

# Sustainability Report What will sustainable product development look like in 2024?



### This report underpins some of the key things to consider when building a model for sustainable product development in 2024 and beyond.

A good starting point is to look at the UN's <u>Sustainable Development Goals</u> agenda for 2030, and consider how to build these into your business framework. These include working towards responsible consumption and production, reduced inequalities, good health and wellbeing, climate action and, of course, decent work and economic growth. We have divided the report into 3 sections which focus on waste cycles, community impact and regeneration.

When considering what constitutes responsible and sustainable product development, we must scrutinise the entire business model. From raw materials and manufacturing processes, to packaging, shipping, and how it performs; every aspect of the product's lifecycle must be planned consciously to help protect people and planet.





#### **Contents**







#### Creative with Waste

Fully Circular Design Biomaterials Food Waste Cradle to Cradle Textiles

#### Community to Consumer

**Empowering Producers** Giving Work Communicating Social Impact Protecting Wildlife Focus on Indigenous

#### Regenerative **Futures**

Soil Regeneration Carbon Sequestation Bacteria Dyeing Mycelllium









Food Waste

8%

Of greenhouse gas emissions are generated by global food waste, which is almost as much as is generated by all of the cars in the world!

Source: Allegori

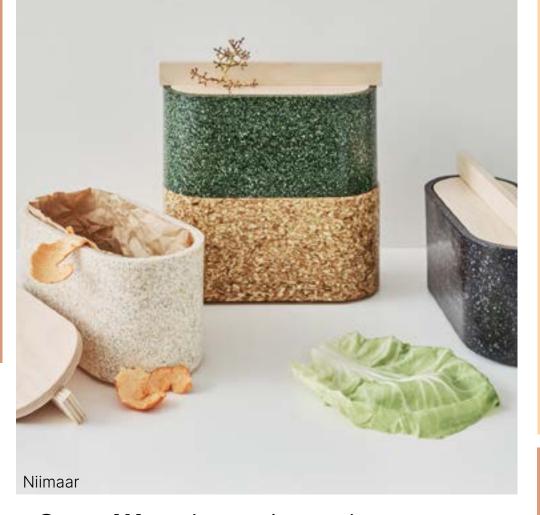


In fact, one third of all food produced in the world for human consumption never reaches the consumer's table.

Therefore, product design which utilises food waste, and converts it into a raw material for manufacturing is solving multiple problems; reducing waste, cutting greenhouse gas emissions, and creating innovative new materials.

Some of the world's leading materialists and designers are currently experimenting with products and materials such as bio leather made from discarded fruit skin or bioplastics made from by-products from the chocolate production industry, like the bento boxes in <a href="mailto:PriestmanGoode's">PriestmanGoode's</a> Zero Takeaway Packaging.

Kaffeeform is a circularity-focused German brand who make Weducer, a travel cup series made from recycled beechwood fibres and coffee grounds. They have also produced the world's first coffee based watch!



**Great Wrap** is an alternative to cling film, made from waste potato skins. This revolutionary stretch wrap was designed by a team of bio-designers, engineers and scientists in Australia. The first 100% compostable stretch wrap performs as well as conventional plastic film but will break down in 180 days.

#### Niimaar

Products which encourage the recycling of food waste will become increasingly important in the home. Biowaste Box is a stylised counter top composting solution made from wood waste composite.

#### **Studio ARP**

This British design studio are currently exploring the possibilities of recycling waste orange peel and turning it into a fabric or a pulp for innovative home goods like lighting and desk accessories.

"If food wastage were a country, it would be the 3rd highest emitter of greenhouse gas in the world."

FAO









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Fully Circular

The circular economy is all about minimising our impact on the environment by reducing, reusing or recycling materials. Good design is fundamental to a circular economy and can be used as a force for change.

#### The Ellen McArthur Foundation

is challenging the industry to pivot away from the current linear 'take-make-waste' system. Motivated by this challenge, many designers are already beginning to tackle the problem of waste by converting it into a resource, such as radios made from recycled plastic bottles.

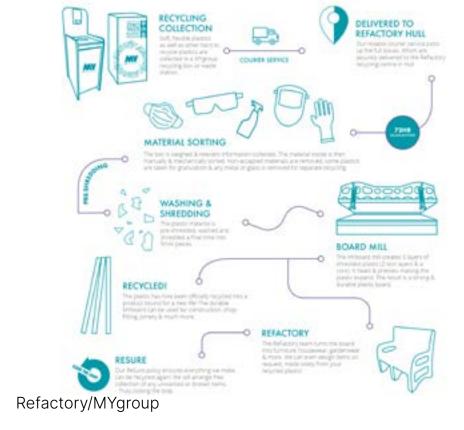
Designing with waste tackles only part of the problem, but designing out waste ensures that products never become waste in the first place.



#### **Design for Disassembly**

Sometimes good design can mean good service models, which allow for repair and recycling. **Gomi** create beautiful portable speakers from recycled plastic, but their efforts don't stop there. Their 'for life' business model ensures that their speakers can be infinitely repaired and they offer this for free. Once at the end of life, they will buy them back from the customer, and recycle all the components into their latest generation products.

Aiaiai are a responsible headphones brand who also focus on design for disassembly, claiming this also helps the brand to minimise the risk of their products becoming obsolete.



#### **Closing the Loop**

**Refactory's** goal is to provide public facing, accessible recycling schemes for all hard-to-recycle waste materials in the UK, allowing businesses to execute their corporate social responsibility when it comes to waste and pollution. They offer a full service from the collection, treatment and processing of many tricky waste types including Christmas decorations and beauty product packaging. These are repurposed into either new products or new materials to be put back into the original producer's supply chain, closing the loop.

**SchoolCycled** is an initiative by **MyGroup** & **ReWorked**, designed to educate the next generation about recycling, fragile ecosystems and sustainability. Currently being piloted in selected schools across Yorkshire, it includes recycling boxes for plastic bottle caps. Once the boxes are full, the bottle caps are weighed in and exchanged for 'Earth Tokens'. Schools can exchange these tokens for chairs, tables, mud kitchens and planters made from the plastic waste they've collected.



#### **Sequestering Suds**

Canadian beauty brand **CleanO2** have created the world's first carbon capture soap. By inventing a revolutionary device called CarbinX™ that captures carbon dioxide emissions from building heating systems and turns it into non-toxic pearl ash (potassium carbonate), they were able to recycle the captured carbon by adding it to soap formulations which creates a luxuriously silky lather.

#### **Waste-Water to Beer**

In Holland, regional water authorities have <u>collaborated</u> with circular designers and creative thinkers to make a beer, completely from sewage, in a protest to the local authorities to lift the waste status of the raw materials. Every aspect of the beer has been responsibly considered - the beer itself is brewed using cleaned sewage water. The glass bottle is made with calcite (lime), a by-product of the water softening process. The bottle label grass paper and the printing ink is made from vivianite, an iron phosphate from sewage sludge.





"We need to go upstream, to create systemic interventions that design out waste and pollution."

Ellen Macarthur Foundation

Furniture and Textiles

According to **Fabscrap**, (a fabric recycling organisation in New York), recycling textiles is associated with more greenhouse gas savings than paper, plastic, and glass recycling combined, and every 10 pounds of fabric diverted from landfill has the same CO2-reducing benefit as planting a tree.

#### **Recycling Challenges**

Unfortunately post-consumer textile waste is not always easy to recycle because of the fact that many items are now made with a blend of natural and man-made fibres. Mono fibres such as cotton and wool are easy to recycle and therefore preferable materials for sustainable textile goods.

'Rethinking Textile Waste' is a project initiated by **Studio Sarmite** (Germany) and Riga Technical University (RTU) in Latvia. This idea was inspired by the fact that mixed fibre post-consumer textile waste has few recycling options since it is difficult and expensive to separate distinct fibres and the manufacturing of new yarn requires the addition of virgin fibres. Studio Sarmite collaborated with RTU to create a circular, beautiful, high-quality bio-composite that could give these inferior fibres new life again. The new bio-composite will be appropriate for both fashion and product design applications.

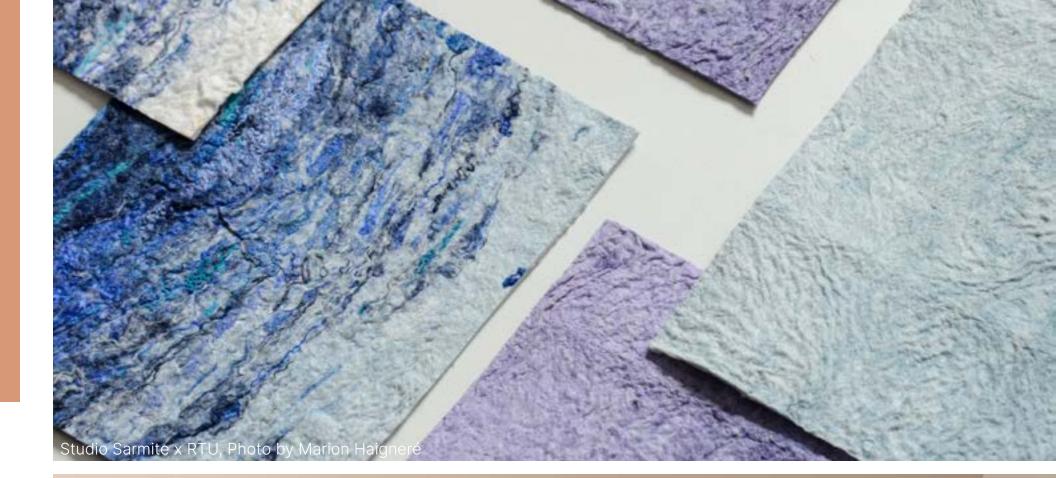
90%

90% of furniture sold in the UK ends up in landfill because it doesn't last, or isn't recyclable or biodegradable.

The Most Sustainable Sofa
Habbio set out to create the perfect sofa which is both affordable and sustainable, with a mission to reduce the number of sofas that end up in landfill. Their range contains no toxic chemicals, is constructed of 85% recycled materials including fabric constructed from plastic bottles with less than 1% VOCs and compostable packaging.

#### **Dyes Made From Waste**

Commercial textile dyeing causes a huge amount of damage to the environment due to the chemicals used in the process, yet natural dyeing is rarely employed on an industrial scale. **Ignorance is Bliss** is a brand of home products designed by **Agne Kucerenkaite**. Since 2016, Agne has been experimenting with upcycled textile dyes that originate from botanical, metal waste and by-products. Agne's main goals are to recover the value of currently 'valueless' industrial waste in a functional and scalable way and to challenge the current colour manufacturing industry. Agne's latest rug, Juno (pictured right), uses 7.63 kg of waste to dye the fibres.







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Nurturing Communities 1 in 78

people on Earth, that's 100million people around the globe, are currently displaced having been forced to flee their homes due to conflict or crises.

Source: UNHCR



"Our beginnings are testament to the power of intersections where those moving away from war are met by opportunity and community."

Muhra

#### **Empowering Refugees**

Production and manufacturing set-ups which provide work to those who are most vulnerable are an important component of responsible sourcing, especially amongst displaced communities where reintegration into society and employment is critical. Here we highlight a handful of social enterprises who are doing just that.

**Drop Earrings Not Bombs** 

Muhra is a Syrian Women's Social Enterprise in Istanbul. They set up their 'Drop Earrings Not Bombs' project to help refugees to rebuild their lives. Facilitated by Small Projects Istanbul, each unique pair of earrings is hand crafted by a group of 20 refugee women who started as strangers and now have the support of a community and a livelihood. This shows the power of a safe, transformative space in which training, education and care can thrive.



With a similar purpose, one of the UK's top social enterprises, <a href="Memi">Nemi</a> **Teas** are a London-based premium tea brand who believe good taste starts with good business. As well as buying their tea on fairtrade terms and creating seriously sustainable packaging, they focus on providing decent employment for refugees here in the UK, as they believe in giving all Londoners (including refugees and economic migrants) the same chances for a decent quality of life.

#### **Mumutane**

This Danish B corp are fusing Nordic design with African tradition for their range of design-led home textiles. The name <u>mumutane</u> means 'we the people', and their philosophy is to collaborate across cultures and national borders to create better conditions for more people. Using small-scale suppliers of fabrics and sewing workers in Abuja and Lagos they combine African wax prints with factory offcuts from the Danish textile manufacturer Kvadrat.











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### Communicating Impact

For brands who are ensuring their sourcing has a positive impact on the people and communities behind the products, communicating this impact effectively to the consumer is the biggest challenge.

#### **Great Storytelling**

American brand **The Citizenry** are creating 'home goods with a soul and a story' and use compelling imagery and storytelling to communicate their craft processes.

#### **Supporting Education Equity Kumbeshwar Technical School**

(KTS) in Kathmandu is an educational and vocational training centre supporting the needs of low-income families throughout Nepal. They specialise in hand knitted or woven apparel and home textiles using natural fibres such as wool, cotton, allo (nettle fibre), hand spun banana and silk yarns.

Not only do KTS provide fair, living wage employment to hundreds of women after training them in knitting and weaving, but the sales of their products help to fund inspiring social programmes too, such as a free nursery and primary school for 200 children, an orphanage for 20 children, and free annual health camps for employees and their families. The children are also provided with free school meals, stationery and uniforms to alleviate the associated cost of education from their parents.





Supporting Food Security Feed Projects is an impact-driven

Supporting Food Security
Feed Projects is an impact-driven
lifestyle brand who aim to offer
meaningful ways for people to make
a difference from products they use
in their everyday lives.

Hunger is a daily reality for approximately 795 million people, and Feed believe that one of the most effective solutions to combat this crisis is school feeding. With every product they sell, they provide school meals to the most vulnerable communities across the globe, through on-the-ground partners.

The direct impact of purchasing each product is clearly communicated to the customer both on the accessories themselves and through the currency of 'meals'. The number of meals which each product funds is displayed next to the price. For example, the pouch trio above will fund 45 school meals.

"We set out to build a company that celebrates
the people behind our products. Our name,
"The Citizenry", is a reflection of the collective
of individuals – artisans, designers, and
dreamers – who rally together across cultures
and continents to craft our collections."

The Citizenry









Supporting Indigenous Groups

According to UCL, indigenous people make up around 6% of the world's population, yet are responsible for protecting 80% of its remaining biodiversity.

It is therefore imperative that we prioritise protecting indigenous groups and their ways of life and supporting them to sustain an income is an important part of this. The Pacific Islands are some of the most vulnerable in the world to the effects of natural disasters and climate change, as well as being some of the most economically volatile. Whist many of the indigenous groups on these islands possess amazing art and craft skills which are intrinsic to their culture, their limited access to major foreign markets can prohibit economic growth. Not only do the Pacific islands have vulnerable populations, the world stands to lose a critical habitat for wildlife if growth in this region is not managed sustainably.

Rise Beyond The Reef is a homegrown value and supply chain which is working in partnership with rural remote women and their communities in Fiji.

Their economic development work helps to support rural remote women as leaders and creators of abundance in their communities, while connecting sustainably to the outside world and creating a supply chain which is market driven and consistent.







The Arts & Crafts programme helps to generate income for women while preserving and celebrating traditional knowledge and natural materials. RBTR co-ordinate the orders and production of hand-crafted home goods from 25 remote villages spread across 5 islands. They organize all of the transport of goods and materials as well as international sales and marketing.

Rural remote communities usually spend 30-70% of their monthly income to access markets in Fiji. Selling at the village gate saves artisans' money and the long and dangerous trek to the nearest market.





### Regenerative Futures



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Paying Back the Planet 16%

Of soils across the world are estimated to have a remaining lifespan of 100 years or less.

Source: Our World In Data

#### **Soil Health**

Global agriculture is facing many potentially devastating challenges which need to be urgently adressed. Due to overfarming and urban development, soil erosion is becoming a huge threat, and while this differs dramatically in different parts of the world, many of our soils are degrading and action must be taken to restore them.

Regenerative agriculture offers solutions to help reverse climate change by restoring the health of degraded soils. Methods are employed to help increase the organic matter in soil such as no till farming, cover cropping, crop rotation and grazing for ecological resilience. Some of these practices help to reduce erosion and water pollution, in turn producing healthier soils.

#### **1% For the Planet Programme**

This global movement is inspiring businesses and individuals to support environmental solutions. The idea is simple: because companies profit from the resources they take from the earth, they

The idea is that you can always give more, but you should never give less than 1%.

should protect those resources.

The organization was founded

reputable giving and provide

and individuals that meet our

1% of annual sales or salary to

environmental causes.

to prevent greenwashing, certify

accountability. The 1% for the Planet

certification is given to businesses

high-bar commitment—donating

One of the companies signed up to this pledge are **Kib Tea**, a planet positive herbal tea brand who are focussed on regenerative growing. Their herbs are grown in dense, diversely-sewn 'food forests' that claim to give back more than they take.

#### **Carbon Sequestering**

This is the process of capturing, securing and storing carbon dioxide from the atmosphere. The idea is to stabilize carbon in solid and dissolved forms so that it doesn't cause the atmosphere to warm. The process shows tremendous promise for reducing the human carbon footprint.

Camira are proud of their carbon-sequestering Hemp fabric. The crop itself is fast-growing and it captures atmospheric carbon twice as effectively as forests, according to recent research by the Centre for Natural Material Innovation at Cambridge.





"We must start with soil in order to feed the planet more sustainably and fight climate change. Healthy soil stores carbon, improves crop yields and makes farms more resilient."

Kib Tea





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### Regenerative Futures

Designed by Nature

### What would the world look like if every new product we designed focused on working with nature rather than stripping the value from it?

Regenerative design aims to work with nature to help sustain life within it. Materialists, designers and bio-tech researchers are currently experimenting with natural resources to produce materials that do no harm and can nourish the earth after use.

#### **Bacteria Dyeing**

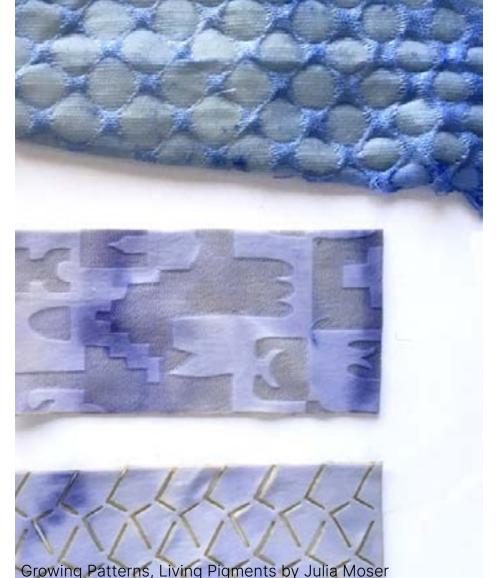
Since the dyeing industry is seen as the biggest environment polluter in the production chain, we're tracking a focus on bacteria dyeing, which brings numerous advantages over traditional dyeing techniques.

Living Colour by **Kukka** (textile and surface design studio) is a biodesign research project exploring the possibilities of natural and sustainable textile dyeing with pigment producing bacteria.

#### **Growing Patterns, Living Pigments**

is an ongoing project by Julia Moser, re-thinking textile design practises with the exploration of bacteria dyeing combined with state-of-the-art technologies such as UV and 3D printing, laser engraving and jaquard weaving etc, to push bacteria dyeing a step forward in terms of design aesthetics.

Fungi Solutions









#### **Collaborating with Fungi**

Researchers are looking into mycology, the study of fungi to harness the fantastic properties of mushrooms and turn organic waste into biodegradable packaging solutions. **Fungi Solutions**, a biotech research facility in Australia, has created an organic packaging alternative to Polystyrene, made from reishi mycelium. **Mushroom Packaging** by Evocative is a highperforming, cost-competitive, and insulating protective packaging solution. Simply made with 2 natural ingredients: hemp hurd and mycelium.

Mushroom based packaging and insulation production uses just 12% of the energy required for plastic production, with 90% fewer carbon emissions. [Fungi Solutions]





## Leading Positive Change for the Future of Life at Home

This report was produced by TrendBible's Consultancy team on behalf of Source Home & Gift.

TrendBible is a global futures agency and the authority in predicting the future of life at home. They work collaboratively with the world's best brands helping them seize tomorrow's opportunities.

TrendBible are passionate about building confidence in their clients

so that future change is possible, manageable and desirable. They bring change to life and show the good that can come from moving forwards.

If you are ready to start strategy planning for the next 12-24 months ahead and feel you would benefit from a complimentary discovery session with our trend consultants drop us a line:

letstalk@trendbible.com

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The only international sourcing platform of its kind in the UK, Source Home & Gift unites only the best manufacturers from key sourcing regions around the world with key retailers, brands, contractors and interior designers who are looking to find new suppliers or explore private label opportunities.

Where great ideas become great products.

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### Coming up next...

Don't miss our webinar on 29th November where we'll be discussing the topics covered in this report and giving our audience a chance to ask questions.







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