



Support Report Mapping Sustainable Fashion Opportunities for SMES Annex 3 Case Studies

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COSME CASE STUDY 1

VEJA (FR)



Case Overview

Key facts:

- Name of Organisation: VEJA Fair Trade SARL
- Website: www.veja-store.com
- Type of Initiative: fair trade and ecological fashion footwear brand with B-Corp certification
- Sector: shoes
- Target Market(s): men, women, children
- Date Established: 2004
- Location: 13 rue de la Cerisaie 75004 Paris
- Value Chain Stages: design, sourcing, retail
- Size: 85 employees in France, 20 employees in Brazil. 600 000 pairs of sneakers produced in 2018. 1800 stores in 40 countries. Turn over €18,621,000 in 2017

Key Messages

- The conviction of leaders and their ability to share their values is a source of longevity and credibility for the business
- Knowing suppliers and loyalty is the key to transparency. Transparency is a foundation of Veja and is reflected in a very clear and comprehensive website.
- It is necessary to anticipate the development of the brand by identifying in advance suppliers who meet the expected values.
- To ensure volumes and traceability, the collection should not be very extensive. It is necessary to work on the depth of the range (many choices of fabrics, finishes) from a few base styles.
- The most difficult thing is to keep the same economic model when growth accelerates

Introduction

The business model of Veja is based on fair trade and sustainable production and local global supply chain in South America. The headquarters of Veja is in Paris, France and the brand also have a branch in Brazil, which manages sourcing and production. Veja sell in 1800 stores in 40 countries and have 3 concept stores in Paris under the name "Centre Commercial".

The brands business model and strategy is to offer sneakers made with great transparency, in the spirit of the times thanks to numerous collaborations, at a fair price (85€ to 125€).

The brand is an exemplar of sustainability/circularity, and since the company's creation in 2004, Veja has remained faithful to its aim. A Brazilian sneaker brand, whose components, certified organic or eco-friendly, are purchased in fair trade, production is made in certified workshops and logistics are managed with social integration. Overhead costs (marketing and communication) are reduced to a minimum to enable sales to be made at market prices whilst ensuring a better purchase cost for producers. The proximity of the Parisian fashion world and the successful use of social networks have

contributed to its commercial success. It should be noted that Veja is one of the only young French brands that is ecological and sustainable and has exceeded a €15 million turnover without going against its principles. The product line remains restricted to one category, with growth coming from exports and collaborations.

Sustainable/Circular Business Model & Practices

The two main principles of Veja's business model, are that the brand does not invest any budget in marketing and advertising and that they only produce on order, using their website to sell any unsold items. The increase in exports, particularly to the USA and the United Kingdom, has doubled Veja's turnover in 2 years.

Since the first Veja/Agnès B collaboration in 2006, the brand has regularly launched collaborations with other brands that share its values, the most recent being Veja/Bleu de Paname. The brand also does not use paid advertising but is very active on social media networks and is very present in the Parisian fashion microcosm of sustainable brands.

Veja has worked hard on its logistics and since 2004 and has entrusted its logistics to Ateliers Sans Frontières. Every year, this non-profit workshop helps about a hundred vulnerable individuals to find a job and regain social stability. The company's values (sharing, human interactions, responsible fashion) are shared by all the company's employees and twice a year, members of the headquarters or shop teams meet suppliers in Brazil or visit for example the logistics centre.

The founders and particularly Sébastien Kopp regularly participate in conferences, initiatives related to fashion and sustainable development. He is very often interviewed by the press. He does not hesitate to give his time to share his convictions and his commitment with the general public and the actors of the profession.

In addition to the sneaker brand, Veja manages 3 concept stores in Paris under the name "Centre Commercial". The first store opened in 2010. In these boutiques, you will find a selection of fashion brands and leather goods chosen by Veja for their social and/or environmental values.

Veja is B Corp certified since December 2018 with a score of 84.2 out of 200. It is the only French fashion brand to be B Corp certified.

The basic idea was to be able to source all components and the assembly plants in the same geographical area. Since Veja buys materials directly from their supplier in Brazil and produces at Rio Grande do Sul as well, the brand operates in a short cycle that provides both economic and ecological benefits.

Veja sources organic cotton directly from *ADEC*, an association of Brazilian cotton suppliers, with whom they are engaged in a long-term partnership. With their suppliers, they agree every year on a reasonable price, that is usually far better than the market price. These Brazilian suppliers apply the *polyculture* process that makes the ground naturally more fertile, with no need of chemical fertilizers or pesticides. Veja also works with *ESPLAR*, a Brazilian NGO that provides engineering help to cotton suppliers. Veja also sources organic cotton in Peru with GOTS certification. Brazilian organic cottons are certified by the IBD label.

Veja's rubber is also purchased via fair trade. The sole of the sneakers is composed of 18 to 22% natural rubber sourced directly by Seringueiro communities who collect it from the wild rubber trees in the Amazon forest. The aim behind this process is to protect the forest and to use natural materials.

The strength of Veja for being and standing as a sustainable brand is also about being aware of technological improvements. From 2008 to 2015, Veja used only vegetable tanning for all the leather sneakers, but because of costs, they came back to classical chrome tanning. Today, only 10% of the Veja sneakers are made from vegetable tanned

leather. However, in order to use chrome tanned leather in a more sustainable way, Veja only works with a tannery certified by the *Leather Working Group* that ensures they respect the *REACH* European norms, guaranteeing the chrome tanned leather as non-toxic. At the same time, Veja's sourcing of leather is linked to traceability as they make sure the leather comes from the south of Brazil, especially from an area that was not deforested for the exploitation of cattle and leather.

While using leather according to these requirements, the team is working on new ecological ways to replace it. After five years of research, they found a new bio-sourced material that visually looks like leather. This material, called *C.W.L* and developed by an Italian company, is made of organic cotton coated in corn waste (from the food industry) and bio-based polyurethane. It is totally biodegradable and offers a solution to both leather and synthetic leather mainly made of plastic derived from oil which is not a sustainable alternative in the long term. Today, 1 pair of Veja sneakers out of 4 is vegan (the *Campo* styles) and this is increasing with new collections.

Finally, Veja's approach is very close to upcycling processes. Upcycling involves using waste or unused materials to create new ones. Some Veja sneakers are made of recycled cotton and recycled polyester called *B-mesh* material. Since 2013, they also use Tilapia fishskin leather, that was usually thrown away, but now transformed into leather thanks to vegetal tanning. As we move through the years, Veja seems to add more and more upcycling materials to its products. Research is underway to find solutions for repairing and cleaning sneakers.

Regarding the manufacturing, VEJA manufactures its sneakers a few hours away from Porto Alegre, in factories and workshops where ILO rules are followed and audited by Veja. To guarantee working conditions that meets VEJA's requirements, additional criteria must be met, such as: proximity and quality of housing, the freedom to form groups to defend their rights, standard of living and purchasing power parity and employee benefits and freedom of expression.

Organisational History: Key Challenges & Opportunities

The two founders Sébastien Kopp and François-Ghislain Morillion studied at two French business schools. After that, they both worked for several years for investment banks. During a one-year round-the-world trip, they studied in the field the impact of "green" and sustainable development projects of major French companies. What brought them together through the Veja project was the search for meaning. As their work by this time didn't make any sense for them, the two friends decided to create a project together with a more human approach. It is important to say that their political convictions brought them together. The desire of a company careful about human beings and the planet made Veja come to life. Both keen on sneakers, and convinced of the importance of sneakers in fashion, they chose this product to drive their project. "We chose to create sneakers because they are a symbolic product of our generation and our time. It is also a product that crystallizes the challenges of globalization through its production, distribution and use".

From the beginning, Sebastien Kopp and François-Ghislain Morillion are the only two shareholders of the brand. They always decline the support of business angels or investors. This choice consequently allows them to keep their freedom, to decide to respond to their own requirements. At the beginning, they did not receive any special assistance but were quickly spotted by the most specialized Parisian shops. The Colette concept store was one of their first resellers.

Some additional support or initiatives could help them to grow going forward. They would like to have access to a shared offer to purchase materials and supplies. Especially for innovative and sustainable materials, they would like to be able to use them for certain products but their purchasing volumes are too small. They are also awaiting an eco-certification and supply chain traceability label accessible to all brands at no cost.

When they created the company, the main barrier they encountered was their lack of familiarity with the fashion market. Since they were quite young and refused any help of investors, they started from very little. They travelled many times to Brazil in order to directly meet with the suppliers of materials and factories.

Once they created a strong bond based on trust with their suppliers they began by developing just one style of sneakers. This is how, step by step, little by little, they built the brand in their very singular way.

The main obstacles today that Veja describe are: to succeed in accompanying growth whilst maintaining proximity to the supply chain. Another challenge is to include the entire supply chain, including trimmings (laces, soles, etc.) in their sustainable dynamic. To solve this, two people are constantly searching for and visiting new cooperatives (rubber, cotton) and new factories (for assembly) in South America. Another important area of research is the diversification of materials to limit the proportion of cotton in collections.

Lessons Learned & Recommendations for Policy

Veja have learnt that making a single-product brand helps ensure traceability and transparency. They have chosen a country where it is possible to source all the components of the product and anticipate the company's evolution by finding new suppliers that meet the brand's values.

Veja would like to see the promotion of meetings between responsible brands to encourage exchanges and joint projects. Veja thinks that a responsible fashion label would support the development of sustainable brands.

Conclusion

Veja's success is based on a high degree of loyalty to its principles, the choice to expand its geographical market instead of diversifying its collections, remaining close and loyal to suppliers, sharing with customers the brand's passion and convictions, its great transparency in its practices, its choices and its limits.

Other comparable businesses in the sector

Within each case study other brands/organisations have been included as comparators, to give a sense of the activity clustered around particular business models, sub-sectors or practices that may use a different assortment of sustainable or circular practices. These have been identified by the research team and not the interviewees.

Patagonia, a US- based brand rated 151.5 (out of 200) by B-Corp, is a model for Veja and like Veja, Patagonia grew out of a small company, with its founder's values reflected in those of the business. Patagonia pioneered the use of recycled polyester in sportswear and instigated take-back schemes towards circularity.

Ector is a French brand of knitted sneakers, using knit technology to create a lighter and more flexible sneaker, that also utilises recycled materials. The sneakers have been eco-designed from start to finish with no material waste and all components of the shoe are made of recycled PET. The shoe upper is made out of single-material recycled composite, which can be more easily recycled.

The brand aspires to offer a full cycle of circular consumption and unlike Veja offer a service to return the sneaker at their own expense in exchange of a discount on a new pair in order to reuse and recycle all the components.

Good Guys Don't Wear Leather is a French vegan brand founded in 2010 by shoe designer Marion Hanania. Their biggest challenge was to find suppliers that could adapt

their own shoe manufacturing process avoiding the use of ingredients of animal origin. Not only has the brand has received the 'Peta Approved Vegan' label, it was also awarded 'Best Vegan Shoes' in 2017 by Peta. In the coming years, they wish to continue to develop sustainable fabrics and invent new types of animal-free materials.

Resources

<https://www.veja-store.com/>

<https://eu.patagonia.com/gb/en/home/>

<https://www.ector-sneakers.com/>

<https://www.goodguysdontwearleather.com/>

Acknowledgements

We would like to thank Céline Hay, Sustainability Manager at Veja, for her time.

COSME CASE STUDY 2

MUD JEANS



Case Overview

Key facts:

- **Name of Organisation:** MUD Jeans
- **Website:** <https://mudjeans.eu/>
- **Type of initiative:** Denim Jeans Brand with B Corp™ certification
- **Sector:** Jeanswear for women and men, mid-range price bracket (€119 /jeans)
- **Target Market(s):** fashion and sustainability conscious customers
- **Date Established:** 2012
- **Location:** HQ in Latren (NL); production: Tunisia and Spain
- **Value Chain Stages:** from cotton jeans recycling to selling and leasing on and offline and collecting used jeans
- **Size:** 11 employees; 25,000 jeans manufactured and sold in 2018; 300 stores in 29 countries

Key Messages

- A fashion brand based on the circular economy model following the principle “less is more”
- Offers premium quality denim essentials based on a small supply chain
- Manufactures and sells jeans made of 100% organic and up to 40% recycled cotton, in an ethical way (fair trade) with zero carbon impact, no harm to animals, reduced chemicals, low water use, low energy consumption, in a totally transparent and measured way
- In parallel to selling jeans, MUD Jeans shows a new way of consuming by leasing jeans, offering repair service and recycling-rebuying used leased jeans
- Collects used jeans, at least 95% cotton (discount €10 to customers or a free month lease) and recycles them

Introduction

The business model of MUD Jeans is fully based on a circular economy. Its headquarters are based in Laren, Netherlands and the brand sells in 300 stores in 29 countries over the world.

Paradoxically they succeed in manufacturing and selling fashion jeanswear with mostly permanent items. They provide stores with limited quantities of merchandise and offer repeat-order deliveries within 24 hours. No discounted sales are ever made. Store mark-up is quite good (2.8). End price is quite affordable (€ 119/jeans). Production costs are reasonable thanks to fairly high volumes (25,000 jeans in 2018) and a reduced number

of SKUs, low marketing costs, a frugal company culture and almost no financial costs, due to creative solutions.

What does make the difference with the MUD Jeans brand is that they succeed in selling affordable products with a 100% sustainable sourcing and production strategy. They also try and implement a 360° variety of ways to reduce their environmental and social footprint; organic and recycled raw materials, no harmed animal, etc but also push the boundaries by challenging consumers' need to possess garments.

As a proof of the exemplar nature of the brand in terms of sustainability, we can see the many ecological and ethical labels it has the certification from organisations such as; B-CORP, Nordic Swan Ecolabel, Peta approved Vegan, Cradle to Cradle, Ecocert, GRS.

Sustainable/Circular Business Model & Practices

By selling affordable items, MUD Jeans can reach fairly high volumes. Keeping all costs as low as possible they have started reaching a profitable level in 2018 after 6 years of losses. Their just-in-time supply chain allows for no waste and no lost nor discounted sale in store. All costs including marketing ones are kept as low as possible.

They differ from almost all other fashion players by having only one limited collection running and items continued for long periods of time.

The benefits generated by MUD Jeans for society are mainly environmental. The brand very precisely measures and reports its sustainability objectives, action plans and progress made. In particular they have measured that over the last 3 years they have saved water and chemicals in large quantities.

1. 300 million litres of water (only 1,500 litres of water are necessary to produce a pair of MUD Jeans against 7,000 litres for a classical pair of jeans).
2. 90% of the chemicals normally used for dyeing and bleaching
3. 700 tons of CO₂ - the brand is now totally carbon neutral
4. 12,000 pairs of jeans recycled, to make new denim fabric. Now producing a fabric that is composed of 40% recycled denim.

The company started leasing jeans in 2013, aiming to change consumers' focus from owning to using and collect used jeans to recycle them, thus achieving a complete and almost perfect closed loop and cradle to cradle model. Approximately $\frac{1}{4}$ of MUD Jeans business is made through leasing and $\frac{3}{4}$ through selling jeans.

The additional gain in social value is dual; improving consumers' health by using non-dangerous materials and implementing HR practices that allow workers to be better paid and happier with their jobs.

Regarding the brands production, the recycling factory is based in Valencia (Spain) and the jeans are produced in Tunisia. Remarkably the sourcing and production supply-chain consists in 3 partners only. Used jeans collected are sent to Valencia, new jeans are made of 40% post-consumer recycled cotton mixed with organic cotton fibers. The focus on sustainability starts with the very design of the garments: for example, MUD Jeans does not use leather labels on their jeans but prints them. This way the jeans remain mono material and they are also vegan. Rivets and buttons are all made of recyclable steel, the paper labels and indigo paint are Cradle 2 Cradle certified.

Contrary to the traditional use of sandpaper and chemicals to create the effect of use, MUD Jeans factory works with a laser technique, which both less polluting and less dangerous for workers, as well as using a very small quantity of water. Their Tunisian garment manufacturer, Yousstex International, has a water filtration system that filters 95% of the production water. The additional 5% evaporates and is replaced with rain

water, which results in zero fresh water needed. Bleach washings are created with ozone and laser instead of using harsh chemicals and through manual labour. At Tejidos Royo, their Spanish fabric mill, they use a steam turbine to transform the steam from the production line into energy, this installation allows MUD Jeans to be self-sufficient in terms of energy.

They also aim to replace their polyester linings with a more sustainable alternative or organic cotton in the near future.

The brand also encourages their consumers to take more ecological habits. For example, they encourage their consumers not to wash their products often, and unless it is really necessary.

The brand has many retailers all over Europe and a few in the US, Canada, Australia and Japan. But some important options offered (free repair service for leasers and 10€ voucher for the sending of old pair of jeans) are yet only available in the Netherlands, Belgium and Germany.

Organisational History: Key Challenges & Opportunities

The founder of the brand, Bert van Son, worked for 30 years in the fashion industry, which gave him an accurate knowledge of the negative consequences of fashion on both workers and nature. MUD Jeans project was born in 2012 as an alternative to fast fashion, from the consideration of making fashion in a way that does not interfere with the future of the planet and of the future generations.

Jeans was chosen to start the battle as the largest and most polluting item and over the next 2 years production was moved from suppliers considered not transparent enough to 2 Spanish partners (Royo fabrics and Reconvertex). Yousstex in Tunisia manufacture the jeans.

Only the dedication of the founder, his partners, his own private money, the readiness to lose it all if necessary allowed MUD Jeans to take off within a few years. No other public or private help was mentioned nor identified and the lack of it resented. We can say that the big issue is to reach an economical critical size of activity while losing money for a long period of time, like Amazon or Facebook had done but very few examples in the fashion system.

Their goal by 2020 is to launch a pair of jeans made from 100% post-consumer recycled cotton. For now, the denim products are composed of 40% of recycled cotton, there is still a lot of work to do to reach this goal. Even it is 20-25% more expensive than organic cotton.

Lessons Learnt & Recommendations for Policy

MUD Jeans case evidences that one of the condition of the sustainability of a brand is the will to present an alternative system to fashion, since sustainability does not seem to be compatible with the way fashion runs today. For this alternative to be reliable, it has to be global, focusing on every detail to reach extremely high sustainable and ecological goals.

Specifically focusing on the elements of or how an enabling environment can be created where sustainable/circular practices and business models can flourish. The main challenge for such a case is to finance business growth for a long time until critical volume levels can be reached. The founder resents the fact that he could get no public support in his enterprise and had to take all the financial risks related.

Conclusion

Dedicated to sustainability and implementing cradle to cradle principles, MUD Jeans succeeds in developing a thoroughly sound and viable business in the highly polluting jeans industry. Based on eco-design principles, a rather limited product range, a very small number of suppliers and a refusal to follow fashion cycles, they can sell almost 100% sustainable apparel at affordable prices and be profitable.

Other comparable businesses in the sector

According to Bert Van Son the B Corp community offers many examples of comparable businesses. In particular in the EU among the community one can cite:

- **Finisterre** (UK) a surfwear brand focused on recyclability and transparency, founded in 2003
- **Elvis & Kresse** (UK) a luxury brand recycling leather waste to manufacture and sell accessories, giving 50% profit to charities, founded in 2005 (see case study 4)
- **Ecoalf** (Spain) a fashion and accessory brand that recycles waste from the ocean, founded in 2009 (see case study 10)

Within each case study other brands/organisations have been included as comparators, to give a sense of the activity clustered around particular business models, sub-sectors or practices that may use a different assortment of sustainable or circular practices. These have been identified by the research team and not the interviewees.

Since 2012, **Nudie Jeans** denim has been made with 100% organic cotton. They certify their jeans with Fairtrade and Global Organic Cotton Standard. Last year, they also replaced the leather patches on their jeans and denim jackets with a vegan alternative, made with paper. Informing their customers on how to take care of their jeans is also an important part of their brand approach and they offer free repairs to their jeans for life.

HNST (pronounce as 'honest') is a Belgian denim brand that produces with European manufactures with recycled denim fibres. Made out of 50% recycled cotton denim and 50% Tencel®. In addition of offering maintenance and repair services, another commitment of the brand to improve the lifetime of their product is to educate their consumers to avoid unnecessary laundry.

Launched in 2013 through a crowdfunding campaign, **1083** is a French made denim brand. They provide the first pairs of jeans woven, dyed and manufactured within 1083 kilometres – the distance between the two farthest cities in France. The brand only uses organic cotton certified GOTS, mainly grown in Tanzania, Benin or Mali where water irrigation is moderate.

Resources

<https://mudjeans.eu>
<https://www.1083.fr/>
<https://www.nudiejeans.com>
<https://www.letsbehonest.eu/>
<https://finisterre.com>
<https://www.elvisandkresse.com/>
<https://ecoalf.com>

Acknowledgements

We would like to thank Bert Van Son, MUD Jeans founder, for his time.

COSME CASE STUDY 3

Stanley/Stella (BE)



Case Overview

Key facts:

- **Name of Organisation:** Stanley/Stella
- **Website:** <https://www.stanleystella.com/en-gb/>
- **Type of Initiative:** Company
- **Sector:** Leisure wear T-shirts /Basics in the B2B sector
- **Target Market(s):** Europe
- **Date Established:** 2011
- **Location:** Belgium
- **Value Chain Stages:** Manufacturer with 6 factories, Bangladesh (4), China and Portugal
- **Size:** 100 employees, 9 million garments sold in 2017

Key Messages

- Sustainability efforts of Stanley/Stella focus on two key areas: 1) products that use exclusively certified organic cotton and 2) decent working conditions and fair wages in their production factories. In the words of Bruno van Sielegem, Head of Sustainability, PR and Internal communication, “sustainability is more a human conviction than business positioning”.
- One of the main learnings from the company’s experience is that sustainability can only be reached as a concerted effort of all the relevant stakeholders, namely brands, producers, suppliers, NGOs and relevant UN agencies – to help build an industry that values both people and planet globally.
- Stanley/Stella calls for an industry initiated Code of Conduct that would introduce regulations regarding minimum prices to be paid by brands for manufacturing their products. As an example, Stanley/Stella highlights that it is impossible to ensure fair treatment and wages across the supply chain for under €2 per T-shirt. This should be reflected in the minimum price and strict penalties for non-compliance.

Introduction

With its headquarters in Brussels (Belgium), Stanley/Stella is a company developing fashionable and sustainable garments (mainly leisure wear basics) for both the business-to-business (B2B) and the business-to-customer (B2C) markets. The Stanley/Stella product portfolio includes mostly plain knitted fabric garments such as T-shirts, polo shirts, sweat shirts, jackets and scarves. Their target markets are printers, promotional agencies, multi-national corporations such as Coca-Cola or Google, but also small brands that cannot afford their own production.

The focus on quality, fit and responsible positioning within the promotional merchandise garment led Stanley/Stella to double-digit growth in 2017, achieving a sales volume of around 9 million pieces. Their main target market is Europe.

Stanley/Stella's 6 factories are spread across 3 countries – four in Bangladesh (Dird, Ahsan, Interstoff, Aus-Bangla), one in China (Sanxi) and one in Portugal (Etfor). Their local team of 16 people in Dhaka are present in the Bangladeshi factories, monitoring quality, planning and working conditions on almost daily basis. The limited number of factories they engage with allows Stanley/Stella to closely monitor the working conditions, and at the same time it gives the company a leverage (by covering 15-25% of the overall factory production) for negotiation with the management towards constant improvement of working conditions and fairer employment practices.

Since its beginning in 2011, Stanley/Stella has been a member of the Fair Wear Foundation initiative that fosters collaboration in improving conditions for workers across the supply chain. The company's commitment to environmental sustainability is reflected in a strong commitment to using 100% certified organic cotton (GOTS or OCS), grown without pesticides or chemical fertilisers. Other raw materials used in their products are also carefully considered (see below for more details).

Sustainable / Circular Business Model & Practices

Stanley/Stella business model generates revenue by selling garments in the B2B sector. Focus on quality, fit and environmental and social credentials of their products are Stanley/Stella's main selling points in their market.

Materials and certifications

Materials used in Stanley/Stella products include: 95,4 % Organic cotton; 3,6 % Polyester; 0,7 % Other sustainable materials (Tencel and Modal by Lenzing (Austria)) and 0,3 % Recycled materials (recycled polyester or recycled cotton).

GOTS is the Global Organic Textile Standard label, the strictest certification for textiles made from organic fibres. GOTS tracks the entire chain of production from farm to factory: from harvesting of the cotton, weaving of fibres, assembly of items, to the final product before printing, including even the export of the clothing. It certifies that Stanley/Stella cotton is GMO-free and is grown without the use of chemicals and is processed and dyed without using any banned toxic substances. GOTS also ensures compliance with the labour standards of the International Labour Organisation throughout the chain of production.

Tencel and Modal are biodegradable and made from eucalyptus or beech tree pulp. Eucalyptus is known for being a fast-growing wood that does not require irrigation. The Tencel manufacturing (closed loop) process has received the "European Award for the Environment" from the European Union due to its low emissions. Stanley/Stella cellulose fibres are sourced exclusively from the Austrian manufacturer Lenzing, the first fibre manufacturer to have received the EU Ecolabel, which promotes environmental excellence.

Stanley/Stella also uses **recycled polyester** to make its windcheater jackets and as a complement (up to 15%) to organic cotton in some of its sweatshirts. One windcheater uses between 7 and 8 PET bottles. To ensure that their sweatshirts are soft against the skin, it is never in direct contact with the polyester, which is sandwiched between two layers of organic cotton.

The **Global Recycled Standard** label certifies that the materials used are recycled: in the case of polyester, from PET bottles, and for cotton, from cutting waste. GRS also guarantees compliance with social and environmental criteria such as treatment of waste water, the absence of certain toxic additives and respect for working conditions in partner factories. The cutting of different pieces to make Stanley/Stella's products naturally produces scrap material. Since the idea of throwing this material away is out of

the question, the company has a partner who collects and recycles these for manufacture of their tote bags.

OEKO-TEX Standard 100 certifies the absence of harmful chemical substances in all Stanley/Stella products thanks to the “Confidence in textile” label. An independent testing and certification system ensures that all raw, semi-finished and finished textile products are processed in a way that prioritises the precautionary principle. This prohibits certain potentially harmful substances even where they are not (yet) legally banned and guarantees the absence of chemical substances that are harmful to health and the environment such as lead content of dyes.

Stanley/Stella is also **PETA** certified. This means that they do not conduct or commission any animal tests on ingredients, formulations, or finished products. In addition, their apparel is made from 100% vegan materials so the customer can be confident that no harm came to animals during the garment’s production.

Working conditions

In terms of monitoring the working conditions of its supply chain, Stanley/Stella has selected a limited number of factories to work with, in a limited number of countries. The members of the Stanley/Stella board have also made an important step towards increased transparency. Based on a proposal supported by the CEO and the newly appointed Sustainability Manager, Stanley/Stella publicly name all of their factories, prioritising the transparency objective over the business interest of keeping their production facilities confidential. This practice is rare in the B2B market where Stanley/Stella operate.

In conjunction with its Corrective Action Plan monitoring, held every 3 months, Stanley/Stella has also introduced a monitoring system based on systematic checks during all production runs. This practice allows the company to have an update on the working conditions in their factories on a daily basis.

As a part of this monitoring system, additional social, environmental, and building and fire safety checks are also included. Records of all these visits are summarised in an internal Corporate Social Responsibility (CSR) report. This tool allows Stanley/Stella headquarters to stay informed in case of deviation to regulations or principles of the Fair Wear Foundation Code of Conduct. The report covers 98%+ of overall Stanley/Stella production spend (Dird, Ahsan and Interstoff).

Stanley/Stella is also continuing Workplace Education Program projects in two factories (Dird and Ahsan), aimed at empowering workers and making them more conscious about their rights. These two factories have received UN and FWF certificates, and Stanley/Stella will continue to monitor the project and supervise its further development. While still a work in progress, a new planning system implemented in 2016 has already shown benefits in decreasing pressure on pricing and reducing overtime.

The overarching principle at Stanley/Stella is that each partner along the supply chain should work in decent conditions and make a fair profit. Therefore, it is key for them to establish long-term business relationships that are commercially viable for both Stanley/Stella and its suppliers. As a reflection of this philosophy, the company has been working with its core suppliers for more than five years.

Challenges and limitations

While Stanley/Stella recognizes the benefits and the contribution of certification systems such as GOTS or OCS to improving social and environmental standards in the fashion industry, our interview with Bruno van Sielegheem also pointed to limitations and a need

for future improvements. According to our interviewee, the main issue is that the number of certifications issued by different bodies makes the meaning of certifications confusing. In addition, as Stanley/Stella's first-hand experience also proves, it is often impossible to double-check the credibility of the claims made by the issuers. As an example, at a recent visit to a ginning mill in India, Bruno van Sieleghem was alerted to the fact that the working hours and the welfare of its employees significantly breach multiple standards set by the certification. Similarly, cases when organic and conventional cotton were mixed in ginning and spinning mills have also been repeatedly reported.

The main challenge for the company is therefore full transparency, because it is often extremely difficult to ensure that the information received from their supply chain and the certification bodies accurately reflects the reality. Despite their best efforts, Stanley/Stella acknowledge that the complexity of issues linked to different stages of the supply chain makes meeting their own social and environmental standards in 100% cases nearly impossible. The need for alignment of national laws in producer countries with international expectations, particularly in relation to fair wages, has also been highlighted.

Organisational History: Key Challenges & Opportunities

Environmental sustainability and welfare of workers were at the core of Stanley/Stella's vision from its very beginnings. Having founded and sold another profitable company in the same sector, Stanley/Stella's founder and CEO Jean Chabert now wanted to do business differently. However, staying competitive in a market where most businesses are not bound by environmental and social commitments that tend to come at a premium, has been challenging. The fact that one of Stanley/Stella's main competitors is the CEO's previous company is a proof.

The main challenge for Stanley/Stella is full transparency because monitoring the practices across the entire supply chain is extremely hard and time consuming.

Conclusions, Lessons Learnt & Recommendations for Policy

The key lessons learnt from Stanley/Stella experience are the following:

1. Sustainability requires a concerted effort of all relevant stakeholders across the whole supply chain, including brands, manufacturers, suppliers, NGOs, governments and the UN;
2. Final customers need to be well informed about the implications of their shopping patterns and also to act on this information

In terms of recommendations for policy, Stanley/Stella would welcome an introduction of a universal Code of Conduct for the industry that would set minimum prices for products. This would on one hand ensure more responsible practices and would also eliminate the competitive advantage for companies that do not put respect for people and planet at the core of their business. For example, from Stanley/Stella's experience, it is impossible to manufacture a T-shirt for under €2 while ensuring everyone across the whole supply chain has been paid a fair price. Our interviewee Bruno van Sieleghem also highlighted that more political and legal support is needed to influence governments and trade associations in the producing countries, so that more alignment between their national laws and international standards in issues such as wages is achieved.

Stanley/Stella is convinced that manufacturing in Asia is a good thing if done responsibly. This includes respect for the environment and gradual improvement of rights and welfare of employees across the whole value chain. To this end, the focus of the media and NGO

work should extend from CMT (cut-make-trim) factories to spinning and ginning mills and farmers, who often struggle in transition from conventional to organic cotton.

Other comparable businesses in the sector

Within each case study other brands/organisations have been included as comparators, to give a sense of the activity clustered around particular business models, sub-sectors or practices that may use a different assortment of sustainable or circular practices. These have been identified by the research team and not the interviewees.

As a business at the top end of SME scale with a focus on leisure wear, Stanley Stella shares some similarities with Houdini Sportswear.

Houdini Sportswear is a progressive outdoor company based in Stockholm, Sweden. In close collaboration with scientists, artists, designers and adventurers the company pushes the boundaries of how outdoor clothing is made. Together with their customers, they are recycling, renting, repairing and reusing clothing to a new, sustainable outdoor industry.

Houdini Sportswear's ambition is to change the textile industry from the ground up. Clothes are produced, consumed and discarded at an ever-increasing pace which has to stop. With nature as the blueprint for the perfect circular system the company strives towards designing a circular system; to create real alternatives to linear consumption where long-lasting products can be used, repaired and reused and then finally become new resources. They engage with the world based on circular principles, with a collaborative mindset, open source innovation and sharing knowledge, experiences and camaraderie.

Houdini designs products made from recycled and recyclable materials, or alternatively from organic, renewable and biodegradable materials. They also design circular business models extending product lifetime, securing that raw materials remain within the system and enabling product-as-a-service solutions radically improving resource efficiency at the systemic level.

Houdini offer services within rental, repair and second-hand sales that are quickly growing in popularity. 45% of the Houdini spring and summer 2019 collection is completely circular and this number is growing quickly. The company estimates that the upcoming collection for fall and winter 2019 will be 64% circular and the goal is to be 100% circular in 2022.

Resources

Stanley/Stella (2017). Stanley/Stella Social Report, [Retrieved from https://www.stanleystella.com/en-gb/](https://www.stanleystella.com/en-gb/)
<https://houdinisportswear.com/en-eu>
<http://www.goldfingerfactory.com/>

Acknowledgements

We would like to thank Bruno Van Sielegem, Head of Sustainability, PR and Internal Communication at Stanley/Stella for his time.

COSME CASE STUDY 4

Elvis and Kresse (UK)



Case Overview

Key facts:

- **Name of Organisation:** Elvis & Kresse
- **Website:** www.elvisandkresse.com
- **Type of Initiative:** Luxury accessories manufactured from rescued materials; social enterprise with B-Corp certification
- **Sector:** Accessories/homeware
- **Target Market(s):** High-end sustainable luxury
- **Date Established:** 2005
- **Location:** Tonge, Kent, UK
- **Value Chain Stages:** Material sourcing upcycling: design and production, online retail
- **Size:** t/o not given for ideological reasons, it celebrates the wrong metric of success, small business - 22 employees

Key Messages

- Rescue, Transform, Donate is the key ethos of Elvis & Kresse – if they can't do it their way they will not take on a project. Running your own enterprise means you write your own rules and don't have to compromise as long as you can survive.
- No new material is as sustainable as an existing one; by throwing away materials businesses are dishonouring materials and throwing away potential income.
- Sustainable practices and social equity have to permeate every aspect of the business from energy use to employment strategies and customer service.
- Further legislation and actions (such as higher landfill taxes) are needed to deter the dumping of waste and stimulate reuse of resources
- The fashion industry is insular and limited by a lack of creativity and imagination to change its practices – it needs to collaborate with other industry sectors to innovate.

Introduction

Elvis & Kresse is a UK based company focused on diverting waste of many kinds from landfill to repurpose and revalue materials into high quality accessories and homeware. Their flagship material is decommissioned fire-hoses, which were the genesis of the company; they also utilise leather offcuts provided by Burberry fashion house and their waste materials. The products are handmade, many being pieced together in a modular system, enabling the use of small scraps of material. Their market is the luxury accessories sector, with bags competing in quality with companies such as Louis Vuitton, unusually for an upcycled fashion product. One of their most successful products is a washbag made from fire-hose material.

Elvis & Kresse was founded on an ethos of Rescue, Transform, Donate and all their products and practices must conform with this. Since 2005 the company has successfully prevented all London hoses from ending up in landfill sites. They were one of the first UK businesses to be awarded B-Corp certification. They donate 50% of their profits to charitable causes, including donating revenue from the fire hose products to The Fire Fighters Charity. Their business practices include circular and sustainable principles throughout including using green energy in their premises and fair employment practices. Kresse Wesling has been awarded an MBE in the UK and received the Cartier Womens Initiative award.

Sustainable/Circular Business Model & Practices

The business model from the start was selling products direct to consumer from the E&K website, rather than focusing on wholesale and stockists, whose margins are very high. Online sales through their website account for the majority of their revenue, however the business has a small number of stockists in the UK, Australia, Germany, France, Belgium and Dubai. The vast majority of revenue is generated from online product sales from the company's own site. A small minority of the income stems from wholesale, collaborations and consultancy.

The materials for E&K products exclusively derive from industrial and fashion waste material (such as decommissioned fire hose, tea sacks and leather offcuts from fashion products), and they demonstrate how a great deal of value can be added to waste materials through creative imagination. For 1000kilos of waste materials sent to landfill, £410 has to be paid in landfill tax (in UK); but the same volume of waste can be transformed by Elvis & Kresse into products that generate £100,000 in value.

Last year (2018) the company rescued more than 6 tonnes of material from landfill and donated £30,000+ to charity. The company operates as a Social enterprise and has a clear social agenda – it commits to donating 50% of profits to charities and causes. Altogether, they have donated £100,000+ to The Fire Fighters Charity and diverted more than 200 tonnes of waste materials from landfill. They also work with a prison workshop to make packaging, helping to reduce reoffending rates by up to 60% through meaningful and fairly paid work. Other co-benefits include an apprenticeship programme where their apprentices learn several skills including dealing with customers, logistics and every aspect of the business. E&K do not take on unpaid interns. The company also runs hands-on workshops for the public to experience the craft process of modular construction.

The fire-hoses go through a number of processes that E&K evolved to create an attractive luxury quality material. All their waste materials are sourced collaboratively through building partnerships with their materials stakeholders. E&K operates a transparent business with open book accounting.

Organisational History: Key Challenges & Opportunities

The business was founded in 2005 by Kresse Wesling and her partner Elvis based on a chance encounter with the London Fire Brigade. Curiosity about their decommissioned damaged fire-hoses led to a desire to give this hard-wearing material new life. Kresse is an entrepreneur who had always had a fascination for waste, inspired by her Grandparents' generation where waste did not exist, and all resources were precious. She previously worked in a venture capital company in Hong Kong where she "learned about the evils of capitalism". Kresse started Hong Kong's first green business in bio-packaging materials (ahead of its time). When she came back to the UK in 2004 she was appalled to find that 100 million tonnes of waste materials were going to landfill each year. She saw the opportunity to make a difference in waste by focusing on one material (fire-hose) to solve the problem through researching its properties and potential next life. With no specialist knowledge, E&K's first products were simple belts and they learnt the sewing skills and acquired the equipment needed to make bags and other products.

It was very difficult to find workshops or factories to work with the fire-hose material (nitrile rubber) – they approached many people who were working with luxury level goods in the EU, and finally found a workshop in Romania willing to take a risk on working with the material. To finance the minimum factory order of 800 pieces, Kresse pre-sold products in an offline early type of crowdfunding scheme. E&K have never taken any investment and are self-funded. They face the usual business challenges of cash flow, HR, external economic forces, and scaling etc.

A Circular business is harder to operate than a linear one – partnership building takes time, and E&K cannot just go out and buy materials as all have to be carefully sourced from waste.

After a talk in London Elvis & Kresse were approached by Burberry to collaborate on waste, but it took two years to negotiate the 5-year deal to rescue some of the 9 tonnes of leather waste produced every month through the production of Burberry leather goods. A key positive element for Kresse was that there were no constraints (e.g. secrecy) imposed by Burberry on the messages or operations relating to the collaboration.

Lessons Learnt & Recommendations for Policy

Kresse and Elvis were always determined and resilient – Elvis was good at learning new skills to realise their ideas. They believe direct action is the way to respond to environmental problems and see Elvis & Kresse as a productive and joyful form of protest. All people are paid properly – “If we can’t do it the E&K way – we won’t do it”.

Having focused on one waste material initially, Elvis & Kresse expanded their model to encompass a wider range of materials including ex-military parachutes, and use for example old tea sacks as packaging. The products are a result of deep research around each material, and development of new processes where necessary.

Millennials and GenZ consumers have created a new demand in the market – looking for transparency and to trust in the values of the brands they buy from. Attention needs to be paid to the voice of the next generation – as seen in the powerful recent school strikes and protests by Extinction Rebellion.

Although B-Corp certification is valuable, in the opinion of Kresse, their criteria do not focus enough on environmental issues, given the urgency of issues to be dealt with in the next decade due to climate change.

Conclusion

Elvis & Kresse are not typical of usual businesses competing and operating in the luxury fashion sector, but set an example for others in their commitment to environmentally positive and social equity practices in running their business. By revaluing materials others designate as waste, Elvis & Kresse are able to generate sufficient added value and profit to donate 50% and still thrive as a business. They see their philosophy of Rescue, Transform, Donate as a form of disruption and protest, whilst also giving back to society. Others may try to copy their products but “if they only copy the products and do not the values, then ultimately they fail”.

Elvis & Kresse consider their environmental and social impacts as a crucial measure of success beyond the profit motive, in line with B-Corp criteria. They believe this certification needs to be strengthened in its environmental aspects.

A key message for other companies is to consider the full costs of all their materials such as the treatment of all people and materials in the supply chain – factoring in the hidden

costs of modern slavery, utility use, single use plastics, pollution, flytipping etc. From this perspective, true costs of business are revealed.

Other comparable businesses in the sector

Within each case study other brands/organisations have been included as comparators, to give a sense of the activity clustered around particular business models, sub-sectors or practices that may use a different assortment of sustainable or circular practices. These have been identified by the research team and not the interviewees.

Elvis & Kresse's competitors from a customer and market level viewpoint are luxury brands such as Louis Vuitton and Gucci, although these brands do not see Elvis & Kresse as competition.

Swiss brand **Freitag** is an adjacent brand – a company that upcycles and repurposes printed truck tarpaulins into bags. However, Freitag do not operate a profit sharing model and are not in the luxury market but street wear.

Raeburn is a UK womenswear, menswear and accessories brand that upcycles ex-military materials including parachutes, maps and blankets that are carefully sourced. The company also offers consumer workshops and repair facilities, similar to E&K. However, not all products are made with waste/upcycled materials and there is no profit share.

Resources

www.Freitag.ch

www.raeburndesign.co.uk

<https://bcorporation.eu>

Acknowledgements

We would like to thank Kresse Wesling, co-founder of Elvis & Kresse, for her time.

COSME CASE STUDY 5

REDU (RO)



Case Overview

Key facts:

- **Name of Organisation:** REDU
- **Website:** <https://www.facebook.com/redu.org/>
- **Type of Initiative:** Social enterprise
- **Sector:** Apparel from upcycled textiles
- **Target Market(s):** Fast-fashion consumers
- **Date Established:** 2015
- **Location:** Pacurari, 51A, Iasi, Romania
- **Value Chain Stages:** Sources, Manufacturing, Retail
- **Size:** Micro (3/4 employees)

Key Messages

- The brand has developed in the form of a social enterprise that aiming to transform waste into resources in a creative and educational way.
- As a social business, the revenue earned will never be used for the founders' personal purposes but will be invested in developing the idea that works for a common cause: reducing textile waste that negatively impacts the environment. They aim to create jobs and reinvest in the community in the form of campaigns to protect children, animals and nature.
- Every day is a challenge, because of their local context - the market, as well as the consumers - are too little informed. Therefore, their work is primarily to bring to light the impact of the textile industry on the environment.
- On the strength of their experience, in the sustainable fashion field, the REDU team reports the necessity for a policy that is engaged in making the environment supportive to allow sustainable practices to thrive. Therefore, they emphasise the need to sensitise businesses about their impact on the planet through legislation that acts on good practices and rewards (or fines) them through tax actions.

Introduction

According to the interviewees, REDU is the first social enterprise in Romania, where its headquarters and textile workshop are located, to produce new textile products from donated accessories, as well as from the scraps of materials offered by factories and local workshops. The brand team is comprised of Gabriela Stoica, Place Lab Manager, Sergiu Elvys Sandu Prisecaru, Fashion Designer, Anca Elena Gheorghică, Business Co-Catalyst, and Andreea Spataru, Team Member.

The interviewees state that currently their local market is not involved in sustainable practices. This translates into a lack of awareness from the consumers' side. However, according to the experience of the brand, consumers are well prepared for change, and if

informed about the reasons for sustainability are willing to buy products even if they are more expensive.

REDU are currently working in different markets, where sustainability consciousness is more embedded such as Belgium, Holland and Germany. Currently their distribution channels are direct, sales take place in their single shop or online. The brand acquires the materials for its collections from several sources, part of their fabrics come from material scraps offered by factories, leftovers from local workshops' production, or donations from institutions or private individuals.

The manufacturing phase takes place in the brand's workshop where materials are collected, processed and transformed into new products: garments and bags. The brand design is characterized by a casual style for both women and men's apparel.

The size of the company deeply influences the brand's development strategy, which is at this time, short-term, and is reflected in the results that they achieve. These are limited and are not sufficient to consolidate REDU's presence in the market to create a solid advantage over the competition from fast fashion brands.

REDU was selected for the in-depth case study thanks to its innovative and visionary upcycling model, carried out in a region which is not well prepared to support these kinds of initiatives. The region's industrial and infrastructure system is designed according to an old business model and is not prepared for a sustainable change. Its achievements regarding the processes of collection, recycling, reuse, and education are currently ensuring the existence of sustainable development in Romania, that otherwise would not have been reached. REDU is changing how fashion is viewed locally, from an impulsive choice to a conscious one.

Sustainable/Circular Business Model & Practices

The brand is focused on two aspects of sustainability; the environment and society. Through its actions, it aims to redefine clothes, prolong the life of textiles and create new garments, and accessories, from materials that would otherwise be thrown away and increase the negative impact on the environment.

The company's revenues are invested in the development of projects that not only reduce the impact on the environment but also aim to create jobs and reinvest in the community in the form of campaigns to protect the weakest social groups. Specifically, REDU have engaged more than 1,500 people, who donated materials and participated in public events such as its solidarity bazaars, creative workshops, convivial events, or movie screenings. These were organized to raise awareness of the hidden cost of the fashion industry, encourage people to commit to responsible consumption, and create a manifestation of solidarity in the community. A significant amount of the clothes received are donated to socially disadvantaged groups.

Organisational History: Key Challenges & Opportunities

REDU was launched in April 2015 from an idea of a Romanian NGO – "Mai Bine" ("For The Better") as a pioneering project in Iași, financed by the Norwegian Government through the Norwegian Grants 2009 - 2014, within the Green Innovation Funding in the Romanian Industry. Thanks to this support the team were able to implement circular economy practices collecting and reducing the amount of textile waste by transforming it into new products, clothes and accessories, with a positive impact on the environment and the community. Since then they have been economically independent and have made use of only their own resources.

The founders' aims were translated in the recovery of pre-loved materials which were transformed into useful products thanks to the team's background in costume design and

slow fashion. What is not transformed is sorted, cleaned and distributed to disadvantaged social groups or taken to a municipal collection centre.

The main barriers which REDU has faced, and with which they are still struggling, are related to; (1) their business size, which is very small, (2) the local market which is not accustomed to dealing with sustainability practices, (3) consumers' behaviour - whose perception of sustainable products as more expensive is perhaps the greatest obstacle to greener purchasing, and (4) the competition from fast fashion brands which dictate a faster production and consumption model.

They are dealing with these issues through their initiatives which aim to educate the market and the consumers, to bring back manageable time frames in both production and consumption along with trying to scale their business.

Lessons Learnt & Recommendations for Policy

The key lessons learnt from their experiences are related to understanding the timeframes in which their work is requested, as theirs does not correspond to those on which the fast fashion market is currently set. Clothes and accessories are goods that people change at an increasing pace, but REDU's cycles are slower and directly connected to the brand size, which is currently composed of just 4 people.

REDU have achieved a major awareness of their work and its impact, translated via the recovery of used garments and their transformation, as well as donations to disadvantaged people, where product is not perfect but still in good condition, minimizing the final waste. Interviewees also reported how they learnt to engage with customers to educate them on the effect of their consumption.

REDU's efforts to embed sustainability in the Romanian fashion system face the limitations imposed by local policies which is not engaged in supporting sustainability. Therefore, their key enabler comes from abroad (Norwegian government) which supported them through a grant focused on empowering local Romanian organisations which want to adopt sustainability practices to make the local industry flourish.

Based on this experience, the team expresses just one key recommendation, for both local and community policy, which is the need to make businesses aware of their impact on the planet, by acting directly on them through legislation that champions good practices and rewards them (or imposes fines on bad practices) through tax actions. The interviewees also reported that a much-needed support, which would help them to grow, would be a more favourable regulation on the company's duties, as almost 50% of their income is spent in taxes.

Conclusion

Fast fashion is now the mainstream model and is having a negative impact on niche companies that are committed to good practices. This is due to two main reasons: time to market, which is increasingly faster and impossible to manage for small businesses, and costs. In fact, for companies like REDU it is not possible to meet their sustainability standards and fall within the market prices of fast fashion giants. The experience of the brand shows that policies to support a sustainable consumption education that can inform consumers and guide them in the impact of their choices could positively affect the scenario of the European market in terms of sustainability.

Also, there is a need to enhance, through policies that take into account the quality of the practices carried out by these companies, a support that does not necessarily translate into funds but also in more equitable tax policies that take into account the size of the businesses.

Other comparable businesses in the sector

Within each case study other brands/organisations have been included as comparators, to give a sense of the activity clustered around particular business models, sub-sectors or practices that may use a different assortment of sustainable or circular practices. These have been identified by the research team and not the interviewees.

On the European panorama there are several businesses that, like REDU, engage themselves in sustainable practices through the upcycling of waste or pre-loved materials.

Reet Aus Design, an Estonian brand engaged in upcycling practices, was established in 2013. The innovation in the brand is connected to its industrial upcycling method that involves complete lifecycle analysis of the garments. This method allows the creation of a circular flow inside the factory where the waste is re-used as a material in the production of garments. The Reet Aus collection is able to save on average 75% water and 88% energy for each garment made. All the collections are realized according to her own UPMADE® Certification criteria.

Christopher Raeburn is a British designer who is a pioneer in reworking the surplus of fabrics and garments to create distinctive and functional pieces. The brand uses de-commissioned military stock to design limited edition outerwear for both men and women. The garments vary from wool field jackets to nylon parachute canopies. The brand, similar to REDU, deconstructs the original piece and reworks the materials into unique new garments.

The Upcycling Movement, is an Irish collective which develop practices for upcycling what normally is considered waste, active since 2012. Like REDU, their work contributes in keeping items out of landfill and to promote a circular economy. As they focus on the huge volume of wetsuits that get sent to landfill each year, their mission is designing solutions to combat textile pollution as these materials cannot be recycled and are not biodegradable.

See also Case Study 4 **Elvis and Kresse** (UK) and Case Study 7 **Rifo** (Italy)

Resources

<https://eeagrants.org/>

<http://reetaus.com/>

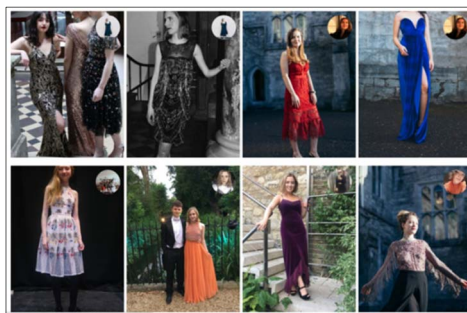
<https://www.raeburndesign.co.uk/>

<https://theupcyclemovement.com/>

Acknowledgements

We would like to thank Gabriela Stoica and Elvis Sandu Presecaru of REDU for their time.

COSME CASE STUDY 6 THE NU WARDROBE (IR)



Case Overview

Key facts:

- **Name of Organisation:** The Nu Wardrobe
- **Website:** <https://www.thenuwardrobe.com/>
- **Type of Initiative:** Peer-to-peer clothing sharing platform
- **Sector:** Clothing / Collaborative Consumption
- **Target Market(s):** Womenswear
- **Date Established:** September 2015
- **Location:** Ireland / UK
- **Value Chain Stages:** Retail
- **Investment-to-Date:** €215k

Key Messages

- Collaborative consumption through clothes-sharing platforms, like The Nu Wardrobe, are essential for increasing the use-life of clothes, reducing garment waste and the significant greenhouse gas emissions associated with fast fashion.
- The Nu Wardrobe platform is centred on extending the use-life of clothes through enabling clothes sharing communities.
- Every time an item of clothing is borrowed instead of bought new, by keeping it in circulation 25% of the resources used in the production of the new item are offset.
- Policy makers can use economic instruments, like tax breaks on rental and sharing models, to de-risk these new business models and accelerate their diffusion.

Introduction

The Nu Wardrobe, a clothes sharing platform where people can exchange their preloved clothes, began life in 2015 as a clothes swapping initiated by two final year students at Trinity College Dublin, Ireland (1). This female-led start-up was created in response to the realisation of the negative environmental and social impacts of the fashion sector and a desire to provide an affordable and accessible alternative to fast fashion.

In 2017, one of the co-founders, Ali Kelly, decided to pursue an alternative career and co-funder Aisling Byrne committed full-time to the start-up funded by Enterprise Ireland's New Frontiers Programme (2). Between 2017 and 2019 the start-up evolved from a clothes swapping service into a clothes sharing platform with communities active in Dublin, Cork and London.

According to The Nu Wardrobe's estimates (based on the London Waste & Recycling Board's (LWARB) resource impact calculator) – every time an item of clothing is borrowed instead of bought new, by keeping it in circulation and extending its use-life you are offsetting 25% of the resources used in the production of the new item it has effectively substituted (3). Since 2017 this collaborative consumption platform which targets young professional women, students and graduates has gone from strength to strength recently securing c. £215k to build a team and grow The Nu Wardrobe offering in Ireland and the U.K. (4) – see *Figure 1 for an overview of the start-ups evolution.*

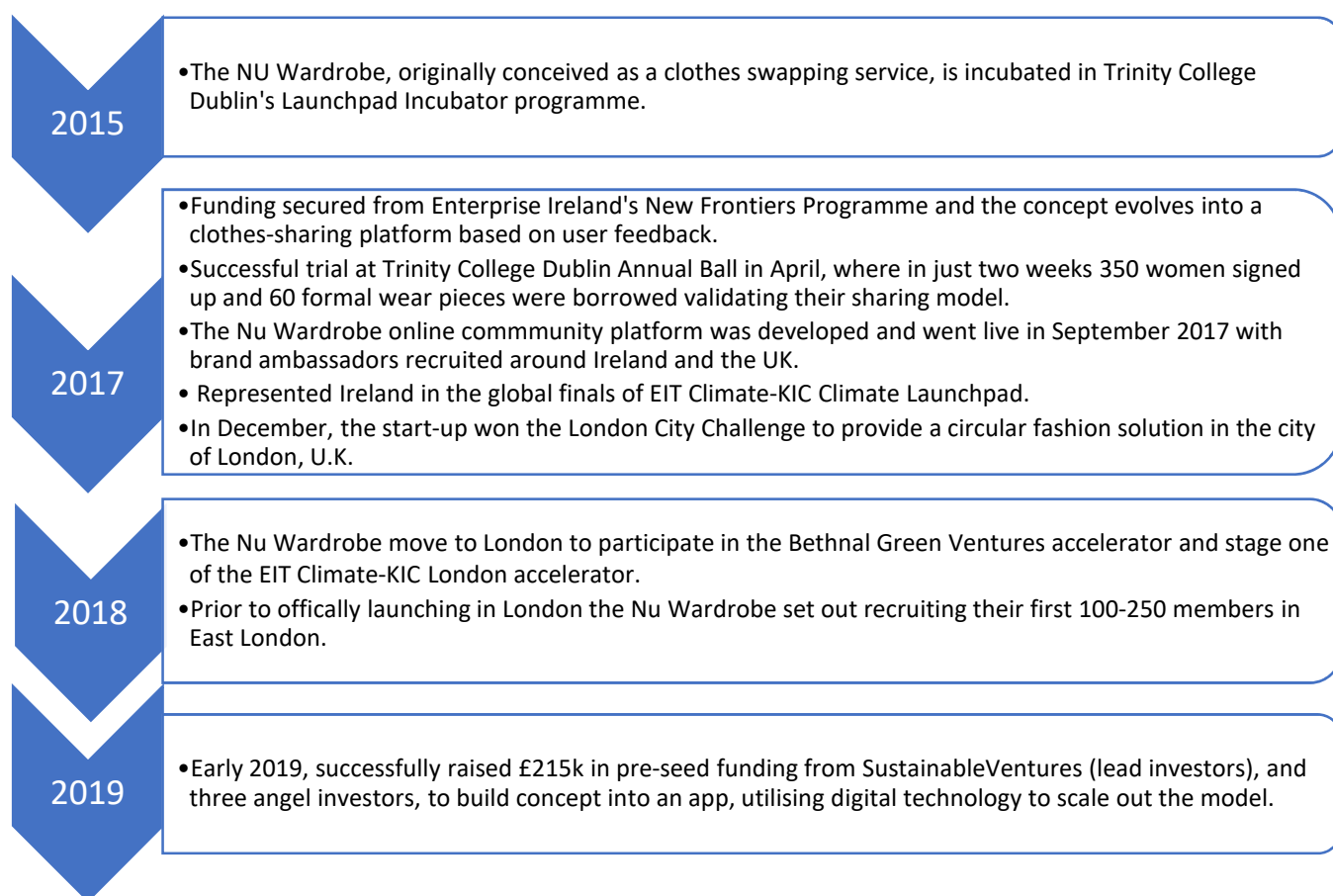


Figure 1: Evolution of The Nu Wardrobe

Circular Business Model

This online start-up targets university students and graduates enabling them to pool their clothing creating a shared wardrobe where they can borrow and lend their much loved but underutilised pieces. Under worn clothing is kept in circulation through a membership-based model where community members can borrow items for a minimum 4 day period facilitating the collection, use, cleaning and return of the item to the owner. Initially the platform charged a borrowing fee of €5 per item (5) but as the ultimate objective is to create clothes sharing communities the start-up is exploring a model whereby members pay a low monthly fee (circa €10 per month tbc) and borrowing is free.

When conducting market research to inform the operating model to underpin The Nu Wardrobe, considered the advantages and disadvantages of adopting a similar model to the Lena Fashion Library in the Netherlands (6) - and other well-known examples like Rent the Runway in the USA (7). Lena Fashion Library, enables users to borrow or buy clothing online or from their flagship store in Amsterdam, and their collections consists of emerging sustainable designers and vintage clothing. At the other end of the spectrum, Rent the Runway, is a high-end US fashion platform which gives women unlimited access to 1,000's of designer clothing items for a premium subscription.

Adopting a similar model to Rent the Runway would require significant investment in inventory and infrastructure to offer a large range of designer clothing meaning the membership fee, required to make it financially viable, would make it out of most students and graduates budgets for a very long time. Lena Library on the other hand, was financially more accessible relative to Rent the Runway, but still required a physical stock inventory and online infrastructure as it is based on renting emerging sustainable labels and vintage clothes.

The Nu Wardrobe initially considered a model similar to Lena Library, given their objective to make fashion accessible and affordable, but discovered through focus groups that users wanted to know what they would do with the wardrobe of clothing they already had. This feedback informed the Nu Wardrobe's decision to focus on scaling an existing behaviour – sharing clothes when they are not in use with friends – into wider clothes sharing communities. As a result the start-up has focused on creating an autonomous scaling model – where clothing are always with users – rather than sitting in a warehouse idle as inventory. The Nu Wardrobe views its role as creating the platform and mechanisms to enable clothes sharing communities to grow organically.

Key Challenges

One of the biggest challenges that Aisling Byrne encountered in the process of securing pre-seed funding for The Nu Wardrobe was not being taken seriously as a viable venture and being written off as a “nice project” (8). Byrne attributes this to mainstream investors, particularly those from older generations, not understanding the circular economy and its financial benefits nor the fact that collaborative business models are increasingly desired by environmentally conscious millennials.

Networking with other sharing based start-ups outside of the fashion sector and getting introductions to investors who understood the benefits of a collaborative consumption business model were vital in overcoming initial barriers to accessing funding. Moreover, Byrne credits securing public funding through accelerators in London (Bethnal Green Ventures and EIT Climate-KIC) combined with prioritising the platform's users' needs (regardless of doubtful investors) as pivotal in enabling her to stick with it. Testing ideas with to users as quickly as possible is also cited by Byrne as central to The Nu Wardrobe's success to date.

Conclusions & Policy Recommendations

From The Nu Wardrobe perspective an enabling environment to accelerate the adoption of circular fashion business models within Ireland and across Europe would include;

- *Economic instruments which incentivise rental and sharing models.* For example in the UK there is a Seed Enterprise Investment Scheme (SEIS) (9) which provides tax incentives to investors to incentivise investment in small and early stage start-ups however, this scheme precludes rental models.
- *Economic instruments which de-risk starting a collaborative consumption based fashion venture.* One example could be providing tax breaks for entrepreneurs paying themselves for the first two years when trying to get a new venture off the ground another could be to make sharing/rental models vat exempt or reduced vat – similarly to examples in Europe like Sweden where tax breaks on repair have been introduced (10).
- *Reducing barriers for women starting new circular fashion ventures:* by providing access to public health insurance in first two years – as entrepreneurs can fall through the cracks as often not officially employed and thus not eligible for free health care. Moreover, incentives should be provided to start-ups who employ women going on maternity leave and returning to work.
- *Dialogues and communities of practice around circular fashion should be facilitated through public funding.* Facilitate spaces for dialogue within the fashion industry to explore how the fashion system needs to change and to enable those within the industry who want to transform the model to get support from, and feel part of, a wider circular fashion movement.

Other comparable businesses in the sector

Within each case study other brands/organisations have been included as comparators, to give a sense of the activity clustered around particular business models, sub-sectors or practices that may use a different assortment of sustainable or circular practices. These have been identified by the research team and not the interviewees.

Additional examples of collaborative consumption models are **Vestiaire Collective**, an online marketplace to buy and sell authenticated pre-owned luxury fashion established in France in 2009 (11); **Chic by Choice**, a UK based designer dress rental website established in 2014 (12) and **Vigga**, a baby and maternity clothing product service system based in Denmark, also established in 2014 (13).

Vestiaire Collective, similarly to Rent the Runway is driven by the objective to increase the life-span of luxury items which often sit unused in owners wardrobes. It's business model differs in so far as it encourages re-use through authenticated resale, rather than rental, of high-end luxury items. Since establishment in 2009, Vestiaire Collective has expanded globally with over 7 million members across over 50 countries.

Chic by Choice, similarly to Rent the Runway, is a leading designer dress rental website in UK and Europe. Where it differs to Rent the Runway is its new „become a lender“ campaign which makes it similar to The Nu Wardrobe as it facilitates increased uses of designer dresses by providing a platform for users to rent out their designer clothes and accessories. However, in contrast to The Nu Wardrobe which creates communities of clothes sharing, Chic by Choice are the physical intermediary between the owner of designer item and additional users with owners sending in items to Chic by Choice for validation before being uploaded onto their platform and subsequently shipped to users.

Vigga, an organic baby and maternity clothing subscription service, is a premium product service system and what differentiates it from other collaborative consumption models is the fact it targets the clothing mothers and babies need during a particular life-stage. Vigga enables parents to lease a basic wardrobe during their pregnancies and for their babies which are returned to the Danish company when they no longer fit/ are of use - to be re-circulated amongst other Vigga members. As of December 2017, Vigga had managed to circulate over 300,000 pieces of clothing with users achieving water savings of 9,9 million litres and reducing CO2 emissions by 185 tonnes through clothes sharing between subscription users.

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Acknowledgements

We would like to thank Aisling Byrne, CEO and Founder of The Nu Wardrobe for giving her time to participate in this research project.

COSME CASE STUDY 7

RIFÒ (IT)

Case Overview



Key facts:

- **Name of Organisation:** Rifò
- **Website:** <https://www.rifo-lab.com/>
- **Type of Initiative:** Srl (Limited Company)
- **Sector:** Apparel, especially knitwear, using upcycled textiles
- **Target Market(s):** Womenswear
- **Date Established:** 2017
- **Location:** Prato, Italy
- **Value Chain Stages:** Sources, Retail
- **Size:** Micro

Key Messages

- Rifò make high quality knitted garments and accessories, using 100% upcycled textile fibres. Transforming old cashmere clothes into a new yarn which is used to craft new warm and soft products. The production process is entirely local.
- With the goal of not having any unsold merchandise, the production process starts only when an order is received. The goal is to create a sustainable and high-quality fashion brand using raw materials entirely upcycled, such as 100% upcycled cashmere and denim. In this way Rifò drastically reduces water and chemical usage and gives discarded clothes a new life.
- Emphasises the need for policy makers to update the laws which currently do not allow companies to engage in circular practices. This could be translated into a regulation that supports the free trading of used clothing, considering them a raw material and not waste. The adoption of this kind of support could create, according to Rifò, a virtuous circle of good practices, aimed at shifting the industry towards a circular system.

Introduction

Rifò was born as a start-up aiming to produce cashmere and wool garments whilst reducing the environmental impact of the production and supporting the local economy of the Prato textile district. All this thanks to a clever mix of creativity and technology innovation. They transform scraps of fabric and old garments into new clothes that maintain the same qualities of original products. The brand team is composed of Niccolò Cipriani, founder, and Clarissa Cecchi, co-founder, and they depend on the support of a team of collaborators, that is currently settling.

The company is based in central Italy, in the city of Prato, where their headquarters are located. Currently, they also operate in Europe (Germany, France, Ireland, Spain and Switzerland), via their online sales channel. They aim to consolidate their position in the foreign market in the future, as the brand revenue comes directly from product sales.

Rifò is still shaping its business model. According to Niccolò Cipriani, the business founder, the current fashion market is very fast evolving, and is changing so fast that it is not feasible and not beneficial to settle a fixed business structure that, eventually, will need to be reviewed. The company needs to be flexible and ready to deal with the market evolution. Today, Rifò is reassessing its business model every two months, to adapt it according to market feedback, in terms of the offer to their clients (products) as well as the logistics of product manufacture (supply chain).

Rifò was selected as an in-depth case study due to its engagement in the adoption of a circular economical model from its inception. The business was born in a fashion context, defined by the interviewees as saturated, and where everyone talks about sustainability and circularity but without bringing these concepts back into their production processes. Out of 100 fashion items produced, currently 40 are sold and 60 are thrown away, therefore Rifò proposed to develop an innovative and sustainable process. Their materials are acquired through three channels: 1) the market of raw and second-standard textiles, 2) the collection of second-hand clothes from NGOs, and 3) the direct online collection of customers' pre-loved clothes.

As the production starts only when an order is received, the final product is already sold and, with this, there is an impact on the whole system, from saving of resources to the minimization of waste. The adoption of these practices, according to the idea that circular economy must also have an impact on cost reduction, allows the final product to have a cheaper price compared to the average market price. This is especially evident in the production of regenerated cashmere garments.

Sustainable/Circular Business Model & Practices

The brand creates benefits for both the environment and society. Their knitwear manufacturing model uses the traditional production technique of "fully fashioned" – known as "la calata" in Tuscany. Fully fashioned is the principal technique to make knitwear, enabling the pieces to be shaped through decreases and increases, without the need for cutting. This technique is an added value to the garment because it requires more time and care in processing, which is reflected in the fit of the final garment.

It is a sustainable technique because compared to cut and sewn manufacture: 1) only the material needed to make a garment is used, as the necessary pieces are produced in their exact shape, 2) the production of textile waste is reduced, and 3) resources are saved. There is no waste in the making up because a special machine, called a linker, makes a chain stitch seam and does not remove any fabric.

According to the interviewees, by using recycled materials, they reduce energy consumption by 77%, chemical pollution by 90%, CO2 emissions by 95% and use of dyestuff by 100%. Rifò also has a positive impact on the Prato textile district community. In fact, Rifò was founded at a time of crisis for the local textile sector, and was able to activate synergies, supporting the knowledge and experience of Prato artisans, which led to virtuous practices and allowed the relaunch of the textile production cycle. Rifò also partnered with social organisations, the AMI foundation, supporting the cause of breastfeeding; and Legambiente for the maintenance of a mountain retreat for children's didactic activities.

Rifò aims to change current unsustainable manufacturing practices through its model: 1) scraps of fabrics are collected and divided by colour, 2) these scraps of fabric are processed into new fibres, 3) from these fibres a new yarn is obtained, and 4) the yarn is used to produce 100% regenerated garments.

Their new 'Made in Italy' garments are developed in the Prato textile district and the "la calata" technique guarantees high-quality results with a minimum waste of materials.

Today the brand is taking on a new challenge, which has proven to be a winning choice for the company, the upcycling of denim - one of the least sustainable fabrics in the fashion sector. Rifò is the first company in the world to be producing a knitwear garment created with 100% recycled and regenerated denim yarn; 97% is composed of cotton, with the remaining 3% comprising unspecified fibres originating from the yarns used for the jeans' seams. Five pairs of jeans are recycled to produce a sweater and only 80 litres of water are used, instead of the 3000 litres the same virgin cotton garment would require. According to the data provided by the interviewees, there is a 97% reduction of water consumption, 77% energy reduction and 95% less CO2 emissions.

Organisational History: Key Challenges & Opportunities

Rifò was born from Niccolò Cipriani's personal experience in Vietnam, where he worked for the AICS- Italian Agency for Development Cooperation. In Hanoi there is a high production of garments which are exported abroad, generally to Western regions. If they do not succeed in selling in Europe the clothes are sent back to Vietnam where they are taken to landfills and incinerators. This involves a huge waste of resources as well as having a dangerous impact on the planet in term of energy consumption and emissions generated, by both the transportation and the incineration. Influenced by his experience, Niccolò founded Rifò, in 2017. His aim is to give a new life to pre-loved and unsold garments, proposing an ethical business model, and a sustainable and circular alternative to the current model.

The business started thanks to crowd-founding, with the Ulule Campaign, which generated 290 pre-orders and 400 purchased products in Italy within a few months. After this first step, they entered into the Nana Bianca incubator in Florence, where they structured their business plan and then founded the current limited company. Today, Rifò is finalizing its last fundraising campaign, after which, the brand expects to be able to stay in business through the sales of their products.

The main barriers that Rifò have had to overcome, and which they are still dealing with, are related to: 1) consumer knowledge on the upcycling concept, which is often misunderstood. People perceive upcycled clothes as of lower quality and, in relation to this, tend to consider the prices of these products too high; and 2) the laws which govern these types of practices are too complex. There is a local community law, then a national one, and then a regional one which must be respected by the companies which work with waste. This complexity is a major limitation to the business.

A policy aimed at incentivising and not at banning or deterring by fines, as has happened with plastic, could be the right means to create an enabling environment for sustainable and circular SMEs in the fashion/textile sector.

Lessons Learnt & Recommendations for Policy

The interviewees reported one fundamental key lesson learnt from their experience, the importance of field work. The founder's experience as an SMEs consultant led him to reflect on the need, in the current market, to combine his theoretical background with practical experience.

Today, a circular economy is being actioned at many levels, from political to management level. But still laws do not allow companies to engage in these practices. A regulation that favours free trading of used clothing, which are considered textile waste, but which are also a raw material, would greatly favour the circular economy. The application of this type of support system could create, according to Rifò, a virtuous circle of good practices aimed at adopting a circular system.

Conclusion

Rifò has established itself, in the international textile industry, as an innovator in terms of the sustainability of its production processes and circularity practices. Thanks to the recovery of traditional processes and the social benefits that their actions have brought in their local textile district. Today the major challenges for the company are related to: a) the market's consciousness about upcycling practices, regarding quality and impact of the materials, b) the complexity of the legislation, which governs the textile/garment waste field, and c) the comprehension of a "fluid" global fashion market by the company and its ability to position itself within it.

Other Comparable Businesses in the Sector

Within each case study other brands/organisations have been included as comparators, to give a sense of the activity clustered around particular business models, sub-sectors or practices that may use a different assortment of sustainable or circular practices. These have been identified by the research team and not the interviewees.

A Spanish textile company committed to sustainability and circular fashion, **Hilaturas Ferre – RECOVER** develops and manufactures highly sustainable super-recycled premium yarns, for all types of fashion, accessories and home textiles. RECOVER is their satellite company specialized in upcycling different materials (cotton, PET bottles, Nylon 6.6, wool) to produce new yarns. Like Rifò, this business adopts a circular system, their yarns can flow through the Upcycled Textile System for several lifecycles as they enable the production of long-lasting, high-value products in each successive reuse.

Arela is a Finnish brand that uses natural materials, of high quality, including cashmere, to ensure the longevity of garments and their collections, which are produced by professionals in Nepal, Latvia, China and Finland. An important characteristic of the brand is the brand's commitment towards the customer and the product after purchase, offering a unique care service for their knitwear. Through the 'For Good' service, which encompasses a concept of products, services and events that aims to extend the life of clothing, increasing awareness of clothing materials and maintenance, and to discuss the meaning of clothing and consumer choices.

Also see Case Study 4 **Elvis and Kresse** (UK) and Case Study 5 **REDU** (Romania).

Resources

<https://www.rifo-lab.com/>
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<https://www.hifesa.com/en/>
<https://www.recovertext.com/>

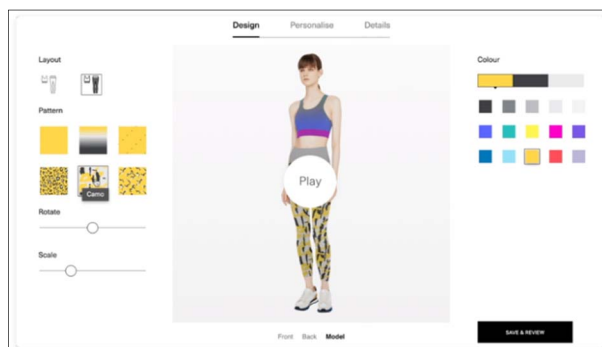
Acknowledgements

Thanks to Niccolò Cipriani of Rifò.

COSME CASE STUDY 8

UNMADE (UK)

Case Overview



Key facts:

- **Name of Organisation:** Unmade Ltd. Interviewee co-founder Ben Alun-Jones
- **Website:** www.unmade.com
- **Type of Initiative:** Digital Manufacturing Software company
- **Sector:** Knitwear and Sportswear - Womenswear and Menswear
- **Target Market(s):** B2B: Brands, manufacturers and retailers
- **Date Established:** 2013
- **Location:** London
- **Value Chain Stages:** Direct to consumer sales, Design and manufacturing software systems for on demand manufacturing
- **Size:** approaching £1million revenue, 31 employees

Key Messages

- Unmade aims to disrupt the current fashion manufacturing system and has a long term vision (> 10 years) to end mass consumption, overproduction and waste in the fashion industry
- Unmade aims to make a radical shift in the supply chain to pure on-demand manufacturing - on a mass scale - i.e. mass customisation on demand.
- Unmade works across every part of the fashion business - design, manufacture, logistics, sales
- Unmade aims to create more meaningful products for the consumer that will be kept and worn for longer. They aim for the industry to sell less overall, but the product has to be high quality and what the customer wants to own.

Introduction

Unmade is a global fashion software company, based in London, driving innovation through customisation and delivering an end-to-end digital solution for on-demand production at scale. Unmade works with major fashion, lifestyle and sportswear brands to foster a new level of customer experience through customisation.

Unmade started with a desire to reimagine both the design and manufacturing processes within the fashion industry using digital solutions, so brands only make what is actually sold, resulting in minimal waste. They aim to move the industry to pure on-demand - on a mass scale.

Unmade has evolved their business model significantly over the last few years. Initially selling individual knitted sweaters direct to the consumer via in-house production they now operate on a subscription model selling software licences to their collaborating brands and manufacturers.

Unmade through their innovative software developments are linking digital production technologies such as industrial knitting and digital printing with design templates for production achieving large volume efficiencies in small batches and in individual customisation. They are therefore achieving the long- desired goal of mass customisation ie single item and small batch production at the same or lower costs than the large, speculative volumes of mass production, that generate much waste from overproduction.

Sustainable / Circular Business Model & Practices

Unmade's current business model is based on selling subscriptions for their proprietary software to large fashion and sportswear companies, that enables a fully digital and integrated supply network connecting everything from design all the way to production. They work with UK and international brands including previously Johnstons of Elgin (knitwear Manufacturer in Scotland), Farfetch (online sales platform) and Opening Ceremony (fashion brand) and currently partnering with Rapha Sportswear

The business model is based on demand-led fashion so products are only made to order according to customer demand. Unmade believe consumer driven production can drive sustainability and create more meaningful products that will be worn for longer. There is a need for more research to demonstrate this but Unmade's customers have seen a drop in customer returns and individuals have anecdotally reported Unmade customised sweaters as their favourite garments.

Organisational History: Key Challenges & Opportunities

Unmade was founded in 2013 by Hal Watts, Ben Alun-Jones and Kirsty Emery, all of whom met while at London's Royal College of Art. The three founders have complementary expertise – Kirsty a fashion and knitwear designer, Ben an interaction designer and Hal a former mechanical engineer and now Unmade CEO. Ben and Hal previously ran a successful design consultancy that provided the initial finance to start Unmade (originally known as Knyttan). They also benefited from a 3 month technology start-up programme run by US-based company TechStars, in return for a small percentage. Although this was a high price in the long term, this support helped Unmade package the business into an investable prospect, and also assisted the founders in learning how to manage themselves and their team as it grew, and Hal in understanding his future role as CEO. Two rounds of investment have been secured with a third due, not based on profitability or garment sales, but the rapid growth of the new subscription business model and throughput in the system.

For the first 3 years Unmade operated a direct-to-consumer customised knitwear business model: selling sweaters and scarves designed by collaborating fashion designers (who earned royalties). Their groundbreaking technology and interface allowed the customer to manipulate, using a tablet touch screen, a highly realistic visualization of the sweater's colour patterns to create a unique variation, placement, and scale, of any current design. The software linked the design directly to a Stoll industrial knitting machine operated in-house within Unmade's studio. This iteration of the business gained a great deal of attention, and in 2016 was shown in Selfridges' London flagship Bright New Things annual showcase, complete with in-store knitting machine, producing sweaters in 90 minutes. The early customised knitwear business demonstrated the ability of Unmade's digital platform and technology to seamlessly link customised design and on-demand production. This enabled the company to attract venture capital to build the business.

Unmade then changed to a different model, becoming a service business licencing their software to large clothing brands. This aims to facilitate a future distributed design and manufacturing fashion system where all clothing is made on demand in smaller batches, in response to local or regional customer requirements; where no stocks are held and everything that is made is sold. This shifts the industry from a design/make/sell model, to a system favouring design/sell/make. The latest collaboration is in custom-printed team sportswear with Rapha Sportswear, enabling small batches (minimum 5) of team-branded clothing to be designed and produced at the same or lower cost than mainline garments. Unmade also sees a future where design is undertaken in a flatter manner by

more people within a company, potentially based on style guides with local or regional variations.

Unmade now has a diverse team of 31 staff comprising several disciplines including software development, design, fashion and clothing production. The company is about to announce further investment which will double the staff. The challenge here is to scale up operations, hire the right people and organise themselves internally.

Key enabling factors, apart from finance, include location in London and access to cheaper studio space and other key support by Somerset House and Makerversity. This, coupled with key exposure from press and influencers, led to invitations to give talks etc. and enabled key access to a high level networks.

Challenges partly overcome include “knowing what to do next“, and how to create value for both the customer and Unmade. However their vision of disrupting the industry is long term (initially they thought it would take 3 years), and their business, like many start-ups, has not yet made a profit.

More formal mentoring schemes would have been beneficial to the development of Unmade’s business (and other start-ups) at the early stages.

Lessons Learnt & Recommendations for Policy

Key lessons for Unmade’s internal operations include learning when to accept expert advice (or not), and learning to question assumptions. Unmade learnt to be comfortable in making mistakes and aim to generate an environment for staff where a certain degree of taking risks and making mistakes is ok – creating space to play and innovate, otherwise nothing will ever be changed. An environment of trust has to be created both within the company culture (staff have to trust the managers) and managers have to give staff freedom to experiment (within approved budgets).

Developing trust, openness and transparency is also crucial for working with external customers and clients.

On a wider level, the value of multi-disciplinary innovation needs to be further recognised – not necessarily creating something new but creating better ways of doing something, for example as Unmade have shown - building connections between existing technologies.

On a policy level it is urgently required that a date be set when it is no longer acceptable for businesses to operate in a heavily carbon intensive manner: setting a carbon tax would create a necessary rapid shift in business practices towards circularity and more intelligent use of resources; similar ambitious targets need to be set to deal with management of waste and maintaining biodiversity.

Conclusion

Unmade has carved out a unique space for its end-to-end digital technology across the full range of the fashion supply chain from design to retail, building on and linking existing digital technologies such as industrial knitting and digital printing to a customised offer for consumers, brands and retailers. Their customisation and on-demand models of individual and small batch production enables a radical shift from design/make/sell to design/sell/make, creating high engagement and value for the customer and eliminating excess overproduction. Unmade further envisages a more distributed model of design and production made possible by utilising a fully digital supply network and on-demand manufacturing, replacing trend-driven and speculative production.

Many processes in the fashion supply chain remain manual and analogue, but the Unmade case demonstrates that customer driven manufacturing capitalising on digitisation can be as cost effective as mass production.

Other comparable businesses in the sector

Within each case study other brands/organisations have been included as comparators, to give a sense of the activity clustered around particular business models, sub-sectors or practices that may use a different assortment of sustainable or circular practices. These have been identified by the research team and not the interviewees.

Although others have worked with a mass customisation model for example **NIKE ID** footwear, Knyttan/Unmade created a unique end-to-end digital production, initially by hacking proprietary knitting machine software.

There are others working on specific aspects of the supply chain but they believe no other competitors cover so many areas of the supply chain as Unmade.

Acknowledgements

We would like to thank Ben Alun-Jones of Unmade for his time.

COSME CASE STUDY 9

RE:NEWCELL (SE)



Case Overview

Key facts:

- **Name of Organisation:** re:newcell
- **Website:** <https://renewcell.com/>
- **Type of Initiative:** Recycling Industry Innovation
- **Sector:** Textiles (cellulosic)
- **Target Market(s):** Fibre manufacturers
- **Date Established:** 2012
- **Location:** Cardellgatan 1, 114 36 Stockholm, Sweden
- **Value Chain Stages:** Materials production and end-of-life recycling
- **Size:** Small

Key Messages

- re:newcell is a Swedish pioneer in the fashion and textiles recycling industry. The company was born in 2012 from the collaboration between a team of academic researchers. Through their partnership they develop an innovative technological process for chemical recycling of cellulosic based textiles, this allow them to turn used cotton and viscose into new biodegradable pulp, to obtain new fibres, new yarn, new fabrics and new garments.
- Following the growing demand for re:newcell pulp from the fashion industry, the first re:newcell plant opened in Kristinehamn, Sweden in 2017. With this very first plant they succeeded in verifying the technology on a larger scale. They tested lots of parameters such as raw material fibre composition, dyestuffs, and contaminants. They optimised process parameters based on learnings and further developed the process to increase efficiency, robustness and quality. The demo plant is used to validate the technology on a larger scale but also as a platform for collaboration and building new knowledge.
- In 2017, the company received a major investment from H&M Group that has not only brought an economic benefit but has also given the company visibility and credibility in the fashion industry.
- Thanks to the experience acquired within the circular fashion field, they highlight the need for (1) policy to financially support new innovative companies as there is a lack of willing investors in this sector; (2) the adoption of incentives for recycling practices such as reduction of taxes and encouraging fashion industries through policies to use recycling materials, supporting the collection and sorting of pre-loved materials; (3) streamline grants procedures because for small companies it can be difficult to deal with the bureaucratic process involved in these tenders.

Introduction

The re:newcell team is composed of researchers, who operate in the chemical sciences and engineering field from KTH, the Royal Institute of Technology in Stockholm, and business and management professionals from international business schools. They had been researching more efficient ways of producing bioethanol by finding a new way to decompose cellulose. As work progressed, they understood their method could be successful in decomposing the cellulose in cotton and viscose. They are convinced that this could be the key to recycling textiles on a massive scale and make fashion sustainable.

The company is based in Sweden and they are currently working in Europe (Germany, Austria), but also in India, Indonesia, and China. China is the biggest market in which they operate and is also their major client. Currently the main revenue for the company comes from sales of pulp for regenerating cellulose for the creation of new fibres and textiles.

Re:newcell's business model is based on a circular set up. The company buys the raw material, refines/converts it, and then sells their pulp. They pay low prices for the raw materials from pulp producers, from pre-consumer surplus/offcuts from textile companies, and from post-consumer collected garments. This is a win-win model if producers or brands provide or donate raw materials, which they consider as waste in their own business model, they can then get the textile for a minor cost and this is reflected also on a garment's final price, which can have a positive impact on sales.

In 2017, the company received a major investment from H&M Group that currently supports their development and is also giving them visibility on the market.

The originality in their model resides in their exclusive use of waste to produce the equivalent of a virgin material. The revolution in re:newcell's practice is in the fact that their final product does not suffer a downgrade in fibre quality. If virgin wood resources are compared with re:newcell cellulose fibres, there is no drop in quality.

Sustainable/Circular Business Model & Practices

The main sustainability and circularity benefits come from re:newcell's use of waste instead of virgin materials; through their business model they contribute to the avoidance of deforestation practices.

In 2017, Stella McCartney produced a report that compared 10 different scenarios hypothesizing the use of sustainable viscose. Re:newcell was scenario no.5. The report explained how their production has an impact on climate change, for example to produce 1 Kg of viscose fibre from re:newcell pulp the emissions of carbon dioxide were reduced to -2 Kg CO₂e, against the average 6 Kg produced by the current industry model.

Re:newcell's sustainable business is focused on minimising their impact on the planet, especially on land use. This is reflected in their production practices which only use green energy, they are consciously engaged in safeguarding wildlife, and no pesticides are used. Compared to virgin cotton fibre production, their model reduces the use of water by more than 90%. Significantly, they only use half the energy resources compared to polyester fibre recycling practices.

Organisational History: Key Challenges & Opportunities

Re:newcell was founded in 2012 by a group of researchers from the KTH, the Royal Institute of Technology, in Stockholm. They start from an idea for solving the problem around Fashion waste. At that time, they addressed the need to bridge the gap between the high demand for cellulose fibres and the huge amount of cellulose waste produced by the industry. The team together with a family-run firm, who had previous experience in the bio-economy field, founded a small research-based company.

The first prototype, the well-known yellow dress (pictured), was realised in 2014. The yellow dress was made out of blue jeans that were recycled with re:newcell technology. It was the first garment in the world to be made from chemically recycled post-consumer used textiles. It was also the first re:newcell production of a fully recycled garment, soon to be followed by other dresses, a t-shirt, children's pyjamas and scarves. Two years later six more re:newcell garments could be seen on the catwalk during the Berlin Ethical Fashion Week.

An initial proof of demand from the market for this kind of product, came from the direct experience of one of the founding members in the cellulose pulp and recycling industry.

This joint venture between the academic and commercial world - people with an idea and the competences for its future development - was supported by a team with the financial resources necessary for realising their vision. In particular, the financial support has been crucial.

Now the partnership with H&M is enabling re:newcell to grow. The presence of an industrial partner who knows the value chain, and has an influence on the market, allows re:newcell to enter in this market and give them visibility and credibility in the field.

The previous and current challenges for the business overlap and are concerned with regulatory issues related to the hybrid nature of the company, which is unique of its kind. re:newcell works in the field of pulp production, which is mainly related to the wood industry rather than the fashion sector. This has always been an issue as it means the profile of the company is not aligned either to the wood industry, of course, or to the fashion industry, resulting in difficulties in positioning the company in a relevant market. Legislation is also a barrier as the regulations determining the current market system need to be updated according to new circular business models. Other barriers are related to specific technological aspects needed to develop their production process further, which we were not able to go into further in the interview for reasons of confidentiality.

Lessons Learnt & Recommendations for Policy

The main lesson learnt is to be able to present re:newcell's idea in an attractive way which can make people interested in investing in the business, but also the necessity to secure industry support. Further learnings involve understanding the importance of networking to gain credibility in the fashion industry at an early stage; and the importance of having the competences and previous scientific knowledge from the inventors.

The key recommendations for policy are related to financial support to new and innovative companies, as there is a lack of willing investors in this sector. This can negatively influence the future of promising commercial initiatives.

Looking to re:newcell's specific market, there are many ideas about how to incentivise better recycling practices, such as reduction of taxes; encouraging fashion industries through policies to use recycled materials; and supporting the collection and sorting of pre-loved materials. On this last suggestion, the EU is starting to support this through forthcoming legislation that will require the compulsory separate collection of textiles from general waste. In addition, policy can have a crucial role in the further development of companies through EU grants, but for small companies it can be difficult to deal with the bureaucratic process involved in these tenders.

Financial support specifically designed to incentivise circular practices/models is required from the EU. Finance for scaling up is vital for this type of business initiative as private investors are not willing to support new business models which they are not accustomed to. The interviewees are aware that enormous sums of money are invested by Institutions for the starting phases of these projects, what is missing is concrete support

for the next phase of development and structuring that is fundamental for the survival of these companies.

Conclusion

Re:newcell has managed to establish itself in the textile industry as an innovator thanks to its pioneering patented chemical recycling processes and the expected benefits that their actions will bring to the sector. Today the major challenges for the company are related to (a) the bureaucratic aspects encountered when opening their factory - a series of permits and complex steps were required, due to the fact that their company is a novelty compared to the current market, and (b) the uncertainties related to the lack of investors who can understand the potential of the company without having tangible examples of businesses with which to compare the project, as re:newcell do not fit into the regular business operations and models.

Other comparable businesses in the sector

Within each case study other brands/organisations have been included as comparators, to give a sense of the activity clustered around particular business models, sub-sectors or practices that may use a different assortment of sustainable or circular practices. These have been identified by the research team and not the interviewees.

Several companies are working in research and development in chemical recycling. **Infinited Fibre** in Finland have developed a regenerative technological process which turns textiles, cardboard and agricultural waste into new cellulose natural fibres. Like re:newcell, their chemical process allows the reduction in use of new virgin materials, transforming waste into resources for low environmental impact, reducing costs, producing a new high-performance fibre, and securing raw material availability. The business is at a much earlier stage of development than re:newcell.

Smartfiber AG, based in Germany, has patented a production process capable of incorporating natural additives, such as zinc or seaweed, into cellulose fibres, produced under the brand names Seacell and Smartcell by Lenzing AG in Austria. These textiles have a beneficial effect on contact with the human body, certified Oeko-tex 100. The production happens in a closed circuit which results in no chemicals waste to dispose of.

Worn Again Technologies, founded in 2005 by Cyndi Rhoades in UK, turning disused textiles into new and desirable garments/accessories. They have since developed a process which can recycle textiles at the molecular level. They aim to develop a solution that could turn both pure and blended polyester and cotton textiles back into a virgin equivalent, convenient, raw materials for the clothing industry.

Swedish Stockings, founded in 2014 by two Sweden entrepreneurs, Swedish Stocking's pantyhose are produced from both pre and post-consumer recycled nylon waste fibers such as Econyl™ by Aquafil. They collect old hosiery which is recycled for filling materials.

Resources

<https://infinitedfiber.com/>

<http://www.smartfiber.de/en/home/>

Acknowledgements

We would like to thank Harald Cavalli-Bjorkman of re:newcell for his time.

COSME CASE STUDY 10

ECOALF (SP)



Case Overview

Key facts:

- **Name of Organisation:** ECOALF
- **Website:** <https://ecoalf.com/en/>
- **Type of Initiative:** Clothing Brand with B Corp™ certification
- **Sector:** apparel, shoes, accessories
- **Target Market(s):** various
- **Date Established:** 2012
- **Location:** Madrid, Spain
- **Value Chain Stages:** sources, production, marketing, retail
- **Size:** Medium

Key Messages

- ECOALF is a Spanish brand which was created as truly sustainable thanks to the integration of breakthrough fabric recycling technologies which allow them to create clothing and accessories made completely from recycled materials, with the aesthetics and quality of those created from virgin materials.
- ECOALF's core is sustainability, according to the brand motto "BECAUSE THERE IS NO PLANET B". They aim to minimise their impact and lead by example for other businesses. Using waste resources as a raw material allows minimisation of both the consumption of the planet's limited resources, and waste production and disposal.
- The company is at the forefront of the diffusion of sustainable practices. This commitment is reflected in the activities promoted by the ECOALF Foundation, in environmental campaigns that are not just story-telling actions, but that directly involve the brand in the development and adoption of eco-compatible practices. In addition, the brand promotes educational talks, in schools and universities, to raise awareness among consumers, especially young people, of their impact on the planet.
- The interviewee believes that policy can enable an environment where sustainable practices can flourish. This can happen through policies which (1) guarantee the appropriate timescales in production and (2) educate the future generations in sustainability/circularity.

Introduction

ECOALF was founded by Javier Goyeneche, in 2012. ECOALF is based in Spain and the brand has opened four stores in Spain and one in Germany. Also, through their online shop they operate worldwide.

Today the company can count on a team of highly committed professionals in the sector, including people from design, R&D, sales and general management.

The brand creates new garments from recycled materials with the same quality and design as those produced with virgin materials.

The ECOALF business model is structured according to the idea of never compromising. Therefore, their research and experimentation are realised coherently with the brand values of sustainability and quality, no matter if this means an increase in development times. The company conducts extensive research into recyclable materials that can be used in the fashion industry, they select the proper raw sustainable/recycled materials, and then develop the technology and products around them.

ECOALF are currently working with recycled plastic bottles, recovered from the bottom of the ocean, recycled Nylon, recycled cotton, recycled wool, and recycled used tyres. The non-organic materials are treated in the laboratory and processed to obtain a state of crystallization. The polymers obtained are used in the production of the fabric. A special mention should be made of their innovative tyre recycling technology that took 2 years to develop to make the brand's flip flops. They also use bio waste such as coffee materials.

As stated by Javier Goyeneche, "ECOALF has not invented recycling and we do not build facilities, we work with people who are already doing the recycling. In terms of the ocean project, we have pushed our R&D very far; to create our fabrics, we need a very good level of polymer, we need a level of contamination per million particles below 40, and what we see in the ocean is above 300 because the sea, the salt, and the sun and time all damage the plastic. So we had to work intensively to acquire a polymer of the quality that we needed" (THE COFFEES OF THE SECRETARY-GENERAL: Javier Goyeneche, 19 Oct 2016).

The company has established itself in the world's fashion scene, despite its small size, for its innovative approach to sustainable production practices. It is the first Spanish fashion company to be awarded B Corp certification.

Nowadays, ECOALF collaborates with 500 Spanish fishing boats in eleven harbours and collects around a ton of waste per day from the Mediterranean Sea. This waste, if not collected, could stay on the seabed for more than 400 years and end up in the food chain. From this waste, an innovative sustainable eco-yarn is created, 70 plastic bottles are needed to produce one metre of yarn.

The ECOALF Foundation has managed to involve more than 3000 fishermen, in 39 ports, who have collected more than 400 tons of trash from the bottom of the Mediterranean Sea. This initiative has now been replicated in Thailand.

Sustainable / Circular Business Model & Practices

The company revenue comes from the sale of their products, through three sales channels, wholesale (ECOALF is distributed in over 7 countries aprox. 300 point of sales), in the five ECOALF stores, and on-line - through the brand website.

ECOALF and its Foundation were born with two main goals, 1) to work in the oceans, acting against plastic pollution and 2) to invest into education.

According to the company ethos and goals, ECOALF is engaged holistically in environmental causes carrying 'Upcycling the Oceans' initial plan with support from the European Community (Upcycling the Oceans, Upcycling the Oceans Spain, Upcycling the Oceans Thailand). Moreover, as education is considered one of the most important drivers for the development and adoption of sustainable practices, the company works on

implementing a sustainable education not only for customers but for future generations thanks to their commitment to schools and universities.

ECOALF is the first Spanish brand to be certified B Corp™. They are meeting the highest standards of overall social and environmental performance, transparency and accountability and they are using their business influence to solve social and environmental problems.

ECOALF mission is creating recycled products with the same characteristics, in terms of attention to quality, design and technical properties, of the ones produced with virgin materials. The team manages the full process from waste collection to recycling technologies, manufacture, design and retail. This allows the company to be completely transparent in its work.

However, the organic materials, like cotton and wool, are mechanically recycled through specific equipment and processes. The coffee waste is treated and converted in master batch, being encapsulated during a heat process into a carrier resin which is then cooled and cut into a granular shape, that is processed to realise the yarn. For the company this phase of research and development is fundamental and videos have been made to explain their processes, in detail but in a simplified way.

The fabrics are developed in partnership with specialist manufacturers around the world. ECOALF operates several joint ventures globally (Portugal, Spain, Philippines, Taiwan, Korea, Mexico, Japan) to collect and process waste into fabric and components with the highest recycled content available in the market. This is happening according to Goyeneche's rule: *"manufacture in the same place where you recycle"* (El pais, 24 Oct 2014).

Their collaborators include; 1) ECOEMBES, the company responsible for collecting the plastic, in Spain; 2) the HAP Foundation; 3) the ports from the provinces of Castellón, Alicante, Girona, Barcelona, Tarragona, Valencia, and Catalonia amounting to a total of 441 sea trawlers, for the Upcycling the Ocena Spain project; 4) the Tourism Authority of Thailand; 5) the company PTT Global Chemical Public and 6) different fishermen's associations, environmental NGOs, scuba diving clubs, and other local entities involved in cleaning up the beaches, for the Upcycling the Ocean Thailand project.

Also, since 2013, ECOALF has created various designer and retail collaborations in the sustainable fashion field including with Barneys NY, Cool Hunting, Ekocycle, Sybilla and Felder Felder.

Organisational History: Key Challenges & Opportunities

ECOALF was born from the founder's experience and understanding of the negative effect that fashion has on the planet and its limited resources, because of its production practices. Raising awareness of this impact drives the brand to commit itself to contribute positively to the sustainable development of fashion and to reduce pollution through its practices.

Javier Goyeneche was already the founder and owner of a successful Spanish brand specialized in contemporary fashion handbags and accessories. As stated by Goyeneche, in 2016, *"Unfortunately we have not been helped by any administration so far, in any form of tax breaks or incentives. We often talk about how we can incentivise companies to do things in a different way. It would be great for companies starting out and doing similar things to be getting tax deductions or financing. We tried getting funding both in Spain and in Europe but nothing happened so all the funding was raised privately"* (THE COFFEES OF THE SECRETARY-GENERAL: Javier Goyeneche, 19 Oct 2016).

In 2015, they were funded, for their project of cleaning the oceans, by EASME, the European Union executive agency for SMEs in charge of Enterprise Europe Network, COSME, and other programs. Through a HORIZON 2020 project, UPCYCLING THE OCEAN, in June 2015, they succeeded in raising 50k euros.

Today the company is able to sustain itself with its own sales, but incentives and grants could of course allow the continuation of its work. They are supported by other external actors due to the brands environmental projects that, as per OCEANETS, supported by the EU, which aims to develop an ICT tool to prevent fishing gear loss and optimise the recycling technologies to produce high-quality fabrics from plastic nets.

When they started ECOALF, one of the main problems was the brand's association and perception as a recycling company which had negative connotations for the products' quality. Also, the company was based in Madrid where recycling practices were poorly developed, as were technological innovation which lagged behind compared to other countries. This drove the team to travel between Europe and Asia, to learn and study the most advanced practices for developing their fabrics.

ECOALF are currently facing the unsustainability of the current fast fashion production system. As they have an internal production policy which aims to guarantee the product higher standards as well as the safety of their workers, they are not able to keep up with the current market speed.

Lessons Learnt & Recommendations for Policy

Key lessons learnt from ECOALF experiences are related to the necessity for their processes to be coherent and transparent in line with the brand value. This gives them the credibility and base to establish themselves on the market.

As stated by the brands' founder, it is important for businesses to affirm themselves as innovators because today, in all sectors, there are already those who stand out for their good practices. What is needed is to differentiate in terms of innovation, this is fundamental to establish a successful business. In addition, investing in innovation is crucial for a brand's survival (Next Education, 5 Aug 2015).

ECOALF indicated the necessity for policy to guarantee adequate timescales in innovation and production. In their experience, this means enabling brands to meet and respect high standards in quality of both final product and working practices, according to market demands and timing, enabling an environment where sustainable practices can flourish. The current fashion sector is still set on the unsustainable fast fashion timeframe. Therefore, policy can act on this issue through legislations which support a fairer system in terms of product quality and production time.

ECOALF also report a gap in consumer knowledge about sustainability and circularity. Policy can have a major role in educating the future generations on these topics.

Conclusion

ECOALF standards, according to its B-Corp certificate, are comprehensive, transparent and verified. The company is legally required to consider the impact of their decisions not only for their shareholders, but also for their stakeholders. Through its actions, ECOALF has become a pioneer and a sector leader in creating the first generation of recycled fashion products with the same characteristics as non-recycled ones. This is possible thanks to the continuous activities of research and development which aim to maintain a very high standard in the recycled polymers characteristics which is reflected in the final fabric and product quality.

ECOALF is a worldwide exemplar for companies which want to engage in sustainable fashion. This vocation to be a driver for good is reflected in all its processes, products, projects, and campaigns which are a reference model for both other businesses and for customers to be influenced by its example.

Other comparable businesses in the sector

Within each case study other brands/organisations have been included as comparators, to give a sense of the activity clustered around particular business models, sub-sectors or practices that may use a different assortment of sustainable or circular practices. These have been identified by the research team and not the interviewees.

STOP! Micro Waste is a German NGO founded by LANGBRETT, a group of surfers and nature lovers. Like ECOALF, they raise awareness especially about microplastic pollution through educational activities. Their Academy is the means to share their research findings, experiences and scientific papers, and through their Training-the-Trainer program they educate school children and company representatives.

The team developed THE GUPPYFRIEND WASHING BAG, a consumer product for clothes washing, which is a scientifically approved solution to fighting the microplastic pollution in rivers and oceans, produced from the huge amount of plastic fibres synthetic textiles generated by washing machines.

Riz Boardshorts is a British sustainable swimwear brand for men founded in 2009. Like ECOALF, their products are crafted from sustainable 100% recycled polyester and recyclable fabric as well as being digitally printed in the UK using earth friendly inks. They have developed a pioneering model, called Rizcycle, which allows customers to return their old swim shorts for a discount off on their next pair. Riz Boardshorts have recently been awarded B Corp certification. Their goal is to be 100% circular by using recycled polyester swimwear made only from reclaimed ocean waste plastics.

Resources

<https://ecoalf.com/en/p/recycled-materials-18>
<https://www.centexbel.be/en>
<https://cordis.europa.eu/project/rcn/197366/factsheet/es>
<https://www.crunchbase.com/organization/ecoalf#section-overview>
<https://ec.europa.eu/easme/en/oceanets-technological-approaches-circular-economy-solutions-terms-prevention-recover-re-use-and>
http://ec.europa.eu/research/infocentre/article_en.cfm?artid=48060
https://elpais.com/elpais/2014/10/24/inenglish/1414143732_193749.html
<http://www.oecd.org/about/secretary-general/coffees-with-the-secretary-general/GOYENECHE%20Brochure.pdf>
<https://www.rizboardshorts.com/about.php>
<https://stopmicrowaste.com/>
<https://vimeo.com/54955647>

Acknowledgements

We would like to thank Carolina Alvarez-Ossorio of ECOALF for her time.

COSME CASE STUDY 11

Orange Fiber (IT)

Overview of Case



Key facts:

- **Name of Organisation:** Orange Fiber
- **Website:** <http://orangefiber.it/>
- **Type of Initiative:** Limited company, upcycling waste materials
- **Sector:** Textiles from bio waste
- **Target Market(s):** Luxury textiles/fashion
- **Date Established:** 2014
- **Location:** Catania, Italy
- **Value Chain Stages:** production of upcycled fibres and fabrics
- **Size:** Micro

Key Messages

- The first and only brand in the world to produce a patented material from citrus waste. Fabrics are made of a silk-like cellulose yarn that can be blended with other materials. If used in its purest form, 100% citrus textile, it features a soft and silky hand-feel, lightweight, and can be opaque or shiny according to production needs.
- The rising demand for processed food, over the last 50 years, has gradually generated a huge number of inedible by-products which are considered waste and contribute to the exploitation of the limited natural resources. Orange Fiber succeeds in reducing waste and pollution by transforming citrus juice waste material into a new and sustainable product.
- Today, thanks to successful brand building, communication, and marketing activity, and to the partnership with Salvatore Ferragamo, the brand is recognized worldwide as a best practice exemplar of sustainable, innovative and high-quality fabric for fashion.
- Based on their experience, Orange Fiber report several recommendations for policy which are related to: 1) the pace of the policy actions which with their long duration risk damaging companies especially when they are young or in the process of training; 2) the need to fund specific investments that should aim to support companies especially in their initial phase when they are focused mainly on the stages of research and development and 3) the necessity to also train investors with the necessary knowledge about start-ups and their technological and system innovations.

Introduction

Orange Fiber is an Italian company that create sustainable fabrics from orange juice production waste, which would otherwise be discarded. The founders were able to see a new life for this material, transforming it into fabrics.

The company is based in Italy, in the city of Catania and most of its operations are in Italy. In 2017 the company collaborated with the brand Salvatore Ferragamo who launched the first Orange Fiber capsule collection and most recently in 2019 the company have worked with H&M. Their business model is based on a circular model, the company buys the raw waste material, refines/converts it to fibre through a patented process and then sells their textiles directly to their clients.

The first production phase takes place in Sicily, where the cellulose is extracted from orange, lemon and grapefruit waste. Then, the cellulose is sent to Spain, where a partner company transforms it into yarn. The final phase happens in Italy, in a weaving mill based in Como, where the yarn is transformed into textile.

The company extract a raw material from a non-rival food/nutrition industrial by-product. This allow them to satisfy the growing demand for cellulose fibres for textile use, preserving natural resources, without producing industrial waste. If compared to the existing regenerated cellulosic fibres, which derive from wood, hemp, or bamboo, Orange Fiber does not exploit natural resources, as it uses a by-product intended for disposal. Therefore, their process reduces the exploitation of natural virgin resources, land and water, the use of polluting pesticides and the general impact of textile production on the planet.

Sustainable/Circular Business Model & Practices

Orange Fiber's mission is to create a high-quality yarn, from the waste of the citrus industry, with the same characteristics, in terms of attention to quality, design and technical properties, of the ones produced with virgin materials. The team manages the whole process from waste collection to production technologies. The "pastazzo" - the citrus juice waste by-product which is composed by everything that remains after the industrial squeezing of the fruits - is collected and processed. Thanks to its innovative technology the company can extract the citrus cellulose from the discarded material. The resulting material, which is a polymer, is then spun to produce a sustainable fabric.

Since its creation, Orange Fiber has raised financial resources of more than €500,000 thanks to business angel investments, public funds and grants:

- €135k - from private investors
- €250k - from Trentino Sviluppo Seed Money and S&S Invitalia
- €150k - from H&M Foundation
- €400k - from the sale of its products to customers (Salvatore Ferragamo)

As of July 2019, Orange Fiber successfully closed their equity crowdfunding campaign raising more than €650k.

With their innovative patent, the company was able to have an impact on the local environment, as the project is one of the possible solutions for the disposal of the "pastazzo". 700,000 tons of this material is produced every year, just in Italy, and the disposal cost is very high both from an economical and environmental point of view. Operating locally the company has an important impact on the regional economy, favouring its development.

Organisational History: Key Challenges & Opportunities

Orange Fiber was born out of an idea of Adriana Santanocito, in 2012. Moved by her passion for textiles and her attachment to her native Sicily, the designer began to think

about the possibility of producing yarn from the scraps of the citrus fruit industry. In partnership with Enrica Arena, her roommate, they started to develop this idea.

First, they verified the feasibility of the process with Politecnico di Milano, who they collaborated with to start the experimentation process, working with the Chemistry & Materials department. The project was intended to be developed, patented and sold to the textile industry to start the production. But after they won the Changemakers for Expo, an initiative promoted by Telecom with Expo 2015 with the support of the Milanese incubator "Make a cube", they started studying and framing their business model with the help of a series of professionals who explained what equipment to use and advised the size of the processing plant.

In 2013, Orange Fiber was able to establish the first contacts with Francesco Virlinzi and Antonio Perdichizzi, the Sicilian entrepreneurs who bought a stake in the company. This happened thanks to the founders' connection with the *Working Capital Accelerator* of Catania. The result of this investment was the foundation of a start-up, which was accepted by the "Trentino Sviluppo" business incubator. This incubator gave them money to invest and above all the structures, services and consulting that allowed them to implement their project. The first products were presented during the Vogue Fashion Night Out event in Milan, in 2014.

In 2015, Orange Fiber received funds of Smart & Start by Invitalia, a national agency which supports the establishment and growth of innovative startups throughout Italy. It finances projects between 100,000 and 1.5 million euros, covering investment and operating costs. Their investment allowed the realisation and opening of the first pilot plant for the extraction of waste citrus pulp, also allowing the realisation of the first production series for Ferragamo.

The company has benefited from both public investment, European funds managed at national level (Fondo FSER- Fondo Sviluppo Regionale), and contributions from the private sector. In 2015, after the launch they were incubated in the Change Makers for EXPO, an accelerator in Milan, that promoted start-ups related to the EXPO 2015 themes.

Currently they have just launched a new crowdfunding campaign and are active members of different business networks such as Fashion for Good accelerator, and the H&M Foundation – as one of the Global Change Award winners in 2016.

During their entrepreneurial journey, they have faced different barriers: the initial resistance of investors to financing projects that have an innovative technological base, in which they are unable to have an immediate tangible response; the limitations connected to the fact that they are working in a field, the cellulose one, which has been missing in Italy for about 20 years; and the great difference, in terms of time, between the production chain and the market request, which often results in relatively long periods when the company is exposed financially.

Also, there are constraints regarding grants which often have timeframes incompatible with those of the companies which can apply for them. Often, the length of these timeframes does not consider that the market, which is in a continuous and fast evolution, changes its management scenarios and within a few months the plans that are been presented are no longer valid by the time they are approved.

Lessons Learnt & Recommendations for Policy

Lessons learnt by Orange Fiber interviewee is the choice of their collaborators and the difficulties of creating a team of specialists, particularly without knowledge of certain areas of work, as in the specific case of this company, the chemistry field.

Orange Fiber's key recommendations for policy are related to the time frame of bureaucratic practices that with their long duration risk damaging companies especially when they are young or in the process of training. There is a need for specific investments that should aim to support companies especially in their initial phase when they should focus only on the stages of research and development.

They suggest the creation of an international database that can collect information on who does research or activities in which relevant areas could encourage synergies and promote development within the sectors. Also, there is a need for "literacy" of investors with respect to start-ups and their technological and system innovations.

Conclusion

Orange Fiber has managed to establish itself in the Italian textile industry as an innovator thanks to its innovative production processes and the expected benefits that their action will bring to the local environment.

Today the major challenges for the company are related to the uncertainties and lack of investors who can understand the potential of the company without having tangible examples of the business with which to compare the project as they do not fit into regular business models and standards. In addition, it is impossible to be zero impact or completely circular, because the market is not ready to accept the consequences of this model, in terms of costs. Therefore, companies have to face the reluctance of consumers to be sustainable unless prices are low.

Other comparable businesses in the sector

Within each case study other brands/organisations have been included as comparators, to give a sense of the activity clustered around particular business models, sub-sectors or practices that may use a different assortment of sustainable or circular practices. These have been identified by the research team and not the interviewees.

Much research and development is currently underway in converting different bio-materials into textiles or dyes, all at different stages of development. Three examples are given here. The use of Mycelium for leather substitutes has attracted significant recent attention.

Mycoworks, is a British company that produces a vegetable-based textile from Mycelium (mushroom tissue) and agricultural by-products. Thanks to a carbon-negative process Mycoworks is able to grow a new kind of leather which is sustainable, versatile, animal-free, and that looks and feels like real. The team of engineers, designers, and scientists designed a closed-loop process which uses natural fibres to create a 100% biodegradable material, that can be customised in surface quality, size and shape an alternative to leather.

Pond Textile is a Danish company producing 100% bio-based and fully bio-degradable bio resin systems. These resins are used to bond other natural fibres such as flax, hemp, cotton and jute, resulting in fully biodegradable materials for construction, textiles, automotive and packaging industries. The peculiar characteristic of this product, which makes this resin systems unique compared to its competitors, is the strength properties achieved in the end product.

Vienna Textile Lab is a green business start-up, winner of the Climate Launch Pad 2017 in Austria. The Textile Lab fabricates environmentally friendly dyes using colours derived from naturally occurring bacteria aiming to rethink textile colouration and avoid the use of chemicals.

Resources

<http://orangefiber.it/>

<https://www.viennatextilelab.at/>

<https://pond.global/>

<https://www.mycoworks.com/>

Acknowledgments

We would like to thank Enrica Arena of Orange Fiber for her time.

COSME CASE STUDY 12

FASHION REVOLUTION



Case Overview

Key facts:

- **Name of Organisation:** Fashion Revolution
- **Website:** <https://www.fashionrevolution.org/>
- **Type of Initiative:** Campaign/NGO
- **Sector:** Across all sectors
- **Target Market(s):** Across all markets
- **Date Established:** 2013
- **Location:** Head office UK; operates globally
- **Value Chain Stages:** Across the whole value chain

Key Messages

- Fashion Revolution is a global campaigning organization with a vision of a fashion industry that gives equal value to people, environment, creativity and profit (1).
- The mission of Fashion Revolution is to act as a link between individuals and organizations across the whole value chain to radically improve the social and environmental impact of the current production and consumption of clothing (2).
- The organization operates globally from its base in the UK, with volunteer led branches in 25 EU countries and beyond, with further operations across Africa, Asia, Central America, North America, Oceania and South America.
- Since its establishment in 2013 Fashion Revolution has grown into a global movement recognized for its unique way of empowering people to actively question current ways of producing and consuming fashion without defaulting to negative messages and 'blaming and shaming'.
- The trajectory of Fashion Revolution to date and specifically the way it has successfully conceived and continuously expanded an active ecosystem of localized as well as global networks, highlights the agency of passionate and committed individuals in a transition to more a sustainable and more circular future.

Introduction

Fashion Revolution connects citizens, brands, retailers, students, producers, educators and journalists through its emphasis on the urgency of improving transparency in the fashion industry. This is seen as a key step in transforming the ways in which fashion is currently produced and used. The strategy of Fashion Revolution is informed by a three-point framework for change (3) in the following areas: 1. the current business model of fashion, 2. concerns linked to materials, people and the environment, 3. paradigm shift in the way we think about fashion.

With its base in the UK, Fashion Revolution now has eight additional offices in Europe (Denmark, Portugal, France, Germany, Czech Republic, Slovakia, Spain and Switzerland), another three in Brazil, Malaysia and Philippines and many more countries have taken

the first steps in taking on a legal form appropriate in their country. Significantly, Fashion Revolution is represented globally in more than 90 countries by a network of voluntary country representatives and country teams.

The UK headquarters relies on two separate bodies. The first, Fashion Revolution CIC (Community Interest Company), is a non-profit social enterprise that currently have 14 employees, 12 of these make up the Senior Leadership Team. The Team is in charge of global policy and strategy, communications, partnerships, collaborations, PR and education and it also liaises with and oversees the activities of global country coordinators and country offices. The second UK entity, the Fashion Revolution Foundation generates funding for the day-to-day running of Fashion Revolution, including its education and awareness-raising activities and public events.

The key and best-known activities of Fashion Revolution concentrate around the annual Fashion Revolution Week in April, that marks the anniversary of the Rana Plaza disaster in Bangladesh on April 24, 2013 and the impetus for setting up the organisation. The impact of the campaign #whomademyclothes that enables consumers to demand transparency from brands, as well as the accompanying hashtag #imadeyourclothes inviting makers to share their stories has been growing rapidly each year. The 5th Rana Plaza anniversary year 2018 attracted considerable media coverage of over 2000 articles globally and engaged over 3.25 million people worldwide, with 720 million impressions of posts during April and over 1000 events worldwide (5). [The campaign film](#) released for the start of the week won the Best Green Fashion Film award.

Among other core activities of Fashion Revolution is an annual publication of the Fashion Transparency Index that reviews the largest brands and retailers in terms of the volume and character of publicly available data about their social and environmental practices. (The 2019 updated version available [here](#))

The campaigning model developed by the Fashion Revolution is entirely unique on a global scale. The success of the campaign and the way it has tapped into the current concerns as well as passions of people worldwide is confirmed by the fact that the majority of its worldwide country coordinators and country team members work on a pro bono basis, alongside their other roles and employment (often in the fashion industry). As highlighted in our interview with one of the founding members Jocelyn Whipple, Fashion Revolution has given a name, a framework, a platform and a sense of solidarity to a movement that had already existed in many places thanks to pioneering individuals working in their local areas. The #whomademyclothes campaign and the #imadeyourclothes hashtag are now instantly recognizable and have become synonymous with an awareness of both social and environmental issues linked to the current fashion industry.

Organizational Model & Practices

The activities of Fashion Revolution are financed through private foundations, institutional grants, commercial organisations and individual donations enabled through a dedicated tab on the campaign website. Among recent supporters were e.g. AEG/Electrolux, British Council, C&A Foundation, European Union and European Commission. Country coordinators are responsible for raising funds in their own countries, in compliance with the organization's worldwide Ethical Funding Policy.

Apart from core activities linked to the Fashion Revolution Week and the Fashion Transparency Index, members of the Global Coordination Team and country team members also engage in public speaking, they act as educators at higher education institutions worldwide and take consultancy roles across the value chain. By providing freely downloadable materials for educators and also through their Loved Clothes Last and #haulalternative projects, Fashion Revolution target specifically young people and

encourage them to enjoy fashion in a more sustainable way that does not necessitate frequent new purchases.

Our interviews with fashion and sustainability experts across the 28 EU countries confirmed the significance and relevance of the campaign across Europe. In some of the emerging countries, such as for example Czech Republic, Slovakia, Cyprus or Malta the clear and compelling narrative of the Fashion Revolution campaign attracted coverage by mainstream media that would previously not easily engage with issues of workers' rights or environmental sustainability. This significantly contributed to raising public awareness, and in combination with the activities of regional representatives, enabled progression in the level of discourse on social and environmental responsibility in fashion.

The Fashion Revolution website further facilitates this process through signature graphics, clear navigation and multi-level engagement with the content. The menu clearly signposts how each visitor can contribute and so empowers people to act without delay. For example, the 'Take Action' tab offers a range of live links such as 'Write a postcard to a policy maker', 'Send an e-mail to a brand', 'Post on Instagram' or 'Use your voice on Twitter'. Campaign assets and further guidelines such as 'Citizen action kit' or 'Influencer action kit' are freely downloadable for use at local events. Another layer of engagement is possible through the sub-menu 'I am a...' with concise and tailored information and more live links for citizens, brands, retailers, students, producers, educators and journalists. Several of the action resources are also available in Spanish, French, Polish and Portuguese. In addition, each participating country has a dedicated page (either in its own language or English) that is curated by the country team. All this makes the Fashion Revolution campaign visually striking, memorable, easy to take part in and easy to disseminate both locally and globally.

Organizational history: challenges, opportunities and the future

The impulse for starting the organization came several days after the Rana Plaza disaster in 2013 when Carry Somers then Co-director of the Pachacuti Panama hats company (now the Director of Global Operations) phoned Orsola de Castro, then co-founder of From Somewhere upcycling company, (now the Creative Director) to ask if she wanted to start a fashion revolution.

Developing a suitable conversational style and visual communication tools that would be strong but also very adaptable were the first steps in establishing the campaign. Along with these, a team of committed professionals at the top of their game, who were prepared to work pro bono for the first two years and make their own rules where none existed, were all key to the success of Fashion Revolution (6).

Key challenges and opportunities remain in securing sufficient funding for Fashion Revolution teams across the world and also in supporting and educating continuous collaborations. Due to the unprecedented growth of the campaign and the fact that many decisions and strategies were initially based on instincts and most pressing needs at the time (such as improving transparency), Fashion Revolution Global Team are now revisiting multiple aspects of their strategy to make sure their future work reflects changing needs in terms of where their actions should be directed. Providing space for young designers and contributing to redressing the balance between large and small players in the industry will be among these (6).

Conclusions, Lessons Learnt & Recommendations for Policy

The Fashion Revolution movement has given people voice, tools and a community to act on issues that can often feel too overwhelming for individual efforts, its model has proved to be totally transferable across cultures and geographies. Possibly the most unique

aspect of the movement is its non-confrontational conversational style that puts emphasis on engagement and action across the whole value chain, harnessing cross-cultural perspectives and operating a combination of on-line and off-line activities. This latter aspect in particular was highlighted in our interview with Jocelyn Whipple, who pointed out that although Fashion Revolution is an on-line movement, its personal, local and off-line events and conversations are equally important and valid as any on-line action.

In terms of recommendations for policy on the EU level, the insights brought by Fashion Revolution teams suggest that political borders are creating barriers and stumbling blocks in terms of progress for social and sustainable agendas. Production is often pushed out to immediate borders of the EU, where issues with tax barriers and lack of access to information inhibit responsiveness to developments in the rest of the EU. For these reasons, cross-country connections within Europe as a physical, rather than political region should be fostered.

Other comparable businesses in the sector

The selection of Fashion Revolution for this case study was based on the fact that their operating model is entirely unique globally with its focus on work across the whole value chain and also in terms of its worldwide impact and active network of campaigners. For this reason, cross-references to other social and environmental campaign's in fashion were not considered relevant in this case.

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