

Innovative by nature

Renewable Carbon Initiative

...and why Lenzing is founding member

Stakeholderdialog Biobased Industry „Bioraffinerien und Kreislaufwirtschaft“

Josef Innerlohinger
14. Dezember 2020





**Every
second, one
garbage truck
of clothing is
landfilled or
burned**



**The total
fashion
waste in
2030 is
anticipated
to reach
148 million
tons**

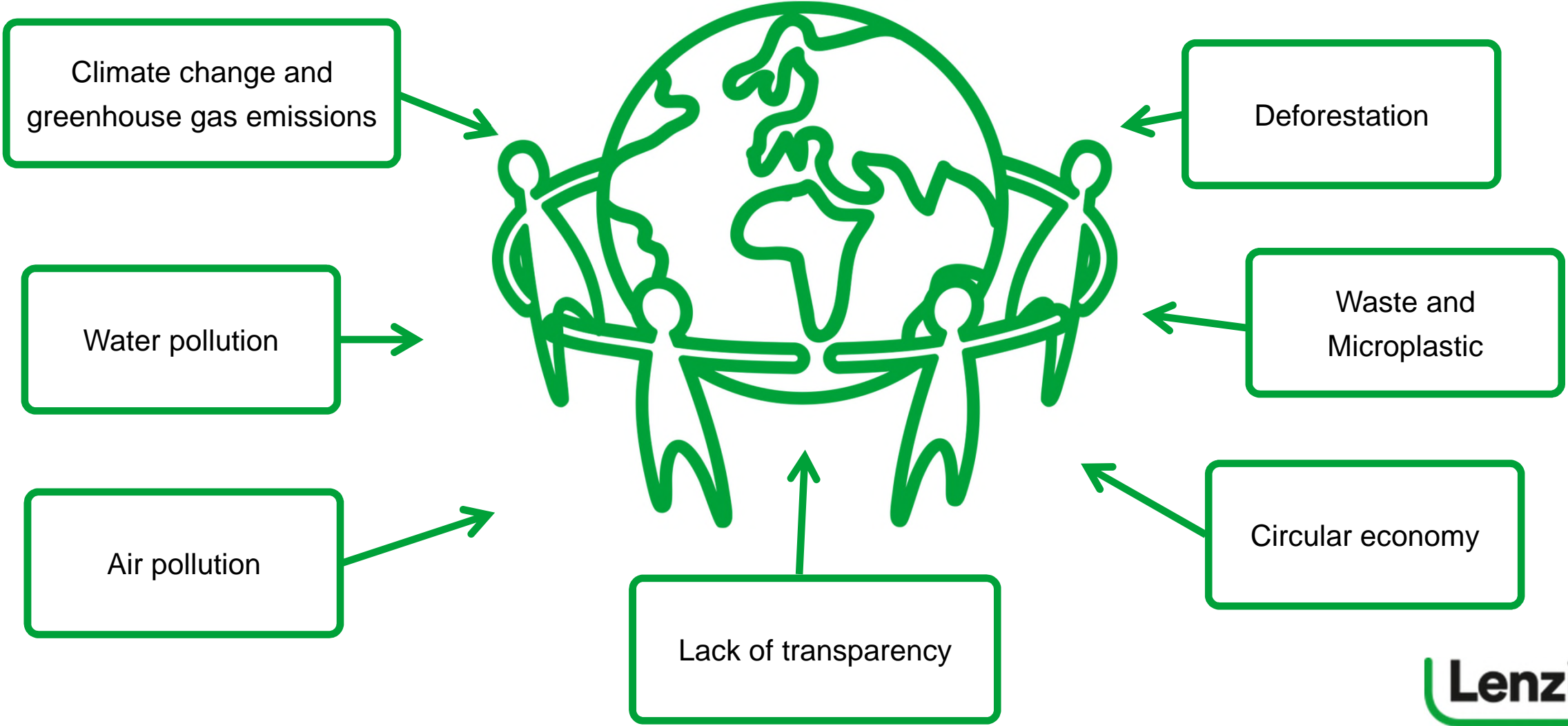


**Global
apparel and
footwear
industry are
responsible
for 10% of
the global
carbon
emissions...**

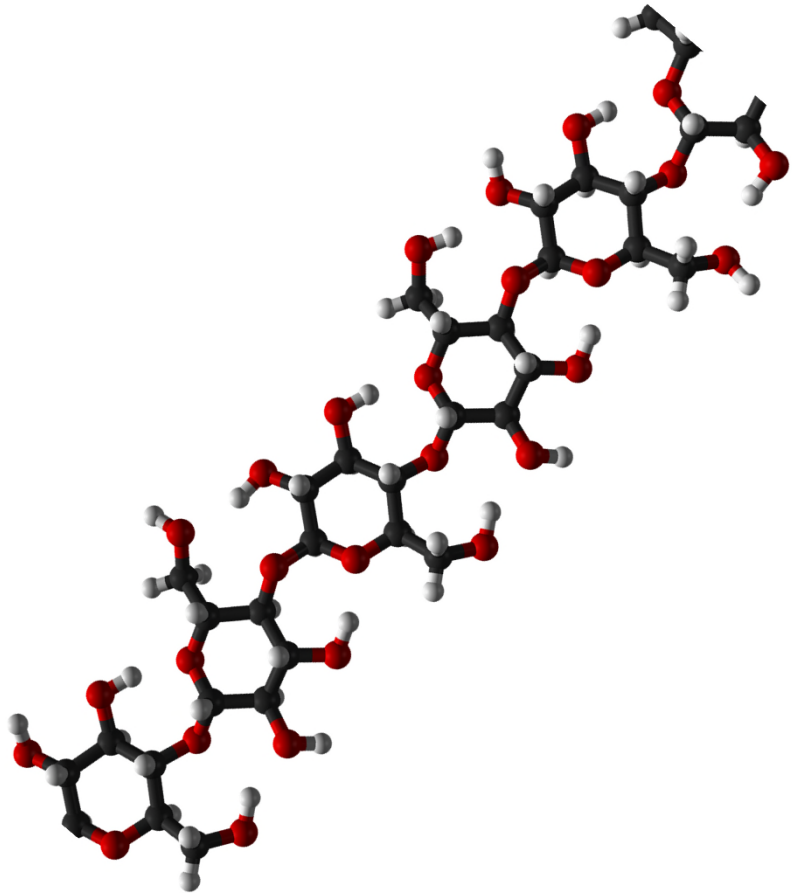


**9 millions
tones of
plastic
waste per
year end up
in the
oceans**

Global challenges for our fiber industry



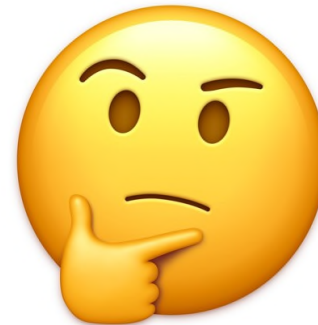
Decarbonisation – the right concept for materials?



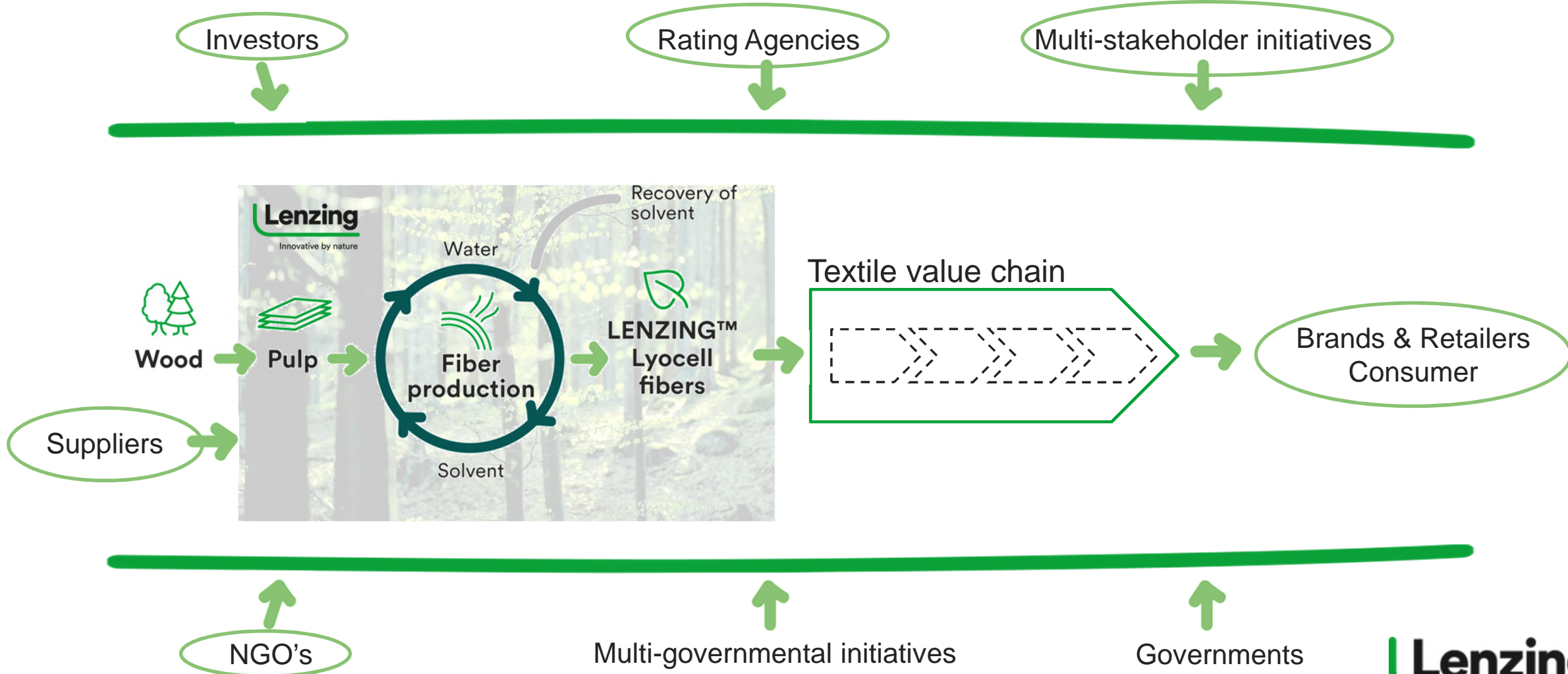
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Partnering for systemic change / transparency



The Renewable Carbon Initiative

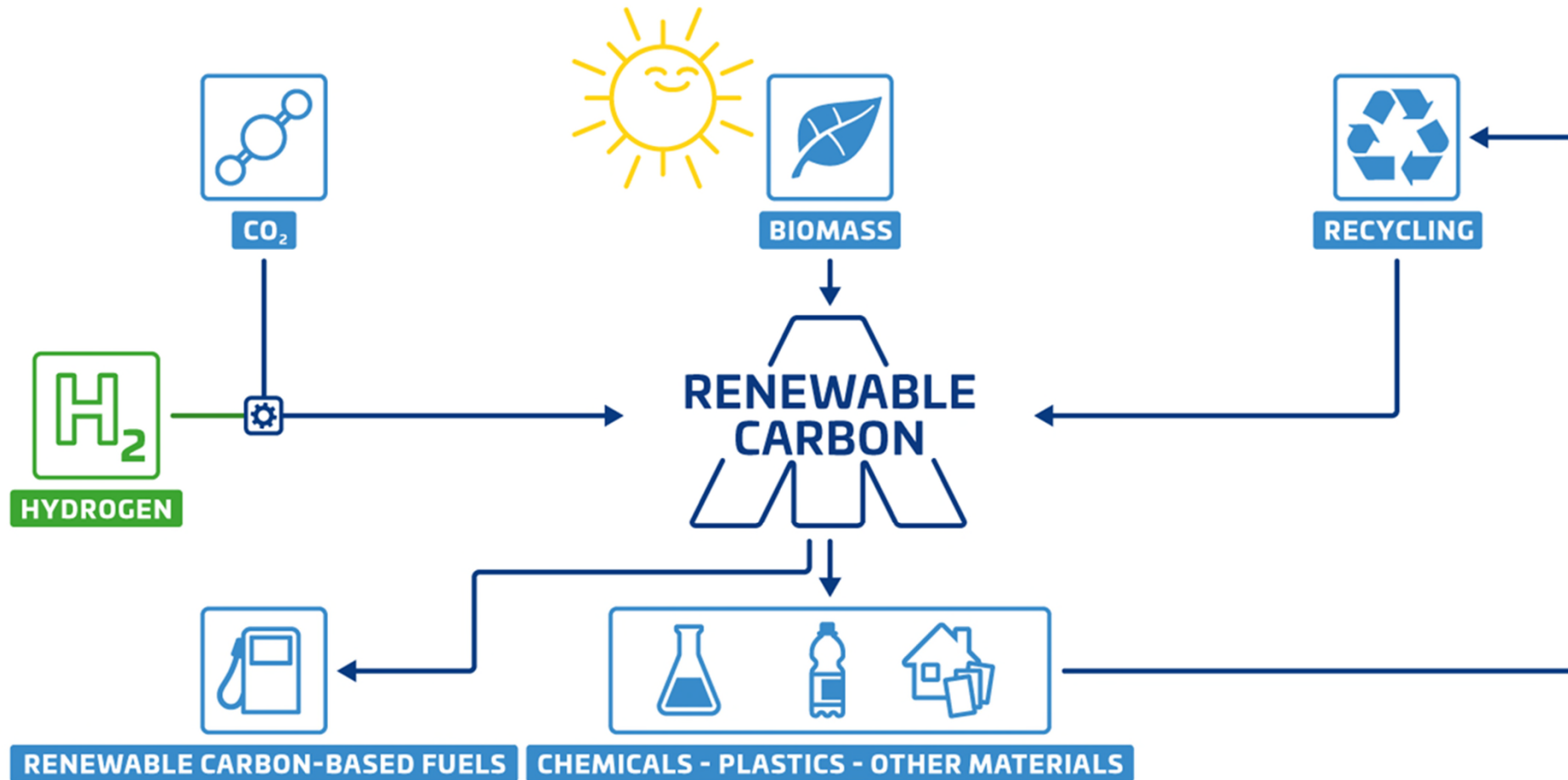


„It is not CO₂ that is at the core of the climate problem, but the additional fossil carbon that we take out of the ground and which gets released in the atmosphere as CO₂ or other emissions. If the inflow is prevented, the CO₂ content of the atmosphere will no longer increase.“

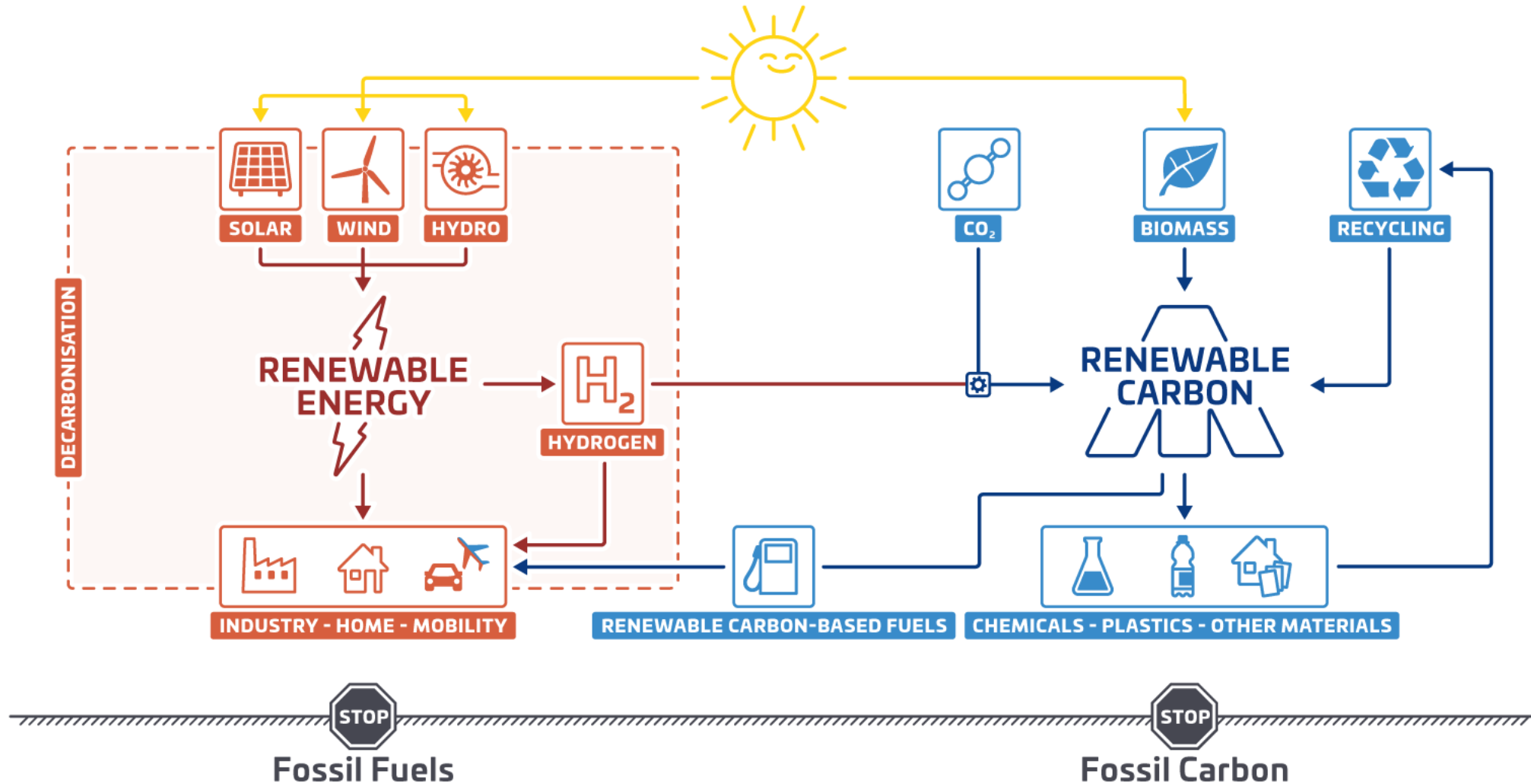
Michael Carus, May 2020

More information: <https://renewable-carbon-initiative.com/>

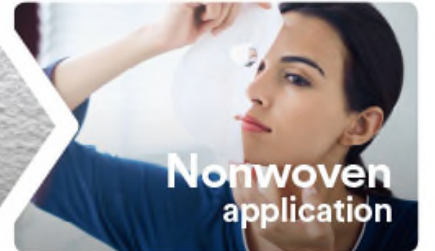
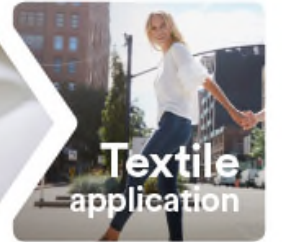
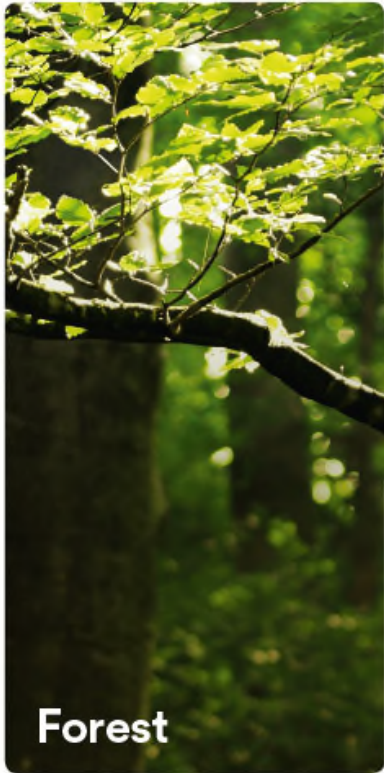
Renewable Carbon – focus on materials



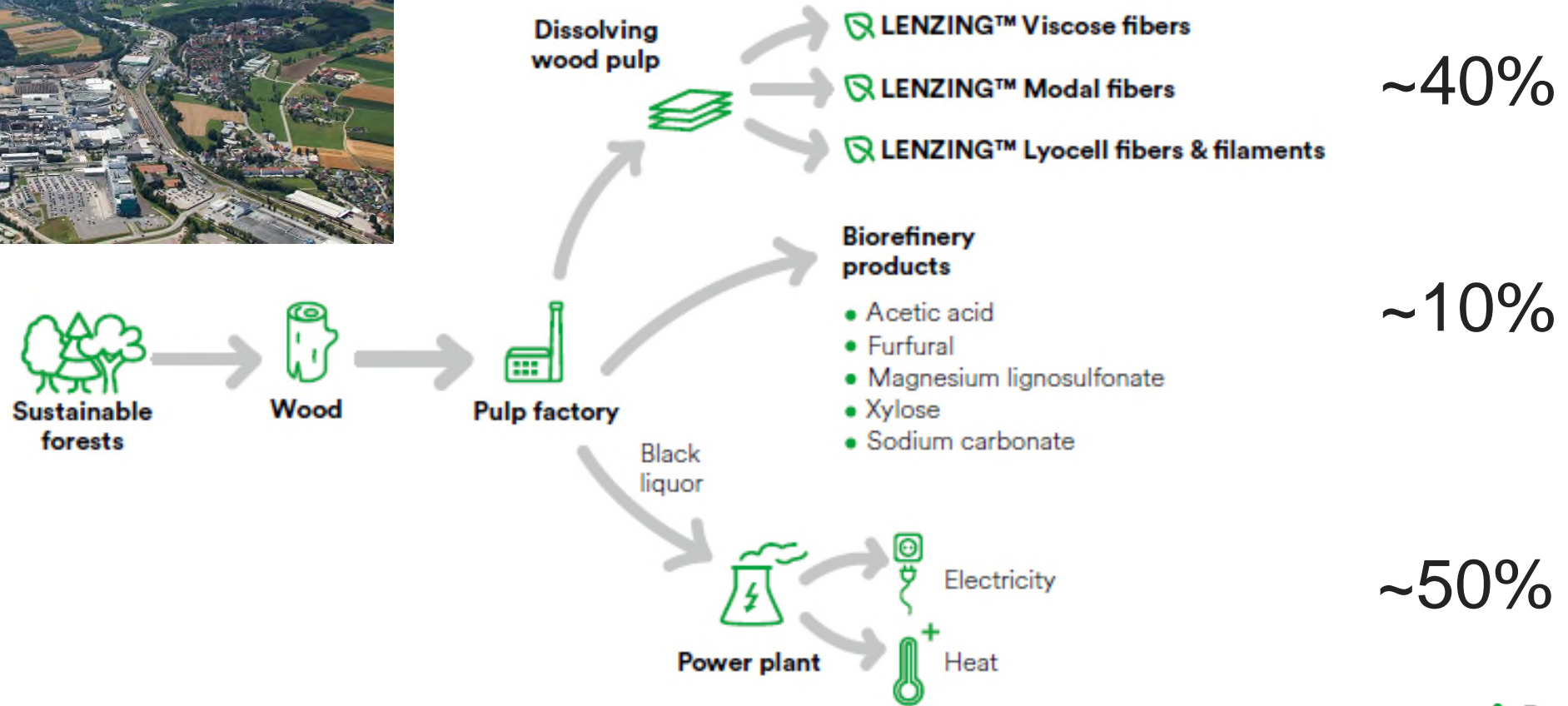
Renewable Energy and Renewable Carbon for a Sustainable Future



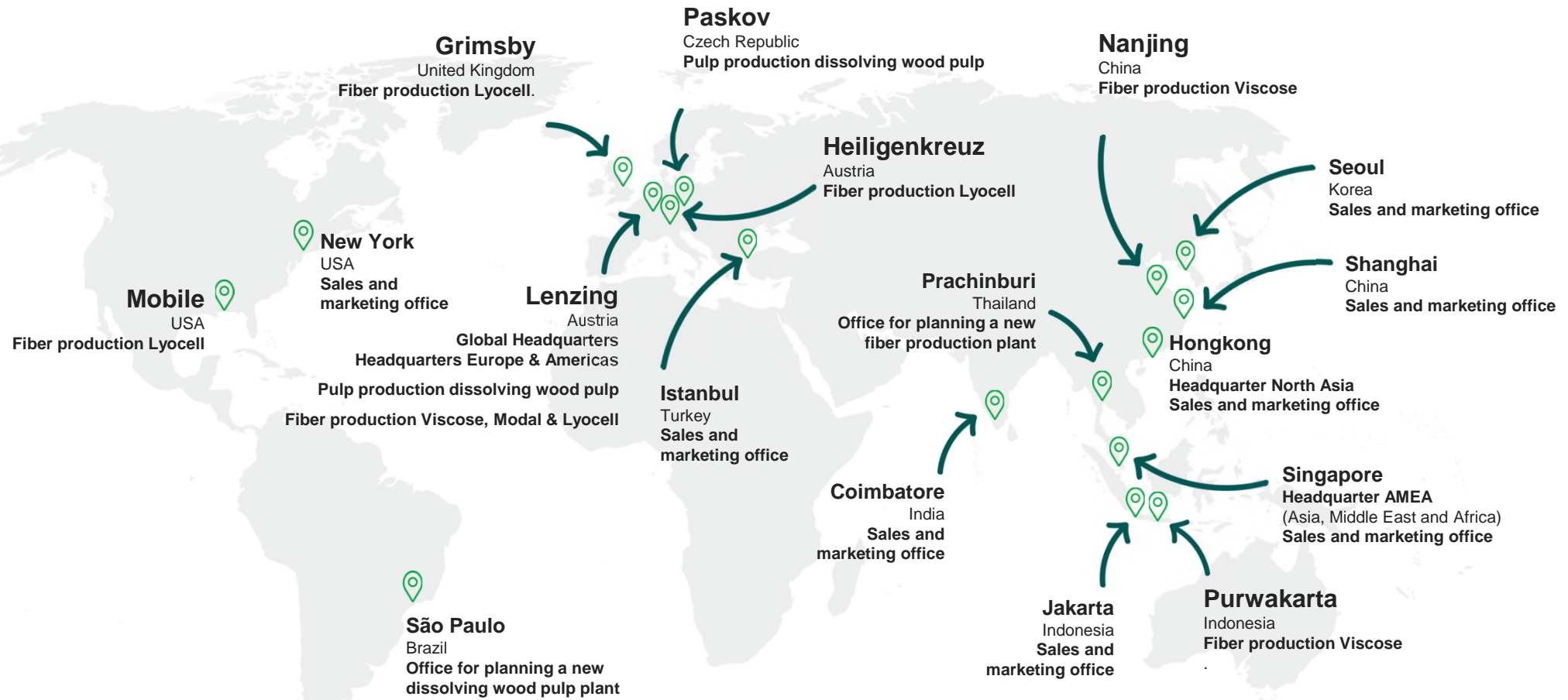
LENZING™ fibers produced from the raw material wood



Lenzing business model



Locations of the Lenzing Group



Nameplate capacities as at December 31, 2019

The Lenzing Group 2019

- The Lenzing Group recorded a solid business development in 2019
 - Group revenue down 3.3 % to EUR 2.11 bn
 - EBITDA down 14.4 % to EUR 327 mn
 - ROCE at 5.3 %
 - Strong balance sheet
 - R&D expenditures at EUR 53.2 mn
 - Number of employees as at 31/12/2019 at 7,036



Keep it circulating

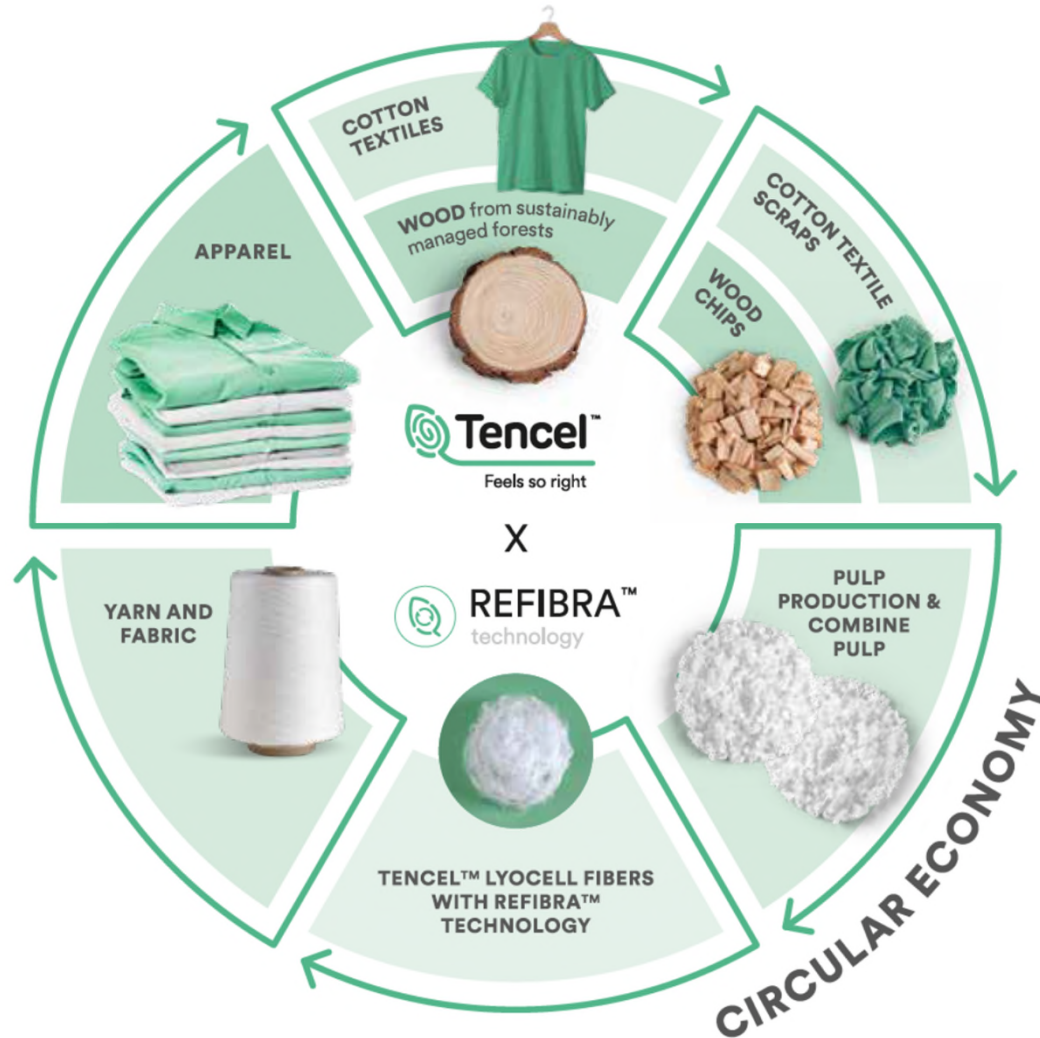
second life for cotton scraps



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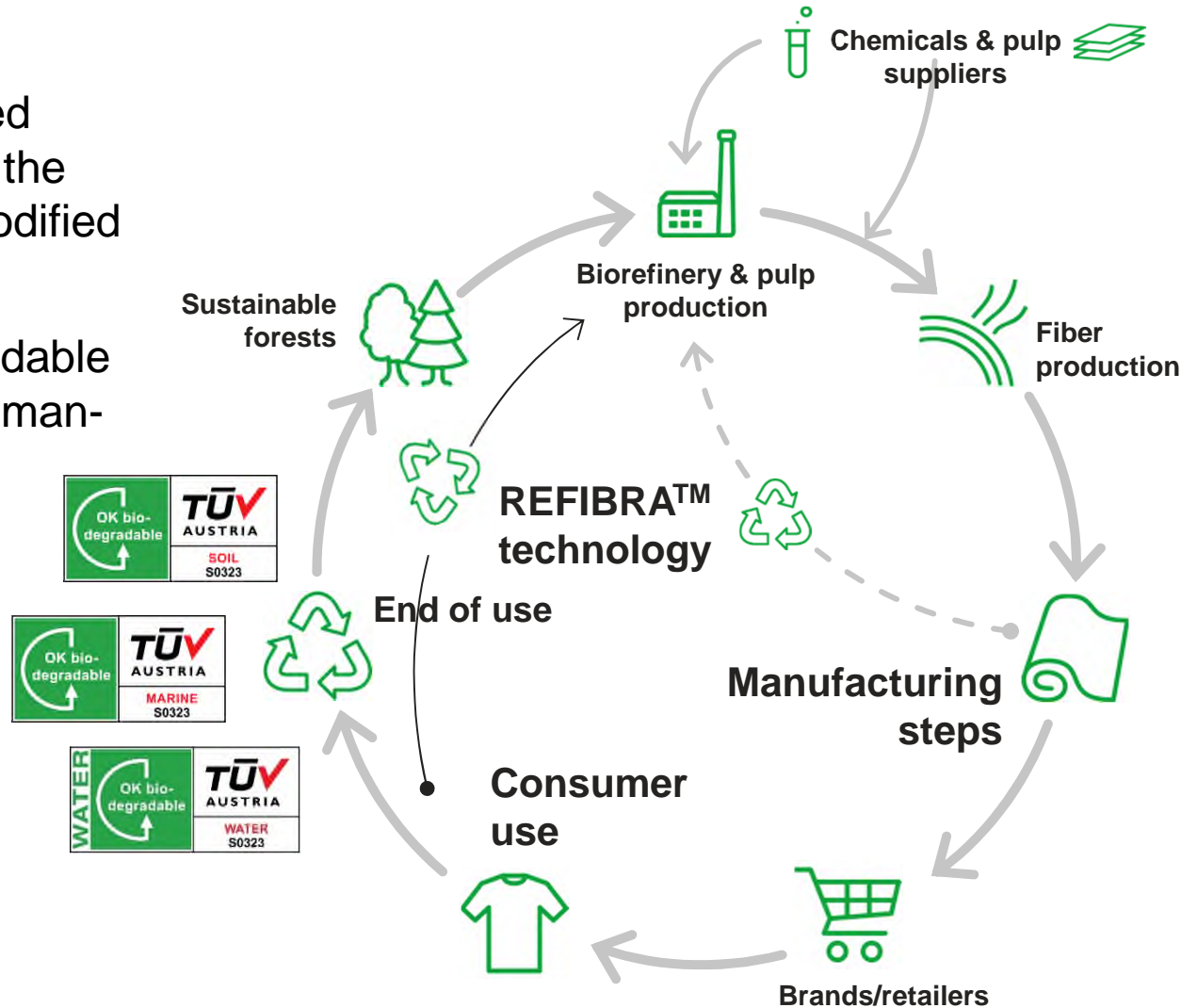
RECYCLING



- REFIBRA™ Technology enables circular economy for textiles
- Innovation all along the textile chain
- Launched 2017 - First commercially available cellulosic fiber with chemically recycled content
- TRIGOS Award 2019 in climate protection category

Life cycle perspective: Circularity on different levels

- Regenerated / wood based cellulose fibers consist of the natural, chemically not modified polymer cellulose
- They are readily biodegradable in all suitable natural and man-made environments



- Recent innovation: use of post-consumer material
- New system to identify the fiber in finished garment



TENCEL™ is now offering verified carbon neutral fibers which contribute to decarbonization of the textile industry

- Net-zero emissions
- Verified CarbonNeutral®
- Based on scientific-data
- A new offer for TENCEL™
- New co-branding & communication possibilities



carbon zero



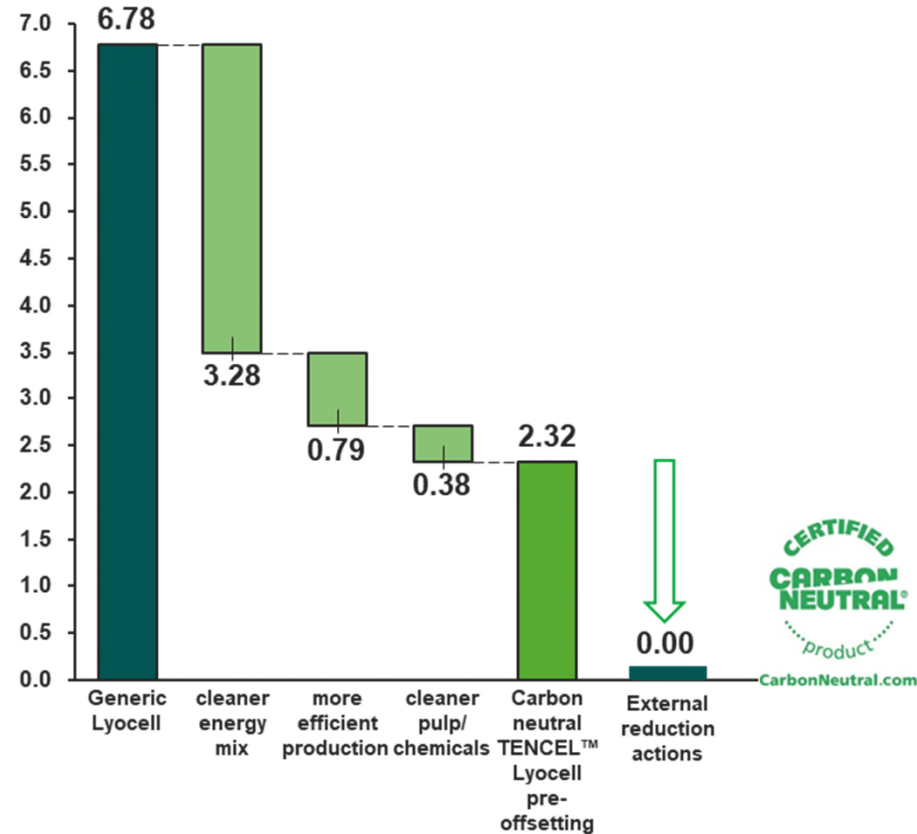
engaging suppliers



Science Based Targets commitment

TENCEL™ Lyocell

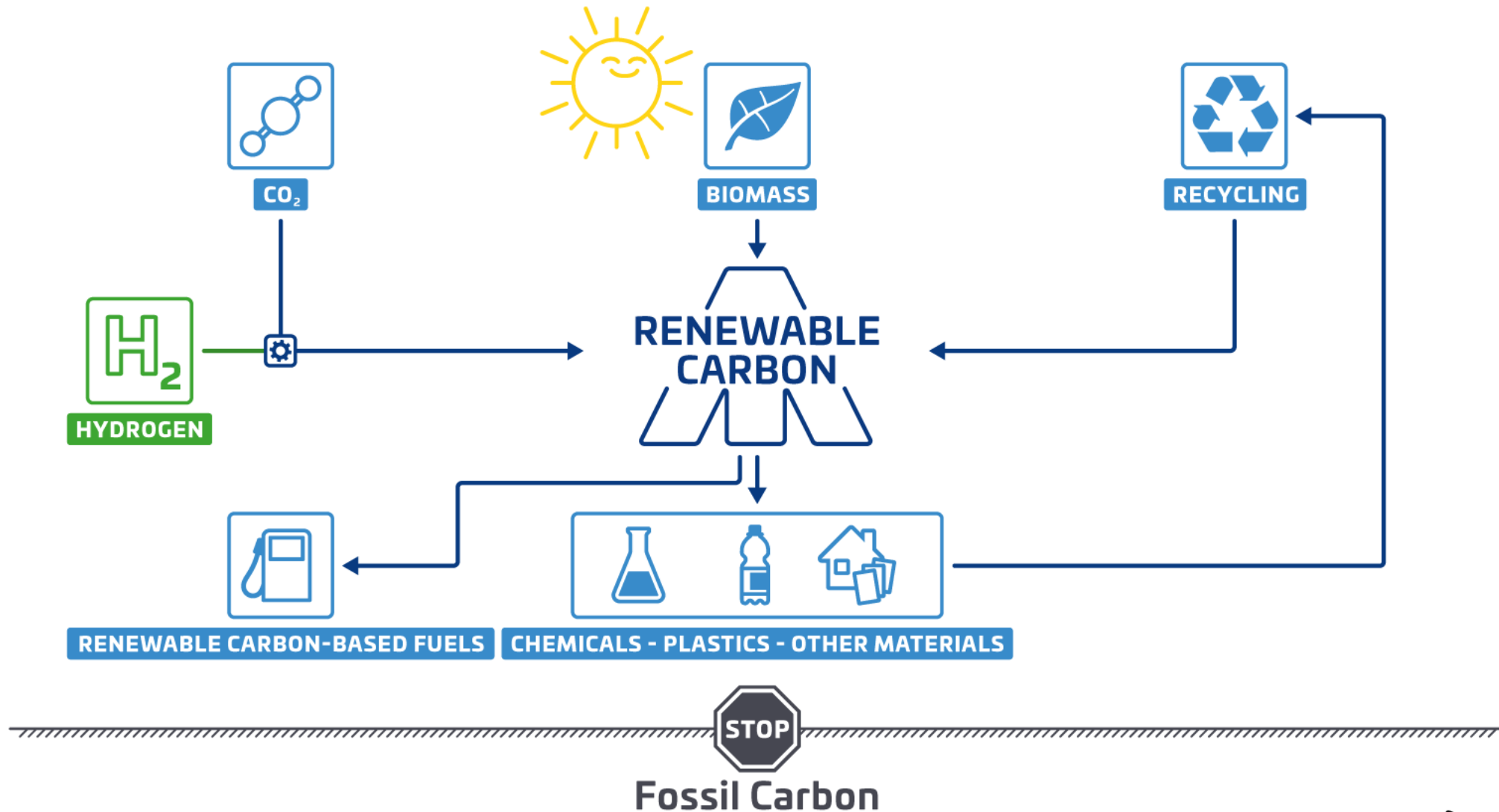
[t CO2/t fiber]



with



Renewable Carbon



Cross-sectoral initiative

MEMBERS OF THE INITIATIVE

Beiersdorf



Givaudan



NESTE



LanzaTech



PARTNERS OF THE INITIATIVE



And already 170 personal supporters



About the nova-Institute

- nova-Institute is a private and independent research institute, founded in 1994
- Research and consultancy with a focus on the transition of the chemical and material industry to renewable carbon
- Future challenges, environmental benefits and successful strategies to substitute fossil carbon with biomass, direct CO₂ utilisation and recycling
- Unique understanding to support the transition of your business into a climate neutral future.
- Subjects: feedstock, **technologies and markets, economy and policy, sustainability, communication** and strategy development
- nova-Institute has 35 employees and an annual turnover of more than 3 million €.

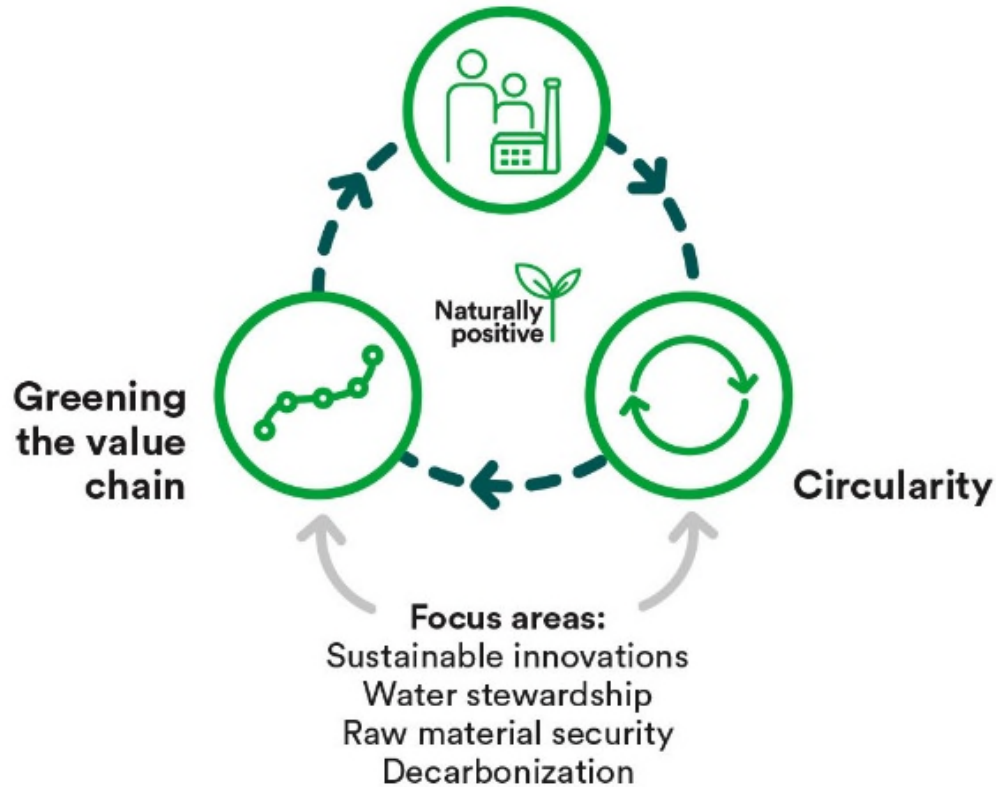


Michael Carus

Lenzing sustainability strategy

Partnering for change

Focus areas:
Partnering for systemic change,
Empowering people, Community wellbeing





Thank You



**for your
attention!**



RCI approach is rather versatile



BIOMASS



BIOMASS



RECYCLING



BIOMASS



BIOMASS



RECYCLING



BIOMASS



RECYCLING



RECYCLING



BIOMASS

- Entwicklung von Bioraffinerien mit Fokus auf Lignin mit hoher Wertschöpfung
- Renewable Carbon Initiative
- Update Aktionsplan Bioökonomie und Kreislaufwirtschaft
- Produktion von biobasierten Resolen aus strukturdefinierten Lignin-Oligomeren (LignoWert)
- Effizientere, biobasierte und recyclebare Stretchfolie
- Nawaro-Flex: Innovative technische Textilien auf Basis nachwachsender Rohstoffe
- DEEP PURPLE: Mit Purpurbakterien zu kreislauffähigen Produkten
- ENZYCLE: Recycling von Plastikfraktionen mit Hilfe von Enzymen
- VAMOS: Neue Materialien aus Zuckerabfallströmen