



Lenzing Fiber Introduction

Mindful Fashion, New Zealand

September, 2021

Agenda

Session 1

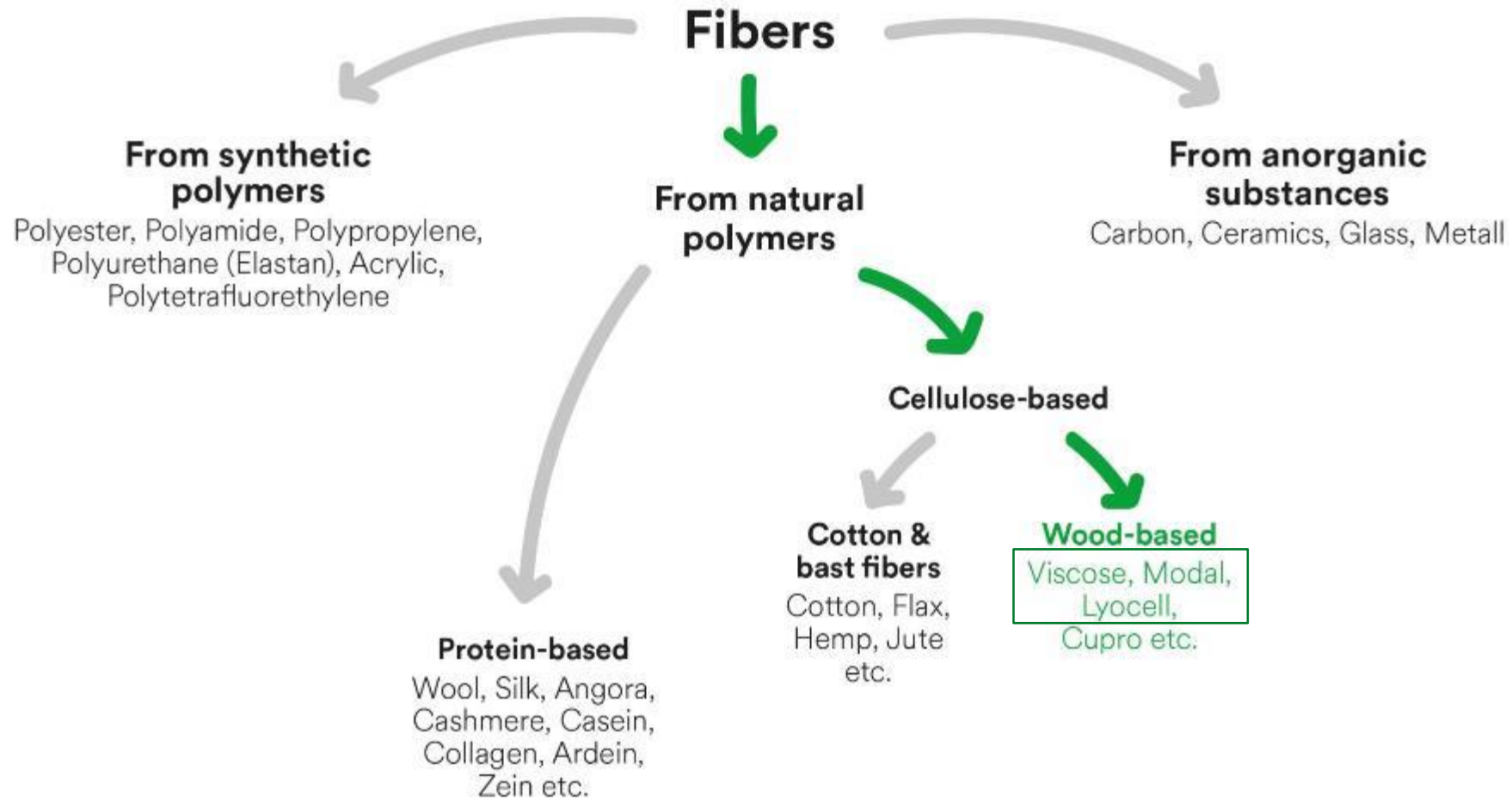
- Lenzing Fiber Introduction
- Q & A

Session 2

- Marketing and Branding
- Q & A

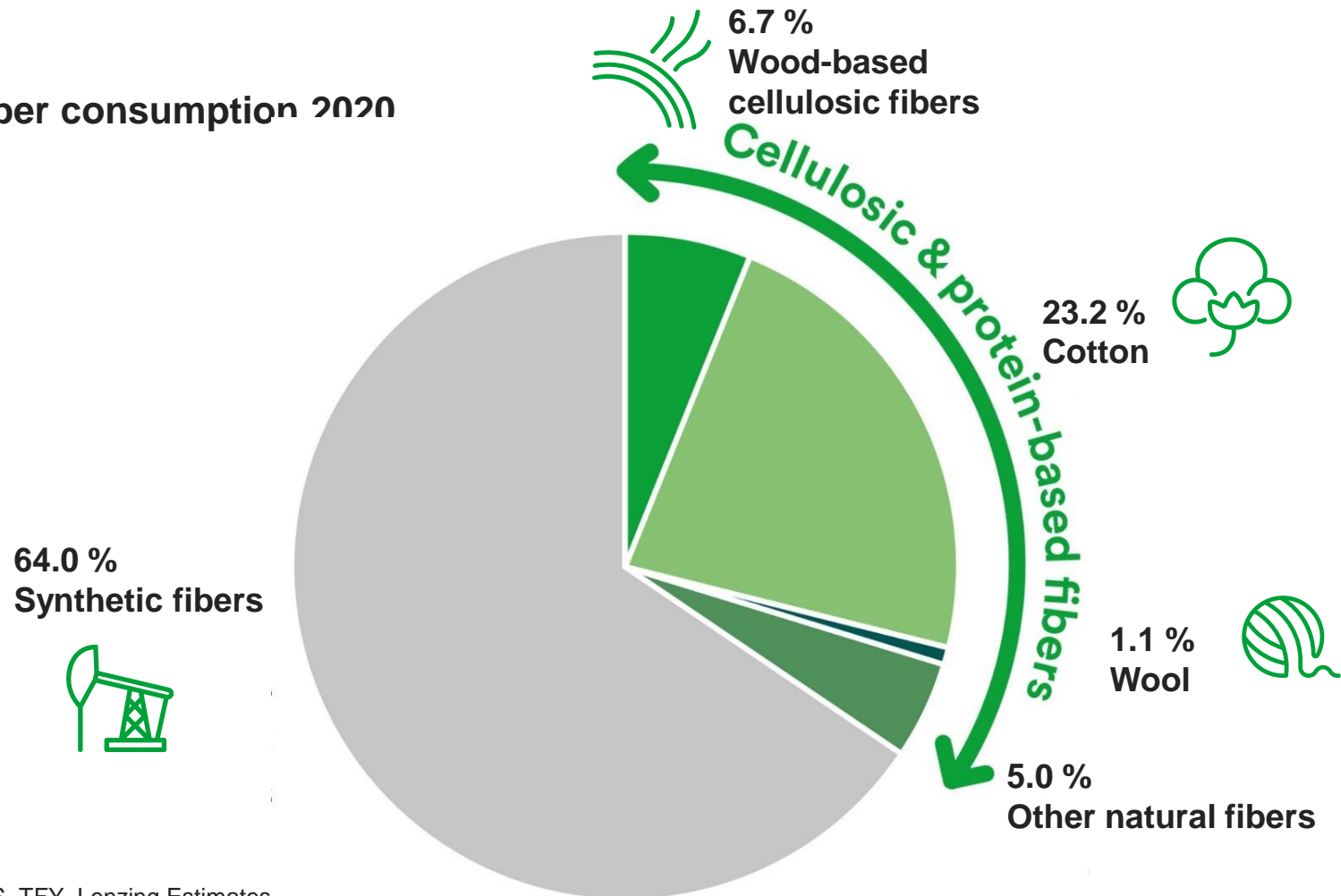


Fibers on the world market



Global fiber consumption in 2020¹

Worldwide fiber consumption 2020
98.2 mn tons



1) Sources: ICAC, CIRFS, TFY, Lenzing Estimates

About Lenzing

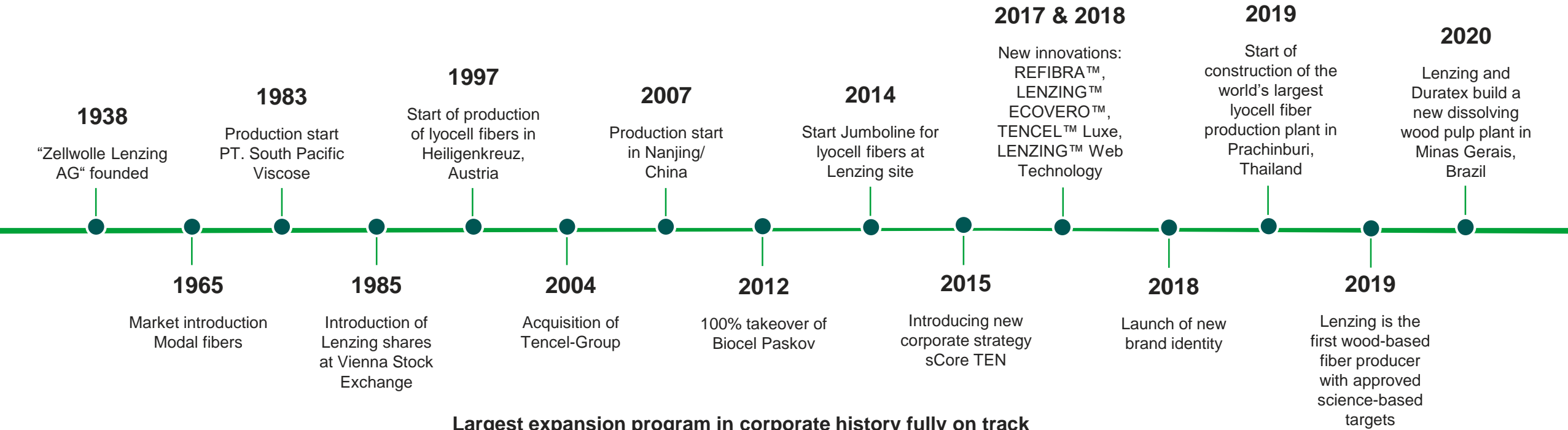


Evolution of Lenzing fibers



**for 80 years Lenzing has been producing
botanic fibers from wood – 80 years of
innovation and growth**

More than 80 years experiences in fibers industry



Largest expansion program in corporate history fully on track

- 2021
 - **TENCEL™ Carbon Zero Launch : Lyocell and Modal**
 - **TENCEL™ Modal Indigo Launch**
- 2022
 - **100 kt Lyocell plant in Thailand** to start in Q4-2021
- 2023
 - **500 kt DWP plant in Brazil** on schedule to start in Q2-2022
 - **LENZING™ ECOVERO™ in Purwakarta Site**
 - **LENZING™ Modal in Nanjing Site**

Locations of the Lenzing Group



*Nameplate capacities as at December 31, 2020

Lenzing Sites located in the middle of green area

Lenzing Site, Austria



Purwakarta Site, Indonesia



Sustainable wood sources



Sustainable
forests



Wood

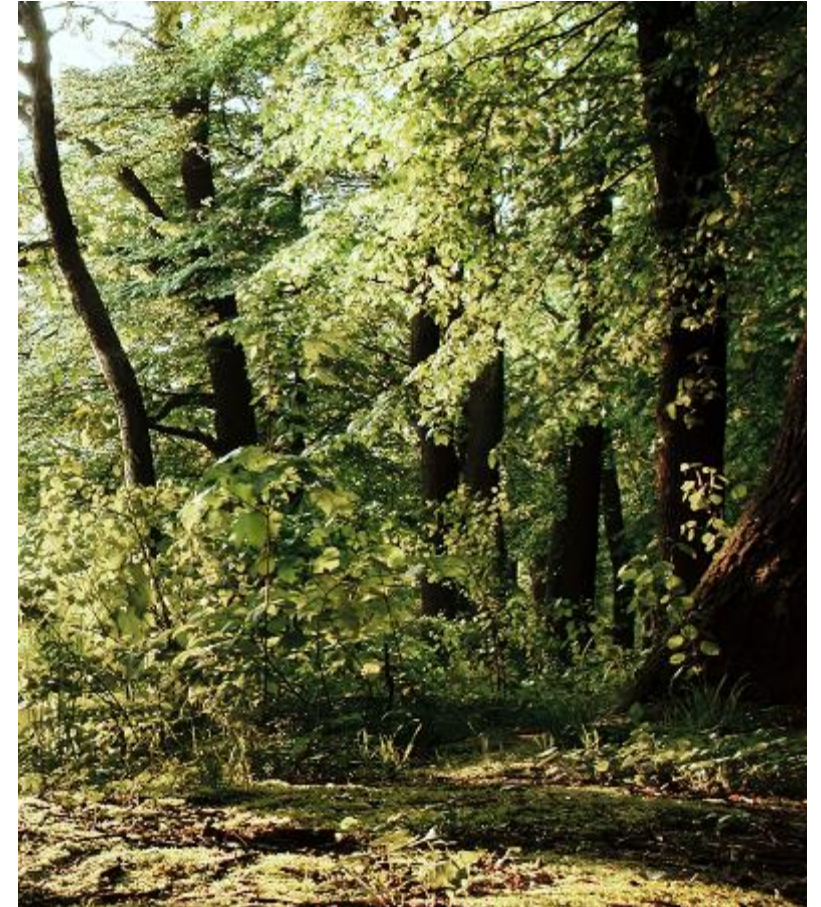


The mark of
responsible forestry



Promoting
Sustainable Forest
Management
www.pefc.org

Wood from natural forests
or sustainable forestry plantations



Introduction to Lenzing product brands

Lenzing

Innovative by nature



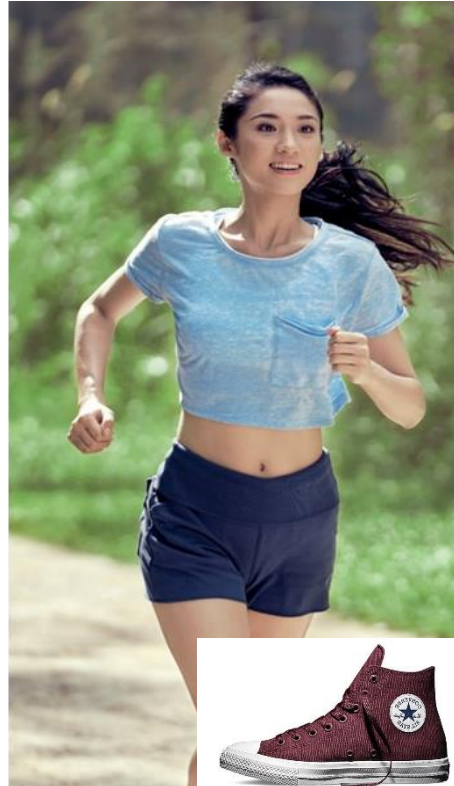
LENZING™ fibers for everyday life – Textile Application



Denim



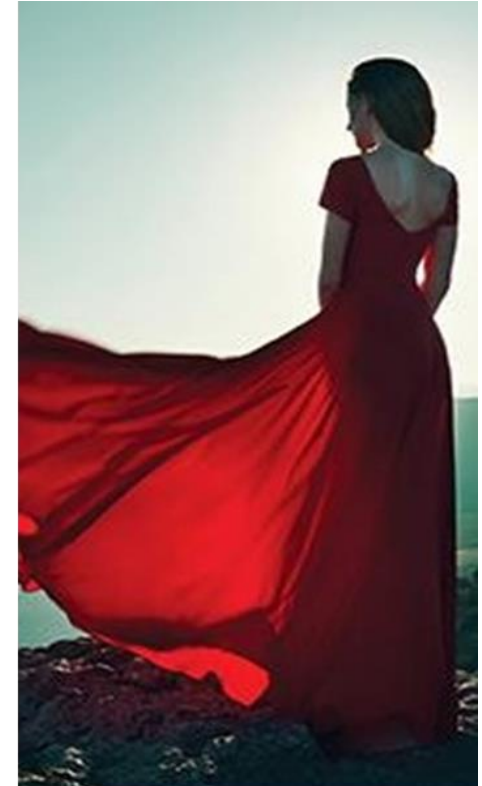
Innerwear



Functional &
Footwear



Home



Ready to Wear

LENZING™ fibers for everyday life – Industrial Application



LENZING™
Agriculture



LENZING™
Packaging



LENZING™
Protective



LENZING™
Workwear



LENZING™
Engineered



LENZING™
Biorefinery

Lenzing Fiber Introduction

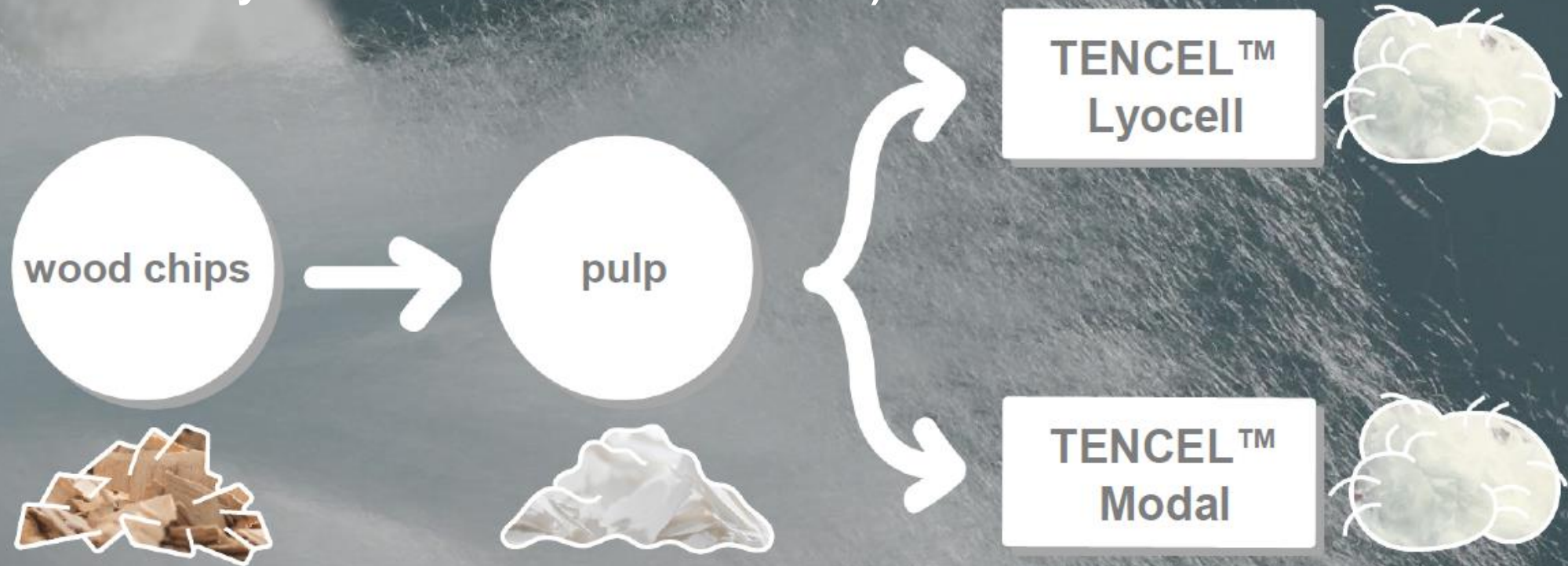


From forest to fabric

TENCEL™ sustainable fibers an introduction

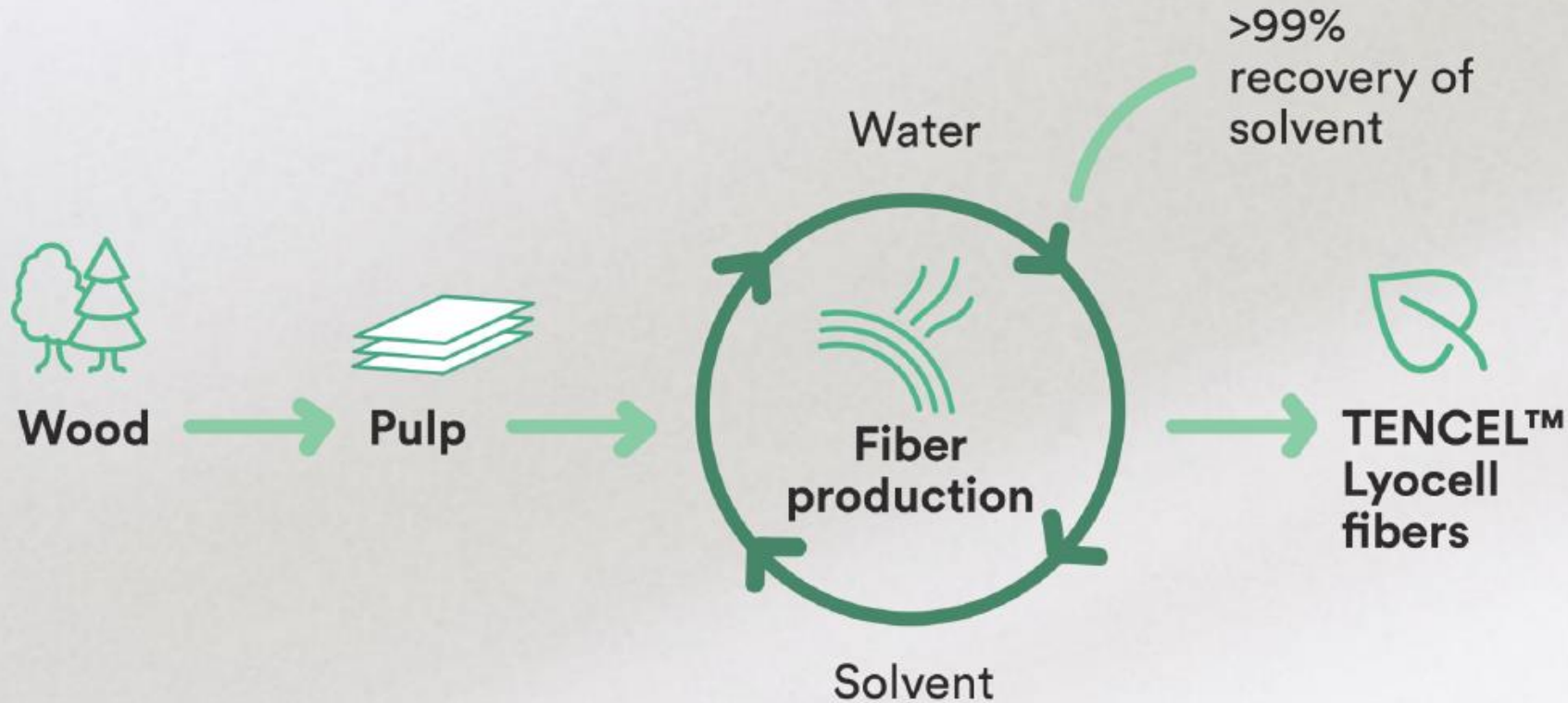


TENCEL™ fibers - production overview (LENZING™ Lyocell and LENZING™ Modal)



Introduction to Lenzing product brands

Lyocell from Lenzing closed loop production process



wearing comforts offered by TENCEL™ Lyocell fibers



enhanced
breathability



gentle on skin



strength



drape



minimal static
charge



thermal regulation



unfavorable for
bacterial growth



color vibrancy



smoothness




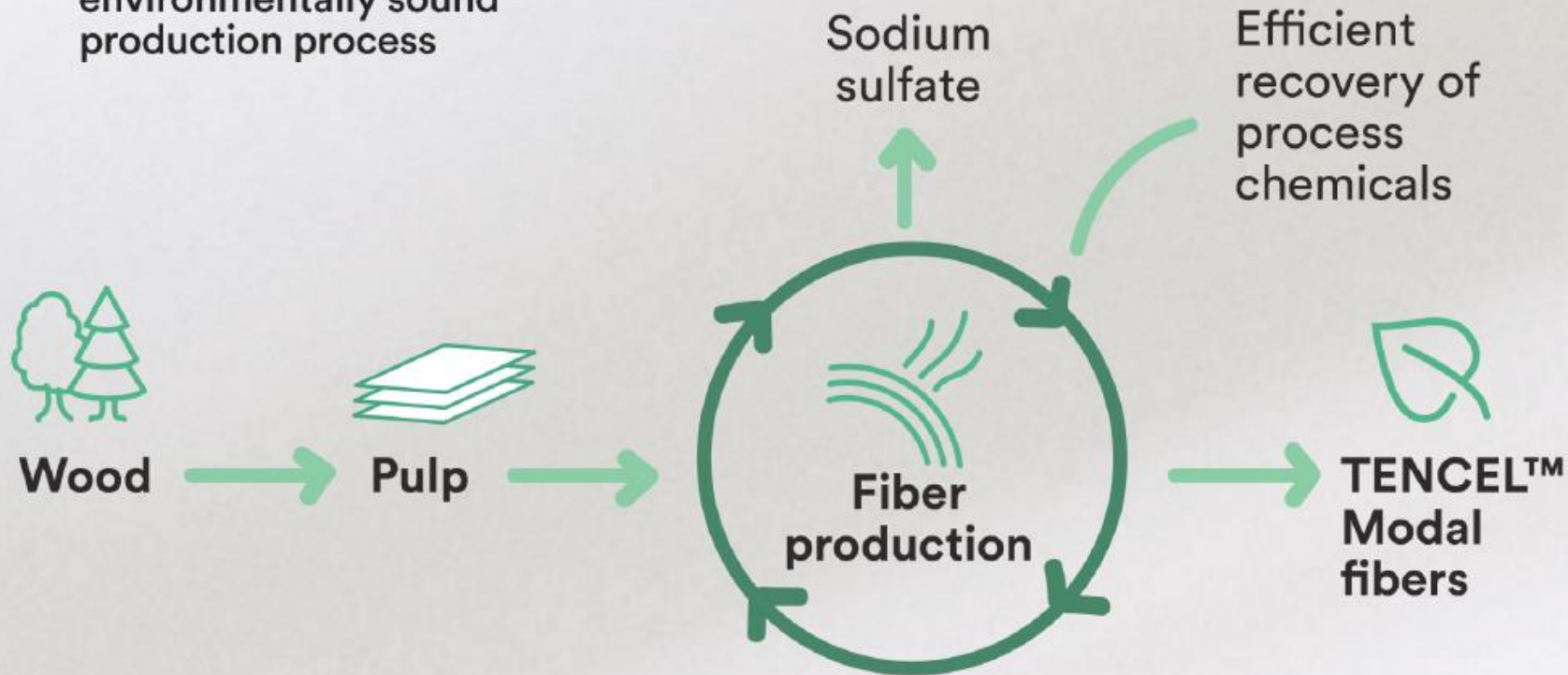
sheen



contribute to
performance

Introduction to Lenzing product brands

 **Modal from Lenzing**
environmentally sound
production process



wearing comforts offered by TENCEL™ Modal fibers



color retention*



long-lasting
softness



enhanced
breathability



contribute to
performance









minimal static
charge

*only applicable to TENCEL™ Modal fibers with Eco Color technology

www.lenzing.com

Technology overview

branded offer	technology
TENCEL™ Lyocell	 REFIBRA™  Micro  Carbon Zero
TENCEL™ Modal	 Micro  Eco Soft  Eco Color

A person wearing a white lab coat is shown from the chest up, holding a large, fluffy ball of white fiber in their hands. The background is a soft-focus white fabric. A green line graphic starts at the top left, loops around, and then extends horizontally across the top of the image.

Introduction to TENCEL™ x REFIBRA™

**let us take you
through the story of
TENCEL™ x REFIBRA™**

The Waste Challenge

The industry operates in an almost completely linear way:
'take, make, waste'.

It will be impossible to sustainably meet market demand with this model.

85%

of the total fiber input used for clothing, is landfilled or incinerated

12%

of total fiber input is lost as offcuts in the product process

\$100bn

USD of clothing is landfilled or incinerated annually

What are TENCEL™ x REFIBRA™ fibers?



X



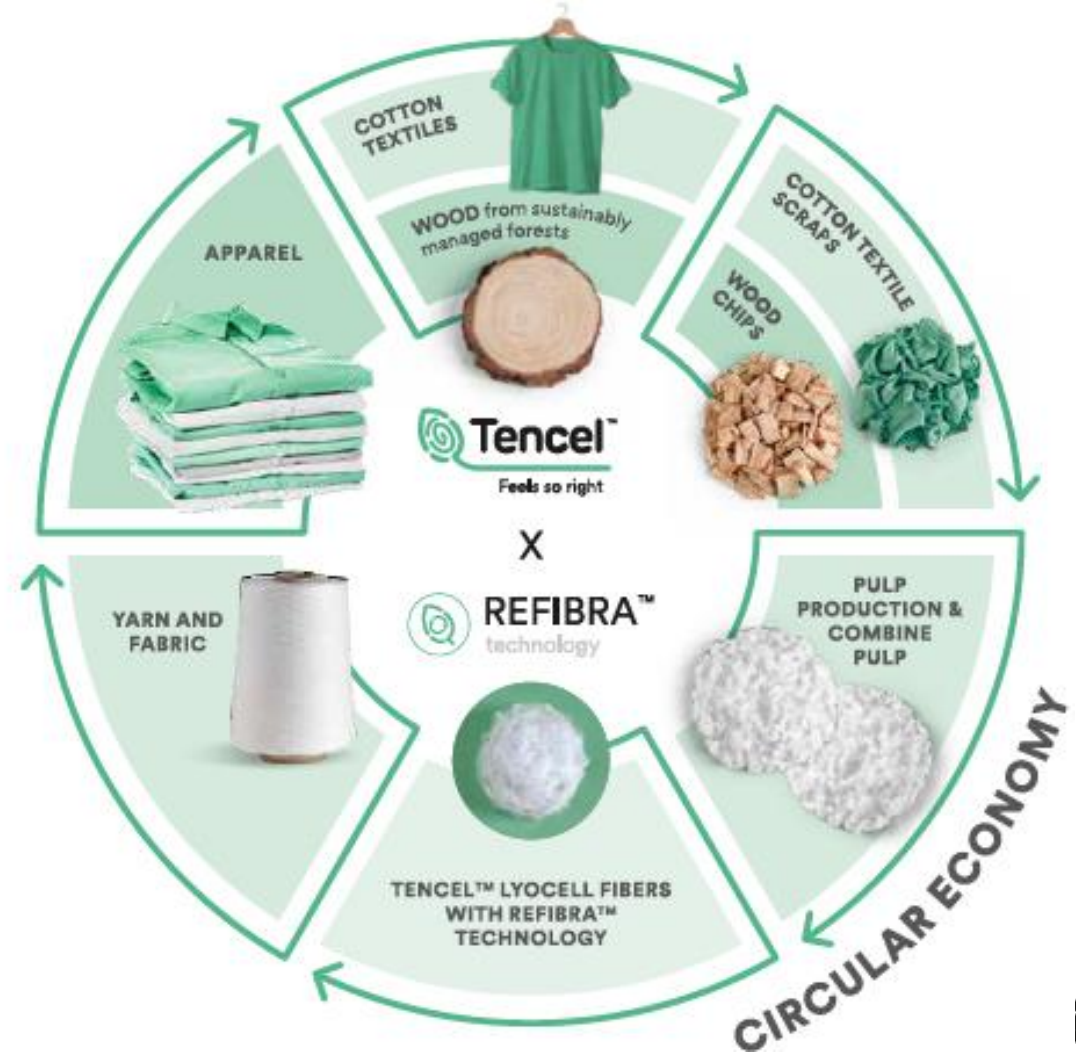
TENCEL™ x REFIBRA™ fibers

Our contribution to circular economy



TENCEL™ Lyocell fibers with REFIBRA™ technology now feature up to **30% of recycled raw material content from pre-consumer cotton textile waste**.

Lenzing's **five-year vision** is to raise the industry bar by producing fibers with REFIBRA™ technology by having **up to 50% recycled content from post-consumer cotton textile waste** to make textile waste recycling as common as paper recycling.



TENCEL™ x REFIBRA™ offers functional key benefits of Lyocell



**enhanced
breathability**



**gentle on
skin**



drape



**unfavorable for
bacterial growth**



**contribute to
performance**



**minimal static
charge**



strength



smoothness



**thermal
regulation**



**sustainable yet
comfortable**

Lenzing

Introducing



with



Decarbonization is a major topic for the Fashion Industry

Global Initiatives are pushing to act on Climate Actions



UN Fashion Pact

“We will commit to implement **Science-Based Targets (SBTs)** on climate and drive corporate actions that are consistent with a 1.5-degree pathway through a ‘just transition’ to achieve net-zero by 2050.

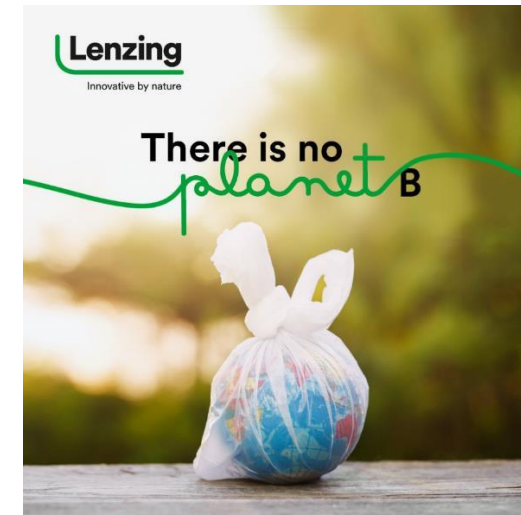
Uniting Business and Governments to Recover Better



- Demonstrate that the best decisions and actions are **grounded in science**.
- Invest in recovery and resilience for a systemic socio-economic transformation.
- Work with Governments and **scale up the movement**.

Transform to Net Zero initiative

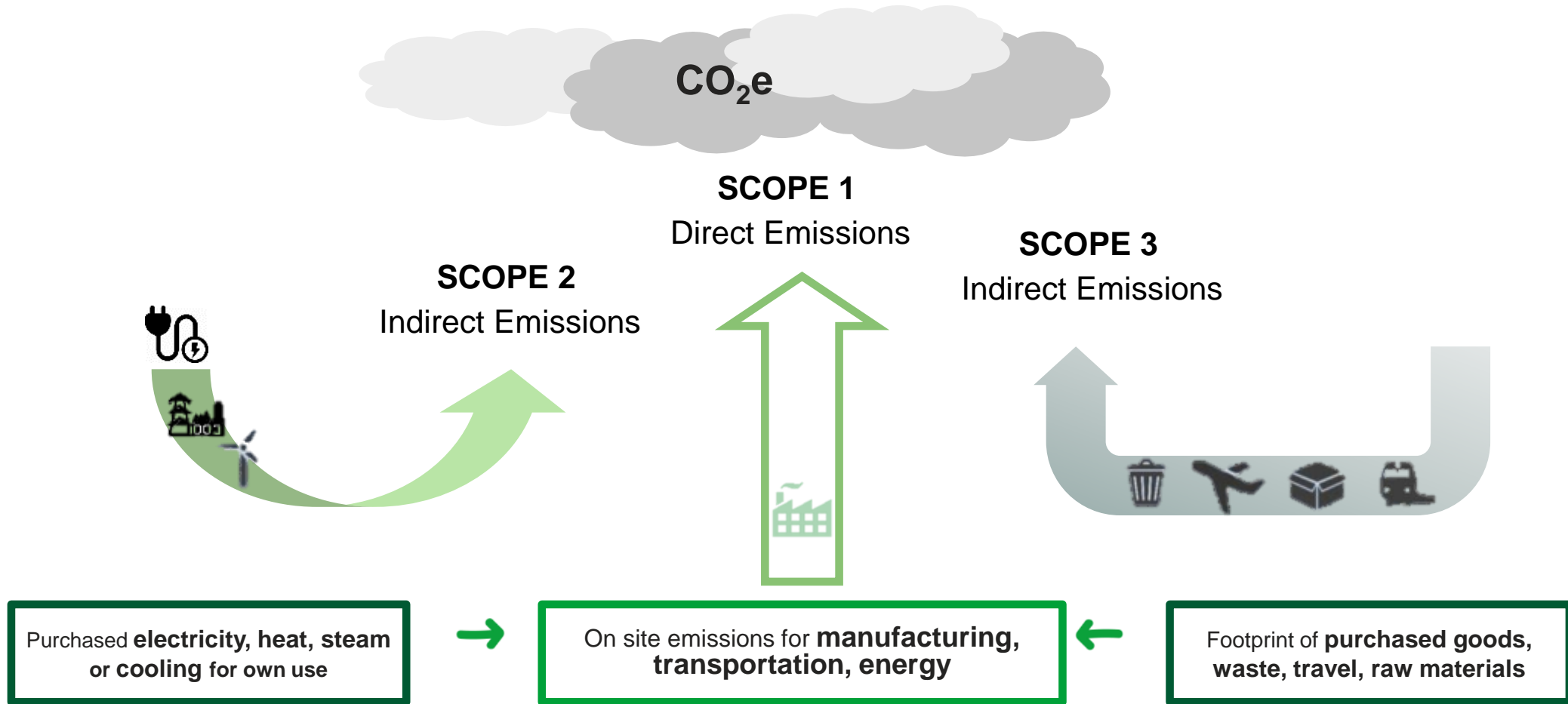
- **Converting commitments into action** and transforming business operations, supply chains, and products and services.
- Making net zero **implementation possible** and viable
- Creating systems change, working beyond sectorial silos to increase investment in innovation, supportive public policy.



As well as acting and supporting the UN Sustainable Development Goals

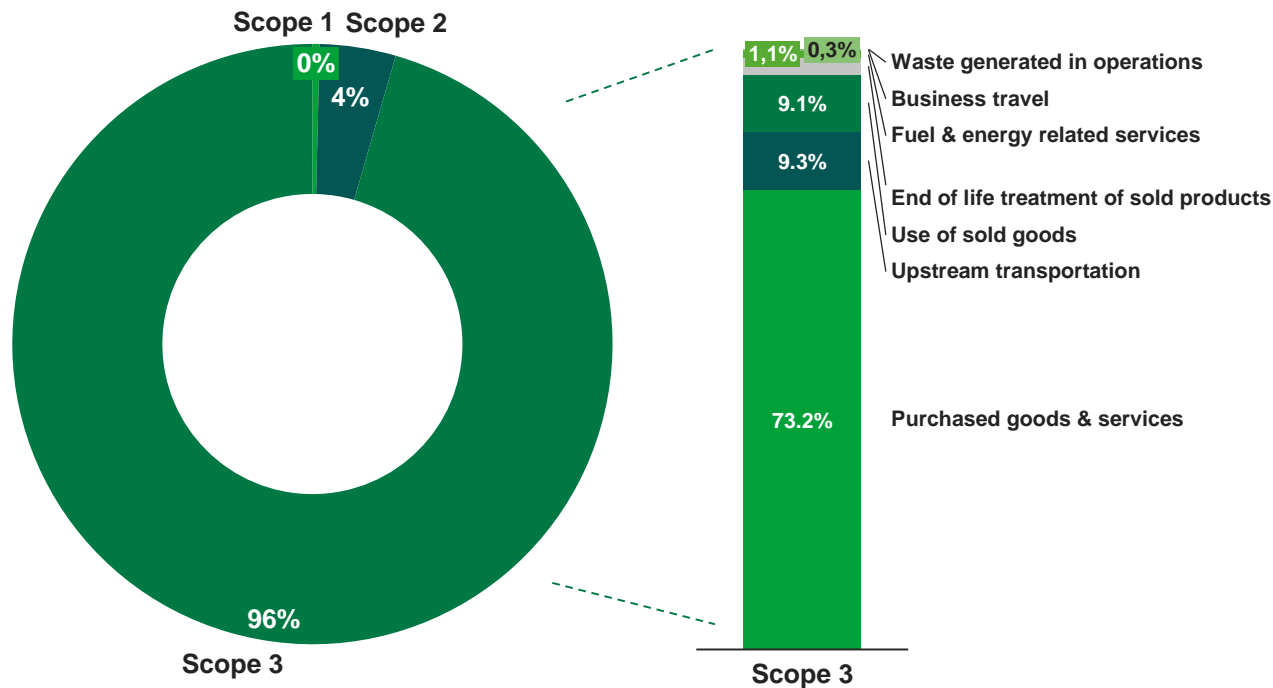


It is important to understand where the GHG - emissions come from



Split of carbon emissions in the textile industry show need for reduction in Scope 3

Example GHG emissions by scope



- Scope 3 contributes strongly to the overall emissions of brands/retailers
- Textile production steps can be found at ,purchased goods and services‘
- Reducing emissions in the textile value chain – from raw material to product assembly – helps to combat climate change

Source:SBT “Apparel and Footwear Sector Science-Based Targets Guidance” https://sciencebasedtargets.org/wp-content/uploads/2019/06/SBT_App_Guide_final_0718.pdf

The result is our Journey to

true

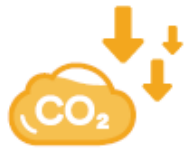
**carbon
zero**



We have developed TENCEL™ fibers with a net-zero footprint by a three step approach

reduce

Our priority is the continuous reduction of carbon emissions through more efficient production methods, using renewable energy sources and embracing new technologies.



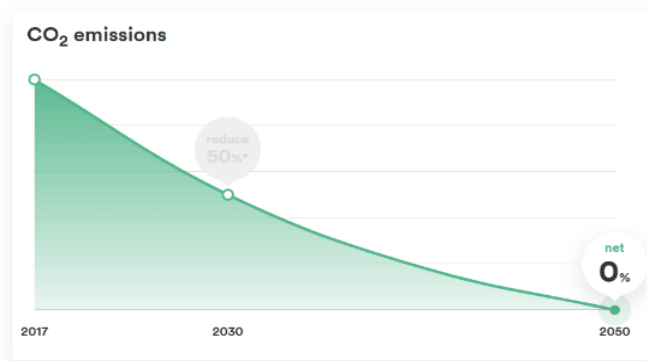
engage

Being the first cellulosic fiber producer to commit to the Science Based Targets initiative allows us to engage and steer our industry to source materials with low carbon footprints and reduce overall carbon emissions.



offset

We offset unavoidable carbon emissions by supporting verified global carbon reduction projects.



*Reduction of specific CO₂ emissions for products sold (pulp and fiber) by 50% until 2030 compared to baseline 2017.

Pulp
Raw materials
Transport



Certified fibers
Transparency
Marketing support

Customers
Brands
Consumers
NGOs

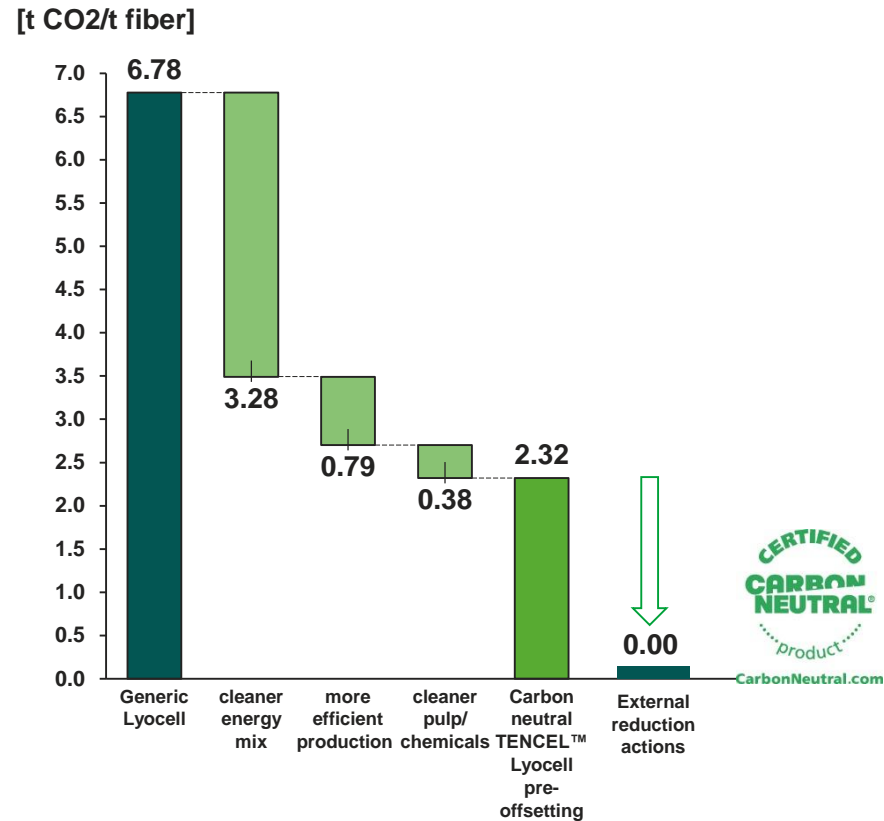
Adopted Sourcing Strategy

true
carbon
zero

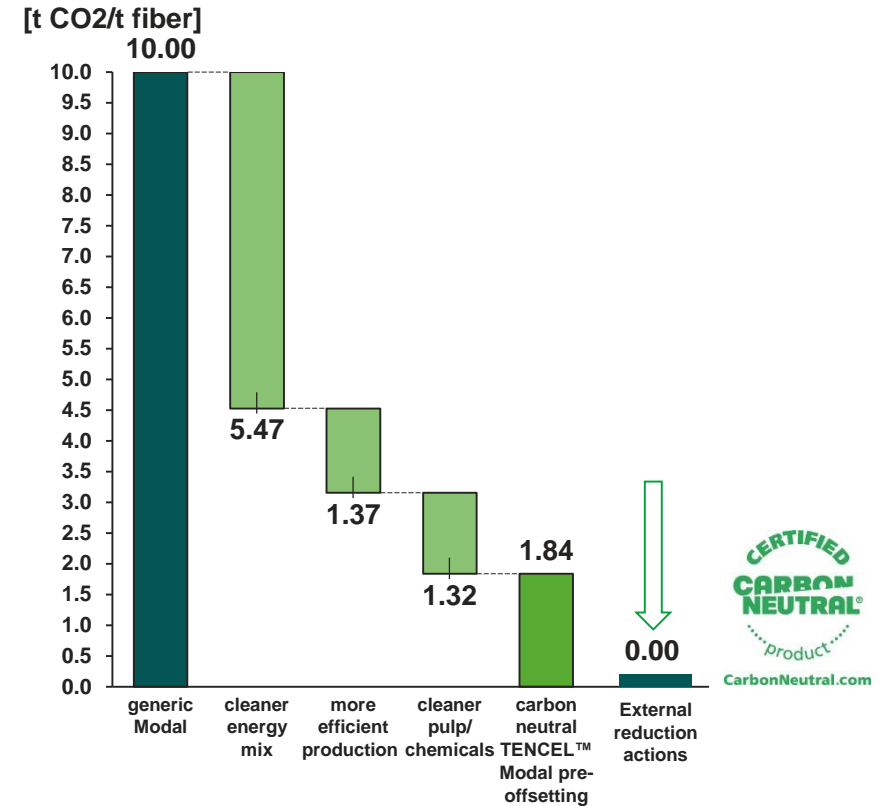


The sum of the internal and external reduction actions leads to verified CarbonNeutral® products

TENCEL™ Lyocell



TENCEL™ Modal



*This calculation includes cradle to gate only – transport to customer (0.22 to CO2eq/to fiber) excluded

Those emissions that we cannot yet reduce are compensated through verified offset-projects

offset



Solar Water Heating – India

- Install in-house hot water supply fueled by the sun
- Reduce dependency on grid electricity and carbon emissions
- Less spending on energy for households



Improved Cook stoves – Bangladesh

- Locally made improved cook stoves
- Avoid harmful indoor emissions
- Reduce carbon emissions



Landfill Gas to Energy – Thailand

- Utilizing landfill gas to generate renewable electricity
- Avoid harmful release of potent GHG
- Support effective waste management



carbon-zero TENCEL™ available for a broad range of fibers



- TENCEL™ Lyocell
- TENCEL™ Modal
- TENCEL™ Lyocell Micro
- TENCEL™ Modal Micro
- TENCEL™ Modal x Eco Clean
- TENCEL™ Modal x Micro with Eco Clean technology*

*carbon neutrality is included in the fiber offering

committed to:



certified by:



#TrueCarbonZero



carbon zero



engaging suppliers



Science Based Targets
commitment

TENCEL™ Modal with Indigo Color Technology

savings using TENCEL™ Modal with Indigo technology compared to conventional powder indigo dyeing and conventional pre-reduced liquid indigo dyeing



water



chemicals



electricity



wastewater

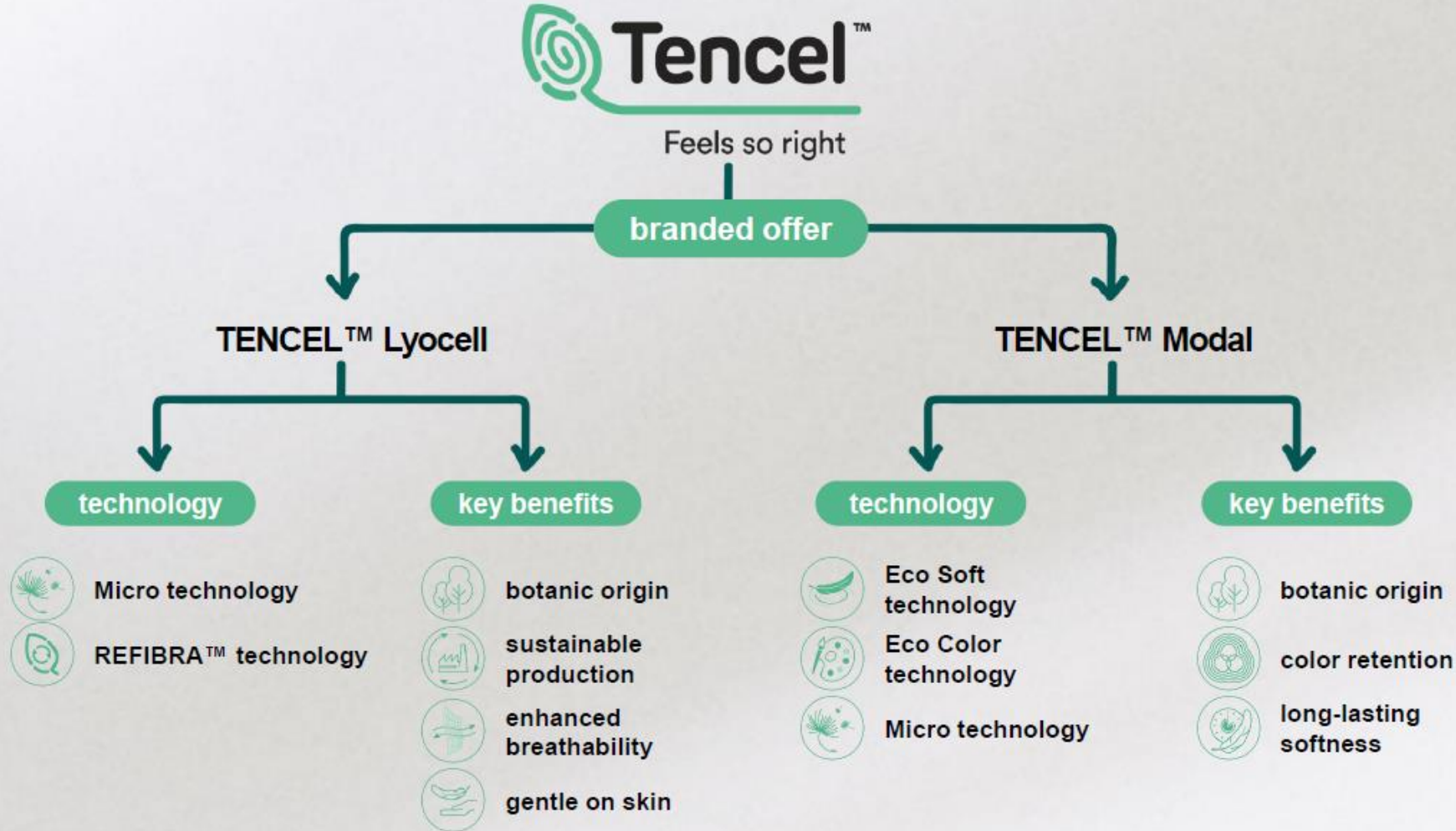


heat energy



Feels so right

Introduction to Lenzing product brands



10 reasons to choose LENZING™ ECOVERO™

“ 10 reasons
to choose

LENZING™
EcoVero™ ”



reasons to choose LENZING™ ECOVERO™

take less

01

derived from sustainable wood and pulp from certified and controlled sources, can be supplied as **FSC** or **PEFC** certified



02

eco-responsible production: up to 50% lower CO₂ emissions*

03

contributes to environmental protection: up to 50% less water impact*



04

awarded the EU Eco-label: achieved environmental excellence throughout the life cycle from raw materials to disposal

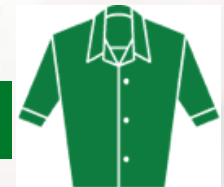


EU Ecolabel : AT/016/001

05

achieved an industry-leading score, with a "green shirt" in **Canopy's Hot Button Ranking**, for its wood and pulp sourcing practices and efforts to support the protection of Ancient and Endangered Forests

Dark Green



*as compared to generic viscose

reasons to choose LENZING™ ECOVERO™

give more

01

strong protection:
trademark covers
over 189 countries
worldwide; marketing
claims validated



02

well recognized
by consumers as
a sustainable fiber
brand*

03

**supply chain
transparency:**
empowered by
Lenzing's unique
fiber identification
system that could
trace our fibers used
in textile end products



04

**brand licensing
service** available
with Certification
& Licensing and
hang tags

05

multi-language
brand website
featuring 'where to
buy', enabling
**consumer education
and promotion**
around the globe



*Global performance study of Lenzing, Nielsen Hong Kong, May 2019

Key Features of LENZING[™] ECOVERO[™]



Up to 50% lower emissions and 50% water impact than generic viscose



Supply chain transparency



Certified eco-responsible



Sustainable wood & pulp sourcing



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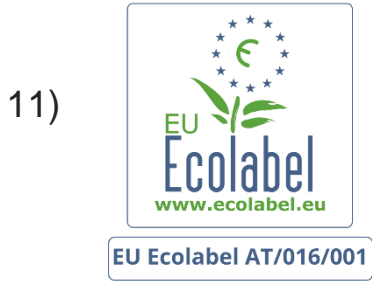
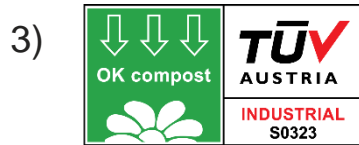
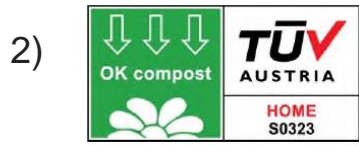
Contribution to natural circularity

the fibers are certified as
fully compostable and biodegradable*,
derived from nature, returns to nature
Within 16 – 22 weeks



*applicable to products made from 100% Lenzing fibers
www.lenzing.com

Lenzing product certifications






























- 1) USDA Biobased
- 2) Home Compostability
- 3) Industrial Compostability
- 4) Soil Biodegradability
- 5) Marine Biodegradability
- 6) Fresh Water Biodegradability
- 7) STANDARD 100 by OEKO-TEX®, Appendix 6
- 8) The FKT „Medically Tested – Tested for Toxins“
- 9) Food Contact Compliance
- 10) Responsible Forestry
- 11) EU Ecolabel
- 12) Responsible Management System
- 13) Quality Management Systems
- 14) Recycled Claim Standard (RCS)



The Lenzing Certification Number is mandatory for obtaining a Product License and ordering Swing Tickets and Stickers.

Lenzing Brands may only be used on products based on Lenzing certified materials.

Fabric Certification Requirement

	TENCEL™ Lyocell	TENCEL™ Modal	LENZING™ Modal Color/ Black	LENZING™ Viscose ECOVERO™
TENCEL™ Lyocell				
TENCEL™ Modal				
LENZING™ Modal Color/Black				
LENZING™ Viscose ECOVERO™				
LENZING™ Viscose				
Generic Lyocell				
Generic Modal Color/Black				
Generic Viscose Color/Black				
Generic Viscose Filament				
Synthetic fibers				
Natural fibers				

* Min. fiber composition is 30%

Fabric Certification Sample

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www.lenzing.com

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Hong Kong
www.lenzing-fibers.com
Phone +852 3718 5995
Fax +852 3718 5901
E-Mail pchan@lenzing.com
Effective Date 2019/03/21

Certification Confirmation Letter

认证证明确认函

In reference to application ID: CER191722

申请编号: CER191722

We hereby issue the Lenzing Certification for:
我们特此出具兰精公司认证证明:

- Company 公司名称: PT Indo Pacific
- Product name 产品名称: P-H&M 007 A (Light Color only)
- Composition 总成份: LENZING™ Lyocell (Standard) 48%, LENZING™ Viscose 52%

Your sample has been tested according to our Internal standard tests and complies with the requirements and preconditions as set out in the applicable Lenzing Certification Standard. We therefore issue the Lenzing Certification with the following Lenzing Certification Number:

经我司内部标准测试的检测, 贵司样品符合适用的兰精公司认证标准中规定的要求和前提条件。因此, 我们向贵司出具兰精公司认证证明, 相应认证证明编号(CR Number)是:

31928478

The company PT Indo Pacific is entitled to use the Lenzing Certification Number

贵司PT Indo Pacific 有权使用此兰精公司认证证明编号:

- as from the issuing date of this confirmation letter (the "Effective Date") for a fixed period of 2 years, 自本确认函出具之日(“生效日”)起, 固定期限为2年,
- In accordance with the Lenzing Certification and License Terms accepted by you in connection with your application for the Lenzing Certification. 遵守贵司在申请兰精公司认证证明时所接受的兰精公司认证证明和商标使用许可条款。

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With the Lenzing Certification Number one is entitled to apply for a Product License or other marketing materials within the Lenzing E-Branding Service, only in relation with the above stated product for which the Lenzing Certification was issued and in accordance with the Lenzing Certification and License Terms for the following Lenzing fiber types.

贵司有权依据兰精公司认证证明编号在兰精公司E-Branding服务(在线品牌服务)中申请兰精公司产品类商标或其他市场推广资料的使用许可, 但必须与上述已经兰精公司认证的产品有关, 并且遵守用于如下兰精纤维品种的兰精公司认证证明和商标使用许可条款。

LENZING™ Lyocell (Standard)

as long as the above mentioned Lenzing Certification Number is valid.

只要上述认证证明编号有效。

- Any tests referred to have been carried out by Lenzing using Internally agreed test methods, designed to assess whether any problems are likely to arise with the sample(s) of which you provided in either further processing or in garment care. They are not intended to replace the normal fabric manufacturer, product manufacturer or retailer testing, nor do they give any guarantee as to the performance/ material composition of these fabrics in a specific garment program. The Lenzing Certification does not constitute any specific seal of quality or seal of approval.

任何测试指的是由兰精公司以内部认可的方法实施的测试, 是设计用于评估在后续加工或成衣护理阶段样本是否会产生任何问题的方法。该等测试无意取代面料、成品厂商以及零售商通常所作的测试, 也不作为在特定成衣中所含的该等面料在性能及材料组成方面的保证。本认证证明并不构成任何对产品质量的认可或产品达标的认可。

Best regards

顺祝商祺



Pinky Chan
Deputy Lab Manager, North Asia
Lenzing Fibers (Hong Kong) Ltd.

Lenzing

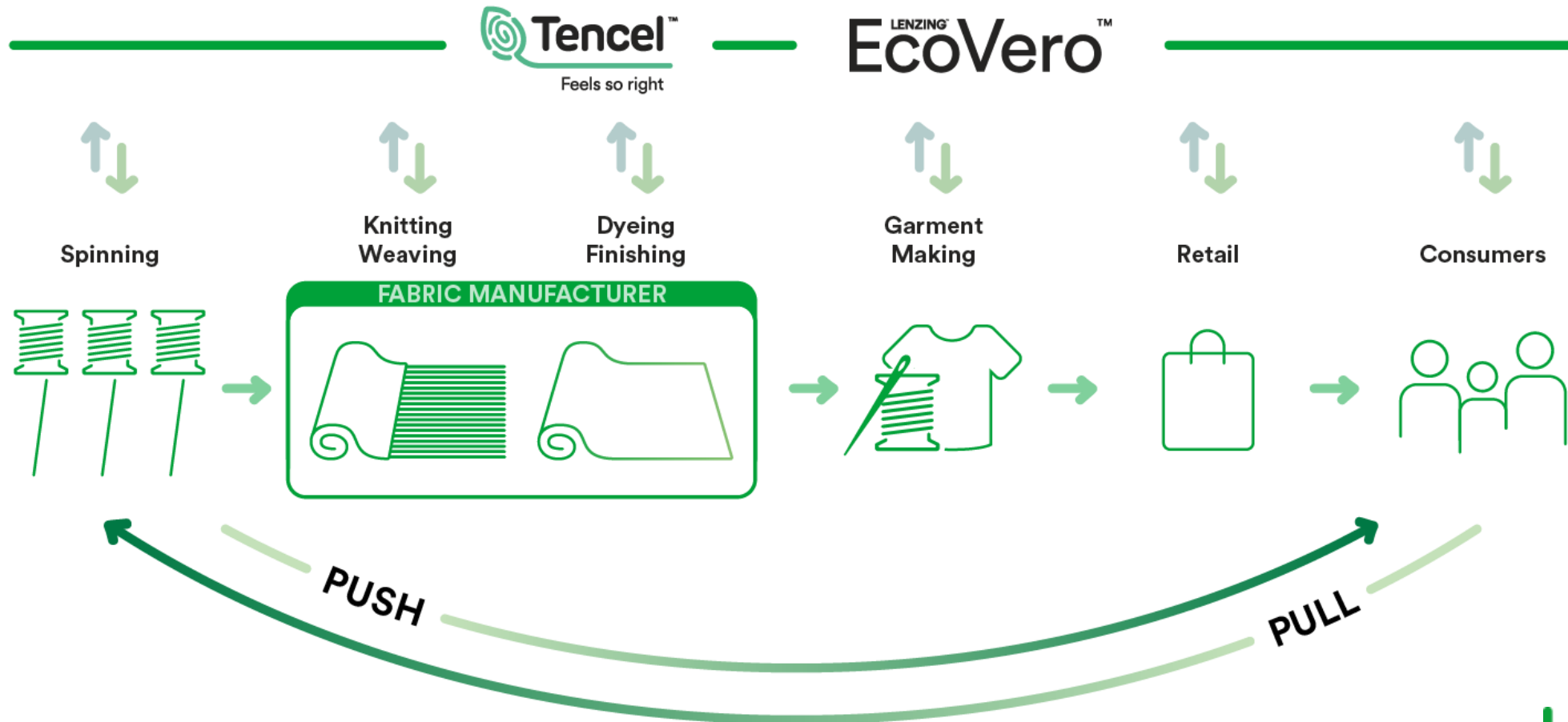
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Textile Supply Chain



Lenzing Sourcing Partner

Textile Value Chain



Our Team – Commercial SEA & Oceania region



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Q&A



Thank



You

**for your
attention!**