaking. For example, data on the collection points which receive the most items of clothing or on the contamination of these containers with non-textile materials are key to understanding how the system can be improved to maximise reuse and collection, for example, by adding more containers in the most used areas.

Lastly, one of the most important positive contributions procurement contracts can make is by adding a requirement for the organisations applying to hire or work with groups in society with a distance to the labour market or who have been otherwise marginalised. There are many positive examples from Europe of how municipalities have used procurement to support social enterprises with a strong social inclusion focus, while maintaining high standards of performance within the system.

For example, acknowledging the role of 'work integration social enterprises' (WISEs) as ways to increase employment among such groups, the city of Madrid launched a procedure for awarding a contract for the collection of second-hand clothes and textile waste management, which foresaw the placement of 1,150 textile collection containers throughout the city. The contract had three lots, each covering different districts of the city (366, 419, and 365 containers, respectively), with the city reserving one lot specifically for WISEs to operate. Lot 3, which covered the Southern districts, was reserved for work integration social enterprises because of the socio-economic characteristics of the area (which has a lower-than-average income level). The total contract value was €5,472,852.50, while the value of Lot 3 specifically was €232,687.50.

In November 2017, the Polish Municipality of Rzgów announced a tender for the collection and management of municipal waste from households. A reserved tender procedure was used to award the contract, in order to create new employment opportunities for people currently outside of the labour market. The tender was specifically reserved for contractors who jointly:

- Had the status of a sheltered workplace or their activity included the social and professional integration of persons from socially marginalised groups;
- Had at least 50% of the employees considered to be from socially marginalised groups.

Locations of containers

Where street containers are based is a key determining factor in the quality and quantity of volumes received. Deciding where to place collection bins brings into focus the issues of both fairness and performance.

For example, municipalities should make certain that the coverage of containers is geographically spread out to ensure that all citizens, no matter their location within the municipality, can easily access a street container. This, of course, does not have to relate solely to street containers. Systems can ensure fair coverage through a combination of street containers, door-to-door collection, and bring points (recycling centres), although fair

access to street containers must be prioritised, given the fact that these are open to use 24/7, meaning they are much more convenient than recycling centres or collection models which only open or come at certain times of the week or month.

[The Catalan Waste Agency](#) and the region's Circular Fashion Pact recommend that there be one collection point for every 1,000 to 1,500 inhabitants (considering containers of 1.5–2.5m³). The best systems for urban areas will ensure that no citizen should have to walk more than 1km to access a textile container, and in more densely populated areas the target should be between 500–800m. This can translate to approximately no more than 10 minutes travelling time, for rural areas where cars or public transport are required. Combining their locations with other containers used for collecting recyclable materials (glass most commonly) is also an option increasingly used by municipalities, although it is not clear yet if this extra convenience—for instance, bringing both glass and textiles to one place—increases the quality and quantity of collected materials, or if such sites risk extra contamination and dumping.

However, accessibility alone does not ensure high participation. Our partner TEXroad is beginning to analyse whether walking accessibility to textile collection bins affects usage rates in Dutch urban contexts. [Their initial research](#) shows that some Dutch cities achieve strong collection outcomes, despite lower spatial access per citizen to containers. This highlights the need for a broader approach to maximise collection, combining fair coverage and access with convenience.

Just as door-to-door collection models have proven to be most effective because of their convenience for households, textile collection from street containers should also consider how convenience plays a role. For example, increasing the number of containers, their size, or even just their collection frequency in parts of the municipality that are visited often or serve as community hubs, should be a central part of a city's strategy. Practically, this could mean having textile containers positioned at several points down a central street for shopping, or next to local parks, sports centres, and supermarkets. This means that any location that receives high foot traffic could be a suitable location for street containers. Ideally, municipalities should be asking for feedback from local citizens on where the most favourable locations could be, or how far they would be willing to travel to drop off reusable and recyclable textiles.

Lastly, the foundation of the system should still be that citizens and businesses remain able to drop off textile items at larger centres/bring points that host many other waste streams. These can be critically important touchpoints with citizens, given the extra space at such sites and the possibility to engage with local waste workers. Municipalities should consider how they can further disaggregate the textiles being dropped off at such sites into different categories and streams, depending on the arrangements that have been made and the possibilities that exist with sorting, reuse and recycling partners. Collection at such centres/bring points provides the best opportunity to introduce deeper sorting into the understanding and behaviours of local residents. For example, with guidance from local workers, citizens should be asked to separate textiles into reusable, recyclable or damaged categories. Further separation could be encouraged or mandated, such as asking citizens to differentiate between categories, such as:

- General clothing
- Fashion accessories (shoes, belts, bags, hats, etc.)
- Bedding (pillows, sleeping bags, sheets, blankets and duvets)
- Kitchen and bathroom textiles/towels
- Other home textiles (tablecloths, curtains, seat covers)
- Toys & other miscellaneous textile items
- Vehicle textiles (seats, seatbelts)

Of course, the separation categories must align with contracts and markets for these items to enter, provided that local or national sorters are willing to accept these separated categories. Such recycling centres/bring points can be a vital first component of capturing high-quality, well-sorted textile materials, thus helping reduce costs and increase efficiency throughout the entire sorting, reuse, and recycling system for actors along the process.

Design and maintenance of street containers

Often overlooked, the design and user-friendliness of street containers can have a big impact on the effectiveness of this method of textile collection. ZWE has written about this before in a [previous guidance paper](#), but for municipalities and enterprises operating the textile containers, key considerations on their design should assess:

- Whether the chosen material and design ensure that the clothes remain protected from bad weather and pollution;
- The appropriate size of the door/levers that open and close the container, providing enough space for bags of clothes and yet not too much that allows for large-scale dumping;
- The ease with which the containers can be opened and emptied, for example, whether they are opened by the operator through locked side doors or underground containers, which may need to be lifted by construction-like machinery;
- The ease at which operating data technology and software could be added, which would allow for ongoing oversight of the bin's remaining capacity.

A critical point to remember for municipalities is the importance of maintaining and cleaning both the containers and the space around each site. This is primarily to guarantee their proper functioning and safety for users, but it also relates to the commonly known '[broken window theory](#)'. This refers to scientific evidence highlighting that citizens do more negative actions—littering, vandalism, etc.—in areas perceived not to have any rules or enforcement against such actions. People are more likely to dump textiles or other items if they that others have done the same, or if they feel that the spaces around containers are not being maintained properly, and therefore, that there is no penalty for such action.

Collection frequency

To optimise the system for operators and to minimise the risk of dumping or a general overflow of textiles, which could be damaged by external weather and pollution conditions, getting the right frequency of collection from street containers is key.

The frequency of collection must be adapted to the speed at which the container is filled, which is defined by how often it is being used by citizens. To create an effective collection system, live data on volumes per container location is therefore critical.

Collection routes can be optimised thanks to the use of information and communication technologies such as filling sensors, container identification, systems on board vehicles, etc. As a minimum, data should be stored on the weight of each container at the time of collection, as well as key information on the owner/entity responsible for each container (if not public). Therefore, having a specific container identification system is required, so management of the system can assess how often each container is filling up and whether there are recurring trends that would affect this (for example, households doing “spring cleaning”).

The next step would be to install volumetric sensors in each container, which can provide real-time information about the precise volume of each specific container. With such information centralised, collection routes can be programmed to be more efficient and dumping can be avoided. This technology is especially interesting in areas with low population density, where containers are far apart, and where optimising collection routes can lead to significant savings in costs, time and transport emissions. Furthermore, if municipalities are concerned about available space in public areas, having consistent data on the weight at each collection versus the volume of the bin could be helpful. This can also help those managing the system decide whether smaller containers could work better or if more containers will be needed, and therefore, new solutions for locations will need to be found.

To conclude, open street containers remain the most common collection method across Europe today. Yet, their effectiveness should really be questioned by local authorities and social enterprises, who are facing extreme challenges from this system. The benefits of such containers are not to be overlooked—convenience (accessible any time), low maintenance costs, and the fact that they provide points for education or advertisements, which can be a potential revenue-generating source.

Yet, at a moment in time where textile sorters and reuse operators are facing an existential crisis due to the volume of low-quality textile waste being collected, the weaknesses of such containers must be addressed. These include the fact that there is no personal identification of the person generating waste/donating clothes, meaning there is no accountability. There is also very minimal quality assurance possible with such systems, and in most urban areas, they increasingly become sites for dumping and littering, leading to extra cleaning costs for the city or the social enterprise managing the container.

Mobile collection points and days

The final component of a comprehensive textile collection strategy at the local level is to offer ad hoc/mobile services spread around the municipality in various locations and at various moments in time.

For areas within a municipality that have been identified as having less access to collection opportunities, or that citizens have further to travel to proper sorting facilities, mobile collection options provide a great tool for municipalities to increase the volume of reusable and recyclable items, and provide more opportunities for citizens to engage in the system.

In practice, this often involves waste companies or social enterprises being located in certain streets on a set date and time, accepting specific items and ideally having an additional social dimension to the event, for example, offering warm drinks and a chance to socialise alongside the collection aspect. Communication in advance is therefore critical to these collection moments, ensuring citizen knowledge about the opportunity and what is/is not accepted is widely disseminated. Flyers, advertisements in public areas around the town and online are all great ways to share information on the collection opportunity in a localised way. Mobile collection services can also be a great opportunity to engage certain parts of the community where engagement is traditionally low. Ensuring that the communications beforehand are done in languages spoken within these communities, which may or may not be the country's main language, is critical to maximising outreach. Likewise, trying as much as possible to ensure that the workers present at each mobile collection moment also speak some of the languages that are commonplace in the community where the mobile event is taking place.

Ad hoc/occasional campaigns and events should also be carried out by the municipality to collect textiles throughout the year. These can take various forms—for example, a regular day each month at a public building where extra textile collection is offered, or that they are organised on the side of existing and popular local events, such as Christmas markets, community fairs, food markets, sporting events, and more. These kinds of events should be seen positively and encouraged by local authorities, as they increase the ability to capture more textiles for reuse/recycling, and also provide great opportunities to increase awareness and understanding within the local community. Therefore, the choice of location and events for these ad hoc collection points is as important as investing sufficient resources in the communications around them. Partnering with existing social enterprises or other community groups—students, schools, fashion groups or brands—if done well, can help maximise reach and impact while reducing workload for municipal officials.

Collection for recycling

Textile-to-textile (T2T) recycling is the process of turning textile waste, both from [manufacturing \(pre-consumer\)](#) and [from used clothing \(post-consumer\)](#), into new fibers or yarns that go towards creating

new textile products. This can involve various methods and technologies, such as mechanical shredding or chemical depolymerisation, to treat discarded textiles and remake them into new materials.

Mechanical recycling of textiles today is still quite rare, all while [remaining the major T2T pathway](#) and being quite difficult to do, given the multi-fibre composition of most items put on the market today. Any mechanical recycling process breaks down the fabrics, which in turn weakens them, meaning the recycled product is either more susceptible for damage, will go into a different item that requires less strength (downcycling), or will require more virgin material to be added in the manufacturing process to ensure the end product is of the same strength as it was in its original form.

There are, of course, some valid concerns that remain regarding the safety and true circularity of chemical recycling. For example, within the plastics industry, chemical recycling is increasingly put forward by companies that do not want to change their business model based on the overproduction of cheap, low-quality materials. Avoiding this replication with textiles is critical if we are to be realistic about delivering a more circular system and business model, as overproduction has come to be at the heart of the broken textiles sector worldwide.

Yet, for municipalities and policymakers in general, exploring the possibility of T2T recycling is absolutely vital if we are serious about reducing the volume of textiles landfilled or incinerated in the short and mid-term. In the long term, stronger regulation on the design of textiles should make reuse and recycling easier. However, until then, there is an emerging T2T recycling industry globally that, if it is to be successful, requires the strong cooperation of municipalities and waste management companies to provide sufficient volumes of quality feedstock. New EPR systems will help by providing greater finances for recycling and as well as by setting legally binding targets, giving greater confidence and stability, hopefully, to recycling companies to begin entering the European landscape at a higher rate.

This paper will not provide a critical assessment of textile recycling, as we have already set the scene in [another publication](#). Instead, we wish to increase awareness and considerations of what local textile systems should/could look like, if they are to support T2T recycling in Europe—or globally—given that recycling is tied to manufacturing knowledge and infrastructure, which are lacking within Europe and sit predominantly in other world regions.

The best collection methods that maximise the recycling of textiles are an under-researched area, given the immaturity of T2T recycling in Europe and elsewhere in the world. It is clear that for textile recycling to succeed and be scaled at the pace needed, recyclers must be able to access large-scale volumes of materials. Therefore, strong collection infrastructure and engagement from citizens are vital. As with other municipal waste materials, a separate stream for recyclable textiles alongside one for reusable textiles is one potential path to go down. For example, future textile collection schemes could involve two different bags or containers alongside one another—one for recycling and one for reuse.

Yet, putting the onus on citizens and businesses to define what is recyclable versus what is reusable textiles provides many challenges in itself and cannot deliver the best performance. For other waste streams

today—electronics, plastics, glass, food, etc.—materials for reuse and repair are mostly separated from the traditional collection system, which focuses on recycling. For example, we now have deposit return schemes using reverse vending machines to collect PET bottles and aluminium cans, or electronic items in need of repair are either dropped off at specific reuse centres or in specific producer responsibility organisation (PRO) containers, rather than in a separate bin at home.

Therefore, one option on the table is to mandate household collection of recyclable textiles while maintaining a separate—for example, ad hoc door-to-door service, street containers, bring points—system for reusable textiles. This would enable two separate streams ending up with the right operators—social enterprises, for example, for reusable materials and municipalities/waste companies for recyclable materials, which can then be shipped and sold to T2T recycling companies, in the same way as other waste streams are organised today. The costs versus the benefits of such a system will depend greatly on the current volume of textile waste found in residual waste, thus reducing costs for municipalities via the fees paid per tonnage for the disposal of waste and also in future Emissions Trading Schemes (ETS) for waste incineration. It is also unclear how municipalities or brands could communicate to citizens which materials are recyclable and which are not.



Humana sorting centre in Barcelona, Spain.

[A 2025 study from the Joint Research Centre \(done on behalf of the European Commission\)](#) concluded that the material composition of post-consumer textiles makes it a largely recyclable stream. It studied the composition of 18 tonnes of waste from three EU countries, the Czech Republic, Romania, and Italy. On average, over 65% of these textiles were mostly fibre blends or cotton-rich materials, and had a composition that would enable mechanical or chemical fibre-to-fibre recycling from a technical perspective. The study found

that the barriers to securing the increase in feedstock volumes necessary for recycling to become economically viable were not the composition of the waste, but rather improper sorting at the household and sorting centre levels that were holding back further increases in feedstock availability for recycling.

To help provide sufficient post-consumer textile feedstock, one possibility to explore could be for local and regional public authorities, or the sorters themselves, to set up specialised agreements with recyclers. These could be similar to the off-take agreements brands make with recyclers, or the guaranteed tonnage amounts that municipalities often have with incinerators, which provide a certain degree of financial stability to private operators within the waste sector.

The authorities or sorters could enter into temporary agreements with recyclers about providing a certain volume of textiles for recycling, giving a certain guarantee to the recyclers about the quantity of feedstock available. This could give confidence to both recyclers and local authorities about removing a certain volume of textile waste, which is mostly being landfilled or incinerated today, or to sorters who will be able to focus on managing the higher-quality, reusable material only. To succeed, robust data will need to be collected and analysed from the local/regional level regarding the composition of the textiles being collected, ensuring the recycling infrastructure is able to handle this properly.

Therefore, it is clear that expanding collection methods and options to include post-consumer textiles for recycling is paramount if we are to support a T2T recycling industry. Further research and data are required to best understand the specifics of what this system could look like, something that ZWE is working on with other partners in the sector. It is clear, though, that collection for textile recycling, if it is to be successful, will have to follow the same guiding principles as other waste streams:

- Greater convenience for citizens and businesses to recycle rather than to throw items away;
- User identification and data accessibility are key foundations of well-performing systems;
- Economic incentives to support activity from the top of the waste hierarchy and minimise residual waste generation;
- Strong investments in education and awareness-raising so that users can confidently and properly engage in the separate collection system.

Conclusion

Too often, municipalities' approach to textile waste has been an 'out of sight, out of mind' one. External companies, whether social impact or profit-driven, have stepped in to operate the system without a huge amount of oversight on the one hand or support from local authorities on the other.

Given the mounting textile waste crisis and the nature of the global textile market today, this approach can no longer be seen as acceptable or feasible.

At the local level, municipalities must prioritise the design of flexible and citizen-friendly collection solutions that allow residents to conveniently and consciously sort textiles. This paper highlights the need for municipalities to begin moving beyond the traditional outsourced street container model for textile collection, which is outdated at this moment in time, where the volumes of textile waste are too large and the quality too poor. Instead, more frequent and regulated door-to-door collection models should be explored, supplemented by public containers that provide protection from contamination and broader collection offered at municipal bring points or recycling centres.

Local authorities should continue working together with existing actors in the sorting and reuse sectors, building on their experience and supporting their work with key community groups. **However, we strongly encourage municipalities to bring textile waste into their sphere of competency and oversight, similar to other common municipal waste streams.**

This can be done primarily through stronger public procurement. Here, municipalities should mandate having greater oversight on key data within the textile system—especially regarding volumes, financial costs and end destinations. This will enable municipalities to be in a far stronger position once new EPR schemes come into force across Europe by 2028, as the true expense of the system and the critical data on waste generated can flow freely into national reporting and financial reimbursement schemes. Once EPR is introduced, PROs will have to publicly report the volumes of textiles placed on the market, collected and treated.

Strong EPR schemes will be paramount in ensuring that textile actors—from sorters to reuse operators and recyclers—will be financially supported to deliver both high-performing models and also have the capacity to manage extra data and reporting requirements which underpin successful systems. This is on top of the fact that greater transparency on waste generation levels, locations and proper engagement of citizens will all lead to more effective local systems for textile prevention and management.

For all actors working at the local level today and wishing to reduce the waste we generate, new approaches should be identified and tested collaboratively over the coming years. Certain models for collection that bring textile reuse and recycling closer to the user, outlined above in this report, will deliver the best results in certain conditions. Over the past decades, we have seen that the best local separate collection systems in Europe all follow similar guiding principles—user identification and friendliness, economic incentives to do the right thing,

door-to-door collection as the primary source, backed up by ongoing and significant educational activities with the community.

For municipalities wishing to improve their textile waste collection system, it is time that these same principles be adopted for these materials, if we are to begin minimising the negative impacts the textile sector is having on our environment and society as a whole.



Zero Waste Europe (ZWE) is the European network of communities, local leaders, experts, and change agents working towards a better use of resources and the elimination of waste in our society. We advocate for sustainable systems; for the redesign of our relationship with resources; and for a global shift towards environmental justice, accelerating a just transition towards zero waste for the benefit of people and the planet. www.zerowasteurope.eu



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