

# 1 Waste doesn't exist

## **Ser-Vies - Iris de Kievith & Annemarie Piscaer**

Breakfast plates and coffee cups are a part of everyday life. Iris de Kievith and Annemarie Piscaer, therefore, collected fine dust in the city of Rotterdam and used it to make enamel for ceramics. The color of the particulate matter makes the poor air quality visible and tangible. Ser-Vies is tableware that raises awareness of air pollution. The name is also a play on words. In Dutch, "servies" means tableware while "vies" means dirty.

*[www.ser-vies.nl](http://www.ser-vies.nl)*

## **ForzGlaze - Studio Mixtura & Renewi Mineralz**

The ashes that remain after waste incineration contain useful minerals. Mineralz, which is part of Renewi, processes these minerals into the material Forz. Studio Mixtura did experiments with these minerals and developed a way to use them as a basis for glaze. ForzGlaze can be applied to various materials, such as stoneware, porcelain, and other kiln-fired ceramics. It has excellent water and chemical resistance and meets all environmental criteria with regard to the production and use of glaze.

*[www.studiomixtura.com](http://www.studiomixtura.com)*

## **The Ocean Cleanup**

Millions of pieces of plastic pollute the ocean. The trash accumulates in five big areas, the largest of which is the Great Pacific Garbage Patch between Hawaii and California. If left to circulate, the plastic will impact our ecosystems, health, and economies. We have to stop this pollution: no more plastic in the ocean. But first we have to find solutions for the existing rubbish. The Ocean Cleanup develops advanced technologies to rid the world's oceans of plastic. A full-scale deployment of these systems is estimated to diminish the Great Pacific Garbage Patch by half in five years.

*[www.theoceancleanup.com](http://www.theoceancleanup.com)*

## **Metamorphism - Shahar Livne**

Imagine that plastic production ceases in the future because we realize that petroleum-based products damage our planet. As a result, the discarded waste from the present era could be seen as a rare and natural resource, something to be mined from deep underground. Shahar Livne dug up waste plastic from beaches in the Netherlands and Israel, and layered it with minestone and marble dust, by-products from the coal mining and stone masonry industries. With heat and pressure, she mimicked the geological process known as metamorphism, which changes the form and texture of rock. She calls the result Lithoplast, and created sculptural objects with it.

*[www.shaharlivnedesign.com](http://www.shaharlivnedesign.com)*

## 2 Dirty, ugly, useless

### **Venti - Billie van Katwijk**

Cow stomachs are usually thrown out or – at best – processed into dog food. Billie van Katwijk studied the richness of textures and specific properties in each of the four parts of a cow's stomach and developed a process for turning bovine gut into a material that can be used to make bags and accessories. Through a labor-intensive tanning process, she arrived at a leather collection with a unique aesthetic. Venti reveals how slaughterhouse remnants can become luxurious design.

*[www.billievankatwijk.com](http://www.billievankatwijk.com)*

### **Fish Leather - NYVIDD, Nienke Hoogvliet & Map Renes**

Nienke Hoogvliet collected waste from fish shops and found a way to tan fish skins without chemicals. Using an old technique that requires a lot of manual labor, she created a strong, sustainable, and beautiful material that can be used like leather. She designed a small stool to show the possibilities of fish leather. With this project she also likes to raise awareness for the waste issues we have with the oceans.

Designer Map Renes has her eye on the future and it time to change the fashion production of a linear economy to a fashion product tailored to the circular economy.

With examples of fish skin, beautiful in texture and surprisingly strong, NYVIDD is looking for cooperation with designers and industry to explore and develop possible applications of this natural product.

*[www.nienkehoogvliet.nl](http://www.nienkehoogvliet.nl) / [www.visleer.nl](http://www.visleer.nl) / [www.mapsz.nl](http://www.mapsz.nl)*

### **Insectology - Matilde Boelhouwer**

Population growth continues apace, while food and other resources are becoming ever more scarce. To find solutions to these major problems, we must look at them from different perspectives. Insects, for example, can play a crucial role in feeding the growing human population. However, to facilitate a broader acceptance of these creatures, Western cultures need to change their perspectives. Matilde Boelhouwer tries to realize this both in terms of food and in terms of aestheticization of the insect world.

*[www.matildeboelhouwer.com](http://www.matildeboelhouwer.com)*

### **Blood Related - Basse Stittgen**

A symbol of both life and death, blood is somewhat taboo. With the project Blood Related, designer Basse Stittgen explores the potential of blood as a biomaterial generated from the waste of slaughterhouses. They discard millions of litres every year, so why not make something useful out of it? A jewelry box, for example, to store precious valuables, yet made of waste materials. Or a record that plays the heartbeat of a cow. The objects confront, challenge our behavior as consumers, create awareness, and yes, reduce waste.

*[www.bassestittgen.com](http://www.bassestittgen.com)*

**Gumshoe – Explicit wear**

Every year, 1.5 million kilograms of chewing gum land on the street in Amsterdam. Publicis One, an Amsterdam marketing and advertising agency, and fashion brand Explicit Wear came up with a trendy sneaker with a top of leather and a sole of recycled gum. Based on the GumTec method from an English company, they come in pink and in the Amsterdam colors black and red, with the city map on the sole. This creative and positive approach offers plenty of opportunities for a campaign with trays on schoolyards and stations. Putting more chewing gum in there also means more sneakers. And the concept can easily be transplanted to other cities.

*[www.explicitwear.com](http://www.explicitwear.com) / [www.gumshoe.amsterdam](http://www.gumshoe.amsterdam)*

**Ignorance is Bliss - Agne Kucerenskaite**

Porcelain tableware, woven textiles, and ceramic wall tiles. With the collection Ignorance is Bliss, designer Agne Kucerenskaite shows that “worthless” and even toxic materials can be reused efficiently, both on a large and a small scale. She processed metal waste from industry, such as water treatment plants and soil remediation companies, into pigments for new products and production methods. Surprisingly, the most contaminated materials also proved to have the most potential.

*[www.agne-k.com](http://www.agne-k.com)*

### **3 For planet & people**

#### **Social Label - Petra Janssen and Simone Kramer**

Creating an inclusive world through the power of design and communication. That's the mission of Social Label, founded by Petra Janssen (Studio Boot) and Simone Kramer (C-mone). Social Label is developing a community as well as a collection of products. Designers collaborate closely with people on the sidelines of society. In this way, made-to-measure work is established for people who can use a helping hand. The result is a series of meaningful and appealing products, made with care, joy, and craftsmanship. Most of all, Social Label creates a movement of people striving for a socially sustainable, inclusive economy.

*[www.sociallabel.nl](http://www.sociallabel.nl)*

#### **T-Slagerij - Bron van Doen and Victoria Ledig**

A collection of ropes and other products made from old t-shirts. Created in cooperation with textile designer Victoria Ledig and communities in Eindhoven that recycle clothing. Plus a workshop on how to make those products yourself. Bron van Doen, a multidisciplinary co-design studio, develops projects that embody social, cultural, and economic values, and creates new and unexpected collaborations between people. The t-shirt project also aims to inspire consumers as well as the textile industry to create quality materials and products from textile waste, using accessible and scalable techniques and designs that open up the possibility for a wide range of applications.

*[www.bronvandoen.nl](http://www.bronvandoen.nl)*

#### **Fairf - Laurens van Dort**

As a social enterprise, Fairf is aiming for a positive, colorful, and sustainable society. This startup by Laurens van Dort developed sustainable wall paint and varnish. Water-based, without measurable concentrations of solvent, making it odorless, and with a fully natural binder from recycled scrap wood. Their factory even runs on solar energy. In addition, the company promotes education and creates jobs for disadvantaged people and youngsters in socially weak conditions at home and abroad. For example by setting up a Color Academy in the favela Providencia in Rio de Janeiro, Brazil, to train residents on the job to make paint and become a painter. At the same time artists gave the favela a makeover.

*[www.fairf.nl](http://www.fairf.nl) / [www.favelapainting.com](http://www.favelapainting.com)*

### **Zandglas -Atelier NL /Nadine Sterk & Lonny van Ryswyck**

Atelier NL reshapes raw materials into everyday objects that showcase the richness of the Earth. This design studio has developed a unique research methodology that transforms clay and sand from specific places into ceramic and glass objects that analyze and represent the hidden qualities and narratives of the Earth. By carefully sourcing naturally occurring sand from areas rich with geological, ecological, or social significance, ZandGlas represents the complex story of this common and accessible natural material and its origin. Like a conversation between the Earth, sea, wind, and people over time.

*[www.ateliernl.com](http://www.ateliernl.com)*

### **Tas met een boodschap - Ellen Willink**

What could be better than your own brand? It is the reflection of the soul of your company or organization and is built with energy and passion. Would it be a good idea to re-use all your old advertising materials, such as banners, by transforming them into a new relationship gift? Ellen Willink has been developing eco fashion for years. Her designs are partially produced in social enterprises, and in her studio she gives people with poor job prospects an opportunity to acquire work experience. She created the label "Tas met een boodschap," which in English means "Bag with a message."

*[www.ellenwillink.nl](http://www.ellenwillink.nl)*

### **Bough Bike - Jan Gunneweg**

Jan Gunneweg wants to bring people closer to nature with his designs. Together with Piet Brandjes, he founded Bough Bikes in 2012, the first company to manufacture wooden bikes in series. The oak wood comes from sustainably managed forests in France. The other materials are as sustainable as possible too, and the business premises are energy-neutral. Bough Bikes works together with social workplaces wherever possible. The company also was the first to launch a wood e-bike with paddle assist, the E-Bough.

*[www.boughbikes.nl](http://www.boughbikes.nl)*

### **Store of the future - Next Way of Living**

Next Way of Living offers products of Dutch labels that have been designed on the basis of recycling, upcycling or circular design. In the department store of the future you can buy a circular jeans or even a tailor made suit made of recycled fabrics. Learn how industrial companies and designers jointly develop new efficient ways of production. Admire innovations such as sneakers of pineapple leaves and the gumshoe with a sole of recycled chewing gum. Discover how packaging can be part of a product and how waste is used in various ways as new innovative raw material. Recognize furniture and lighting from award-winning sustainable designers, such as the Flax Chair by Christien Meindertsma, who are now put into production and are available to the public.

*[www.nextwayofliving.nl](http://www.nextwayofliving.nl)*

## 4 Design for reuse and recycling

### **Shadows of Light - Lotte Douwes**

Jingdezhen (China) is famous for its porcelain, made from kaolinite that is mined around the city and creates the typical translucency of the chinaware. But this specific clay has become less pure and greyer in recent decades, and by now almost half of the production is discarded as waste, mostly because of imperfection. Lotte Douwes was struck by seeing this and developed translucent porcelain made from recycled waste material. In producing her “No Waste” tableware collection, she re-used all bits and pieces. Even the leftover drips were collected and rolled out into a clay slab from which she made coasters and jewelry.  
*[www.lottedouwes.nl](http://www.lottedouwes.nl)*

### **Manureality - Martijn Straatman**

After researching traditional construction techniques, Martijn Straatman set about creating a manure-based material with similar properties to chipboard or MDF, but with an ecological mindset for the future. It is made up of 80 percent manure, chalk, water, and biodegradable glue that are mixed and thereafter pressed into a mold for drying. The research is an example of what is possible and meant to inspire the industry at large.  
*[www.martijnstraatman.com](http://www.martijnstraatman.com)*

### **Rezign - Design Studio Planq**

In the Amsterdam head office of fashion brand Tommy Hilfiger, you can find chairs partly made of their own overstock jeans. This furniture was designed by Studio Planq, founded by twins Anton and Dennis Teeuw together with Joris Kortenhorst. Through this project, the company was also inspired to start commercial upcycle projects with their waste. Planq also offers furniture under the Rezign label, made from overstock textiles and natural fibers combined with biodegradable plastics. And tables made from gym floors. Upcycling and creating awareness go hand in hand. Closing the loop is the motive of Planq.  
*[www.rezign.com](http://www.rezign.com) /[www.planqproducts.com](http://www.planqproducts.com)*

## 5 Create new value

### **Minestone - Paul Koenen**

Paul Koenen, visual artist and photographer, grew up next to a heap of burned mining stone in the south of the Netherlands. Fifty years after the coal mines closes, he developed the idea to use mining stone granulate as material for public benches. In this way, memories are captured and material is loaded with a story. He is working on "The Memory of Maastricht," a project to create benches from the rubble of demolished buildings and bridges with the understanding that all objects can be linked to a database of lost heritage.

*[www.paulkoenen.com](http://www.paulkoenen.com)*

### **Industriell – Ikea and Piet Hein Eek**

When you think about mass-produced furniture, it's easy to imagine big machines spitting out glossy new products, each one identical to the one before. With the Industriell collection, Ikea is turning this uniformity on its head by producing products with a beautifully imperfect, human quality — without raising the price tag. The Swedish company developed new ways to work with wood, glass, ceramics, and textiles in close partnership with Dutch designer Piet Hein Eek, who is a forerunner in the field of sustainable thinking. In the 1990s, he became world famous with design furniture from scrap wood, showing the beauty of natural materials.

*[www.pietheineek.nl](http://www.pietheineek.nl)*

### **CompoLeather - Julie van den Boorn**

Leather has a luxurious look, smell, and feel. Yet, at a certain point leather shoes, jackets, and couches are worn out and end up in the incinerator. Seeking a way to prolong the lifecycle of this valuable natural material, Julie van den Boom developed CompoLeather. Used leather goods are shredded and mixed with water. When pressed into molds, the pulp sticks together without the need for an extra binding agent and becomes a new material that is 100 percent natural and still has the unmistakable smell of the original.

*[www.julievdboorn.com](http://www.julievdboorn.com)*

### **Pieper bier - Instock**

Worldwide, one-third of all food that we produce is being wasted. Restaurant Instock (in Amsterdam, Utrecht and the Hague) turns food surplus into delicious meals by cooking only with unsold products from supermarkets and producers. Startup Instock, founded by four young managers of supermarket Albert Heijn, also developed Bammetjes Beer from leftover bread and Pieper Beer from rescued potatoes. Despite their love for this product, the Dutch let 340 million kilograms go to waste each year because of overproduction, excessively high quality standards, and aesthetic demands. But an imperfect potato still makes a tasty beer.

*[www.instock.nl](http://www.instock.nl)*

**Urban Nature Culture - Anne Marie Hermans**

Upcycled stoneware, glass wear from recycled glass, placemats from Indonesia, and banana-leaf baskets made in India. With a lifelong experience in home and lifestyle collections, Dutch entrepreneur and wayfarer in life Anne Marie Hermans started a new brand under the name Urban Nature Culture. The collection consists of products made from waste materials and recycled sources, thus creating new value. With a design that can be perfect or also imperfect, with patterns that refer to different cultures, from Japan to Africa. All handmade, handcrafted, produced locally.

*[www.urbannatureculture.com](http://www.urbannatureculture.com)*



## 6 Learn from nature

### **MycoTEX - Aniela Hoitink/Neffa**

Neffa has created a new fabric, MycoTEX, out of mycelium, or the roots of mushrooms. Using a body-based modelling process, the company produces garments of this new textile that perfectly fit your body without the need to cut and sew. No chemicals or pesticides are needed, and water use is cut by 99.5 percent compared to the current ways of producing textile. Transport is also reduced sharply. Neffa can grow only what it needs and has no material leftover. And after wearing, you can simply bury your garment in the ground, and it will decompose.

[www.neffa.nl](http://www.neffa.nl)

### **Palmleather - Tjeerd Veenhoven**

Dip the dry and brittle leaves from areca palm trees into a biological softening solution and let them sit there for a few days. They turn into a permanently soft and flexible material with great aesthetic quality that can be processed on conventional machines. Tjeerd Veenhoven, the designer who developed this process, calls it palmleather because it's a plant-based, sustainable alternative for animal leather, plastic, and rubber. In the southern part of India, an estimated 80 million areca palm trees grow naturally and in plantations, parks, and reserves. Local workplaces create palmleather products, such as book covers and bags.

[www.tjeerdveenhoven.com](http://www.tjeerdveenhoven.com)

### **PineSkins - Sarmite Polakova**

Pine trees are the most abundant tree in the northern hemisphere. Usually, they are valued only for their inexpensive timber. But carefully harvested and processed, the leather-like bark surprises in its softness, contrary to the thick and harsh character associated with the tree itself. PineSkin can be used for products with a lifespan of a few years. The adjustment of the function to the lifespan challenges the collective consumption habits of today, namely us hoping for long-lasting products although we are fully aware of the short lifecycles. In that way the bark becomes a link between trees as living organisms and wood as the end product.

[www.studiosarmite.com](http://www.studiosarmite.com)

### **Building with fungi – Avans University of Applied Science**

A house made of fungi? It may sound odd, but researchers at the Centre of Expertise Biobased Economy (CoEBBE), part of Avans, are experimenting with this idea at their 'mycelium lab'. They are growing mycelium composites from agricultural residues and fungal hyphae, to produce environmental friendly alternatives for the building industry. Experiments are -carried out to, for example, create insulation panels or improve the fire-resistance of the material.

[www.coebbe.nl](http://www.coebbe.nl)

## 7 Towards a circular economy

### **Net Effect - Interface**

Interface is a carpet tile company dedicated to creating sustainable production and using its products to head toward a circular economy with the Mission Zero and Climate Take Back projects. Not only economically but also socially. The Net Effect project, for example, provides a source of income for small fishing villages in the Philippines. They clean up their beaches and water of discarded fishing nets and then sell the fishing nets to Aquafil, which supplies Interface with recycled nylon content for carpet tiles.

*[www.interface.com](http://www.interface.com)*

### **Lease A Jeans - MUD Jeans**

MUD Jeans are made from organic cotton under fair working conditions in a state-of-the-art factory in Tunisia. But the company has moved beyond green with the circular concept, Lease A Jeans. MUD Jeans remains the owner of the jeans to make sure they don't end up as waste. MUD Jeans repairs the jeans, if possible, or recycles them to reduce the amount of waste, water used during production, and consumption of raw materials. MUD Jeans uses up to 40 percent post-consumer recycled cotton in its jeans. The aim is to make a pair of jeans that is 100 percent circular.

*[www.mudjeans.eu](http://www.mudjeans.eu)*

### **Fryske sweater - Loop a Life / It Erfskip**

Friesland is a province in the northern part of the Netherlands that has its own language, West Frisian. The Fryske sweater, made from old wool sweaters and local flax, reflects the Frisian culture and tradition. The design is inspired by lines from the Frisian costume and the Frisian landscape. This product also stimulates biodiversity through the demand for flax as crop rotation and increases local employment. The project is set up by Loop a Life and It Erfskip, two organisations specialized in circular textiles and fashion, design and craft, in cooperation with recycling company Omrin, Rabobank, Salvation Army, and the Municipality of Leeuwarden.

*[www.loopalife.com](http://www.loopalife.com) / [www.iterfskip.nl](http://www.iterfskip.nl)*

### **Forward fashion - Elsie Gringhuis**

Elsie Gringhuis has created a high-end, sustainable label with a focus on the essence of clothing. The products are timeless, clean, chic and minimalistic with innovative details. Studio Elsie Gringhuis follows its own rhythm, not forced by the never-ending merry-go-round of fashion. All items are produced on order, so there is no stock or over-production. All materials are sourced as close to home as possible, and the production is fully local in the studio, with the help of skilled tailors. This supports craftsmanship that in many ways is about to be forgotten and stimulates economic growth of the community.

*[www.elsiegringhuis.com](http://www.elsiegringhuis.com)*

**Fairphone – Bas van Abel**

The mission of Fairphone is to combine sustainable design with ethical values. This social enterprise was set up by Bas van Abel with the help of the Waag Society in Amsterdam, a foundation that aims to foster experimentation with new technologies, art, and culture. The mobile device developed by Fairphone contains no conflict minerals like gold, tin, tantalum and tungsten, and guarantees fair labor conditions for the workforce along the chain of production. The latest version is one of the first modular smartphones on the market, designed for easy repair and upgrade.

*[www.fairphone.com](http://www.fairphone.com)*

## 8 Tap the unlimited sources

### **Seven Steps to Heaven - Lianne and Gertjan Meeuws**

Food grown in energy-efficient, modular indoor farms with smart LED lighting, using zero pesticides and 95 percent less water. Grown locally to reduce transportation and pollution. Harvested at the perfect time, fresh and ripe. Accessible, nutritious, tasty and affordable. This is the focus of Seven Steps to Heaven: growing the food every human has the right to eat. As they say, "We are on a mission to contribute to a world where everybody will have access to secure and safe food."

*[www.seven-steps-to-heaven.com](http://www.seven-steps-to-heaven.com)*

### **Electric Life- Teresa van Dongen**

In the muddy soil of rivers and lakes one can find micro-organisms that continuously excrete electrons in their metabolism. Teresa van Dongen explores these specific bacteria as a means to generate electricity for domestic use. Electric Life is a work in progress and the user friendly, improved big brother of van Dongen's latest project, Spark of Life. Both projects work entirely on the power of micro-organisms. A future owner of this living light installation will have to feed and nurture it; a bit of tapwater with some additional nutrients and a teaspoon of vinegar a week will do. Van Dongen imagines that having to feed and thus take care of it, could result in a closer relationship between the installation and its owner. Van Dongen will present the full installation for the first time at the Centre Pompidou in February 2019. Today she has allowed us a sneak preview and a little insight in the technology behind Electric Life.

*[www.teresavandongen.com](http://www.teresavandongen.com)*

### **Solar Car - Lightyear**

Students from University of Technology Delft are seven-time winners of the World Solar Challenge in Australia. Their colleagues from University of Technology Eindhoven won the race three times in the Cruiser Class. Members of the latter team founded the company Lightyear to develop the first solar car for consumers. The Lightyear One, a five-seater family car, is available on pre-order. It has a battery range of 800 km (500 miles) and can drive up to 20,000 km (12,500 miles) per year on its own generated solar energy. This will make the electric car scalable without the EV-charge infrastructure dependency.

*[www.lightyear.one](http://www.lightyear.one)*

**SolaRoad**

SolaRoad is a consortium in Delft that develops, produces and markets road pavements that harvest solar energy and convert it to electricity. State-of-the-art solar technology is integrated into robust, prefabricated concrete elements. SolaRoad pavements, combining infrastructure with solar energy production, turn roads into large, decentralized solar plants: invisible, inaudible, durable, and vandalism proof. Electricity from these pavements can be used to power lights, traffic-management systems, households, electric vehicles, and more. This concept has succeeded in the Netherlands and France since 2014.

*[www.solaroad.nl](http://www.solaroad.nl) / [www.coast2coastev.org](http://www.coast2coastev.org)*