Changing Clothes: The Circular Fashion Economy
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Founder and CEO, Trustrace
FASHION IS AN INDUSTRY IN TRANSITION

Source: Drift, C&A, FFG

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# FUTURE TECH LAB

A UNIQUE HYBRID STRUCTURE ENABLING A FUTURE OF SUSTAINABLE & TECHNICAL FASHION CONNECTING, COLLABORATING & CREATING PRODUCTS TO EVOLVE THE $2.4T FASHION INDUSTRY

<table>
<thead>
<tr>
<th>INVESTMENTS</th>
<th>AGENCY</th>
<th>EXPERIMENTAL LAB</th>
<th>INCUBATOR</th>
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<tr>
<td>Strategic &amp; socially responsible investments - give startups access to brands, designers, influencers. Focus on Seed/Series A, or established research converting to a business entity</td>
<td>Provide solutions and large international fashion brands wishing to implement technologies and sustainability</td>
<td>Facilitate commercialization and scale up of groundbreaking research technologies, creating future perfect products</td>
<td>“FTL Innovation Challenge” to attract the most promising fashion tech start-ups and technologies</td>
</tr>
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Interaction across the physical, digital and biological domains make the fourth industrial revolution fundamentally different from previous revolutions.

- Klaus Schwab
We are PANGAIA—a global collective of one heart and many hands: scientists, technologists, designers—who all believe that we can do better.

We create from renewable and alternative resources, bio and lab grown materials, recycled, sustainable and as natural as possible.

We are starting a movement.

For a better now, for a better future.
Flower down

Breakthrough vegan technology combining an innovative flower based blend with the patented Aerogel system to provide extraordinary thermal insulation properties
Lauren Zahringer
Business Development Manager, Sustainable Apparel Coalition
In 2009, Patagonia & Walmart Had a Radical Mission:
Collect peers and competitors from across the apparel, footwear, and textile sector, and together, develop a universal approach to measuring sustainability performance.
The Sustainable Apparel Coalition’s vision is of an apparel, footwear, and textile industry that produces no unnecessary environmental harm and has a positive impact on the people and communities associated with its activities.
Higg Index Suite of Tools

**Higg Product Tools**
- Higg Materials Sustainability Index (Higg MSI)
- Higg Design and Development Module (Higg DDM)
- Higg Product Module (Higg PM)

**Higg Facility Tools**
- Higg Facility Environmental Module (Higg FEM)
- Higg Social & Labor Module (Higg FSLM)

**Higg Brand & Retail Tool**
- Higg Brand & Retail Module (Higg BRM)
THE RENEWABLE MATERIALS COMPANY
Everything that’s made with fossil-based materials today can be made from a tree tomorrow.
## Ending the era of fossil-based materials

Innovation projects with high potential impact to transformation

<table>
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<th>Bio-barriers, MFC films</th>
<th>Native and modified MFC</th>
<th>Intelligent packaging</th>
<th>Lignin for phenol replacement</th>
<th>Dissolving pulp to novel cellulose materials</th>
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<td>Liquid and food packaging</td>
<td>Specialty papers, non-wovens, personal and home care, barrier materials</td>
<td>Sophisticated applications to brand owners and supply chains</td>
<td>Reduction of fossil raw materials in adhesives</td>
<td>Textiles and nonwovens</td>
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<tr>
<th>Bio-based carbons for energy storage</th>
<th>Bio-based plastics</th>
<th>Biocomposites</th>
<th>Carbon fibre</th>
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<tr>
<td>Anode material for batteries, activated carbon for double layer capacitors</td>
<td>Chemical intermediates</td>
<td>Replacing fossil-based plastics in composites</td>
<td>Sports and leisure, wind energy, automotive, aviation</td>
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</table>
Innovation never happens in isolation

Awarded as Finland’s most startup-friendly company

Screened ~500 digital start-ups - deeper collaboration with 17

Husqvarna’s most innovative supplier

Sustainable RFID tag technology, ECO™ by Stora Enso

Sulapac - renewable and biodegradable straws

TreeToTextile partnership

DuraSense™
Piloting MFC films

TRÄ Group - innovative digital services for wooden buildings

Lineo™
Piloting MFC films

THE RENEWABLE MATERIALS COMPANY
EUR 52 million investment to increase dissolving pulp production

TreeToTextile partnership to develop woodfibre-based textiles
Filippa K

A JOURNEY TO SUSTAINABILITY & OUR COMMITMENTS FOR 2030
TO INSPIRE A MOVEMENT OF MINDFUL CONSUMPTION

BY SHOWING THAT SIMPLICITY IS THE PUREST FORM OF LUXURY
Conscious design for a better future
• Only sustainable materials
• Only recyclable styles

Sustainable sourcing & manufacture
• Full transparency in our supply chain
• Only sustainable production processes

Resource efficient business
• Accurate purchase precision in number of pieces produced
• Minimal footprint through out our business

People in our value chain are respected
• Total compliance to Filippa K Code of Conduct based on Filippa K’s values

Long-term sustainable success
• Professional long-term partnerships
• Sustain a profit level of more then 10% EBT
• Sustain a growth in comparable units
CIRCULAR FASHION

Filippa K
CIRCULAR FASHION

- RECYCLE
- REUSE
- REPAIR
- REDUCE
Since our clothes are made to last, please pass it on to some one else if no longer in use, or return it to us for reuse.
#NotThatComplicated

7 Pieces Is All You Need
FRONT RUNNERS

1. Minimal waste
2. Recyclable
3. Sustainable materials
4. Minimal use of resources
5. Less chemicals
6. Minimal emissions
7. Transparent supply chain
8. Respect for people
9. Respect for animals
10. Long-lasting in design and quality
11. Perfect fit and comfort
12. Financially sound
CIRCULAR FASHION

REUSE

RECYCLE

REPAIR

REDUCE
Filippa K Care
How to Wash, Mend & Care
CIRCULAR FASHION
Filippa K Collect
Give your garment a second life
Filippa K Lease
A way to sustainable consumption
CIRCULAR FASHION
CIRCULAR FASHION
WHY SO HARD?

OPTIMIZED MINDSETS SILOS TIME
FRONT RUNNERS

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Circular design speeds

We aim to develop the first verified circular garments where all environmental impacts and aspects during a full life cycle are taken into account and optimized based on a pre-determined life length.

Design Researchers in Residence at Filippa K to test and develop the principles of the Mistra Future Fashion Design Theme

Nov 2016 – Nov 2018
'Extending the life of clothing by an extra nine months of active use would reduce carbon, waste and water footprints by around 20-30% each.'

Wrap UK, 2015

http://www.wearesalt.org/10-slow-fashion-values/
mono no aware

An appreciation of short lived product lifespans as part of the long and short cycles in nature.

Natural cycles contribute nutrients to provide sustenance for regeneration.
HOW WE DESIGN FOR DURABILITY & LONG LIFE?
HOW WE DESIGN FOR SHORT LIFE? WE DON’T...

FILIPPA K LEASE
A WAY TO SUSTAINABLE CONSUMPTION

LEASE THE LOOK
Unique SS16 runway pieces straight of the catwalk
LONG LIFE – TECHNICAL CYCLE

100% Recycled material
100% Recyclable
THE ETERNAL TRENCH COAT - SS19 COLLECTION
LONG LIFE – TECHNICAL CYCLE

Only recycled materials and fully recyclable
SHORT LIFE – BIOLOGICAL CYCLE

100% Bio based material

100% Compostable
THE THROW AWAY DRESS – CONCEPT DRESSES
THREE STYLES – WOMAN

"The throw away dress"
SHORT LIFE – BIOLOGICAL CYCLE
Bio-based and fully biodegradable
CREATING NEW ECO SYSTEMS
From heavy industry to the world of fashion
CREATING NEW ECO SYSTEMS
From heavy industry to the world of fashion
INSIGHTS

BEGIN WITH THE END IN MIND

AGE OF PARTNERSHIPS

LOOK OUTSIDE YOUR ECOSYSTEM

TRANSPARENCY AND OPENNESS TO CREATE A WIN-WIN
THANK YOU!
elin@elco.nu
Trust Through Traceability
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