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Freitag

In 1993, Swiss graphic designers Markus and Daniel Freitag were looking for a functional, water-repellent and robust bag to hold their creative work. Inspired by the multi-coloured heavy traffic that rumbled along the road in front of their flat, they developed a messenger bag from used truck tarpaulins, discarded bicycle inner tubes, and car seat belts.

This is how the first FREITAG bags took shape in the living room of their shared apartment – each one recycled, each one unique, all made from materials that would have more than likely been thrown away and ended up in landfill.

Today their products are available in 16 F-STORES as well as at over 450 resellers. They have a huge online presence around the world and are famed for how they are recycling with style. Some 23 years and a string of innovative products later, Freitag shops have sprung up in Berlin, Tokyo and many other cities, employing 160 staff and drawing enthusiasts from around the world.

Their first messenger bag has since spawned a range of over 70 different models designed to carry everything you can carry: from smartphone and laptop sleeves; to shoppers, handbags, and backpacks in various sizes, as well as the Haute Maroquinerie styles (high-end leather) made from vintage truck tarps that has struck fear into the heart of the calf- and crocodile-recycling bag industry.

In 2014, they gave themselves a new raw material to play with: F-ABRIC. Their rugged, completely compostable textiles are based on bast fibres that are produced using a minimum of resources within a 2500-kilometer radius of headquarters. By transforming lorry tarpaulins into bags, the Freitag brothers sought to extend a product's life cycle as much as possible. Twenty years later they decided to launch F-ABRIC, a collection of ready-to-wear clothing that rises to a new challenge: how to provide for the afterlife of a product. Clothing made with F-ABRIC can either be composted or unscrewed and reused.

They still haven't found a biodegradable material suitable as a raw material for buttons so invented a very simple button that can be used forever.

Freitag are using both a circular and a linear business model, and are using what would be waste going to landfill to fulfil a different purpose. They are extending the product lifecycle as far as possible with their non-biodegradable product parts.

F-ABRIC Materials

Linen

Linen (also known as flax) is the oldest textile fibre in the world. The fibres are extracted from the bast, the tissue under the plant's bark. Linen fibres are comfortable to wear thanks to their cooling effect, and they're extremely durable. Farming flax requires quite a bit of know-how, but the good news is that it doesn't need a lot of fertilizer or pesticides, or additional irrigation. It grows best in temperate climate zones.

Hemp

Hemp fibres are versatile, easy to care for, and virtually perfect. They're warm, breathable, and extremely strong, which is why hemp has been embraced by so many cultures for thousands of years. Hemp fibres are extracted from the plant's bast. The plant thrives in almost any climate, doesn't need much water or any pesticides and doesn't deplete agricultural soil.

Modal

Modal is a fibre whose properties are quite similar to those of cotton. It's made from cellulose that has been extracted from beech wood. First, beech wood shavings are dissolved in acid and then the cellulose is extracted, processed into a viscous pulp, and spun into threads. Beech trees produce lots of nuts which will potentially turn into seedlings which means no planting is required to produce Modal.

F-ABRIC Clothing

Bast Fibres

Bast fibres, like linen and flax, are obtained from the **phloem**, or inner bark (or skin) of a plant. The fibres support the cells of the phloem and provide strength to the stem. The fibre itself needs to be separated from the interior **xylem**, or woody core, and sometimes also from the **epidermis** which is the outer most layer of cells that carries nutrients to the leaves.

Freitag use the materials of the bast fibres hemp and flax as well as Modal, all of which are resources that are grown on European soil and do not harm it or require excessive amounts of water to grow.

- Natural bast fibres are grown using agriculture crops, which are renewable, without using pesticides and little-to-no herbicides
- They have been used for thousands of years before the invention of petrochemical fibres (eg polyester, nylon and acrylic) which became more popular.
- Bast fibres can reduce cost, reduce weight and reduce manufacturing time

Freitag aim to use as few chemicals as possible during the production of their clothing to make sure they are addressing the ecological impacts of their products, and also the impacts on human health as a result of exposure to toxins.

Once consumers no longer need their F-ABRIC product, it can simply be composted. F-ABRIC textiles are 100 % naturally biodegradable – including threads and selvedge. Their clothing therefore becomes fertile soil for new raw materials and the cycle continues.

Our UK Clothing Industry

Despite improvements in the clothing industry and with the Sustainable Clothing Action Plan 2020 (SCAP) (an industry-wide commitment, convened by WRAP and supported by UK governments), the carbon footprint of clothing in use in the UK has risen. In 2016, 26.2 million tonnes CO₂ were produced by the clothing industry, up from 24 million tonnes in 2012. It is believed that this is due to combination of relatively low prices and an increased population.

Clothing manufacture and sales in the UK is still the fourth largest pressure on our natural resources after housing, transport and food. There have been improvements in the amount of clothing in household residual waste, with it having reduced by 50,000 tonnes since 2012 in the UK. Switching to sustainable cotton continues to present one of the biggest opportunities for clothing retailers and brands with rising global demand to secure new sources of materials and find new markets for used clothing. Fibre to fibre recycling is a key opportunity.

F-ABRIC will biodegrade completely within around a couple of months if you throw it on the compost.

Benefit to the “design-thinking” process;

The Freitag brothers have always found the 'design thinking' method to be extremely valuable. They believe their approach bring many benefits to their business.

Lessons from Nature

Solar income – Freitag clothing products are made using plants which take their energy from the sun. In nature this energy would be passed on through consumers.

Waste = Food – in nature waste from one organism is food for another. In this case the clothing becomes food for decomposers include bacteria and fungi.

Nature provides multiple benefits – The circular design of Freitag products means it can be used for multiple purposes.

Useful links and articles;

<https://www.freitag.ch/en>

<https://www.youtube.com/watch?v=4dGrjnSFfRw>

<https://www.youtube.com/user/freitaglab>

<http://www.wrap.org.uk/sustainable-textiles/valuing-our-clothes>

