Inspired by nature
A way how nature makes fibre

- Renewable and bio-based raw materials
- Mechanical process
- No process waste in the fibre spinning process
- Alternative for natural fibres
- Recyclable without losing quality
A clean process, without dissolving

**MECHANICAL REFINING** → **SPINNING** (PATENTED TECHNOLOGY) → **DRYING**

- **NO HARMFUL CHEMICALS**
- **NO PROCESS WASTE OR SIDE STREAMS**

**RENEWABLE RAW MATERIAL STREAMS**
- Wood pulp
- Agricultural waste
- Leather waste
- Textile waste

**PRODUCT OUTPUT**
- Yarn
- Fibre
- Fabric
- Product

**RECYCLABLE WITHOUT LOSING QUALITY**
SPINNOVA® technology is flexible on feedstock

- **WOOD PULP**
- **AGRICULTURE WASTE**
- **LEATHER WASTE**
- **TEXTILE WASTE**
From textile waste

Spinnova partnered with Swedish textile recycling innovator, Renewcell, to develop and promote a concept to commercialise and scale textile waste-based fibre.
## Key processing advantages over man-made cellulotic fibres

<table>
<thead>
<tr>
<th></th>
<th>PULP</th>
<th>PREPARATION</th>
<th>SPINNING</th>
<th>CLEANING</th>
<th>WASTE</th>
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<tbody>
<tr>
<td><strong>SPINNOVA®</strong></td>
<td>Kraft pulp (also dissolving pulp)</td>
<td>Mechanical refining</td>
<td>Dry spinning and drying</td>
<td>No washes or rinses</td>
<td>No side or process waste streams</td>
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<td><strong>Mechanical treatment</strong></td>
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<tr>
<td><strong>Man-made cellulotic fibres</strong></td>
<td>Dissolving pulp</td>
<td>Chemical dissolving</td>
<td>Dissolving to wet spinning</td>
<td>Several wash and rinse cycles</td>
<td>Side and waste streams*</td>
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<td><strong>Chemical dissolving</strong></td>
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* Lyocell uses a complex chemical process, however in a closed cycle, so it's more sustainable than a viscose process.
The first joint venture factory with Suzano producing SPINNOVA® fibre inaugurated in May 2023
98% less water*

Harmful chemical free process

Traceable certified raw materials

74% less CO₂ emissions**

Recyclable while maintaining quality

Biodegradable

No process waste in the fibre spinning process

* Compared to the average water consumption in conventional cotton production
** Compared to global average emissions of conventional cotton (4.7 kg CO₂-e/ kg of fibre)
### Disruptively sustainable

| 98% LESS WATER USE* | NO HARMFUL CHEMICALS | NO PROCESS WASTE OR SIDE STREAMS | 100% BIODEGRADABLE | 100% RECYCLABLE | 74% LESS CO₂ EMISSIONS** |

* Compared to the average water consumption in conventional cotton production
** Compared to global average emissions of conventional cotton (4.7 kg CO₂-e/ kg of fibre)
We help to reduce CO2 emissions more than we cause

Conventional cotton footprint: 4.7 kg CO₂ eq

SPINNOVA® carbon footprint: 1.2 kg CO₂ eq

Heat recovery from SPINNOVA® process & reuse: -2.4 kg CO₂ eq

Source: Clonet's carbon footprint and handprint calculation on Spinnova fibre, 2021 Value on cotton: Ecoinvent 3.8 dataset
A true alternative to natural fiber, yet

APPLICATION IN VARIOUS FORMS
E.g. Textiles, Non-woven, Composites

MORE THAN A MMMCF
Natural aesthetics and performance

ENGINEERED FOR THE FUTURE
Produced in filament form, Can be even in dyed form
WAY BEYOND JUST RECYCLING

SPINNOVA® maintains its quality through recycling, spin after spin, in a process that uses no harmful chemicals.
SPINNOVA® materials are flexible on applications
SPINNOVA® co-stars in the stories of some of the world’s most pioneering and iconic fashion brands, designers and creators.
Spinnova and Danish multi-brand retailer BESTSELLER have partnered in a long-term sustainability journey. BESTSELLER's largest brand, JACK & JONES introduced a pair of men's trousers available for consumers in October 2022.

The trousers, called Bill Revolver Wide Chinos, are made of 20% SPINNOVA® fibre, 20% BCI cotton and 60% organic cotton.

SPINNOVA® and BESTSELLER is working further on developing various products.
A sustainable fibre revolution

THE SMALLEST POSSIBLE FOOTPRINT

THE CLEANEST TEXTILE FIBRE

MADE TO CIRCULATE
Thank you