Apparel Recycling/Reusing Industry

1. Textile Recycling

The global textile recycling market reached a value of around US$ 5 Billion in 2020**.** Textile recycling refers to the method of reprocessing and reusing old clothing, scarps, and fibrous waste materials. Generally, these materials are recovered from discarded clothes, carpets, furniture, tires, footwear, and other non-durable goods, such as towels and sheets. Textile recycling offers several environmental and economic benefits, such as reducing land and water pollution, minimizing dependence on virgin fibers, curbing usage of chemical dyes, and optimum consumption of energy and water. In recent times, it has emerged as an effective method for sustainability development in the apparel industry. Owing to these benefits, recycled textiles find wide applications across several end-use industries, including apparel, home furn**ishin**gs, and other industrial sectors, such as retail, automotive, mining, building, construction, etc. Based on the distribution channel, retail and departmental stores account for the largest market share, followed by online channels.

On the basis of the end-user, the market has been classified into apparel, industrial, home furnishings, non-woven, and others. Apparel currently accounts for the majority of the market share.

The leading industry players are Anandi Enterprises, American Textile Recycling Service, Boer Group Recycling Solutions, I:Collect GmbH, Infinited Fiber Company, Patagonia, Inc., PROCOTEX BELGIUM SA, Retex Textiles Inc., and Unifi, Inc.

1. Reusing Clothes

Vinted: Don’t wear it? Sell it!

We want to show you just how great second-hand can be. Sell the clothes that have more to give. Shop for items you won’t find in stores. Vinted is open to everyone who believes that good clothes should live long.

On a global mission

Sell what you don’t wear or hunt for rare finds—the world of pre-loved has long moved out of thrift stores. Our growing community of 37 million is on a mission to make second-hand first choice.

## Multinational companies raise awareness and Take-back programmes

## Fashions growing interest in recycling clothing

## <https://www.voguebusiness.com/companies/fashion-brands-recycling-upcycling-resale-takeback-sustainability>

## [Eileen Fisher](https://www.eileenfisher.com/) collected 220,000 items of used clothing in 2018, with take-backs having risen by an average of 15 per cent year-on-year. Clothing in pristine condition — about 60 per cent of collections — is cleaned and resold under the [Renew](https://www.eileenfisherrenew.com/) brand, while lightly damaged pieces are upcycled into new pieces.

**It’s an effective way to acquire customers**

At a time when brands are finding it increasingly expensive to attract and retain customers, take-back programmes are a way to stand out. [Knickey](https://knickey.com/), an organic cotton underwear startup, offers free shipping labels and a pair of new undergarments to anyone who wants to send them unwanted underwear and socks. (Collected items are passed on to a nonprofit for recycling, and the company can take a tax deduction.)

The H&M Group launched its first Conscious Collection in spring 2011, which included materials like organic cotton and recycled polyester, followed by a garment-collecting initiative in 2013. The company has also experimented with combined deliveries, electric vans and packaging-free delivery in India to curb its [e-commerce impact](https://www.businessoffashion.com/articles/intelligence/is-e-commerce-really-better-for-the-environment). These efforts have given the Swedish retailer a no. 4 spot in the [Fashion Revolution 2018 Transparency Index](https://issuu.com/fashionrevolution/docs/fr_fashiontransparencyindex2018?e=25766662/60458846).

Where H&M goes next

Despite its widely publicised commitments to sustainability, the company has no plans to change the factors — production volumes, turnaround times, low prices — that have helped shape a throwaway culture that sends [300,000 tonnes of clothes to landfill per year in the UK alone](https://www.theguardian.com/fashion/2018/nov/27/mps-criticise-high-street-fashion-throwaway-culture). Hanna Hallin, sustainability manager for H&M Group in Greater China, doesn’t see an alternative. “We can stop producing the volumes we do [now], but then the 98 per cent [of companies that are] less transparent and less sustainable will just keep making money. We have a role to play going forward — we ought to put others who are not transparent out of business.”

## The ecological goals of Zara (and Inditex)

The plan of the Inditex group consists of replace fabrics currently used to create garments. The company is committed to ensuring that by 2025 all cotton, the [linen](https://www.vestilanatura.com/textile-fibers/natural/linen/) and the polyester used will be of biological origin, sustainable or recycled.

Inditex also undertakes to invest in the development of new technologies for the recycling of materials, cheaper, more efficient and ecological than the current ones:

* Collaborate with MIT (Massachusetts Institute of Technology) in finding new ways to recover fibers from old clothing (using only clean energy);
* In 2016, he collected used clothing in over 1.300 stores and after two years he claimed to have collected 34 tons of used clothing.
* In 2017, during the delivery of online purchases, he collected the used clothes of users who had bought new ones (only in Beijing and Shanghai). They claimed to have collected more than 850 items of clothing in 1 year.

In addition to the materials and recycling of used clothing, Inditex says it is working for reduce global pollution caused by their own production:

* Eliminate single-use plastics by 2023;
* It will use 80% of energy from renewable sources for stores, warehouses and offices.

Commendable objectives, especially for a company that has over 7 stores in 100 markets around the world with more than 170 people involved. Making every part of the business more sustainable could lead to significant reductions in environmental pollution.

Problems with Current solutions

Sustainability does not mean guilt free consumption

Some observers question the ability of in-store recycling to effect real change. Instead they **could encourage a guilt-free consumption attitude where customers think it’s a good idea to buy and wear (or not) in ever increasing amounts without thought for clothing’s inherent precious value in terms of people and resources.**

Destroying unsold goods

**Most often, the reason is to avoid devaluing the brand; there is a terror of what discounting would do to prestige. Some brands, such as Chanel, never discount. The idea is, keep it scarce and you keep it exclusive.**

**Over the last two years, Cartier owner Richemont, for example, has bought back**[**about $575 million worth of watches**](https://www.theguardian.com/business/2018/may/18/richemont-destroys-nearly-500m-of-watches-in-two-years-amid-buyback-policy) **from retail partners to avoid having the timepieces sold more cheaply on the gray market of unauthorized retailers. Most were destroyed, and the parts were recycled.**

In 2017, British luxury fashion label Burberry burned £28.6M (around $37M) worth of unsold bags, clothes, and perfume.

It’s not just high-end brands that are destroying their stock. Fast fashion is at it too. In 2017 it was revealed that fashion behemoth H&M — which has made much of its green agenda with recycling points in stores and what it calls a Conscious Collection — burned about 19 tons of obsolete clothing (the equivalent to 50,000 pairs of jeans) [in a waste-to-energy](https://fashionunited.uk/news/fashion/h-m-hit-with-fresh-accusations-over-incinerating-new-clothes/2017112326944).

Nike was the subject of a New York Times article in 2017 that alleged the company [slashed clothing and shoes](https://www.nytimes.com/2017/01/26/nyregion/slashers-work-ruins-shoes-discarded-at-a-nike-store.html) to render them unwearable before disposing of them.

Public outcry over the destruction of fashion overstock shows that these methods of disposal carry an unofficial public approval rating close to zero. To input all the resources, emit so much pollution and waste and then destroy those clothes is pure madness, given the ecological emergencies we face.

Waste and fashion go hand in glove. The industry continues to pump out a swelling inventory; each year, [more than 100 billion new garments](https://www.mckinsey.com/business-functions/sustainability-and-resource-productivity/our-insights/style-thats-sustainable-a-new-fast-fashion-formula) from virgin fibers are pushed onto the market. H&M alone was reported in March to have [$4.3 billion worth of unsold clothes](https://www.nytimes.com/2018/03/27/business/hm-clothes-stock-sales.html).

If these practices continue, the fashion sector could consume a quarter of the world’s carbon budget by 2050.

PESTEL model

* + 1. Political/Legal Factors:

<https://www.repubblica.it/green-and-blue/2020/12/23/news/che_fine_fanno_i_nostri_abiti_usati-279214965/>

* + 1. Economic Factors:

https://fluentconveyors.com/it/market/tessile-riciclaggio

* + 1. Sociocultural: Recycling culture is becoming more and more important (Circular economy)
    2. Technological: Higg Index (Toray Use Case), new web technologies allow traceability of clothes. Artificial Intelligence to understand which combinations might be the most liked by the clients
    3. Ecological:

<https://www.vestilanatura.it/moda-e-inquinamento/>

(EPRS\_BRI)

Extending longevity of clothes

**Estimates show that if the number of times a garment is worn is doubled on average, the GHG emissions would be 44 % lower.** Several concepts have been developed in this direction:

• Slow fashion. Unlike fast fashion, slow fashion is an attempt to convince consumers to **buy fewer clothes of better quality and to keep them for longer.** The philosophy includes reliance on trusted supply chains, small-scale production, traditional crafting techniques, using local materials and trans-seasonal garments. It calls for a change in the economic model, towards selling fewer clothes. It is however not supposed to be

simply a marketing stunt to sell even more clothes. As a result it could threaten the economic survival of clothes producers unless consumers are also willing to pay higher prices.

• Fashion as a service. New business models could increase the number of wears of particular items by using the principles of the sharing economy. **Some brands already offer clothes as a service – leasing their clothes instead of selling them** – taking their example from already well-established services of renting wedding and special occasion wear, protective clothes and newer services of renting maternity and baby clothes. Other businesses operate clothes subscription services, where consumers pay a monthly fee to rent a fixed number of garments at a time, enabling them to change their wardrobe frequently without buying new clothes (this already works well with bags and high-end fashion, but increasingly also for everyday clothes).

• Improved collection for re-use, repair and up-cycling. Brands like Filippa K. are taking pioneering steps **by selling their used clothes in their regular shops to make buying second-hand clothes easier.** Others are offering long-term warranties that include offering free repair or replacement of a product, offering repair or instructions for repair, or offering upcycling or instructions for upcycling.

* 1. SWOT analysis
     1. Strength: Low cost raw materials, personalizable combinations of pieces from different brands, many different brands could be chosen as suppliers. Possibly unlimited geographical limits. The suppliers could ship the products to the final clients themselves using an intermediate posting system. To ensure a higher percentage of items are bought within a certain deadline, auctions starting at very low prices could be organized. The combinations could also be organized as surprise/joke gifts to friends in order to become more noticed on Social Media.
     2. Weakness: varying quantity of products (customers are not guaranteed to find the same product again), sizes of clothes might not be adequate, time of the year when the item is sold might not be the best, delivery costs might be higher than actual cost of the product. Large chains may decide to not join in. When the products arrive, the season they were destined for has already passed. This could cause the products to stay in the warehouse for 6/7 months before being sold.
     3. Opportunity: The current political/environmental/ sociocultural requirements could allow us to highlight new aspects of our products and the main benefits consumers would receive. We could also allow clients to suggest combinations and show them to other clients (coupons or bonuses might be given away to the best combinations proposed).

To prevent the stock to stay unused for 6/7 months per year, we could also consider exporting it to the Southern Hemisphere where the target season would be at the beginning. Expanding to a new market (such as the one in South America), which would be unknown to all small-medium apparel chains, could be an enormous opportunity for them. Countries like Argentina and Brazil typically have consumers of a similar size to that of the Europeans and with a lower income. Therefore, our products could fit (both metaphorically and physically) well to the new customers.

* + 1. Threats: companies might decide to not want their items to be sold at very low prices after a while

Porter’s Five Forces Model

Threat of New Entrants: Customer switching cost is very low. Current online resale firms cover different parts of the global market and different types of products which range from luxury goods to secondhand items. Thrift shops or physical shops might not be much of a threat to a new online firm which in turn could be a threat to them. In Italy, Zalando is considered the main online retailer for clothes. Vinted is another website which offers peer to peer sales of secondhand clothes. They cover different types of customer segments and apparel compared to the one our application would deal with.

Bargaining Power of Suppliers: variable. If large clothing chains are chosen as suppliers, they may have significant decisional power. If small stores are chosen, they have less decisional power. Therefore the target suppliers will most probably be small chains or shops that would prefer to prevent paying an amount of money to deal with unsold clothes and to instead receive at least a small amount for those items.

Bargaining Power of Buyers: (B2C) probably low because typically the clothes will be sold at a lower price than in the original case. Also the “Complements” force will allow customers to appreciate the product more.

Threat of Substitute Products or Services: Current Clothing industry may be not willing to allow a secondary market to develop. In particular, luxury clothing brands will not want to see their goods sold at much lower prices (e.g. Burberry and Cartier cases).

Exit Barrier: possible warehouse and employee costs

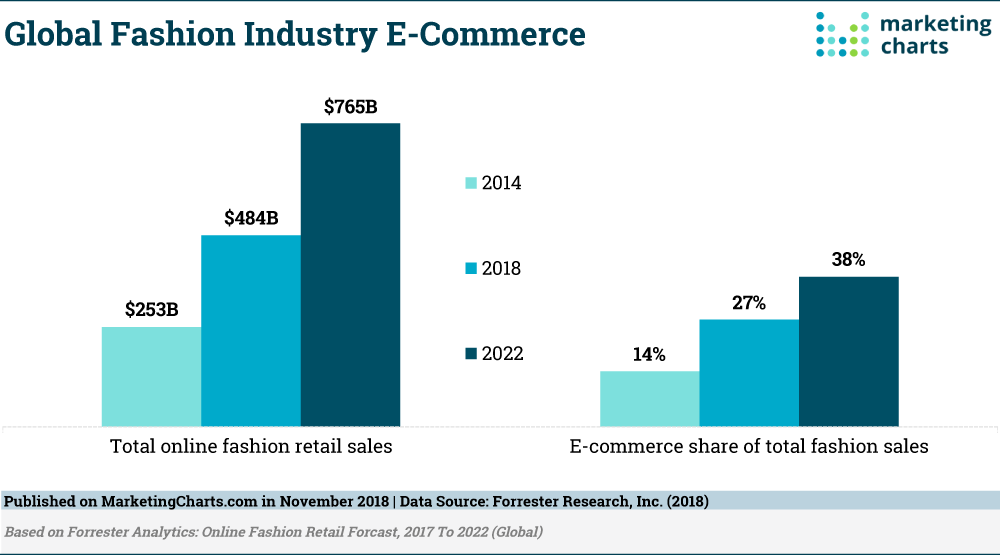
Complements: the sustainability of the products and origin. Products can also be personalized or designed by expert designers.

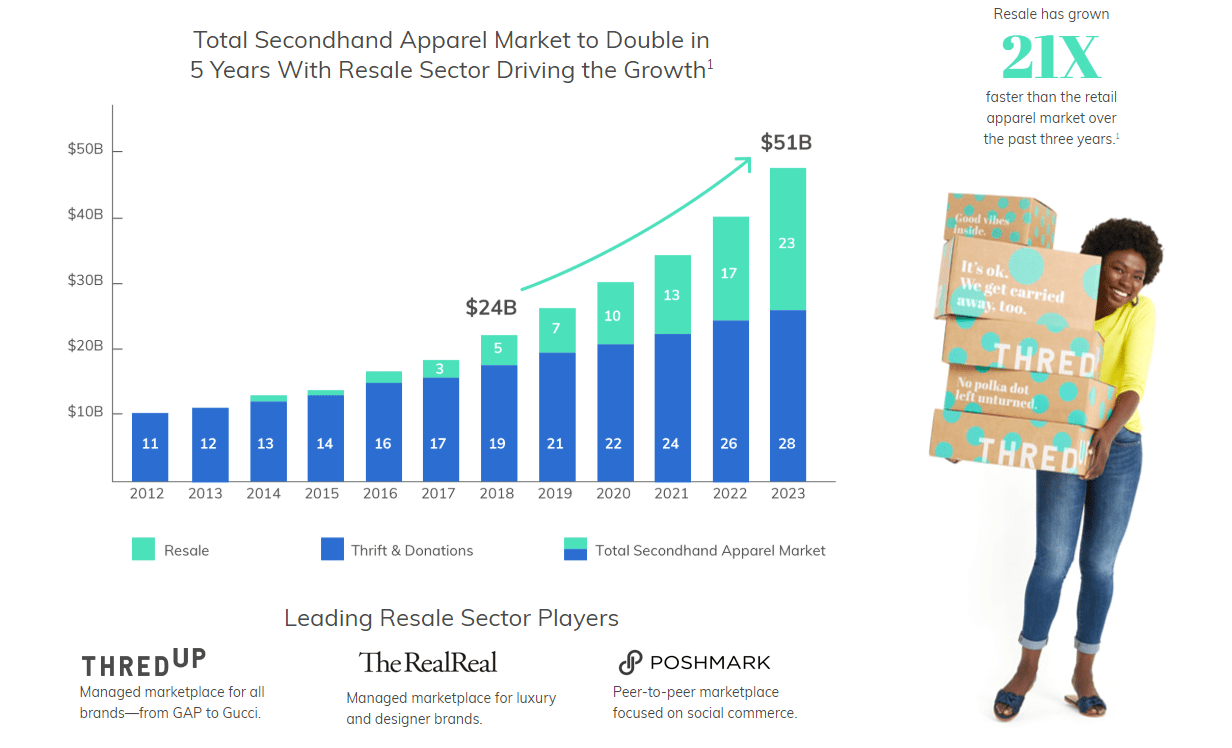
Industry Competitive Structures:

Monopolistic Competition because there are a few new firms which however offer very different products. The entry barriers would not be too high because the potential market suppliers are many. The main aspects of the entry barrier are the warehouse costs.

BCG analysis (Problem Children)

High market growth

Ecommerce and the Resale sectors are two of the fastest growing sectors of the industrial world.



Secondhand stores are nothing new, but startups are helping outfits find another life online and raising significant funding. For example, [ThredUp](https://www.cbinsights.com/company/thredup), which has raised over $125M in funding, is a resale website for buying and selling secondhand clothes.

Online luxury handbag resale marketplace [Rebag](https://www.cbinsights.com/company/rebagg) recently raised a $25M funding, bringing its total funding to over $50M. [Vinted](https://www.cbinsights.com/company/vinted) follows the same model, but with the added bonus of allowing members to swap items.

Low relative market share

The market is so large and so diverse that in the first 4-5 years only a small portion of it at a national level could be taken.

FIRM EFFECTS

Entry Choices

* Entry timing: the Resale industry is at the beginning of its life cycle
* Focus on the customer’s motivation on why he/she decided to buy the object this way. Give him/her more details on how the purchase of the item helped reduce his/her environmental impact (es. Estimated Kg of CO2 saved, litres of water saved, …)

**Business Model**

**Who are the main stakeholders performing the activities?**

**What the business does to create value?**

It buys unsold products from other firms and gives them a new description/scope.

**Why does the business create value?**

The cost of the goods are low and general operational costs are low. Local shops may have a limited number of clients or may have limited visibility.

**How are the offerings to the customer created?**

Personalization of services/products using A.I. algorithms:

The firm uses A.I. algorithms to select target a larger number of customers that may want to buy the product and to perform combinations of different type of goods that can be sold together to make the overall package more attractive. The clients can also modify combinations of clothes presented to them and use chatbots and AI algorithms or talk to real designers to receive suggestions. The overall shopping experience can therefore be personalized and become more user friendly.

Experiential Marketing: Personalization of the online shopping experience is something new that not many other apps offer. A more enjoyable shopping experience can lead customers to ultimately become more attached to the service. Giving the possibility to consumers to also grade, comment or simply (dis)like existing combinations of clothes can contribute to making the app more interactive. Also suggesting new dressing attires could also be stimulating. Allowing users to simply pass the time by scrolling for new possibilities could also provide a nice opportunity for them to feel comfortable while interacting with the app. Since the items in the warehouses can change rapidly, this could be the opportunity to trigger the users’ attention when a combination that they could like is created. Users would also have the chance to appreciate the clothes more and to easily climb the “Ladder of Loyalty” from being a simple customer to a supporter/advocate.

**How should the company compete?**

**Cost Leadership**: low raw material cost. No need to change items. Faulty items may be bought from suppliers at a particularly low price.

The website also differentiates by offering good customer service and feelings when a new purchase is done, providing a high number of combinations of clothes from different brands.

**Nature of Business Model?** Bundling

The general idea to have very low costs allows us to also bundle together clothes to reduce the items left in the warehouse. To further reduce the leftover stock, frequent users can also be gifted simple items of their size which would be sent with the items they bought.

Branding

Our business model deals with pure goods delivered to young, environmentally conscious customers at a low price. Our brand therefore needs to evoke different values such as creativity, and ecology in which the final customers can identify themselves.

The Brand Name: **TCTG** (Too Cool To Go)

The brand name is an acronym because “Too Good To Go” is already a famous registered Danish app.



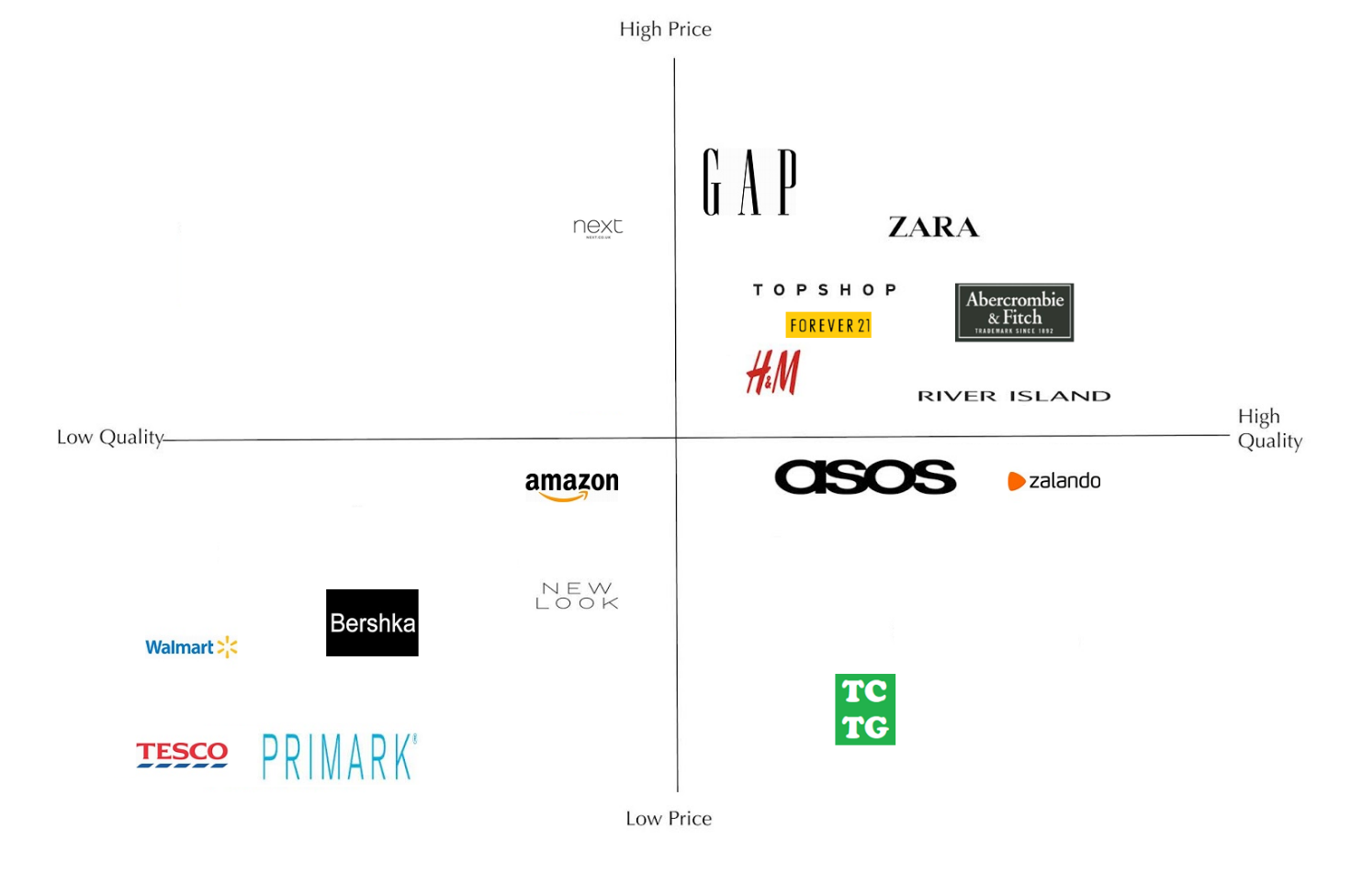
The green color of the logo symbolizes ecology and recycling. The “minimal” style of the characters conveys a sense of simplicity, friendliness. This logo would be shown to the customers only when opening the app or on the boxes in which they would receive the items they bought. The packaging would be made out of recycled cardboard and it would also have a very simple yet inviting look.

Within online apparel industry main **strategic groups**:

* Large online retailers which offer different kinds of products at low prices: Amazon, Zalando, ebay, AliExpress
* Secondhand retailers: Vinted, Wallapop
* Sustainable, Ethical online shops : Etsy, Good Apparel
* Online shops of large multinational chains: H&M, OVS, Macy’s, …
* Luxury Apparel Market Share Insights : Gucci, Giorgio Armani, Burberry (Due to strong brand loyalty, this market has high entry barrier to enter in this market)

Perceptual Map

The main competing brands we needed to take into consideration were the ones from Groups 1 and 4. We inserted our main competitors in the following perceptual map.



Segmentation, Targeting and Positioning

|  |  |
| --- | --- |
| **Variable** | **Properties** |
| **Profile** | |
| Age | 15-35 |
| Gender | Both Male and Female |
| Life cycle | Teens, young adults |
| Geographic | No particular geographical requirements. The area must be well connected to the postal system. |
| ACORN Targets | Categories C, D |
| **Psychographic** | |
| Lifestyle | Active, Adaptable, Economic |
| Personality | Conscientious |
| **Behavioral** | |
| Benefits sought | Convenience, Sustainability |
| Purchase occasions | Self-Buy |
| Purchase behavior | Not brand loyal |
| Usage | Occasional |
| Media Behaviour | Ads on Social Networks |

Customer Pen Portrait

Sara is a 23-year-old waitress working at a bar in the outskirts of Pisa near a small apartment she is renting. She is very open-minded and has an environmentally friendly mindset. She likes going to the gym and hanging out with her friends in her free time. She usually does not worry too much about wearing the trendiest clothes. Simple or sporty clothes are fine for her.





|  |  |
| --- | --- |
| Name | Sara |
| Age | 23 |
| Location | Outskirts of Pisa |
| Mentality | Friendly, Open minded, Environmentally aware |
| Ambition | Travel around the World |
| Daily activities | Work, Gym, Friends |
| Social media | Facebook, Instagram, Pinterest |
| ACORN category | D |
| Monthly income | €800 |
| Monthly spending on apparel | € 30-50 |
| Fashion style | Casual, Sporty |
| Preferred method of shopping | Online, enjoys shopping trips as well |
| Shops usually visited | OVS, sport apparel shops |

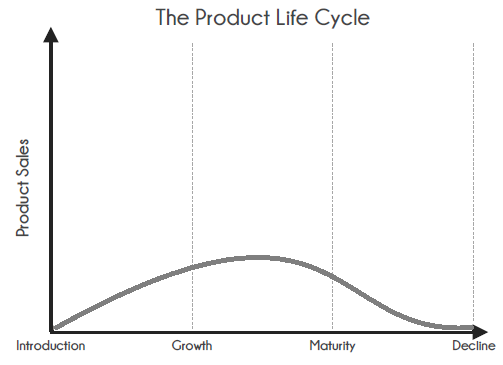
OPERATIONAL MARKETING PLAN

Product Policy

Our products will be characterized by having good quality at a low price. The quality of the clothes will be guaranteed by allowing suppliers to send pictures or videos before shipping them. A team of experts will then analyze, photograph and describe all the clothes that arrive to the warehouse. Once an item is bought, it is put in a box along with all the other items the customer is bought and then shipped. The packaging will necessarily have to be made out of recycled materials to demonstrate that the company tries to be as eco-friendly as possible.

Product Life Cycle

Type of New Product/Service: New to the world

This kind of 2nd life given to unsold products is certainly very innovative. It is different to what companies like Vinted propose because the products have not been used yet. Most probably the products have also not been damaged. Small apparel brands would get more publicity and could expand their market. Because the supplied products are at the end of their normal life cycle, the sales cannot be too high in any stage of their second life cycle. The quantity supplied may also be variable and this can cause the products to have their decline in sales earlier than usual.

Servitization policy

The new tendencies of Cloud Computing, use of A.I. algorithms and Big Data analytics are different instruments developed in recent years to allow companies to develop their business models and keep up to date with a dynamic and growing global market. Our application would use these new technologies in an important manner:

* Cloud Computing: different cloud servers would be used to offer an online web service. To reduce the latency of the service and guarantee “load balancing”, many servers would be used. Providers such as “Amazon Web Services” allow small companies to use their “Virtual Machines” at a low cost. This would also allow us to reduce the overall costs and human effort to setup a proper server center. Depending on the national markets we choose to target different servers could also be used in dislocated parts of the world to reduce latency.
* A.I. algorithms would be applied intensively in our application to guarantee better QoS and allow users to view only outfits that they would buy. In real shops, customers are shown an extremely large quantity of items which however remains the same for everyone. The possibility of presenting up-to-date outfits only of the size selected by the customer can lead to a smoother, more enjoyable shopping experience. We can also allow users to simply **view** (without pushing them to actually purchase) some combinations of clothes of their interest/ taste on virtual mannequins and the correlated comments made by others. The idea of personalizing the feed we present to users would allow us to give them new ideas and make them feel more comfortable when using the application. It is important however to prevent the products from appearing too different from what the final user will receive: distorting the image of our products using A.I. will lead to increased expectations of the customers and ultimately to customer dissatisfaction (gap of type 4). Having a high return rate is one of the main problems online retailers must face (<https://www.shopify.com/enterprise/ecommerce-fashion-industry>).

Distribution

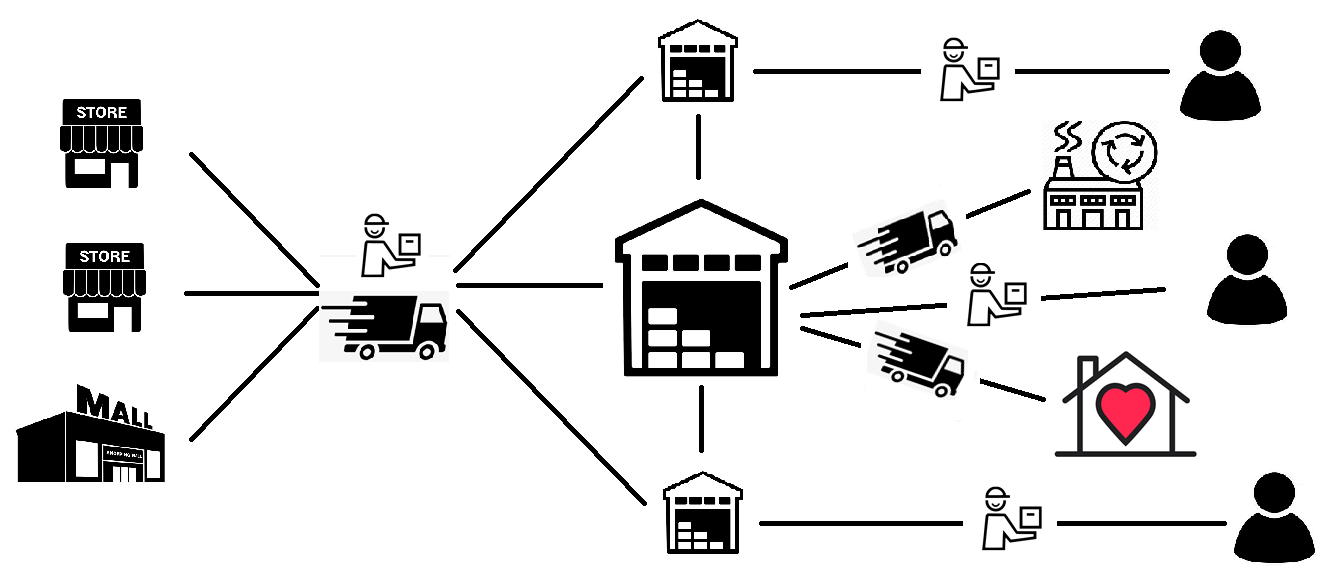
Our company provides good quality items at a low price to private customers (B2C). An efficient distribution of the items would significantly contribute to decrease the overall prices. The best option in our case is also the simplest one: we would need to send the items directly to the final consumer using the national (and international) posting system. To decrease the general cost and environmental impact of shipping the goods from the supplier to a central warehouse to the final customer, using several small, dislocated warehouses could also be taken into consideration. This would also help to reduce the time needed to ship the items to the customer. The warehouse and shipping costs will be discussed more in detail later.

Selectivity of Distribution

It is better to focus on specific, targeted markets (e.g. Italy as a whole or single regions) for a more efficient distribution of the goods. Widening the area of distribution might push the customers to require online tracking and a consequent increase in shipping costs. It would also require higher shipping costs from the suppliers to the warehouse. Depending on the number of supplying shops and their distance to the warehouse, personnel with company trucks could be sent to personally retrieve the goods. This would reduce the time for the goods to arrive to the warehouse (which may not be a strict requirement in our case) but it *would* also increase the personnel and infrastructure costs. On the other hand, assuming personnel to deliver the items to the final customers would be unfeasible: local posting services are much more efficient and faster. We would therefore use **conventional shipping channels** for our final delivery of the products.

Distribution Logistics

A possible implementation of the physical Distribution Logistics is shown in the following schema:



Distribution steps:

1. Delivering the merchandise to the closest warehouse. Depending on the quantity of goods, either the local posting service or the companies own trucks can be used. The suppliers have to send documentation regarding the quality, type and sizes of the goods before actually shipping them.
2. Once the products have been delivered to the warehouse, the company’s workers unload, check and describe them all. Depending on the status and attractiveness of the single items, they can be divided into groups. These groups could be:

* “Sell”: items in good condition which can be sold singularly or combined with other elements
* “Donate”: items in acceptable condition which however the experts consider to not be of any interest for the final customers. They will therefore be gifted to charities to increase the company’s and the supplier’s reputation and to prevent them from filling the warehouse.
* “Repair then Sell”: items which have not yet been sold because they present small problems worth fixing. Giving extra importance to this kind of clothes can be an opportunity to demonstrate to the customers the care and effort the company is willing to put into its daily activities.
* “Recycle”: final option for the leftover items. They will be taken to specific plants specifically intended to recycle clothes (e.g. I:CO) or be reused for other purposes. Thinking of these new options or ideas can also offer good opportunities to interact with the customers.