



UP-CYCLING DESIGN TECHNIQUE

CREATED BY REDRESS



Up-cycled outfits in the finale at 'Redress on the Runway'.

WHAT IS IT?

Up-cycling is the transformation of materials into products of equal or higher quality. In fashion, this means prolonging the life of waste textiles through creativity.

At Redress we have further categorised waste materials used in up-cycling to be textiles that have never been made into any garment form or textiles from non-clothing products. We categorise the reuse of material waste that is in garment form as reconstruction (a separate guide can be found on reconstruction).

WHY DO IT?

Millions of tonnes of textiles are wasted every year during textile and garment production, before the clothes have even reached the consumer. It is estimated that approximately 15 percent of textiles intended for clothing ends up on the cutting room floor.¹ This means that many textiles intended for clothes become cut-and-sew or end-of-role textile waste.

When textiles are wasted so too are the resources, both natural and human labour resources, which were invested and imbedded into the textiles. By up-cycling textile waste, you can prolong the textile's lifecycle, slow down unnecessary textile production and reduce the demand on natural resources.

In addition, by up-cycling damaged and redundant textile waste materials, you can give these waste materials additional value as products of higher quality. This prevents them from being downcycled or discarded.

HOW DO I DO IT?

1 FIRST DECIDE

First decide if you want to make unique pieces or a reproducible collection. This decision will impact your design and choice of waste materials, because up-cycling can take many different directions depending on the textiles and design used.

EXPERT'S TIP

— Filippo Ricci, Co-founder of From Somewhere & Co-curator of Estethica —

It is possible to make large volumes of consumer-friendly collections by up-cycling large volumes of textile waste from the textile industry.



Image credit: Goodone

Goodone's collections combine recycled textiles with new textiles, which allow them to standardise the designs so that they are reproducible.



Wister Tsang, Redress Design Award Hong Kong 2012 winner, made this reproducible design with Esprit's surplus factory textiles.

2 SOURCE

Look at your own textile waste streams or those of the wider fashion industry to source cut-and- sew waste, end-of-rolls, sample yardages or damaged textiles. Look for quality textiles, whatever the size, shape or style.

Using end-of-roll textiles allows you to work with larger pieces of textiles and to make more reproducible designs, yet still allowing for each individual piece to be subtly unique. Using cut- and-sew waste will allow your imagination to grow.

EXPERT'S TIP

— *Nin Castle, Co-founder & Creative Director of Goodone* —

Be aware of the quality of the textiles that you use. Ensure that the textile waste you use is good enough for what you wish to make. If you are putting your time and energy into up-cycling textiles, you want to make sure their quality is good.



Janko Lam, Redress Design Award Hong Kong 2011 winner, used surplus factory textiles stock to create this Cheongsam style up-cycled dress.



Image credit: Victim Fashion Street

Mei Hui Liu of Victim Fashion Street used a patchwork method of different types of vintage textiles together with her own studio off-cuts to create this unique garment.

3 NOW DESIGN

If you are working with cut-and-sew waste look at your textiles and...experiment! Puzzle the pieces together and let the textiles form your pattern. Or you can layer the cut-and-sew waste textiles to create volume. If you want to make reproducible designs, then work with colour blocking and patterns that can work with various types of textile combinations.

If you are working with a larger piece of textile waste, such as end-of-roll textiles, simply work with the dimensions of the textile.

EXPERT'S TIP

— Nin Castle, Co-founder & Creative Director of Goodone —

It's really important to have the design as the pinnacle because if you don't have the design, no one's going to want it. Designs should be informed by the use of recycled materials, not restrained by it.



Image credit: Victor Fraile @ Studio East

French designer and Redress Design Award 2013 2nd Prize winner, Louise de Testa created this up-cycled collection by up-cycling end-of-roll textiles and cut-and-sew waste from her own production.



Kelvin Wan, Redress Design Award Hong Kong Most Promising Student Award 2012 winner, used a patchwork method of surplus factory waste to create this up-cycled outfit.



Image credit: Victor Fraile @ Studio East

Hong Kong designer and Redress Design Award 2013 finalist, Alex Law made this up-cycled couture coattress by up-cycling denim production surplus and end-of-roll textiles.



Image credit: People Tree

British sustainable brand, People Tree up-cycled cast-off sari-silks into 'new' dresses for their Sari Collection. All resulting offcuts created in this process were used to make accessories.



Image credit: Lu Flux

British brand, Lu Flux uses pleating, knitting and antiquated patchworking to create quirky, up-cycled outfits.

4 FINALLY... MAKE!

Start patchworking, draping, interlacing or layering your textiles to create your up-cycled garment. Textile waste can often come in irregular shapes with uneven edges, so ensure quality finishing so that your finished garment does not look ripped or broken.

EXPERT'S TIP

— Orsola de Castro, Co-founder and Curator of Estethica and Co-founder of Fashion Revolution —

If you want a garment to look exquisite, even if it might be made from textile scraps, then make sure all finishing and detailing are perfect.



Eric Wong, Redress Design Award Hong Kong 2011 finalist, draped end-of-roll textiles to create this up-cycled dress.



Herlina Wijaya, Redress Design Award China 2012 finalist, layered cut-and-sew and end-of-roll textile waste that was sourced from her own production waste to create this up-cycled dress.



Image credit: Maison Martin Margiella

Belgian brand, Maison Martin Margiella's SS 2014 'Artisanal' collection, with its contemporary couture look, was made using up-cycled luxury vintage fabrics.



Image credit: Rebecca Earley

Rebecca Earley, a UK based researcher and award-winning designer, created this up-cycled polyester shirt by applying an over-printing technique on an used polyester garment to achieve a striking and more design driven effect. This up-cycled shirt formed part of her long-term research programme up-cycling textiles.



Image credit: Mimi New York

US designer, Mimi New York uses up-cycled textiles to create one-of-a-kind, handmade, couture garments.



Image credit: Piece x Piece

American brand, Piece x Piece create new limited-edition garments by up-cycling textile sample swatches.

ORSOLA DE CASTRO

ON UP-CYCLING DESIGN

Co-founder and Curator of Estethica and
Co-founder of Fashion Revolution



Image credit: From Somewhere

“Up-cycling is a design solution to an environmental problem.”

I’ve been using up-cycling design techniques in my sustainable fashion brand for over 15 years and am now happily known as ‘The rubbish collector extraordinaire’. Up-cycling is an innovative method of recycling textile waste into products of higher quality, for example by up-cycling textile swatches, production off-cuts and end-of-roll textiles to create higher quality garments. Up-cycling ultimately slows down unnecessary virgin textile production. Up-cycling is an artisanal approach to textile waste that requires creativity without any industrial intervention and it is an innovative, design-led and inherently environmentally-friendly solution to textile waste. Up-cycling needs to be differentiated from recycling or down-cycling, where textiles are recycled but often into a product of lower quality.

Today, the fashion industry is increasingly over-producing garments and textiles. What is being thrown away is often beautiful and usable for designers who can approach such waste materials in a creative way. I believe that about 80 percent of textiles being thrown away are reusable.



Image credit: From Somewhere

MY TOP TIPS TO UP-CYCLING DESIGN

1. Always know what is on offer before you start designing
2. Follow your own waste stream
3. No scrap is too small
4. Ugly can be beautiful too
5. Finishing is the key to good design

Me and my partner Filippo Ricci's pioneering sustainable fashion brand, From Somewhere, has been up-cycling textile waste since 1997. All of our collections are made using luxury pre-consumer textile waste, such as swatches, production off-cuts and end-of-rolls. Our up-cycled garments are reproducible in large numbers, whilst still retaining elements of the unique. For example, our groundbreaking collaboration with Speedo, the world's leading swimsuit brand, represented up-cycling in its highest form. Here we created a limited-edition capsule collection using upcycled surplus material from Speedo's 'LZR Racer' swimsuit, which we then retailed in London's high-end department store, Selfridges. We also designed a best-selling up-cycled collection for Tesco Clothing by up-cycling Tesco's very own leftover textile stock. These collections are just two examples that demonstrate that up-cycling can be commercially viable and available to the mass market.

CASE STUDY

KELVIN WAN

Kelvin Wan has been busy delving into his passion for sustainable fashion ever since he won Redress Design Award (formerly the EcoChic Design Award) Hong Kong Most Promising Student Award in 2012. Still relatively hot off the runway, in 2013, he and his design partner established their up-cycling menswear and womenswear brand, called Wan & Wong Fashion. For their brand, Kelvin sources pre-consumer textile waste from factories and fabric suppliers and the duo up-cycle scraps from their own production line to ensure their waste is low and their sustainability credentials are high.



Image credit: Wan & Wong Fashion

Why is sustainable design important to you? How did you get into it?

I got into sustainable fashion because of Redress Design Award and I have not stopped learning ever since. I feel that sustainable fashion development and consumer interest in Hong Kong lags behind the West and I want to be a pioneer to push sustainable fashion through to Hong Kong consumers.

What does up-cycling mean to you?

Up-cycling is one of the sustainable fashion techniques that I enjoy using because the textiles, which may be deemed to be useless by some, get transformed into valuable and beautiful collections.

How do you apply the up-cycling design technique in your collections?

For my collections, I tend to use the patchwork technique to piece together textile waste, particularly on the garment's detailed areas.

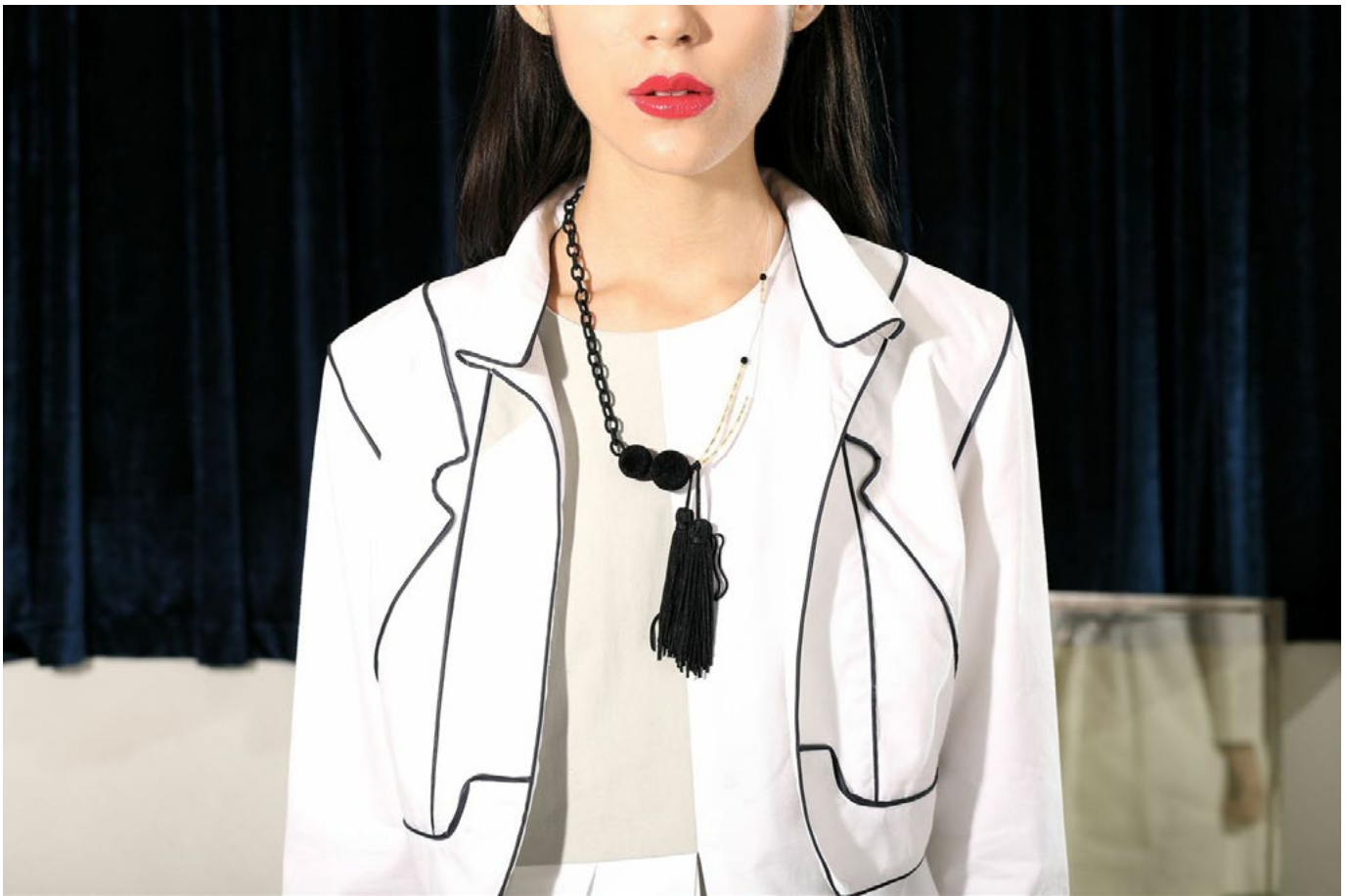


Image credit: Wan & Wong Fashion

Which up-cycled design are you most proud of?

This jacket is one of my favourite pieces because all the piping details were made using small pieces of scrap fabrics in order to define the garment's edges and to create an interesting detail for finishing.

What do you find most challenging about up-cycling?

I find sourcing textile waste the most challenging because there are a lot of factories that are not willing to supply their cutting room scraps to designers.

What do you find most rewarding about up-cycling?

I think the most rewarding moment is when people say they like my designs.

What is your best resource?

My best resource is to learn from other sustainable fashion designers, as well as through books.

What is your top tip to the up-cycling design technique?

My top tip is to spend more time to think before you make. Really think about how to apply the textile waste to the garment and how to add value and aesthetic to the textile waste before you make.

CASE STUDY

CLÉMENTINE SANDNER

Clémentine Sandner, Redress Design Award 2013 (formerly the EcoChic Design Award) finalist, has always been influenced by sustainable fashion design thinking. This interest planted 'sustainability' firmly in her design vision's roots. She combines her long-held interest in collecting fabric scraps for up-cycling projects with her keen design eye. The results, which we witnessed on our own Redress Design Award 2013 runway, shout proudly for themselves.



Image credit: Victor Fraile@Studio East

Why is sustainable design important to you? How did you get into it?

Sustainability is important in my life in general, not just in my fashion design. I think reusing is better than consuming and therefore it is natural for me to put my preference for re-use concept into my designs.

What does up-cycling mean to you?

Textile up-cycling is an opportunity to bring textile waste back to life by creating something new, unique and in higher quality, instead of destroying it.

How do you apply the up-cycling design technique in your collections?

I often up-cycle textural fabrics by stitching together scraps, end-of-roll materials, damaged fabrics and even by combining shredded secondhand clothes



Image credit: Clémentine Sandner

Which up-cycled design are you most proud of?

I'm most proud of this dress, which I made by up-cycling end-of-roll silk. I gave the dress texture by felting pieces of wool threads into the silk and then I added fabric scraps and golden laces from factory samples.

What do you find most challenging about up-cycling?

The most challenging thing is to focus on quality because it is crucial to create a garment that will last in time, which is the very essence of sustainability.

What do you find most rewarding/ inspiring about up-cycling?

I love the fact that you are able to 'reincarnate' something old, which no one wanted anymore, into something unexpected. Because you have to deal with what you can find, this sometimes makes you imagine something that you wouldn't have had to otherwise.

What is your best resource? How/where do you learn more about sustainable design?

I love reading books and articles and watching documentaries about recycling and sustainable production in general, not just related to fashion. These give me ideas and make me understand that sustainability is a big subject, which can transpire into a lot of different ways of life. But when it comes to design, the best way for me to learn is to experiment with techniques by myself and to try to find new ways of creating fabrics, because this is the first step of my design process.

What is your top tip to the up-cycling design technique?

I think it is very important to choose fabrics carefully when sourcing. Think about comfort as the priority as well as quality. This means that you will design garments that people will love wearing.

CASE STUDY

TRAID

TRAID is a UK based charity that recycles unwanted clothes, thereby diverting discarded clothes from entering landfill in order to reduce clothing's environmental and social impacts. TRAIID operates a network of over 1,500 used clothes collection containers around the UK to help British local government authorities, businesses, schools and communities reduce clothing waste and work towards zero clothing waste. Through their collection containers, TRAIID diverts around 3,000 tonnes of discarded clothes from landfill or incineration every year and instead uses these clothes via various recycling channels. TRAIID also has their own fashion label, called TRAIIDremade, which is made from up-cycled unwanted textiles, including vintage and end-of-rolls, and is sold in select TRAIID charity shops.



Image credit: TRAIID

Why is sustainable design important to you/ TRAIID? How did you get into it?

Sustainability is everything at TRAIID.

On an organisation level, TRAIID works to reduce the impact of the production, consumption and disposal of clothes by reusing unwanted clothes. This process delivers sustainable education and raises funds for our other projects that improve conditions across the global garment industry.

More specifically, we also focus on sustainable design through our own fashion label, called TRAIIDremade. This reuses existing resources using the up-cycling and reconstruction sustainable design techniques to create 'new' pieces exclusively from waste. Our label was dreamt up when TRAIID's Chief Executive, Maria Chenoweth-Casey, was sitting on our clothes sorting conveyor belt in 2002 watching discarded clothes pass her by in our sorting process. She saw that upcycling and customisation techniques could be a way to salvage high-quality but damaged clothes. Soon after, TRAIIDremade was born.

What does up-cycling mean to you?

It's a way to reuse our existing textile resources by transforming them into new garments.

How do you apply the up-cycling design technique in your collections?

Our first TRAIRemade collection featured reconstructed men's suit jackets and bags made from old Levi's and hand printed T-shirts. The collection was an immediate success and sold out at Topman. Today, the label has evolved to incorporate fabric rolls and remnants, as well as damaged clothing, which gives us more creative power over the design process.



Image credit TRAIID

Which up-cycled design are you most proud of?

It's always difficult to pick one thing as every collection produces a couple of standout pieces. In our AW13 collection, a quilted jacket was hugely popular with our customers. It was made from both pre-consumer and post-consumer textile waste. It incorporated end-of-roll fabrics, which were donated by one of the most famous luxury brands in the world, and reclaimed blankets and fabric remnants.

I'm also very proud of our animal motif jumpers, which were embroidered by women artisans in Delhi who work in an embellishment co-operative that was set up with TRAIID funding. The project has enabled these embroidery workers to break their dependence on exploitative middlemen for poorly-paid piecework by linking them directly with suppliers in order to secure fairly paid work, which typically doubles their incomes.

What does TRAIID find most challenging and rewarding about up-cycling?

Both the rewards and the challenges of up-cycling are rooted in the fact that we are working with existing resources. This means we have to work with what we've got, which demands creativity, risk-taking and experimentation.

What is your best resource?

There are many incredible resources out there dedicated to sustainable fashion, from nascent blogs to established authors. The rise of social media has been a wonderful way to join the dots between people who might otherwise have operated separately. For anyone interested in finding out more about sustainable design, Twitter is an excellent starting point to engage with the everexpanding global community of people involved in sustainable and ethical fashion.

What is your top tip to the up-cycling design technique?

To go beyond technique and be clear about your motivation and philosophy for designing sustainably. Once that's in place, you'll be a sustainable designer for life!

LEARN MORE

WATCH THIS...

Redress Design Award Up-cycling Tutorial

YouTube youtu.be/U_f_MNIUC54

Youku v.youku.com/v_show/id_XNTQ3MzY1NDQ4.html

Redress Design Award Up-cycling Tutorial with Orsola de Castro

YouTube youtu.be/b7n8AVUE_dg

Youku v.youku.com/v_show/id_XMzY4NTE3MjA0.html

Redressing the Fashion Industry: Orsola de Castro at TEDx London Business School 2013

YouTube youtu.be/1mbqwOK9kNM

READ THIS...

A Practical Guide to Sustainable Fashion by Alison Gwilt

Commentary and Critique – Design for Recycling

www.ecofashiontalk.com/2014/01/commentary-and-critique-design-for-recycling

Cradle To Cradle: Remaking The Way We Make Things by Michael Braungart

Design Is The Problem: The Future Of Design Must Be Sustainable by Nathan Shedroff

Eco-Chic: The Fashion Paradox by Sandy Black

Eco Fashion by Sass Brown and Geoffrey B. Small

Economies of Recycling: The Global transformation of materials, values and social relations by Catherine Alexander and Joshua Reno

Fashion & Sustainability: Design for Change by Kate Fletcher and Lynda Grose

Recycling in Textiles, Edited by Y Wang

Reducing Waste by Re-using Textiles by Rachel Gray, WRAP 2012

www.wrap.org.uk/sites/files/wrap/RWM%202012%20Rachel%20Gray%20Reducing%20waste%20by%20re-using%20textiles.pdf

ReFashioned: Cutting-Edge Clothing from Upcycled Materials by Sass Brown and Natalie Chanin

Remake It: Clothes: The Essential Guide to Resourceful Fashion: With over 500 tricks, tips and inspirational designs by Henrietta Thompson

Shaping Sustainable Fashion: Changing The Way We Make And Use Clothes by Alison Gwilt and Timo Rissanen

Sustainable Fashion And Textiles: Design Journeys by Kate Fletcher

Sustainable Fashion: Past, Present and Future by Gordon K. Farley, Jennifer Farley, Colleen Hill

Sustainable Fashion: Why Now? A conversation exploring issues, practices, and possibilities by Janet Hethorn

The Circular Economy: A Wealth of Flows by Ken Webster

The Sustainable Fashion Handbook by Sandy Black

Trash to Trend, Using Upcycling in Fashion Design by Reet Aus | issuu.com/runnel/docs/reet-aus

Waste to Wealth: The Circular Economy Advantage by Peter Lacy and Jakob Rutqvist

BE INSPIRED BY...

Absurd Laboratory | www.absurd-laboratory.com

Ada Zanditon | www.adazanditon.com

Christopher Raeburn | www.raeburndesign.co.uk

Freitag | www.freitag.ch

Goodone | www.goodone.co.uk

LLB | www.l-l-b.no

Louise de Testa | www.redressdesignaward.com/alumni/2013/louise-de-testa

Lu Flux | www.luflux.com

Luis Valenzuela | www.luisvalenzuelausa.com

Maison Martin Margiela | www.maisonmartinmargiela.com

Mimi New York | www.miminewyork.com

People Tree | www.peopletree.co.uk

Rags2riches | www.rags2riches.ph

Victim Fashion Street | www.instagram.com/Victimfashionst

Wan & Wong Fashion | www.facebook.com/WanandWongFashion

Worn Again | www.wornagain.co.uk

LEARN THE LANGUAGE...

Closed loop design is to keep products, components, and materials flowing continuously within the system, where these values are captured and continue to circulate.

Clothing banks are garment recycling collection stations in the community, placed by a charitable or commercial organisation, where consumers can recycle their used clothing.

Cradle-to-cradle is a closed loop design process that is free of waste. When a product is no longer useful, it becomes material for another product.

Cut-and-sew waste are textile scraps generated during garment manufacturing. It is often considered waste and is discarded due to its uneven and small formats.

Damaged textiles are unused textiles that have been damaged for example with colour or print defects, rendering them unusable.

Down-cycling is the recycling of something into a material with a lower value or quality than the original item.

End-of-rolls are factory surplus textiles that have been left over from garment manufacturing.

Lifecycle is the journey a product makes from the extraction of its raw materials, through production and usage, all the way through to its disposal or recycling.

Post-consumer waste is waste collected after the consumer has disposed of it.

Pre-consumer waste is made up of manufacturing waste that has not reached the consumer.

Recyclable describes a material that can be reused by turning it into a new usable material or product.

Recycled is when a waste material or product has been reused and turned into a new usable material or product.

Reduce, reuse, recycle are the so-called 3Rs that classify waste management, according to their order of importance. Reduce consumption and usage, reuse items again where possible and recycle materials at the end of their lives.

Sampling yardage is factory surplus waste leftover from textile sample manufacturing.

Secondhand is a product that is acquired after it has been used by someone else.

Secondhand textiles are any finished non-clothing textiles (such as curtains, bedding, etc) that have been owned and then discarded by consumers (both used and unused).

Supply chain refers to the steps and resources involved in the production of a product from raw materials extraction, all the way through to transporting it to the consumer.

Sustainability is a lasting system and process that meets the current population's needs while preserving for the future.

Sustainable fashion is clothing that is produced with consideration to the environment and social impacts throughout its lifespan.

Sustainable textiles are textiles produced with minimal environmental impact.

Textile recycling is reusing or reprocessing used clothing, fibrous material and/or textile scraps from the manufacturing process.

Textile swatches are leftover textile sample swatches from the production process.

Textile waste is the textile by-product of the manufacturing of garments, fabrics, yarns or fibres that are deemed unusable for its original purpose by the owner.

Up-cycling is the transformation of a waste material into a product of equal or higher quality.

FOOTNOTES

¹Timo Rissanen (2005), From 15% to 0: Investigating the creation of fashion without the creation of fabric waste
www.academia.edu/3762020/From_15_to_0_Investigating_the_creation_of_fashion_without_the_creation_of_fabric_waste