

# Circularity

Nordiska Textilakademin

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# Revolutionising one of the dirtiest games in the world

**Where sustainability meets function and style**  
**The only 100% circular producer of garments in the EU**



# The need for change





# Fast fashion is out of fashion!



- But it's not going to go away over night
- And it's not the only culprit:
  - workwear
  - corporate clothing
  - institutional clothing
  - the hospitality industry
  - the medical world

**CIRCULAR = THE WAY AHEAD**

# The Circularity Gap Report 2024

3X

The circular economy has reached megatrend status - the volume of discussions, debates and articles on the concept has almost tripled over the past five years

-21%

But global circularity is still in decline - the share of secondary materials consumed by the global economy has decreased from 9.1% in 2018 to 7.2% in 2023—a 21% drop over the course of five years

28%

And consumption continues to accelerate - in the same period, we have consumed over 500 gigatonnes. That's 28% of all the materials humanity has consumed since 1900.

**CIRCULAR = REALLY???**

# The inconvenient truth

- 4.3 million MT of textile waste are landfilled or incinerated in the EU annually
- EU consumption of textiles has the fourth highest impact on the environment, after food, housing and mobility
- Textiles production is one of the top three pressures on water (79b m<sup>3</sup> in 2017!) and land use, and in the top five in terms of raw material use and greenhouse gas emissions
- 2030 EU vision: textile products should be durable, repairable, recyclable, free of hazardous substances and produced in a way that respects social rights
- EPR legislation (supposedly in force in Sweden ...) will make incineration illegal and recycled content mandatory - we have no choice (but maybe an opportunity?)!

**CIRCULAR = THE NEW NORM**

# The even more inconvenient truth...

- More than 140,000 MT of new textiles are put on the Swedish market each year
- Sweden discards 113,000 MT annually
- 66% (75,000 MT) of used textiles are disposed of in household waste and incinerated – *what will happen to this part in the future when EPR kicks in?*
- Of the 34% (38,000 MT) collected separately, 7,800 MT are reused in Sweden, while 27,600 MT are exported to other countries...
- (...where over half literally ends up on the beach and thus the ocean!)
- In short, around 75% of Swedish textile waste is currently either incinerated or dumped

**CIRCULAR = HAS TO BE THE NEW NORM!**



# Actions speak louder than words

**"To do good, you actually have to do something"**

*Yvon Chouinard, founder Patagonia*

- Talking about change is not enough; we really need to take steps to rethink, reshape and improve our industry
- Zero green-washing, zero green-hushing!

**TRULY CIRCULAR = TRULY SUSTAINABLE**

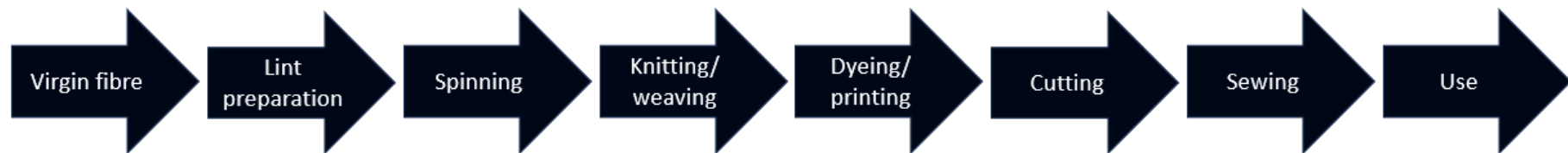
# Circular strategies

- Refuse - make a product redundant
- Rethink - intensify its use or make it multifunctional
- Reduce - increase efficiency in production to reduce the resources needed
- Reuse - same purpose but different user
- Repair - maintain to continue original function
- Refurbish - modernise so that it can be used as originally intended
- **Remanufacture - use parts to create a new product with the same function**
- **Repurpose - use parts to create a new product with a different function**
- **Recycle - process materials to achieve original high quality or reduce to lower quality**
- Recover - incinerate to recover energy...

**CIRCULAR = FEWER RESOURCES, LESS ENVIRONMENTAL PRESSURE**

# Conventional vs. circular recycling

Steps in textile production:



- Conventional recycling = collecting the waste at each stage, shredding it and putting it back in at the lint preparation stage; can be mechanical or chemical, generally pre-consumer, always requires the addition of virgin fibre
- Circular recycling = collecting the waste from ALL production steps (focus on post-consumer), sorting it according to colour, shredding it and putting it back in at the lint preparation stage; mechanical, without the addition of chemicals, no virgin fibres added at all

**CIRCULAR = THE ONLY WAY AHEAD**

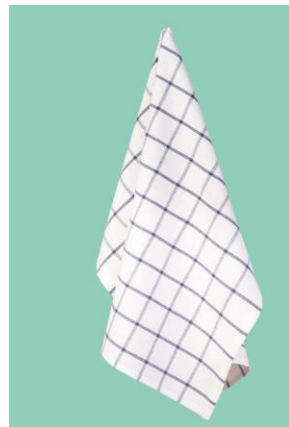
# What we do at Circularity

- Collect used garments/textile products from our clients
- Sort them according to colour and composition
- Strip off the buttons, zips and logos (to be recycled in other ways)
- Cut the clothing into strips
- Shred the result, ensuring the correct mix of cotton and polyester for the end product in question (other fibres are recycled in other ways)
- Spin the shredded fibre into yarn (no dyeing unless the customer wants a very specific colour!)
- Knit or weave the yarn to produce material
- Cut and sew the material into garments/textile products for our clients
- Print/embroider logos and/or designs as per the client's request

**CIRCULAR = FROM END OF LIFE TO NEW ITEMS**

# What do we make?

- We offer a standard collection of knitted and woven goods (t-shirts, sweatshirts, hoodies, sheets, towels...please see our website for details: [www.circularity-works.com](http://www.circularity-works.com))
- ...and are happy to discuss customer-specific developments and designs



**CIRCULAR = ONLY YOUR IMAGINATION IS THE LIMIT!**

# Where do we do it?

- Initially at our BSCI-certified factory in India, where we developed our unique technology
- Increasingly at our plants across Europe
- Soon in Sweden too...
- In the future at new plants in the Middle East, West Africa and North America
- Our goal is for each country to have a fully circular plant, producing items for that country from the textile waste produced in that country
- High levels of automation make it possible to match the cost structure of the Far East, at the same time creating jobs
- All production at all plants is fully in line with EU ESG legislation

**CIRCULAR = LOCAL BENEFIT**








# Who are our customers?

- Brands: Decathlon, Zeeman, H&M, Tommy Hilfiger, Zara, C&A
- Supermarkets: Albert Heijn, Jumbo, Plus, Lidl
- Corporate clients: Bayer, Heineken, Telekom
- Institutions: Dutch Army, German Army
- Communities: City of Amsterdam, City of Berlin
- RFQs from an increasing number of customers in Sweden, both big and small...

**CIRCULAR = JOIN THE CLUB!**

# Benefit to the planet

- Savings per item are significant compared to conventional production (cotton) :

					
T-shirt	0.17 kg	2943 L	0.17 L	1.51 kg	0.43 kg
Polo	0.24 kg	4120 L	0.24 L	2.12 kg	0.60 kg
Sweatshirt	0.46 kg	7923 L	0.46 L	4.08 kg	1.15 kg

- Annual savings for 6m t-shirts (capacity of our factory in The Netherlands):
  - 1,000 MT of cotton
  - 18 billion litres of water
  - 1 million litres of oil
  - 9,000 MT of CO<sup>2</sup> emissions
  - 2,600 metric tonnes of pesticides

**CIRCULAR = NEXT TO NO EMISSIONS**

# Benefit to you

Apart from the obvious need to be less wasteful, there is new legislation in force in the EU:

- Extended Producer Responsibility
  - a waste management concept aimed at reducing pollution and landfill use, while increasing recycling rates; brands are now responsible for the environmental impacts of everything they produce, taking the whole life-cycle of garments and accessories into account
  - introduced in Sweden from 1 January 2022, to be phased in over several years with licensed textile collections starting on 1st January 2024
  - by 2028, at least 90% of the textile waste collected must be reused or sent for material recovery; Sweden's target is to reduce the average amount of textile sent to landfill by 70% by this date
- European Sustainability Reporting Standards
  - from 2025 onwards, companies will have to start to disclose certain environmental, social, and governance information, i.e. the extent to which they comply with the above

At Circularity, we don't just offer products, we offer solutions!

**CIRCULAR = JOIN THE CLUB!**

# Questions?

Please feel free to get in touch!

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## THE FUTURE IS CIRCULAR!

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