



# Problem statement

**Milan**, one of the European capitals of fashion and headliner of worldwide trends, with huge impact on fashion industry, **has the potential to host innovative solutions reinventing ownership in the clothing sector.**

Milan has an abundance of **small boutiques** being trusted by their customers, but the shop owners interested in sustainability are **struggling to implement innovative practices.** In the meantime, we are assisting to a growing market of recycled and renovated textile materials, vintage being a new trend as well. We are standing in front of **all the ingredients for a systemic innovation to happen**, yet the system still struggles to maintain a socially and environmentally sustainable consumption model.

## Team Gingerbreads

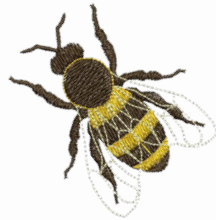
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## Institution

Politecnico di Milano

## Location

Milan, Italy



## Desk research

### An unsustainable consumption model

But why? Let's take a step back.

The fashion industry has a high environmental impact, being responsible for around **10% of global carbon emissions**, percentage that could reach 26% by 2050.

What's more, clothes supply chain is the second-largest consumer of the world's water supply using about 3200 liters of water to produce one cotton shirt, polluting water with dyes, chemicals and microplastics – about 35% of the amount ending up in oceans.

Considering the impact of the overall system, it is impressive how short the life span of a piece of clothing turns out to be. On average, it tends to last around 3,3 years before being discarded, and already **in 2014 people bought 60% more garments than in 2000, while keeping them only for half as long.** This phenomenon, commonly addressed as fast-fashion, is encouraged by international brands skyrocketing the number of collections released each year (24 for Zara, 12-16 H&M) and ends up in stimulating compulsive buying of garments that sometimes are never worn (50%-20% of the wardrobe).

Once becoming waste, only 12% of global garments is recycled. Turning to Italy, in 2019 about 157 thousand tons of clothing were collected by the separate collection system (4224 tons in Milan), but including the estimate of clothes not disposed correctly, the estimate rises to 663 thousand tons. **Almost all the correctly disposed clothes are reused (68%) or recycled (29%),** but only a small amount (1% as EU average) is actually reused to create new virgin fibers and garments: **the majority is downcycled.**

Milan is of course part of this system, being the epicenter where the majority of Italian fashion firms operate. The fashion industry structures the 8,5% of the national GDP and Italian textiles are responsible for the 77,8% of European export in the sector, constituting roughly one-third of the whole value generated. Coming to Milan, the clothing sector builds the 20% of Milanese GDP, and **25% of the Italian fashion exports come from this urban area**, living no doubt about the role of this city in the system.

### Technology won't save us

**Solutions and machinery** to recycle and reuse materials easily accessible both logistically and economically **are surely missing.**

These processes are challenging to manage: from separating components and sorting materials requiring skilled workforce, to the strength problem of the recycled yarn, to chemical, temperature, pressure requirements.

Nonetheless, the real problem is that **recycling is not necessarily ending up in upcycled products or closed loops in the production chain**, reducing environmental impact. As an example, even a brand as Patagonia is not able to infinitely recycle its own polyester, depending on plastic bottles waste.

Technology is a key element, but **we hardly believe that it will solve the problems of an entire system driven by consumerism** and run at an unbelievable speed that would make unsustainable even the most cutting-edge recycling process. **A holistic change is needed, involving different actors** – from brand owners to customers, **challenging fast-fashion habits and ownership itself.**

# Interviews






Strong on the premise that the way we consume clothes needs to be challenged, we wanted to know more about the places where the consumption starts.

The core of Italian fashion and textile industry (excluding luxury ones) is constituted by **small enterprises: over 87% have 1 to 5 employees.** Brands and producers of that dimension rely mainly on small retail shops for the distribution of their clothes.

Milan has a good number of **neighborhood shops**, representing a **reference point for the local inhabitants** offering a unique and personal experience, but they pass unknown to the people outside of the neighborhood.

These realities are **facing economic problems**, struggling to survive, **missing time and skills to remain up to date with innovations** and digital tools, not being able to cooperate effectively. We felt this was an interesting starting point to begin our field research. We selected a sample of 5 shops in the area of Porta Romana in Milan and conducted some interviews with the owners.

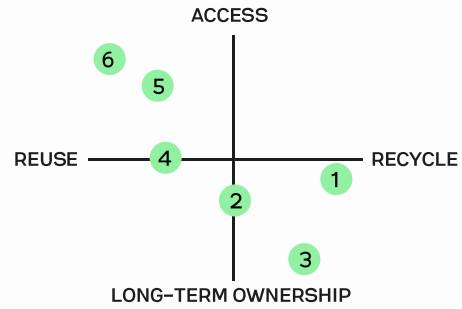
Different kind of shops were identified, from the ones **selecting** and selling brands, to the ones managing and **producing their own firm**, from the most environmental conscious to the least ones.

	Type of boutique	Pre-usage	Post-usage
<b>Our Milano</b> 	Sells a selection of clothing brands for men.	Search for recycled or low-impact materials. Innovations such as Re3 Model case study.	No repair. They suggest a tailoring shop they trust.
<b>Primafla</b> 	Produces and sells their own shoes, added to a selection of clothing brands for women.	Not particularly interested. Sells local produced leather labelled as sustainable product.	No repair. Replace the garment in case of production issues.
<b>Bezpen</b> 	Sells a selection of clothing brands for women.	Search for recycled, natural or low-impact materials.	No repair. They suggest a tailoring shop they trust.
<b>MaClò</b> 	Sells a selection of clothing brands for women.	No recycled materials, try to reduce synthetic the most in favour of natural fibers.	Repair just in case of production errors and eventually replace the garment.
<b>Room 19.21</b> 	Produces and sells their own clothes, added to a selection of brands for women.	Usage of bolt ends, low-impact dyeing and fibers they were able to cut the cost and keep low prices.	Adjust and tailor garments. They repair damaged ones during usage.



## Case studies

Interesting solutions are being tested, some relying on **recycle and reuse tech** to innovate the usage of clothing (1–3) and other services focusing exclusively on **different modalities of ownership and access** to clothes and objects (4–6):



- 1 **Garment2Garment** is a mini-scale production line able to **recycle a used garment into a new one**, without using any water and chemicals, although needing the addition of new virgin fiber;
- 2 **Re3 Model by Seay** is a **circular economy model** encouraging clients to send back to the brand used garments, using the same shipping box provided in the purchase of new ones and providing discounts;
- 3 **Infinite Jeans by 1083** is a project to create **jeans specifically designed to be easily recyclable**, inviting consumers to return them after usage.
- 4 **Streetbank** is a platform to **share things in the neighborhood** giving them away for free, borrowing them, or even sharing skills and helping each other;
- 5 **Camicia On Demand** is a subscription-based service **renting shirts for everyday needs**, managing cleaning and ironing;
- 6 **LENA** is a fashion library, a subscription-based shop in Amsterdam, where you can **borrow clothes each month, without owning them**.

## Research's insights:

1

**A change in the way consumers conceive ownership** of clothing products is vital to make a real positive impact. New recycling technologies might serve as incentive but are not enough to close the production loop.

2

Consumers choose local boutiques for their more **personalized shopping experience**, their consumption choices are not driven by environmental consciousness but more towards a familiar, reliable and near access to the product.

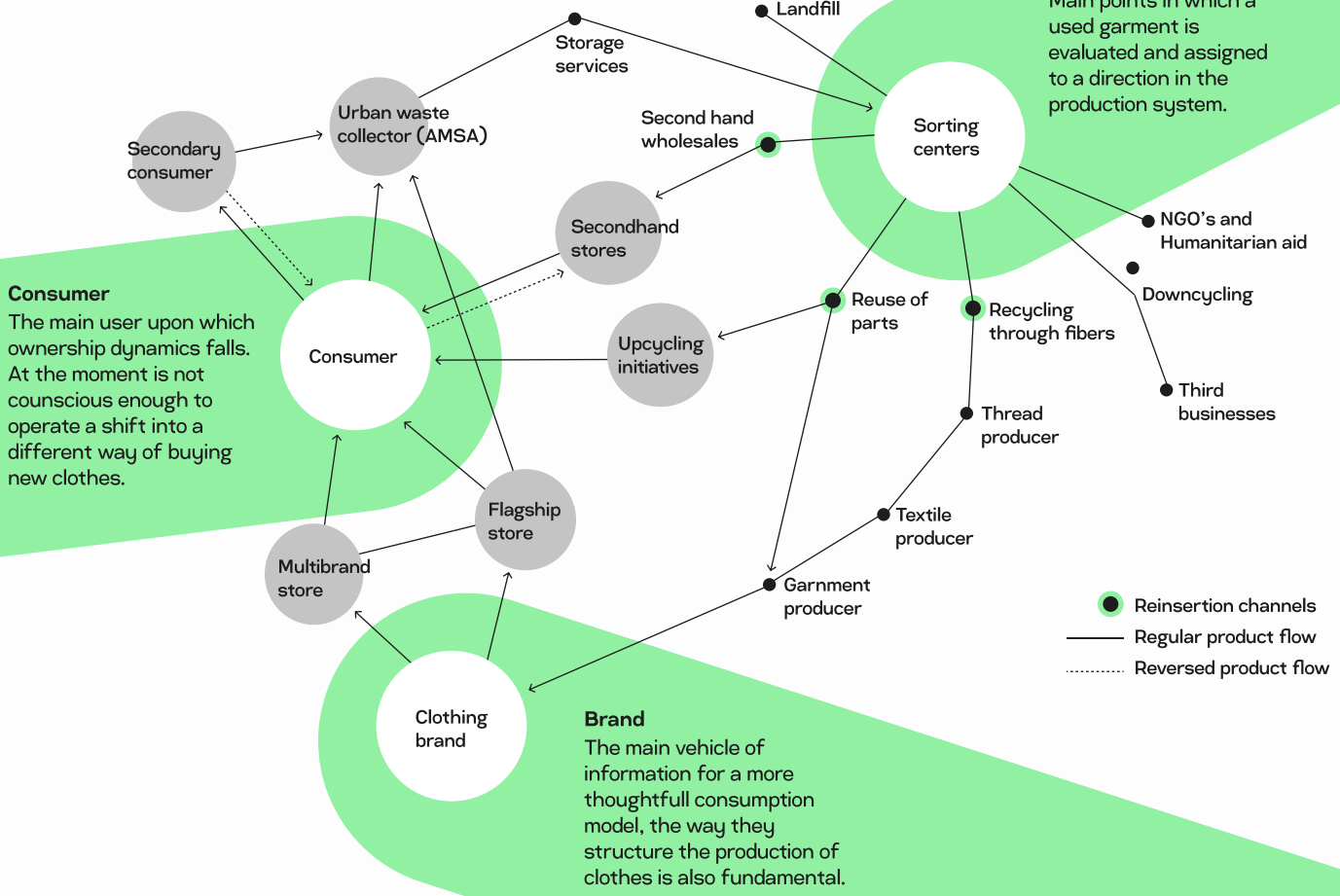
3

Small shops have a **strong relationship with clients, trusting each other**. Shop owners are able to influence their taste and suggest exploring new styles, brands and garments. Shopping at a local scale is a collaborative and relational process.

4

**Different ownership practices are not yet explored enough** while sharing practices and second-hand options still suffer a stigma regarding quality and cleaning of the garment. Little and superficial ethical thought is developed around garments' production and distribution.

# Ecosystem Map



Service Design Challenge 2022

## Opportunities & direction

The insights highlighted pose the basis and forward the question if it is possible to operate a systemic change in the ownership perspective, from the finished garment to its materials, bringing a **new shape-shifting concept on how we perceive a piece of clothing**.

Into this picture, independent **boutiques and local retail shops play a central role as activators** of this scenario but need more affordable access to circular systems in order to do so. **Trust between local activities and clients is then fundamental** to raise awareness about the topic and achieve a different ownership perception.

We think that **Milan can become the perfect incubator** for such a service because of the role in the fashion industry, nationally and internationally. The huge presence of small retailers, customers, tailor shops, and **all the actors of the production chain in the same context** is a fundamental ingredient to unleash a systemic innovation.

References | Interviews open data

## HMW empower local boutiques to become innovators shifting the ownership of clothes towards access and shared usage?



**Slowing fast-fashion  
down empowering  
small actors.**

How empower local boutiques to become innovators shifting the ownership of clothes towards access and shared usage?

