

A close-up photograph of two hands holding a long, thin, glowing white fiber. The fiber has a bright, ethereal light emanating from it, creating a soft glow. The hands are positioned on either side of the fiber, with fingers gently gripping it. The background is dark and out of focus, emphasizing the fiber and the hands. The overall mood is one of innovation and discovery.

SPINNOVA®

INVESTOR PRESENTATION, December 2021

WWW.SPINNOVAGROUP.COM

Presenting today



Janne Poranen

Chief Executive Officer
& Co-founder

Dr Janne Poranen is the CEO and co-founder of Spinnova. Before spinning the business off from the Finnish Technical Research Centre (VTT) with co-founder Juha Salmela, he headed the VTT's Fibers and Bio-based materials research area.

He also held other managerial positions in his ten years with the VTT. Poranen holds a PhD in physics. He is a hybrid of a scientist, industrial expert and entrepreneur.

Spinnova as an investment

- Addressing the very large and growing, **200 bn euro** textile fibre market
- Scalable technology and strong partners on-board for ramp-up with Suzano to more than **1mt p/a in the next 10-12 yrs**
- The same clean technology can process **multiple feedstocks**



Bergans anorak made with fresh & post-consumer SPINNOVA®

Our mission

We produce **the most sustainable textile materials in the world** for the benefit of the environment and humanity.

By doing so we will **transform the raw material base of the entire global textile industry** for the better.



It all started with a spider web

———— 2009 ———→



Could MFC be spun into textile fibre in a similar way to a spider web?

———— 2014 ———→



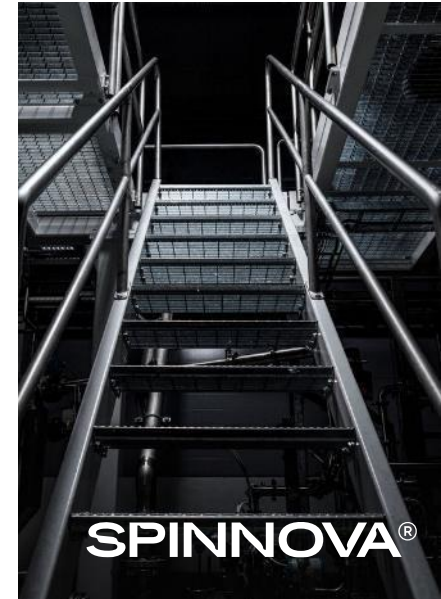
Spinoff from VTT;
start of Spinnova as
a company

———— 2018 ———→



Industrial scale pilot
completed

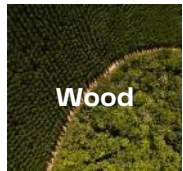
———— 2021 ———→



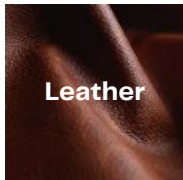
Scaleup plans and
commercialisation

Disruptive technology innovation

Renewable raw material streams



Wood



Leather



Agri waste



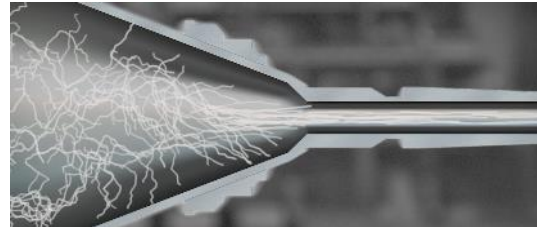
Textile waste

SPINNOVA® Process

Natural micro fibre suspension



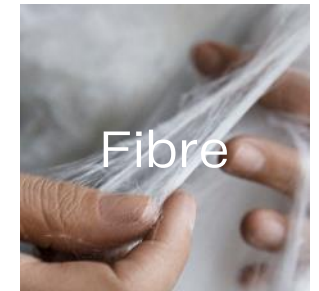
Spinning (**patented technology**)



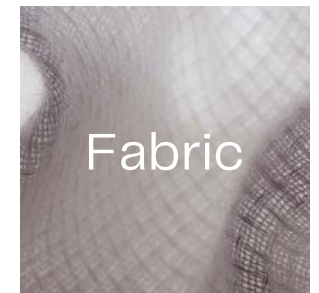
Drying



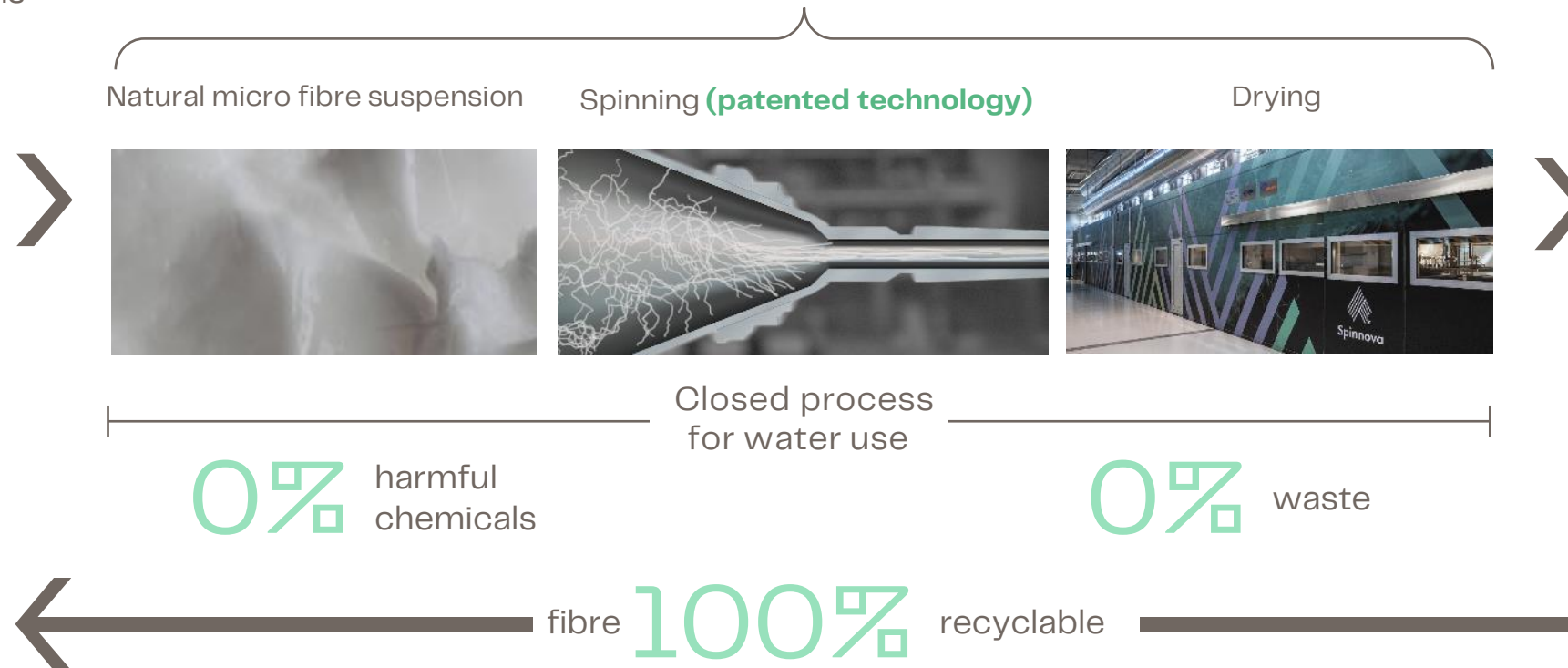
Production output



Fibre



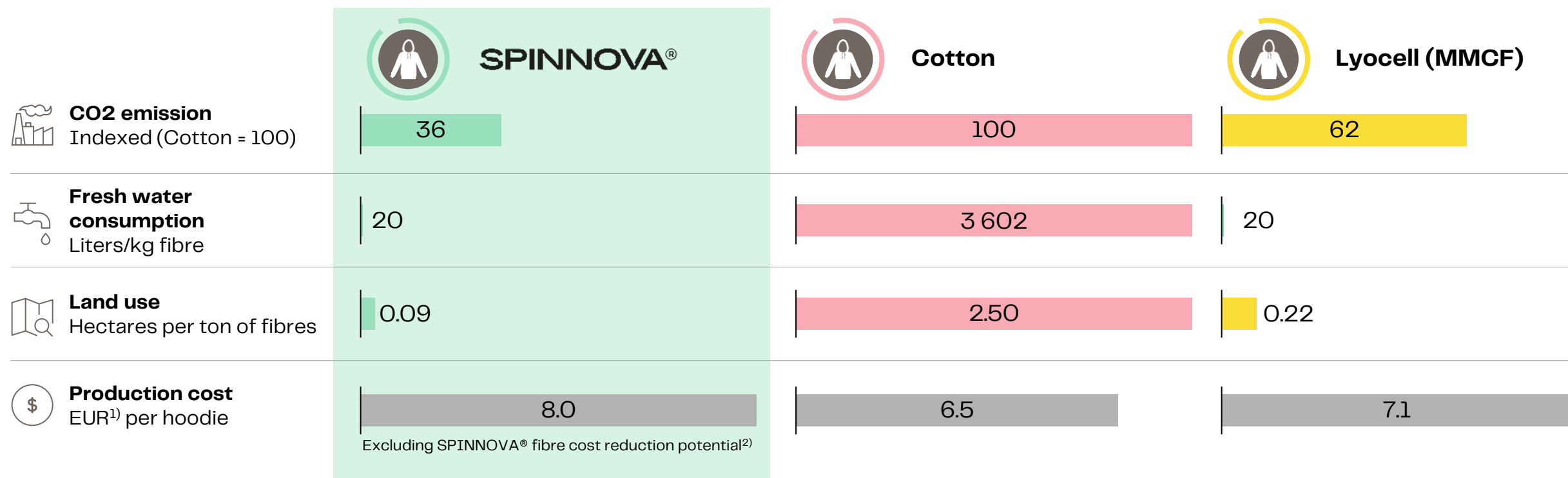
Fabric



The background of the slide is a close-up photograph of dark green, rounded leaves, possibly from a shrub or tree, with some leaves in sharp focus and others blurred in the background. The lighting is soft, creating a natural and organic feel.

Value Proposition

SPINNOVA® hoodie saves ~40–65% of CO₂ emissions



1) Estimated based on the t-shirt production cost calculation logic from Hasan et al. 2020, assuming that production of a cotton t-shirt costs 2.15 EUR and requires ~200g undyed fabric, a hoodie requires ~600g undyed fabric (excluding zippers etc.). Cost of yarn production and all other costs assumed to remain constant for the same weight of fabric used (~86% of cost of cotton hoodie). FX: USD to EUR, 2019 = 0.893.

2) Future cost reduction potential likely driven by decrease in price of raw material, optimized energy efficiency and price, optimized process, and economies of scale; 3) Calculated based on index value of water usage where cotton = 100 and Spinnova = 0.5. 99.5% smaller footprint is based on calculation where artificial irrigation of cotton is included to the water usage and eucalyptus uses no artificial irrigation. Source: ICAC, Hasan et al. 2020 "Addressing Social Issues in Commodity Markets", Environmental impact comparison by 3rd party Simreka 2020 (ordered by Spinnova), Shen and Patel "Life Cycle Assessment of man-made cellulose fibres" (2010), Emerging textiles

SPINNOVA® supports the industry's sustainability goals

PHASING OUT HARMFUL CHEMISTRY



0% HARMFUL CHEMICALS

Zero tolerance for
ZDHC listed
chemicals

REDUCING WATER USE



99% LESS WATER USE

Compared to cotton's
cradle to gate water
use

REDUCING EMISSIONS



65% LESS CO2

Compared to cotton's
cradle to gate
emissions

REDUCING MICROPLASTICS



0% MICROPLASTICS

All-natural composition
guarantees zero
microplastic shedding

CLOSING THE LOOP





100% CIRCULARITY

Fibre can be used for
new fibre post-
consumer without
losing quality

SPINNOVA® fibre is unique from the outset

MMCF

SYNTHETIC OIL
BASED¹⁾

REGENERATING CHEMICAL PROCESS	MECHANICAL PROCESS WITH NO HARMFUL CHEMICALS
	
	

Spinnova is the only scalable player using natural-based feedstock with a mechanical process.

The fibre & materials industry’s most influential non-profit, The Textile Exchange, classifies SPINNOVA® as an “Other plant-based fibre”

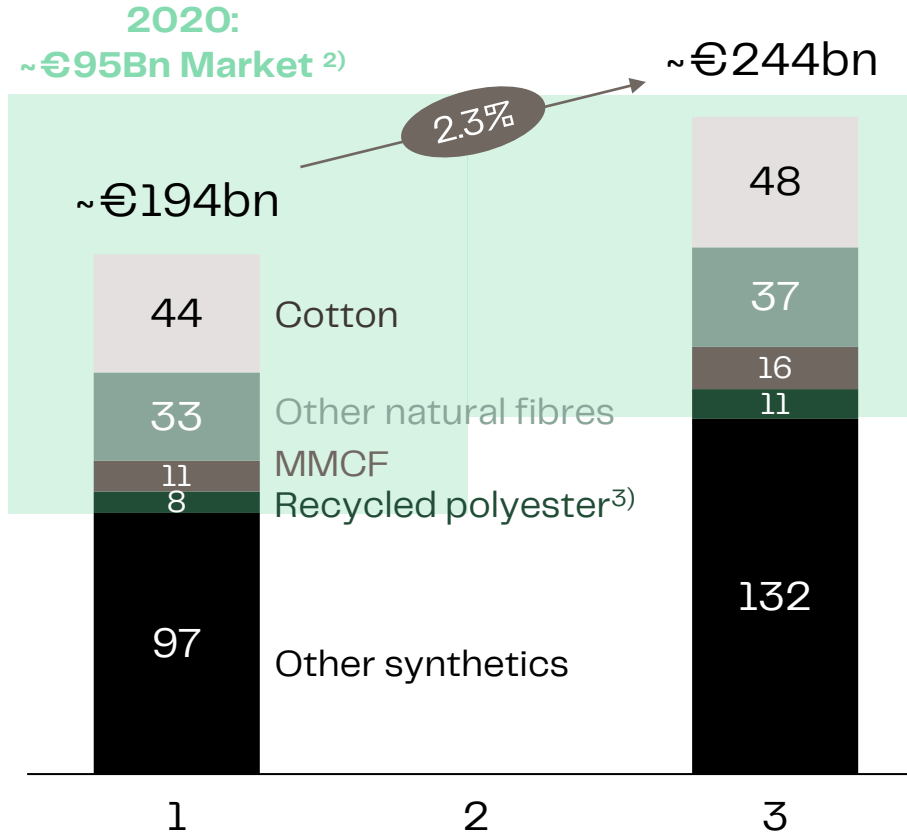
Note: 1) Includes also bio-based polyesters.



Market Opportunity

Large target market with multiple growth factors

SPINNOVA'S TARGET MARKET – SUPPLY SIDE ¹⁾



KEY MARKET TRENDS AND DRIVERS

- 1 Apparel demand grows faster than global GDP
- 2 Clothing lifecycle shortening – “fast fashion” increasing
- 3 Increasing regulation towards sustainable materials
- 4 Cotton has environmental and production capacity issues
- 5 Global brands need a solution for apparel materials

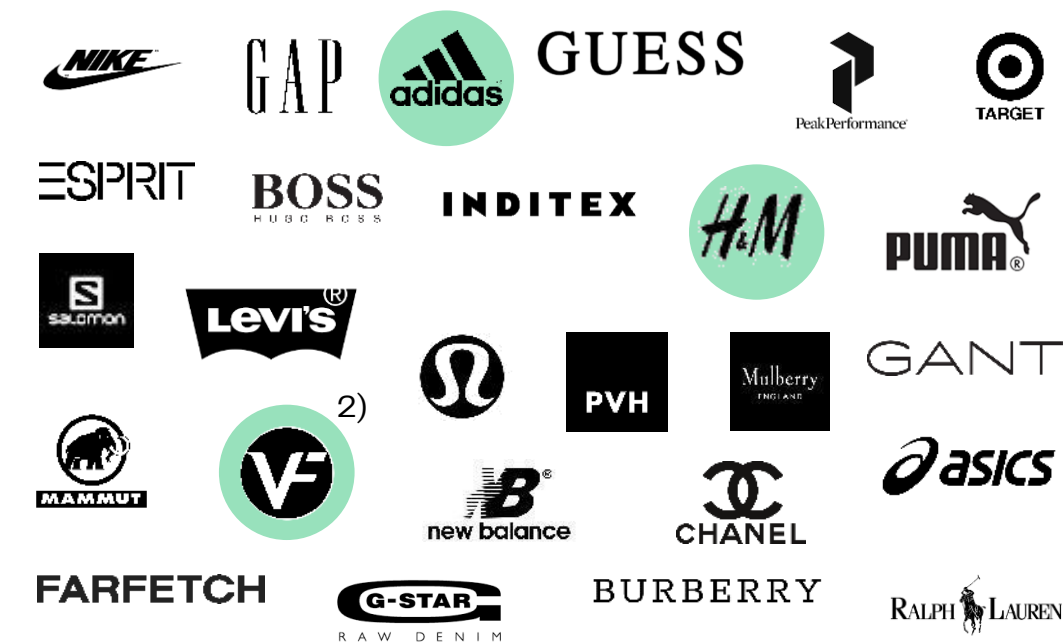
Note: 1) Calculated based on 2019 fibre prices and includes the following fibre categories: Cotton: preferred cotton, regular cotton; MMCF: Viscose, Lyocell, and other MMCF; Other natural fibres: wool, other animal-based fibres, other plant-based fibres; Synthetics: virgin polyester, recycled polyester, polyamid, other synthetics; 2) The addressable market includes minor share from subcategories that are not addressable such as silk. Spinnova's addressable market assumed to include cotton, MMCF, plant-based natural-fibres, and recycled polyester; 3) Estimated based on synthetics to recycled polyester ratio in 2019.

Source: Textile Exchange, The fibre Year report 2020, United Nations; World Population Prospect, The cellulose gap (The future of cellulose fibres), Environmental Science, by F.M: Haemmerle et al. 2011; Textile Exchange; Preferred Fiber & Materials Market Report 2020, ITC statistics, EmergingTextiles

Apparel brands taking sustainability action

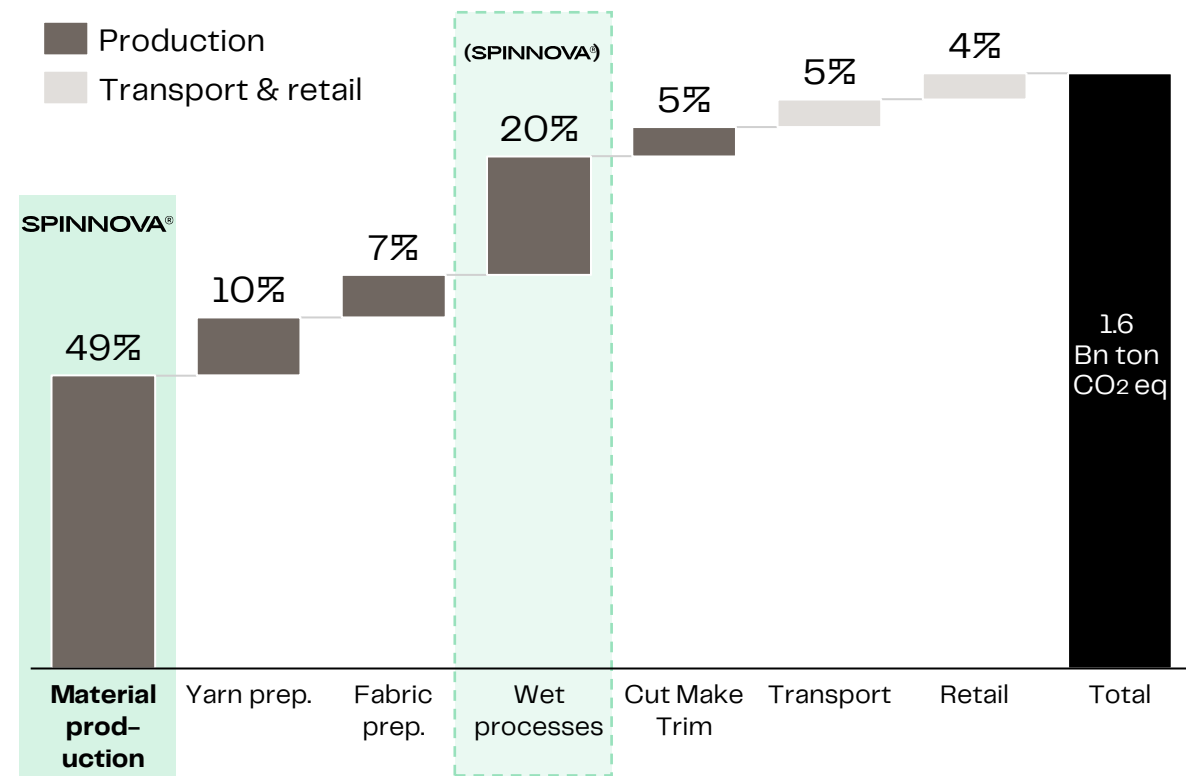
100 FASHION BRANDS COMMITTED TO CUT GREENHOUSE GAS (GHG) EMISSIONS BY 30% BY 2030¹⁾

EXAMPLES



 Already a Spinnova brand partner

GREEN HOUSE GAS (GHG) EMISSIONS OF APPAREL AND FOOTWEAR INDUSTRY BY VALUE CHAIN IN 2018 (%)³⁾



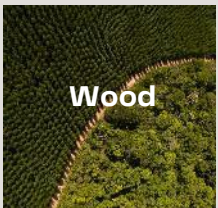
Note: 1) UN's Fashion Industry Charter for climate action in 2018 Commitment to cut green house gases by 30% compared 2015; 2) Spinnova has a partnership with VF corporation's Icebreaker brand; 3) This is an annualized emissions analysis – not a Life Cycle Analysis of a garment; as a result the usage phase emissions differ vs. LCA analysis results
Source: Fashion on Climate, McKinsey & Global Fashion Agenda, August 2020



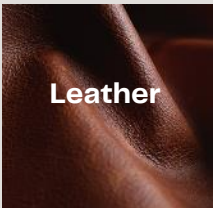
Strategy

Business strategy

Joint Ventures



Wood



Leather



SPINNOVA®

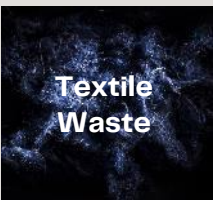


SPINNOVA®

Multiple options



Agri
Waste



Textile
Waste

SPINNOVA®

Fibre technology platform

- Own and develop the technology
- Technology concept provider
- Technology fee

Fibre production and sales

- Joint venture (JV) partner
- Multiple other options

Fabric sales

- Spinnova's own sales and marketing organization



Apparel & Footwear

Interior textiles

Healthcare

Composites

Multiple earnings streams

1) TECHNOLOGY SALES

Turn-key solution, exclusive technology supplier



Payments from JV
for technology
project delivery

Recurring
technology fee
based on the
JV's cash flow*

2) FIBRE SALES

Joint ventures responsible for wood and leather
fibre sales



50% of the JV's profit

3) FABRIC SALES

Fabric sales to brands, fabric co-branded



Profits based on sold fabric volumes

* Only applies to Woodspin.

Business targets announced in H1 2021

	PRODUCTION TARGETS	BUSINESS TARGETS	COMMERCIAL TARGETS
Medium term (4–6 years)	150 thousand tonnes of SPINNOVA® fibre production capacity	EBIT positive	Up to 20 commercial textile brand partnerships, which have SPINNOVA® materials in their product lines
Long term (10–12 years)	1 million tonnes of SPINNOVA® fibre production capacity	More than €200 million EBIT p.a. from share of profits from JVs, recurring technology fees and service maintenance fees Cumulative more than €1 billion cash margin from technology sales	Up to 80 commercial textile brand partnerships, which have SPINNOVA® materials in their product lines
Dividend policy (Spinnova Group)	Short to medium term: no dividends		



Scaling

Proof of concept from pilot

- The 100 tonnes production facility in Jyväskylä has proven technology viable
- SPINNOVA® fibre quality approved by several global brands in ongoing collaborations
- Production has been running for 2+ years with the same proven concept
- Pilot operating continuously (weekdays), producing fibre for product development with brand partners
- Everything of industrial standard (CE marked technology)



Spinnova's pilot production line.

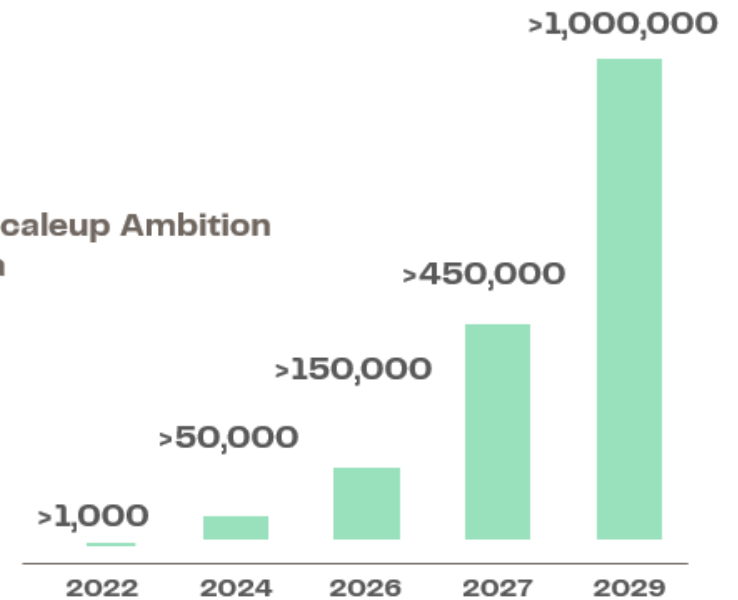
Suzano Collaboration



Extract from Suzano's 2021 capital markets day presentation 24 March 2021



Capacity Scaleup Ambition
Tonnes p/a



- Spinnova an important component of Suzano's new business strategy
- Woodspin joint venture established in 2020
- Joint capacity scaleup ambition to 1 MT p/a

Woodspin – An equal joint venture for scale



- Exclusive provider of sustainably produced micro-fibrillated cellulose for the SPINNOVA® fibre production
- Maximum MFC price of 2,000€/tonne (limited to 18 months after production start-up)
- Scale-up of the MFC production volume to a commercial scale (1,000,000 tonnes within 10 years)



First commercial Woodspin facility producing SPINNOVA®

- Under construction in Finland
- Expected to be completed by end of 2022

SPINNOVA®

- Deliver Spinnova technology and resources to the JV to be able to complete the construction and commissioning phase of the production plant
- Exclusive provider of the SPINNOVA® fibre technology to the JV's future production units
- Continuous technology, product, brand and customer relationship development
- Fibre sold with the SPINNOVA® trademark

Leather Waste Development

- Result of a new partnership between Spinnova and KT Trading, leather partner to global premium-quality shoe brand ECCO
- Utilizes leather tannery waste as feedstock
- Possesses natural durability of leather and light weight and feel of a traditional textile
- Introduces a new category of sustainable and circular textiles that can set new standards for the industry
- Building a pilot production line in Finland; operational on estimate at the end of 2021
- No major further technology development needed from Spinnova to process
- 50/50 owned joint venture company is called Respin

SPINNOVA®

ECCO®



IPO enables growth

- Successful initial public offering raised EUR 115 million
- Brand partners adidas and ECCO also participated
- Suzano, Lenzing and all previous shareholders continued as major owners
- Spinnova (SPINN) listed on the Nasdaq Helsinki First North Growth Market on 24 June
- Approximately 20,000 investors joined our journey
- Owner amount now at 29,256

From top left: Juha Salmela, Timo Soininen, Ben Selby, Harri Sundvik,
From bottom left: Lotta Kopra, Janne Poranen and Petri Poranen.



A close-up photograph of several red bobbins on a spinning machine. The bobbins are arranged in a row, and the white yarn being spun is visible as a blurred cone at the bottom of each bobbin. The background is dark and out of focus.

Thank you!

Follow our IR website at
www.spinnovagroup.com

90 + 90

Financial highlights January–June 2021

EUR Thousand	1-6/2021	1-6/2020	1-12/2020
Revenue	370	87	254
Operating profit (loss)	-3 093	-1 993	-5 473
Total investments	2 949	2 287	3 641
Net debt	- 98 354	-3 010	-1 372
Number of permanent employees (at end of period)	49	28	40

Permanent Employees

