

# BALTIC2HAND

# BENCHMARKING REPORT

Noora Salmela, Maarit Jaakola & Eerika Heinonen  
Turku University of Applied Sciences

## Table of Contents

Overview of second-hand business models.....	3
Overview of second-hand marketplaces .....	8
Best practices for increasing reuse of textiles and decreasing textile waste .....	10
Consumer nudging .....	15

# Overview of second-hand business models

## Business models

With the increasing consumer awareness of reuse of textiles, overall public and political focus on textile circularity and especially fashion industry's growing interest in re-commerce and rental models, it is expected that more innovative business models will enter the market in the future <sup>1</sup>.

The relevant second-hand business models for textile and fashion industry for decreasing textile waste and increasing reuse of textiles include **resale, rental, repair and remaking**<sup>2</sup>. The business models include, for instance, product longevity and durability, leasing and sharing, garment collection, recycle and reuse of materials<sup>3</sup>.

According to Ellen MacArthur foundation (2021), the business models of resale, rental, repair and remaking can provide considerable greenhouse gas savings, and could be worth USD 700 billion by 2030, making up 23% of the global fashion market. Listed US-based second-hand store Thread Up has estimated (in 2021) that extending the life of clothing by an additional 2,2 years on average would decrease the environmental burden; carbon dioxide emissions, waste streams and huge use of water, mainly in cotton production, by as much as 72 %<sup>4</sup>.

Business models related to resale focus on extending the useful life of textiles beyond the first user and intensifying textile usage. Resale includes (online and offline) sale of second-hand items: peer-to-peer, third party marketplaces and own brand re-commerce and textile take-back. The important part related to resale is the collection of textiles to the market for reuse and recycling. The collection of textiles may be brand-selective or unselective. In collection and sorting, logistics is crucial.

One promising option for enabling a resale market is to selectively locate second-hand stores in central shopping areas, making them more visible and contributing to the creation of a mind shift among customers and retailers. Existing businesses should be encouraged to dedicate some of their space to second-hand sales. Textile reuse platforms could allow enhanced sharing of garments and/or returning end-of-life clothes for resale.

From the other business models, rental includes peer-to-peer rentals by private owners, large-scale rental and subscription models by multi-brand platforms or individual brands. In the repair models, a faulty or broken product or component is returned to a usable state. In the remaking business model, on the other hand, a product is created from existing products or components. This operation can include disassembling, re-dyeing, and repurposing.

---

<sup>1</sup> Watson et. al. 2020. Post-consumer textile circularity in the Baltic Countries. *TemaNord* 2020:526.  
<https://pub.norden.org/temanord2020-526/#>

<sup>2</sup> Ellen MacArthur Foundation. 2021. Circular business models: redefining growth for a thriving fashion industry.  
<https://ellenmacarthurfoundation.org/fashion-business-models/overview>

<sup>3</sup> Conscieme et al. 2022. A framework of circular business models for fashion and textiles: the role of business-model, technical, and social innovation. *Sustainability Science Practice and Policy* 18 (1).  
[https://www.researchgate.net/publication/361326790\\_A\\_framework\\_of\\_circular\\_business\\_models\\_for\\_fashion\\_and\\_textiles\\_the\\_role\\_of\\_business-model\\_technical\\_and\\_social\\_innovation](https://www.researchgate.net/publication/361326790_A_framework_of_circular_business_models_for_fashion_and_textiles_the_role_of_business-model_technical_and_social_innovation)

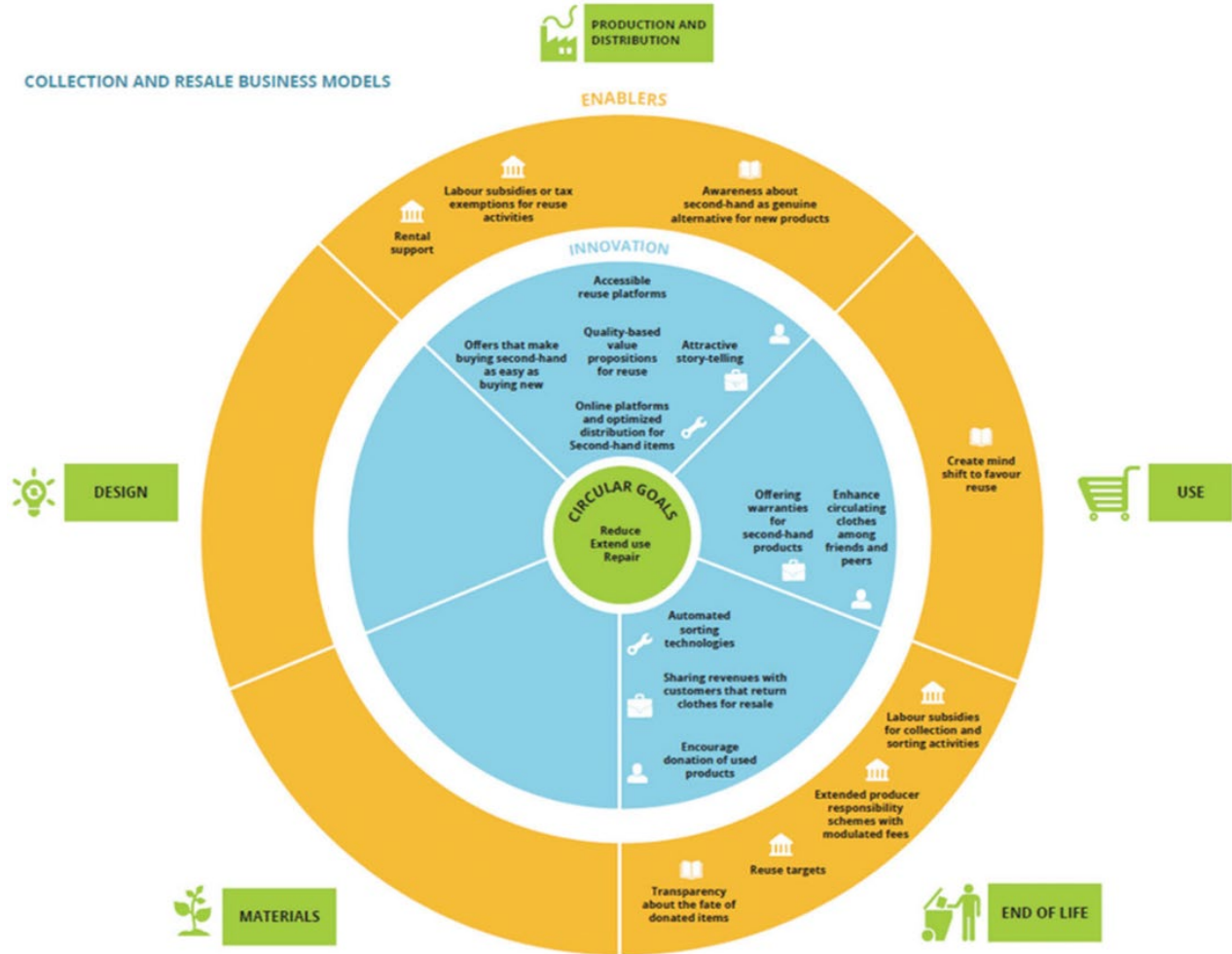
<sup>4</sup> ThreadUp. 2021. Resale report. <https://www.thredup.com/resale/2021/#resale-industry>

The longevity and durability extend the lifetime of garments<sup>5</sup>. Improving the physical durability of garments is possible by using quality materials. Quality standards must be set; relying on sturdy assembly methods; choosing dyes, finishes, and processes to suit selected fabrics instead of more generic ones. Also, quality testing is important. Labels with clear instructions for maintenance and care should be used. Consumers should be educated to recognize and buy good quality garments. In addition, brands or third parties could offer repair and maintenance services and product guarantees.

However, resale and collection business models must be complemented by recycling and material reuse models for addressing all circular economy goals together (Picture 1). The improvement of used clothing and textile waste collection system and the development of recycling technologies is essential. The business models related to reuse and recycling of materials emphasize turning textile waste into raw materials to produce new textiles. They involve reusing parts and cuts and producing recycled fibers for re-spinning and use in other products.

---

<sup>5</sup> Conscieme et al. 2022. A framework of circular business models for fashion and textiles: the role of business-model, technical, and social innovation. *Sustainability Science Practice and Policy* 18 (1).  
[https://www.researchgate.net/publication/361326790\\_A\\_framework\\_of\\_circular\\_business\\_models\\_for\\_fashion\\_and\\_textiles\\_the\\_role\\_of\\_business-model\\_technical\\_and\\_social\\_innovation](https://www.researchgate.net/publication/361326790_A_framework_of_circular_business_models_for_fashion_and_textiles_the_role_of_business-model_technical_and_social_innovation)



Picture 1. Collection and resale business models (Ellen MacArthur Foundation, 2021.)

## Business culture

The breaking away from a linear business model requires a remarkable change in business culture. Clothing brands need new capabilities in the move towards circular business models in the transformation process to overcome transformation related challenges. The dependency on the past and prevailing product portfolio, a product-oriented business model, and the position in the supply chain affect the efficiency with which incumbent companies can become circular, setting boundaries to changes in product segments, target customers, price points, and brand image <sup>6</sup>.

Business model innovation requires organizational change and transformation of the value proposition for customers, and throughout the product life cycle, challenges in renting models.

<sup>6</sup> Salmi et al. 2022. Implementing circular business models in the textile and clothing industry. *Journal of Cleaner Production*

Ellen MacArthur foundation has developed critical steps to follow, in order to achieve circular economy in the textile and clothing industry<sup>7</sup>. These require a substantial change in product designs and consumer behavior to encourage sustainable practices:

1. Phase out unsafe materials and microfiber discharges. Innovative design and production processes are required.
2. Change the ways cloths are designed, marketed and used.
3. Design product for recycling by using products that are recoverable.
4. Build efficient utilization of resources and shift to the use of renewable materials.

Fuentes & Hedegård<sup>8</sup> have found that devalued goods may be turned into valuable second-hand products via production that includes practices of selecting, modifying, pricing and marketing. The study has been made in a shopping mall based on reuse, ReTuna, located in Eskilstuna, Sweden. ReTuna is a retailer and producer of second-hand products. Valuation of products has many sections and alternatives. Selecting practices involve deciding which donated goods to sell and which to discard. Some second-hand products are sold without modifications, other stores in ReTuna modify donated goods in some way to add value. Pricing practices intersect and interact with selecting, modification, and marketing practices. Marketing is done, for instance, by organizing display arrangements, providing in-store service, and arranging various mall events to attract consumers' attention and add value to second-hand goods.

Some companies, like Filippa K, have noticed that the expansion of the second-hand clothing trade does not eat into sales of new products, but may create new markets for them. However, second-hand products are kept separate from the brands' actual stores. For fast-fashion manufacturers, a shift to a more service-based business seems less profitable, as more service would inevitably mean additional costs and higher product prices. Fast fashion is also perceived to have more quality problems, which may make it difficult to reuse or extend the life of the product in the first place<sup>9</sup>.

## Funding

Funding of the fashion industry is limited because investors are unaware and have little experience of fashion innovations. However, financing will flow if stakeholders create the conditions for manageable risk, attractive returns and impact that can be measured.

- Access to fashion, not necessarily ownership, new materials (eg. lab-grown leather),

---

<sup>7</sup> Ellen MacArthur Foundation 2017. A new textiles economy: Redesigning fashion's future.

<https://ellenmacarthurfoundation.org/a-new-textiles-economy>.

<sup>8</sup> Fuentes, C., & Hedegård, L. Re-circulating products - Market practices, valuation, and the making of second-hand products. In: Performing Second-hand retail. 2023.

<sup>9</sup> Eskelinen, H., Teerihalme, H., Lamberg V., Hämäläinen, T. 2018. Uudelleenkäyttö ja sen edistäminen - Selvitys uudelleenkäyttömääristä ja uudelleenkäyttöön liittyvistä liiketoimintamahdollisuuksista Suomessa.

[https://www.researchgate.net/publication/330367039\\_Uudelleenkaytto\\_ja\\_sen\\_edistaminen\\_-\\_Selvitys\\_uudelleenkayttomaarista\\_ja\\_uudelleenkaytoon\\_liittyvista\\_liiketoimintamahdollisuuksista\\_Suomessa](https://www.researchgate.net/publication/330367039_Uudelleenkaytto_ja_sen_edistaminen_-_Selvitys_uudelleenkayttomaarista_ja_uudelleenkaytoon_liittyvista_liiketoimintamahdollisuuksista_Suomessa)

- digital platforms for clothing takeback are emerging to incentivize consumers <https://yellow-octopus.com/> UK but a strong government push will be required to rebalance what is currently a broken market system for recovery and recycling. Policy options including extended producer responsibility and outright regulation to, for example, ban the burning of unsold fashion items have begun to take shape in countries like France and the UK.
- ensuring that materials are produced in a way that avoids the use and therefore recirculation of toxic chemicals and by-products is essential

New circular business models are often start-ups which could benefit from financial and business support by funding bodies and national public business authorities in the form of grants, business counselling, coaching, etc. Additionally, national governments can develop policies designed to accelerate the market share of these circular business models. Inspiration can be drawn from the Telaketju program in Finland, Wärgon Innovation in Sweden, the Green Circular Transition program in Denmark and the Dutch Circular Textile Valley<sup>10</sup>.

### Responsibility and policies

The responsibility of clothing manufacturers is becoming increasingly important in addressing global sustainability issues in the clothing industry. Therefore, models in which the manufacturer of products also participate in their reuse, for example through buy-back services or repair and maintenance services, are of particular interest. While some manufacturers are known to see this as undermining their core business, other companies may see sustainability as an increasingly important value and part of their business potential <sup>11</sup>.

Policy enablers are needed in boosting the circular textile business models. Policymakers can play a vital role in stimulating circular business models by shifting taxes from labour to the use of finite virgin resources. In addition, policy enablers are needed. Such tax reforms could include reducing value added taxes (VAT) on resale, rental, repair, and remaking activities that keep products in use. Other fiscal incentives can increase the use of secondary materials, encourage regenerative production of materials where they are needed, or provide transition funding for start-ups. All of this can be enabled by increasing awareness about the quality and durability of second-hand clothes, as well as by implementing policies on reuse targets and extended producer responsibility.

<sup>10</sup> Watson et. al. 2020. Post-consumer textile circularity in the Baltic Countries. *TemaNord* 2020:526. <https://pub.norden.org/temanord2020-526/#>

<sup>11</sup> Suomen Tekstiili ja Muoti 2018. Kiertotalouden kärjessä II. – Ratkaisuja tekstiilien kiertoon. [https://www.stjm.fi/wp-content/uploads/2022/03/Kiertotalouden\\_karjessa\\_II\\_2018\\_verkko.pdf](https://www.stjm.fi/wp-content/uploads/2022/03/Kiertotalouden_karjessa_II_2018_verkko.pdf)

In regard to donations, a clothing tax-donation receipt can be created as documentation of charitable clothing donations and used by the donor to claim tax deductions similar to the provision available in the United States.<sup>12</sup>

As an example, in Latvia, opportunities are being sought for the reuse and recycling of textile products<sup>13</sup>. The first level is the extended responsibility of producer's tax policy. A higher natural resource tax should be paid for the import and sale of used clothing from foreign countries than for the sale of unused clothing. The second level is the responsibility of traders. The third big link in the chain is the population with its clothing buying and textile sorting habits. It seems that the most effective, convenient and beneficial solution for all parties would be the application of the principles of the producer responsibility system to textiles, which would be implemented through the natural resource tax.

## Overview of second-hand marketplaces

Marketplaces for second-hand stores may be categorized in<sup>14</sup>:

### Walk-in stores

- Traditional second-hand stores. In the concept, a flea market company rents the premises, offers sales space to customers and the customer is responsible for display and pricing of the items.
- More personalized entrepreneurs. In the concept, the trader himself buys the clothes he wants and sells them at the price he wants. These shops are often trendy and may sell some certain brand or style, like vintage.
- Curated large second-hand stores that are run by charitable organizations. The items are donated to the stores. In Finland, for instance UFF and Kontti.

### Online stores

- Large web stores (Facebook Marketplace, tori.fi, ebay)
- Web stores specialised in certain products
  - Facebook groups
  - Other platforms

---

<sup>12</sup> Conscieme et al. 2022. A framework of circular business models for fashion and textiles: the role of business-model, technical, and social innovation. *Sustainability Science Practice and Policy* 18 (1).  
[https://www.researchgate.net/publication/361326790\\_A\\_framework\\_of\\_circular\\_business\\_models\\_for\\_fashion\\_and\\_textiles\\_the\\_role\\_of\\_business-model\\_technical\\_and\\_social\\_innovation](https://www.researchgate.net/publication/361326790_A_framework_of_circular_business_models_for_fashion_and_textiles_the_role_of_business-model_technical_and_social_innovation)

<sup>13</sup> Atstaja, D., Cudecka-Purin, N, Vesere, R. & Abele, L. 2021. Challenges of textile industry in the framework of Circular Economy: case from Latvia

<sup>14</sup> Nurmi, S. 2023. Second-hand survey. Student work. Turku University of Applied Sciences.



Examples of online stores:

Large web store, **eBay**: is the world's largest online marketplace, where you can buy both new and second-hand products from individuals and businesses around the world. eBay has 183 million active buyers worldwide and nearly one billion products when all categories are added together. eBay has become a popular marketplace for vintage and retro products.

Facebook group **HYPEND**: is a Finnish online community founded in 2016 with the aim to connect people interested in current streetwear culture, new (and old) trends, styles, collections, designers and to create a discussion based on the different subcategories of this culture, thus providing the best and most understanding environment for these creators. The Hypend group was created on Facebook among friends. Each of the founders invited twenty of their friends to join the group <sup>15</sup>

Hypend is a sales platform, and a known, or appropriate, target audience can be found there. Hypend is a free platform for its users. Products are perceived as an investment. The buyer will probably use his investment once or twice and then sell it on. If it goes well, the product can be resold for more than the purchase price. Many users extend the activity to "loyalty trading", i.e. systematic buying and selling. From 2021 onwards, Hypend will have expanded from being a buying and selling channel on the web to a "hybrid PR and advertising agency".

A platform, **Grailed**: specializes in fashion, particularly unique and exclusive outfits that can be difficult to find elsewhere. It focuses on street fashion and designer clothing. It is well known and therefore a good platform for buying and selling. Platform owners look after both traders and customers and protect their interests in the event of a dispute. On behalf of the company, the buyer will be assisted with payments. <sup>16</sup>

---

<sup>15</sup> K rkk , H. (2021) Tietyn merkkisest  harmaasta hupparista voidaan maksaa satoja euroja – Nuoret ”treidaavat” harvinaista katumuotia ja luksusmerkkej  netinmyyntialustoilla. Artikkele Aamulehdess  15.7.2021. Haettu 16.7.2023, linkki: <https://www.aamulehti.fi/hyvaelama/art-2000008127398.html>

<sup>16</sup> Young, A (2023) 10 parasta digitaalista markkinapaikkaa myyd  verkossa vuonna 2023. Kirjoitettu 12.6.2023. Haettu 10.7.2023, linkki <https://www.ranktracker.com/fi/blog/10-best-digital-marketplaces-to-sell-online-in-2023/>

## Best practices for increasing reuse of textiles and decreasing textile waste from the Central Baltic region

Based on the literature and company examples, the best practices and interesting business model examples for increasing reuse of textiles and decreasing textile waste from Central Baltic region may be categorized as:

- **Resale.** The principle is to extend the useful life of textiles and intensify textile usage market. Second-hand stores may be selectively located in central shopping areas, making them more visible and contributing to the creation of a mind shift among customers and retailers.
- **Closed loop.** These practices rely on a closed loop where materials are kept in circulation and utilized as many times as possible. Products do not end up as waste at the end of their life cycle, but materials can be used as raw material for new products. Also, new renewable materials are developed to replace fossil raw materials.
- **Remaking.** The principle of the model is that all materials are in use. Virgin raw materials may be substituted by the raw materials generated in production. Materials may be surpluses from production or recycling of discarded textiles.
  - o **Design** is an integral part of remaking. By design, it is possible to increase the value of (possible waste) materials by utilizing it at higher rate products. “Waste” is used in a creative and innovative way.
- **Product as a service.** A solution that takes into account the whole life cycle instead of a single product. The service may be repair or maintenance of textiles. Also, rental business models are included.

### Examples from Finland

In recent years, Finland has continued to develop new business models that increase the reuse of clothing. For example, companies have introduced buy-back systems and started to offer maintenance services and rent and lend products. Many of these companies are still start-ups and relatively small, but they have found profitable businesses in the reuse sector.

Examples of this new type of business are clothing rental shops, which have been operating in Finland since 2011<sup>17</sup>. Clothing rental shops often operate on a membership basis. Customers can borrow a certain number of items, which must be returned after a certain period of time. If they wish, they can also buy a product or rent a complete outfit. In other words, the shops are partly retailers and partly rental. The clothing rental business is essentially a product-as-a-service business, as the customer pays for the membership on a time basis and the price of the membership is not affected by the products borrowed.

---

<sup>17</sup> Suomen Tekstiili & Muoti. 2018. Kiertotalouden kärjessä II – Ratkaisuja tekstiilien kiertoon. [https://www.stjm.fi/wp-content/uploads/2022/03/Kiertotalouden\\_karjessa\\_II\\_2018\\_verkko.pdf](https://www.stjm.fi/wp-content/uploads/2022/03/Kiertotalouden_karjessa_II_2018_verkko.pdf)

Companies related to resale:

- **Emmy Clothing Company:** web store for used branded clothings.
- **Reuseful Oy** sells quality second-hand furniture and clothing in a shopping mall Skanssi, Turku.
- **Second Hand Market** is a circular economy hub in a shopping mall Redi, in Helsinki, offering a range of circular economy products and services

Companies related to closed loop:

- **Touchpoint:** turns used working clothes and other material into furniture. From 2021 onwards, the company is committed to recycle all the textiles they supply to their customers responsibly and to reporting on recycling volumes on an annual basis.
- **Infinited Fiber Company:** has developed a new fiber to compensate wool. The fiber is made from textile waste in a chemical process developed in cooperation with a Finnish research institution VTT.
- **Spinnova:** produces thread out of wood fiber without a chemical process. A Woodspin factory (opened in 2023) produces Spinnova fibre from wood pulp that is used, for example, in clothing.
- **Finarte:** produce design carpets from surplus from textile industry.
- **Finlayson:** the company uses different worn-out materials and, for instance, produces towels from used jeans. The company has collected jeans and other used materials in their shops.
- **Rester Ltd and LSJH:** have invested in refinement plants for recycling and reusing end-of-life textiles in Finland. Rester Ltd. focuses on the collection and treatment of B2B and public sector textile waste streams, whereas LSJH is developing a nationwide operating model for post-consumer textile waste streams together with 28 other municipal waste companies. Their new refinement plants started operating in 2021 <sup>18</sup>.

Companies related to remaking:

- **Muotikuu:** uses surplus materials to make new products.
- **Costo:** manufacture of hats and accessories from the surplus of furniture industry fabrics.
- **Remake:** manufactures design products from used textiles. The company also offers education for upcycling.
- **Tauko:** manufactures design products from textile waste (from hospitals, hotels and restaurants)

Companies related to product as a service:

- **Menddie:** provides services such as clothing and costume repair as well as modification and maintenance of clothes.
- **Vaatepuu and Vaaterekki:** clothing rental shops. The companies rent design clothes and accessories for members.

---

<sup>18</sup> <https://www.stjm.fi/en/textile-innovations-design-excellence/circular-economy-in-the-finnish-textile-business/>

## Examples from Sweden

Companies related to resale:

- **Bloppis:** Bloppis is a number of influencers coming together, either by own initiative or by a blog network, to arrange their own branded flea market and leverage their online marketing channel. Even though the concept of C2C selling is similar to an ordinary flea market, this is a way to reach a new audience and a different segment than the traditional flea market. However, it is important to note that these occasions are often combined with a charity perspective and donations as a part of the objective.
- **Filippa K:** one of Sweden's leading clothing manufacturers, which is recognized for its quality, actively communicates its sustainability values to consumers and has launched several sustainability initiatives. In 2008, Filippa K started a partnership with the Swedish second-hand clothing store **Judits Secondhand** and established its own second-hand clothing flagship store. In 2015, Filippa K expanded its reuse business to other countries (e.g. Finland) and made it possible to return products to any of the brand's stores, regardless of the country.
- **Arkivet:** the business model is the embodiment of this newer kind of second-hand store, which is aimed at conveying the image of a fashion boutique.
- **Tradera:** an online marketplace for second-hand goods with over 2 million users.

Companies related to remaking (and resale):

- **Stockholms Stadsmission:** the not-for-profit organization has for long been selling second-hand in physical shops and has for 15 years been selling some pre-owned items that are refurbished, remanufactured or repurposed. The year of 2016 they started a specific brand and concept store for pre-owned items that are redesigned in any way called 'Remake'.
- **Remake:** the company includes strategies to process the items for making them more fashionable.

Companies related to product as a service:

- **Nudie:** repairing jeans, collect back services. The company is also reselling second-hand of their own brand.
- **Sabina & friends**
  - Clothes rental company, offering luxury and premium casual, business and occasion wear of the latest season.

## Examples from Estonia

In Estonia, charity organizations are expanding their resell activities and new for-profit reuse business models are entering the market. However, in Estonia, only 30% of the donations can be directed to the new round <sup>19</sup>. Unfortunately, a lot of unsaleable goods are brought to the centers, which end up as mixed household waste among. One of the biggest concerns for recycling centers is textiles, it is the most dominant among the donated goods. Broken, dirty and unwashed clothes that do not match the conditions of the center and are of low quality, are included in mixed household waste. At the moment, there is no solution for this in the recycling center, and there is none for such in Estonia capacity for reprocessing for volumes of textile products <sup>20</sup>.

A new trend is to sell your own clothes. Several options have been devised for this. One of them is second-hand clothing stores based on the booth principle, such as Sahtel, Sarapuu flea market and in Riisaikel. It is also possible to sell your clothes on internet platforms such as Yaga, Instagram, E-kirbukas etc. There are also various lice (e.g. Müürilille täika Tartus) and fleas, where you can sell your old clothes.

Apart from the reuse center, other different recycling centers also accept clothes charity shops, such as recycling centres, the Sõbralt Sõbra chain of stores and Aarete box sorting center in Tallinn, also brands like H&M.

Companies related to resale:

- **Yaga** is a fast-growing buying and selling platform where everyone can sell their clothes, jewelry, cosmetics, household goods and other pre-loved items. They work a lot with influencers, who open their own stores on the website and therefore generate traffic for the store. Yaga raised 2.2 million euros from investors to take a leadership role in fast-growing markets in Africa and Asia. Yaga has grown three times in the last year and a half and opened a platform in Kenya and India in addition to South Africa.
- **Riisaikel** – second-hand store with box system. They have physical showrooms and e-store. They also have a store located in the Stockmann shopping center, where they sell more premium clothing brands's used clothes. They also work with different influencers, who have their own boxes at the store. Riisaikel also has separate section for Estonian design.
- **Basaar** – second hand clothing store that also works with people renting out place at their store, where they bring their own clothes. In addition to the store, they have an application.
- **Uuskasutuskeskus** – Non-profit organization, that has several store locations all over Estonia. Their operating model is based on collecting donations from Estonian people and re-routing items in good condition in stores. In addition, they support many people in need and are

---

<sup>19</sup> Aavik, L. (2020). Uuskasutuskeskusesse on mõtet annetada korralikke asju, sest muidu lähevad need prügisse. – Rohegeenius. [veebileht] <https://rohe.geenius.ee/rubriik/uudis/uuskasutuskeskusesse-on-motet-annetada-korralikkeasju-sest-muidu-lahevad-need-prugisse/> (28.03.2020)

<sup>20</sup> Suup, K. Riideprügi. Osoon. Videolindistus. Tallinn: 06.01.2020. <https://etv.err.ee/1021078/riideprugi> (15.04.2020)

cooperation partners for many theaters, filmmakers, craftsmen, student companies and other organizations.

- **Tallinn Design House** – Estonian design store, where over 100 design brands are represented. And as a new direction, there is a pre-loved section, where people can bring their old Estonian design items and which are then sold there.

Companies related to remaking:

- **Reverse Resources**, founded by Ann Runnel, was awarded the 2020 Estonian Startup Awards first place in the categories "Stereotype Breaker" and "World Changer". Reverse Resources creates platform for the mapping and recycling of waste generated in clothing factories. Although the company currently cooperates with large textile and clothing manufacturing companies in Bangladesh, in India, Sri Lanka and Hong Kong and has launched a pilot program with Levi's and H&M, could companies operating in Estonia can also benefit from the platform. For example, manufacturing companies could map emerging textile waste and thereby be visible to potential customers for waste handlers.

## Examples from Latvia

Companies related to remaking:

- **Swimbe**: custom made swimsuits for women and children, which are produced out of old fishing nets, carpets, PET bottles and other plastic waste.
- **Zile-Zile**: the label's main resource materials are denim trousers, men's shirts and fantasy to create a sustainable and modern wardrobe. Every piece of clothing that ZILE upcycles is completely unique. ZILE uses second-hand clothing that is either bought in vintage shops or donated by our collaboration partner, charity shop OTRA ELPA.

Remaking and social aspect:

- **OWA** is the first brand in Latvia that offers clothes with water colour and graphic prints, which are transferred to the fabric with the help of sublimation printing. Aim to promote the employment and integration of the socially vulnerable population, especially the disabled, people of pre-retirement age and young parents.

## Examples from other countries

Companies related to resale:

- Online peer-to-peer marketplace, Lithuanian based Vinted, allows users to swap products as well as purchase, incentivising users to engage with the platform even when not spending money, while increasing the use of clothes. By elevating the circular business model experience, making it desirable through a better user experience than buying new (e.g. through convenient delivery, personalised service), it can both serve customers better and encourage them to engage with circular business models.
- US online consignment thrift store thredUP offers users services to make resale a convenient option. Sellers get a 'clean-out' kit and their items are sorted, listed, and delivered for them. Such a user experience has increased the number of repeat users on the platform with thredUp reporting that 80% of orders come from repeat buyers.
- Vestiaire Collective (France): a resale platform that encourages local peer-to-peer sales, has aimed to create a user experience on par with prominent e-commerce brands while controlling and authenticating all items once sold.
- Resale platform Depop (UK) highlights carefully curated product assortments by their users and points users to specific profiles based on their style to encourage more peer-to-peer transactions.

Companies related to product as a service:

- GANNI: is designing exclusive items for its rental platform, 'GANNI Repeat'. If customers want access to these designs, they are incentivised to try rental, instead of buying.
- Ralph Lauren has introduced a rental subscription service, 'Lauren Look'. The subscription service starts at USD 125 a month and includes delivery, cleaning and suggestions from expert stylists.
- Digital platforms for clothing take-back are emerging to incentivize consumers, an example from UK Yellow Octopus

Companies related to resale and product as a service:

- FARFETCH's online platform provides convenient ways for users to filter and find 'vintage' pieces, donate to resell through a third-party platform (FARFETCH Donate x Thrift+), prolong the use of their shoes & handbags ('Farfetch Fix') and also resell them ('Farfetch Second Life').

## Consumer nudging

Nudging seeks to improve people's decisions by changing the way options are presented to them. The main idea is that it is feasible to make nudging suitably transparent and democratically controlled. It is any feature of the social environment that affects people's choices without imposing coercion or any

kind of material incentive. Mainly, people choose the easiest and most normal option. People who do not want to shake the status quo are often too optimistic and overconfident. People often stick with the default. In future work on nudging, we should pay particular attention to the kinds of institutions through which we develop and implement nudging policies. A challenge for future large-scale nudging policies will be to ensure that the relevant institutions and procedures will remain suitably transparent and democratically controlled. If they are, they might not only increase overall welfare but also facilitate democratic control over the social contexts within which we make choices.<sup>21</sup>

In Nudge, Thaler and Sunstein identify five further broad ways of changing civic behavior to push it in a positive direction:

- 1) citizens often have a default option; a good nudge is one that installs an intervention that leads people towards a positive choice by, for example, enrolling them on a pension scheme automatically unless they actively opt out.
- 2) Policy makers should expect error and design systems so that citizens learn immediately and effectively about the mistakes they will inevitably make.
- 3) It is important to give feedback in a timely and effective way so that people understand the implications of their actions. For example, houses could be fitted with a light and sound indicator when a lot of energy is being used in order to get householders to consider taking measures to save energy.
- 4) Policy makers could support citizens by paying more attention to the way they construct mind maps when making decisions and encourage the adoption of mind maps that facilitate better decisions. Is this my choice or is it a choice that should be framed by my responsibilities to others?
- 5) Given the problems that people have in making complex decisions, policy makers could provide opportunities for collective filtering so that people can learn from others about what works or what choices might suit them as a person, given the tendency we all have to follow those we regard as like-minded.<sup>22</sup>

The strengths of the nudging strategy rest on its consistency with what we know about human action. The relative inertia and lack of use of cognitive capacity means the nudge actions go with the grain of this aspect of human behavior. Nudge gets individuals to cooperate in ways with which they are comfortable. It is low cost and sustainable. The weaknesses of nudging have to do with its inability to address the fundamental problems and, as such, it arguably generates fairly modest outcomes as a result. The very ease of nudging may lead to a false sense of security about these changes. (Ibid.)

Two Scandinavian countries (Sweden and Denmark) where trust in public institutions is very high but the support for nudging is relatively low; and on an individual level, a new predictor that formally runs

---

<sup>21</sup> Macdonald K., Macdonald T. 2017. The Power to Nudge. Cambridge University Press.  
<https://www.cambridge.org/core/journals/american-political-science-review/article/power-to-nudge/F0BD18EC604A63796B6BCC7F6467F95B>

<sup>22</sup> Reti Kilvet . 2022. Nudging for sustainable fashion consumption A concept design based on expert and consumer analysis. Aalto University Bachelor thesis. <http://urn.fi/URN:NBN:fi:aalto-202301221368>



counter to trust in public institutions. Green nudges were most controversial and politicized in terms of polarization across socio-demographics and political party preferences. There are several academic debates on governmental nudging. One concerns its alignment with citizens' preferences and its effectiveness compared with conventional policy tools, another its transparency and a third its public support. It has found that left-wing views implied greater support for nudging than right-wing views did but discovered 'no systematic correlation along approval and party affiliations. Denmark paradoxically stands out as a country whose citizens are trustful of public institutions yet relatively unsupportive of nudging.<sup>23</sup>

A nudge, in the sense of using choice architecture to push people to choose desired results, works well; and a nudge, in the sense of pushing people to choose desired results so that people will be better off, remains questionable. In financial markets, regulators and financial intermediaries currently use nudge theory to adjust how investment choices are presented to investors; and provide information in a selective way. Nudge theory inspires people to think about the use of subtle psychological 'hints' to change people's behaviors, at low cost. This ground-breaking phenomenon can be used to both inform and drive future methodologies and strategies. In the coming years, we may see new and innovative ways to apply nudge theory in different domains, either for better or worse.<sup>24</sup>

## Visual nudge

A study by Roozen, Raedts and Meijburg (2021) examined if a verbal or visual nudge on a retailer's website can significantly influence consumers' (sustainable) fashion choice. The findings showed a significant positive influence of the verbal nudge and, to a lesser extent, of the visual nudge on choosing the sustainable version of the apparel. The nudges also positively influenced the willingness to pay for sustainable apparel. This suggests that nudging is a promising tool to direct consumers to a more sustainable fashion choice. Furthermore, the results showed that respondents with a relatively high score on ecological conscious consumer behavior and a relatively low score on fashion involvement are significantly more likely to choose sustainable apparel.<sup>25</sup>

The analysis of a set of expert and consumer interviews revealed that nudging in the fashion industry is currently untransparent and the consumers do not trust the provided information due to information overflow and the spread of false information. Idea how to use RFID tags; the implementation of DPPs (Digital Product Passport) would encourage consumers to participate in circular fashion consumption models by exchanging, recycling, or returning their garments. For instance, a potential journey of the

---

<sup>23</sup> Almqvist; Andersson. 2021. Low support for nudging among Swedes in a population-representative sample. Cambridge University Press. <https://www.cambridge.org/core/journals/behavioural-public-policy/article/low-support-for-nudging-among-swedes-in-a-population-representative-sample/B5AE0AB69A1DE10417EA102FC6CDF20A>

<sup>24</sup> Weiyi Cai. 2019. Nudging the financial market? A review of the nudge theory. Wiley Online Library. <https://doi.org/10.1111/acfi.12471>

<sup>25</sup> Roozen; Raedts; Meijburg. 2021. Do verbal and visual nudges influence consumers' choice for sustainable fashion? Journal of Global Fashion Marketing. <https://www.tandfonline.com/doi/abs/10.1080/20932685.2021.1930096>

DPP could be the following: 1) A consumer claims the ownership of a DPP through a first-hand purchase of a garment and the RFID tag is updated about the first lifecycle of the garment; 2) After a few years the consumer returns the garment at a clothing collection point. The collection machine can recognize the RFID tag and the product passport is transferred to the second-hand store. The second-hand store prints a clothing tag with a QR code for easy access to the product passport; 3) Another consumer finds the garment at a thrift store and views the product information through a QR code on the tag before purchasing the product. <sup>26</sup>

Based on the findings of some interviews, the study proposes a Retail Change-Makers Workshop informed by the findings and targeted at retail actors such as shopping center owners and retailers. The purpose of the proposed workshop is to enable a mindset change among the choice architects of retail and help them to nudge a change towards strong sustainable consumption through shopping centers and other retail environments. <sup>27</sup>

### Informational nudge

Focusing on the nudges, their effectiveness is suggested, and it is possible to distinguish between informational and visual nudges, whose impact differ. In fact, informational nudges, meaning long, detailed, and transparent explanations on the products' sustainable aspects, is more appealing to consumers than a green eco-responsible label. In fact, there is evidence that wealthier respondents are not the ones spending more money on clothing purchases on average. This could mean that those individuals are either more interested in more affordable articles, despite their wealth, or that they are buying more consciously and less often. As discussed in the literature review (Leal, 2022), it is assumed that, for materialistic and emotional reasons, middle classes tend to be more willing to spend on high end brands, urging for a sense of belonging to a wealthier class. When comparing both types of nudges used in this research, informational nudges (system 2) seem to be much more effective than visual nudges (system 1). Comments about appreciating the level of transparency and enjoying being able to make decisions with all information available were made by participants. <sup>28</sup>

### Nudging in second-hand

---

<sup>26</sup> Kilvet. 2022. Nudging for sustainable fashion consumption A concept design based on expert and consumer analysis. Aalto University Bachelor thesis. <http://urn.fi/URN:NBN:fi:aalto-202301221368>

<sup>27</sup> Almqvist; Andersson. 2021. Low support for nudging among Swedes in a population-representative sample. Cambridge University Press. <https://www.cambridge.org/core/journals/behavioural-public-policy/article/low-support-for-nudging-among-swedes-in-a-populationrepresentative-sample/B5AE0AB69A1DE10417EA102FC6CDF20A>

<sup>28</sup> Leal. 2022. The influence of nudging on consumer's sustainable choices in the fashion industry: a comparison between luxury and fast fashion. Bachelor Project submitted for the degree of Bachelor of Science HES in International Business Management. [https://folia.unifr.ch/documents/321987/files/Va%CC%82nia%20Leal\\_Final%20archival%20copy\\_Bachelor%20thesis.pdf?download](https://folia.unifr.ch/documents/321987/files/Va%CC%82nia%20Leal_Final%20archival%20copy_Bachelor%20thesis.pdf?download)

There is little research on the topic of nudging in second-hand. However, there can be found some examples of nudging in the retail industry and reuse.

Gustafsson & Twengström (2022) studied the effect of nudge through intervention in reuse in the office premises in their degree project. Based on their study, there was a knowledge gap, and communication between tenants and landlords needed to be improved. The nudge of availability was considered to be the most applicable one in the context of reuse, providing knowledge about the issue in the form of positive insights of completed projects and potential savings. By supporting the presented information with quotes and data the respondent gets a positive image of reuse and how successful it has shown to be in practice. <sup>29</sup>

Visual presentations such as coordinated outfits on display, graphic walls or backdrops, and haptic product experiences have been found beneficial in facilitating the imagery of consumption. By physically touching and examining the products, consumers' experience can be made more enjoyable and can result in more precise purchase decisions. <sup>30</sup> Another physical way of nudging was studied by de Groot et. al. (2022). They found out that the smell of fresh laundry increased the sale of second-hand products compared to no-odor or citrus odor ones. This was most applicable to shoppers without time constraint and a specific goal and intention in shopping. <sup>31</sup> Also, Doucé & Janssens (2013) stated in their study that a pleasant fragrance positively affected consumers' reactions and intentions to revisit the store. <sup>32</sup>

Some examples of how different second-hand clothing stores should meet the needs of their targeted groups were presented in Zaman et. al. (2019) study. Three different second-hand clothing stores were categorized as were their target groups. In this study, frugality was the biggest predictor of second-hand shopping, hence all types of second-hand clothing stores should carry a variety of clothing types to meet the needs of diverse tastes of shoppers that value prices. All second-hand stores should carry a variety of classic styles, as style-conscious consumers desire long-lasting and timeless styles. Consignment stores interest especially nostalgia-driven consumers, mostly women, hence they should provide vintage clothing targeting baby-boomers and seniors and play retro music and use vintage themes in their displays to further attract their target group. Online second-hand clothing stores attract eco-conscious people and therefore should offer less wasteful packaging, discounts for bulk buying. For nostalgic people, they could create a storytelling section on their authenticity or craftsmanship, and for fashion-conscious people offer seasonable fashion items and use social media influences to promote their

---

<sup>29</sup> Gustafsson, Twengström. 2022. The Attitude Towards Reuse Within the Adaptation of Office Premises. The Effect of Nudge Through an Intervention. KHT Royal Institute: Degree Project in the Built Environment. <https://kth.diva-portal.org/smash/get/diva2:1681986/FULLTEXT01.pdf>

<sup>30</sup> Kim, J-H., Kim, M., Yoo, Park. 2020. Consumer decision-making in a retail store: the role of mental imagery and gender difference. International Journal of Retail & Distribution Management, 49:3. DOI:10.1108/IJRDM-10-2019-0353

<sup>31</sup> de Groot, Walther, Holland. 2022. A Fresh Look on Old Clothes: Laundry Smell Boosts. Brain Sciences, 12:11. <https://doi.org/10.3390/brainsci12111526>

<sup>32</sup> Doucé, Janssen. 2013. The Presence of a Pleasant Ambient Scent in a Fashion Store: The Moderating Role of Shopping Motivation and Affect Intensity. Environment and Behavior, 45:2. <https://doi.org/10.1177/0013916511410421>

brand. Thrift stores should promote products that target the minimalistic lifestyles of their consumers, who are prone to dematerialism. In addition, they should offer unique items targeting the bargain-hunters. They could also promote themselves as communal by emphasizing the importance of providing affordable clothing for all. <sup>33</sup>

In addition to the above-stated research, there are some examples of political nudging. As an example, France is offering citizens a “repair bonus”, meaning that they will get 6-25 euros of cash for repairing their apparel instead of throwing them out. This bonus will be paid out of a sustainability fund the government has founded. <sup>34</sup> In addition, there has been a pilot in city of Lahti in Finland, where they created a textile deposit system to attract people to bring their discarded clothes for recycling. They received a gift card after this. <sup>35</sup>

---

<sup>33</sup> Zaman, Park, H., Kim, Park, S-H. 2019. Consumer orientation if second-hand clothing shoppers. Journal of Global Fashion Marketing, 10:2. <https://doi.org/10.1080/20932685.2019.1576060>

<sup>34</sup> Bertolino. 2023. France to offer cold harsh cash to repair clothes instead of binning them. Dazed 2.8.2023. <https://www.dazeddigital.com/fashion/article/60509/1/french-government-waste-fast-fashion-paid-repair-clothes-landfill-sustainability>

<sup>35</sup> <https://www.lahti.fi/en/city-and-decision-making/projects-and-programs/lahti-is-the-european-green-capital-2021/its-time-to-pick-up-the-threads/its-time-to-pick-up-the-threads-on-recycling/>