

The industrial use of wood-based biomass offers compelling new business opportunities and possibilities. In addition to traditional forest products like mechanical wood products and pulp and paper, wood is now increasingly used for new added-value products.

Innovative new biomaterials are already produced by large companies, and to accelerate the transition from basic research to commercialization, research-based start-ups and growth companies are a core part of the business ecosystem. For example, new pilot and demonstration facilities help startups and companies test their inventions.

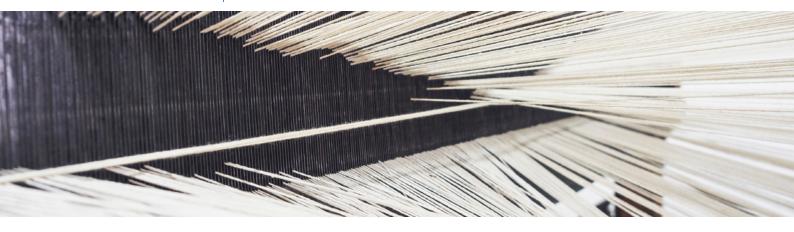
New products such as advanced biofuels (incl. 100% renewable diesel), biocomposites, microfibrillated cellulose, high-quality barrier board, cross laminated timber and kraft lignin have been commercially launched in recent years. Currently, product opportunities for wood cellulose, lignin and bioactive components are being actively explored.

Finland's success is based on a deep understanding of the entire bioproduct value chain, world-class experimental research, integration of cross-disciplinary sciences and "open access" pilots and demonstration platforms. In Finland, added-value wood-based

products and applications are developed through innovative use of the inherent, unique properties of wood and its components in combination with novel production and conversion technologies, product design and the latest IoT technology.

BUSINESS **FINLAND**

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THE NEXT GENERATION OF BIOBASED PACKAGING COMES FROM FINLAND

UPM, Kotkamills, Stora Enso and Huhtamäki offer sustainable packaging and award-winning startups like Paptic, Woodly and Sulapac have developed research-based solutions.

UPM

BioVerno naphtha can be used in bioplastics for paperboard packaging. Lappeenranta biorefinery utilises tall oil for the new bioplastic cartons.

STORA ENSO

Fibre-based, 100% recyclable EcoFishBox is free from expanded polystyrene with minimal plastic content.

World Star Sustainability Award Gold Medal 2017

KOTKAMILLS

ISLA® Duo is an easily recyclable cupstock based on dispersion barrier.

Winner of the NextGen Cup Challenge 2018.

HUHTAMÄKI

Signed a deal to supply McDonald's with sustainable paper straws in the UK and across Europe.

THE COMMERCIAL REVOLUTION FOR FIBER-BASED TEXTILES STARTS IN FINLAND

Finland is number one in the world for wood cellulose-based fiber research. For example, Metsä Group and Japanese company Itochu have established a joint venture for an industrial scale pilot plant that produces textile fiber from wood. Also, the most sustainable fibre in the world is made without harmful chemicals by Spinnova and a company called Infinited Fiber recycles textile waste by turning it to textile fibers to be used again and again, while preserving 100% quality. Thanks to the development of new fiber-based textile innovations, Finland alone could replace 1/3 of global cotton production.

INFINITED FIBER CO.

recycles textile and cardboard waste by turning it into textile fibres to be reused preserving 100% quality.

Member of Fashion for Good's Scaling Program

SPINNOVA

turns cellulose into textile fibres without harmful chemicals.

Member of Fashion for Good's Scaling Program

METSÄ GROUP

and Japanese Itochu Textile Company have established a joint venture to produce textile fibres from paper-grade pulp.

#1 IN THE WORLD FOR WOOD CELLULOSE-BASED FIBER RESEARCH

Finland could replace 1/3 of global cotton production with its fiber-based textile innovations.

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