

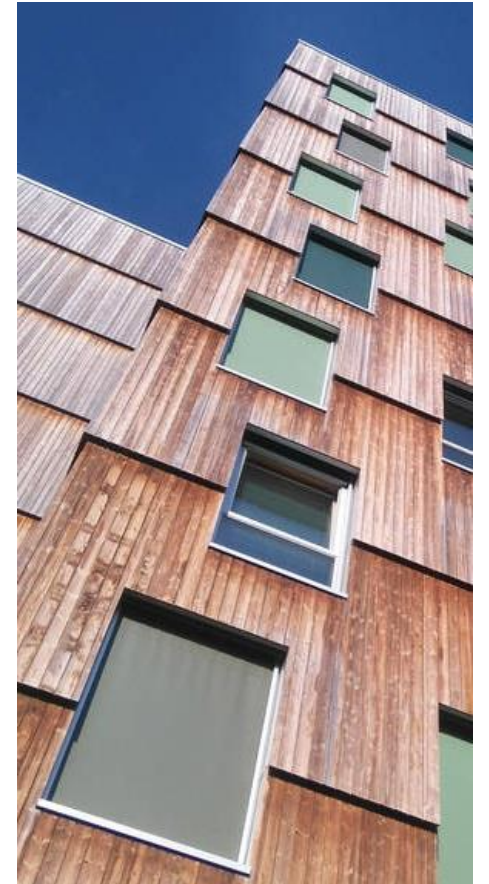
From research to new biomaterials and biochemicals




storaenso

THE RENEWABLE MATERIALS COMPANY

The renewable materials profitable growth company



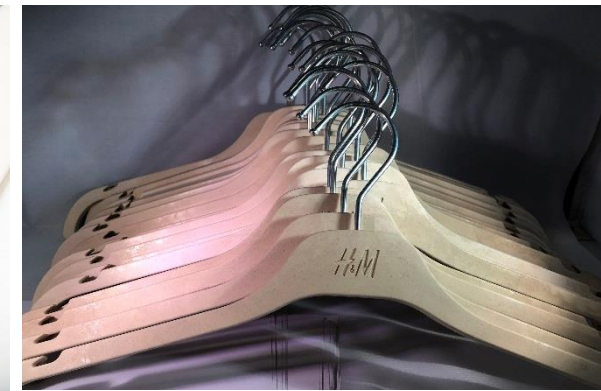
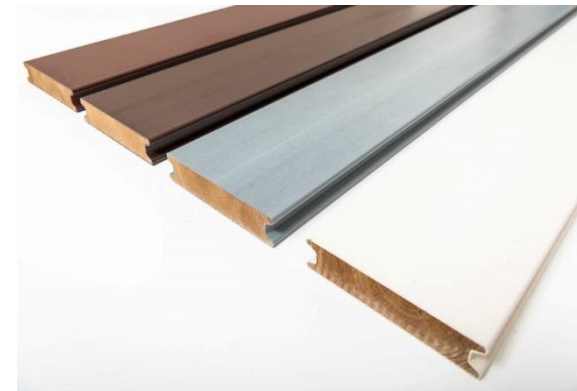
A close-up photograph of several vibrant green leaves on a thin brown branch. The leaves have serrated edges and prominent veins. The background is dark and out of focus.

In 2017, Stora Enso's expenditure on research and development (R&D) in 2017 was EUR 127 million, which was equivalent to 1.3% of sales.

Bio-composites gradually replacing plastic



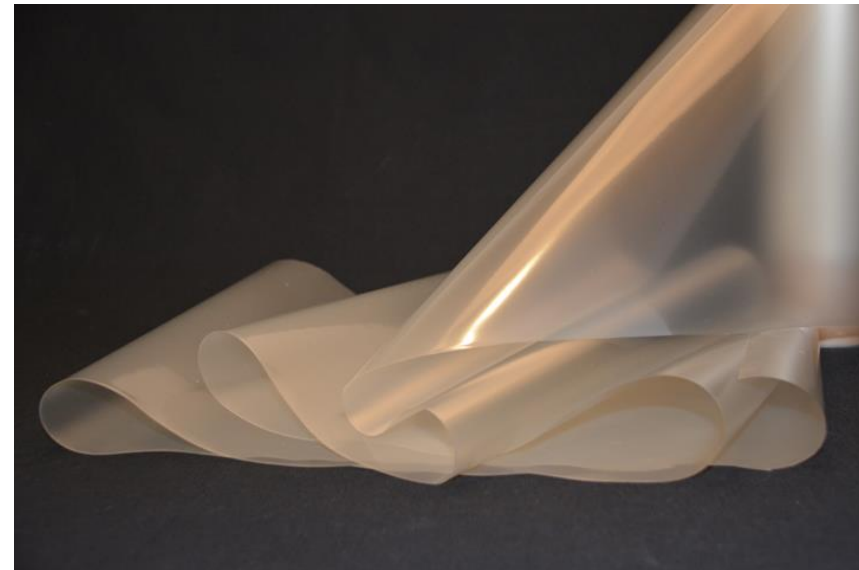
- Use in products, such as disposable cutlery, furniture, as well as storage and logistics goods
- Raw material for markets where plastics dominate
- Can reduce the consumption of fossil-based plastic by up to 60%
- Always a better alternative than fossil-based plastic, reducing the carbon footprint of a product up to 80%



DuraSense[™]
by Stora Enso

Micro Fibrillated Cellulose – potential in films, coatings and barrier materials

- MFC key areas of use are strength enhancement, ideal for specialty paper and wet-laid nonwovens.
- Rheology modifier and stabilizer
- Films and barrier solutions



Lignin – big opportunities in many markets



Adhesives



Carbon fibre



Energy storage



Stora Enso and startup Sulapac have joined forces to develop renewable and biodegradable straws

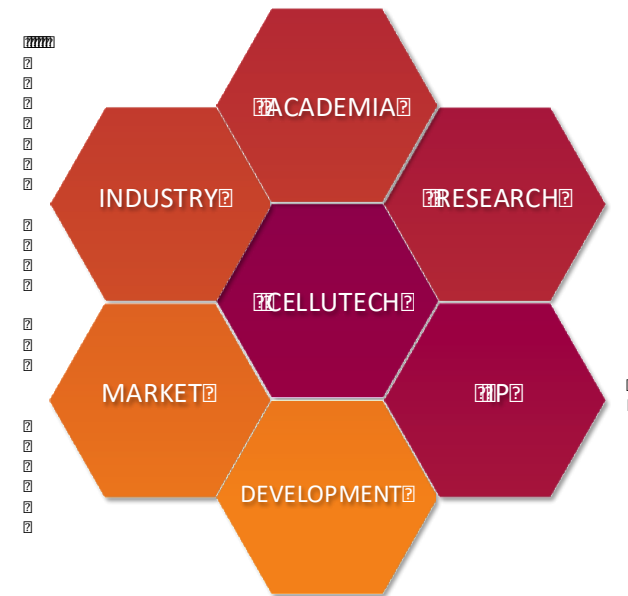


Stora Enso and Sulapac have signed a joint development agreement to combat the global problem of plastic waste by accelerating the use of fully renewable, recyclable and biodegradable materials in packaging.

CELLUTECH



- Founded 2013
- Lab and office located at Greenhouse Labs, KTH Campus
- Develop innovations from Wallenberg Wood Science Center
- A link between academia and industry
- Stora Enso acquired 100% in 2018



Technology for sustainable wood fibre in textiles



POWER OF A TREE