



Bioeconomy in Finland



Definitions of bio- and circular economy

According to the **Finnish Bioeconomy Strategy**, bioeconomy refers to an economy that “relies on renewable natural resources to produce food, energy, products and services. The bioeconomy will reduce our dependence on fossil natural resources, prevent biodiversity loss and create new economic growth and jobs in line with the principles of sustainable development.”

Circular economy, as defined by the Finnish Innovation Fund Sitra, “strives to maximize the circulation of products, components and materials and the value bound to them as much as possible in the economy. In a circular economy, production and consumption create the smallest possible amount of loss and waste.”

Ministry of Economic Affairs and Employment (2014) – The Finnish Bioeconomy Strategy
Sitra – Leading the cycle – Finnish road map to a circular economy 2016-2025

Source: Gaia & Business Finland, 2018.

Innovation Ecosystems in a Sustainable Bioeconomy A Finnish case study for OECD.



Finnish position and policies for bio- and circular economy

1/2

Finnish Bioeconomy Strategy was launched in 2014 to promote

- 1) a competitive environment for the bioeconomy,
- 2) new business from the bioeconomy,
- 3) a strong bioeconomy competence base, and
- 4) accessibility and sustainability of the biomasses.

Current government has as one of five **strategic priorities** “**bioeconomy and clean solutions**” and key projects to increase the value of the wood used in Finland, and support the growth from circular economy and clean solutions



Finnish position and policies for bio- and circular economy

2/2

Plastics Road Map was launched by the government and other actors in 2018 to promote

- 1) the decrease in the use of plastics use e.g. through product desing
- 2) plastics collecting and recycling
- 3) creating new solustions and markets for recycled plastics
- 4) increase the innovation co-operation and research and development efforts in solutions for plastic challenge

The Finnish Innovation Fund Sitra published in 2016 a **road map for circular economy** for years 2016-2025 targeting (update coming in March 2019)

- Finland is the model country for the challenge of scarcity
- as a society Finland will be a pioneer rather than an adapter



Innovation programmes on bio and circular economy

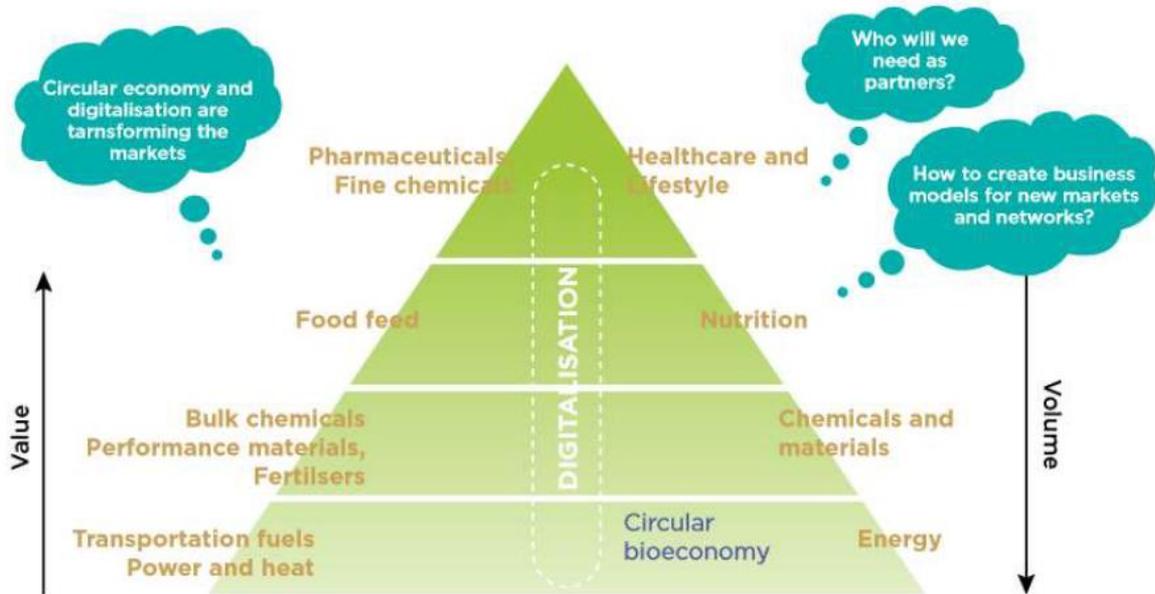
Business Finland launched a new innovation and export programme **Bio and Circular Finland for 2019-2022**. The estimated amount of research, development and innovation funding in the programme is 300 million euros of which 150 million euros is public funding. Examples of growing business areas are packaging, biobased and recycled textiles and biobased plastics.

Academy of Finland has focused funding to bio- and circular economy through its funding instruments. One of the two first Academy of Finland flagship programs was awarded in 2018 for VTT and Aalto University for materials bioeconomy: CERES – the **Competence Centre for the Materials Bioeconomy**: A Flagship for our Sustainable Future was selected for funding.



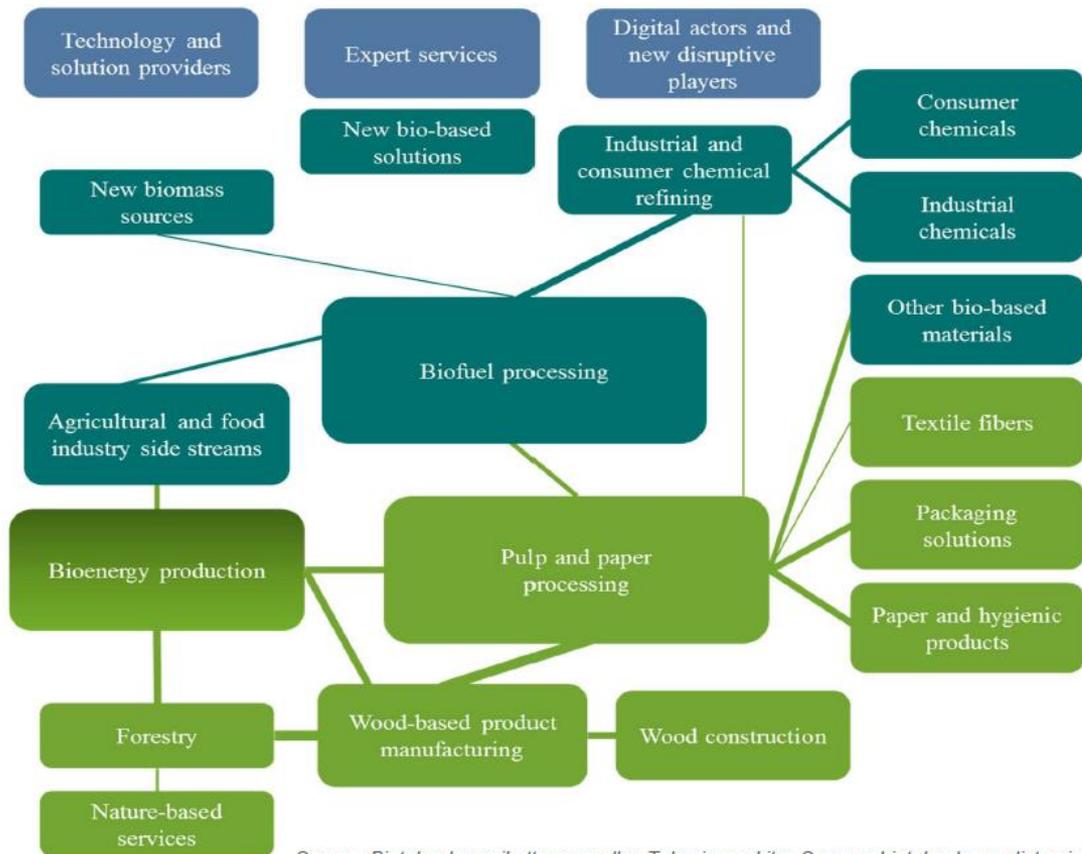
High value potential for bio- and circular economy

Finnish companies and research organisations have high level of knowledge and expertise on utilizing biobased resources. As new market opportunities emerge through e.g. circular economy, plastic challenge and development of digital technologies, new higher value solutions, partnerships and business areas are created.





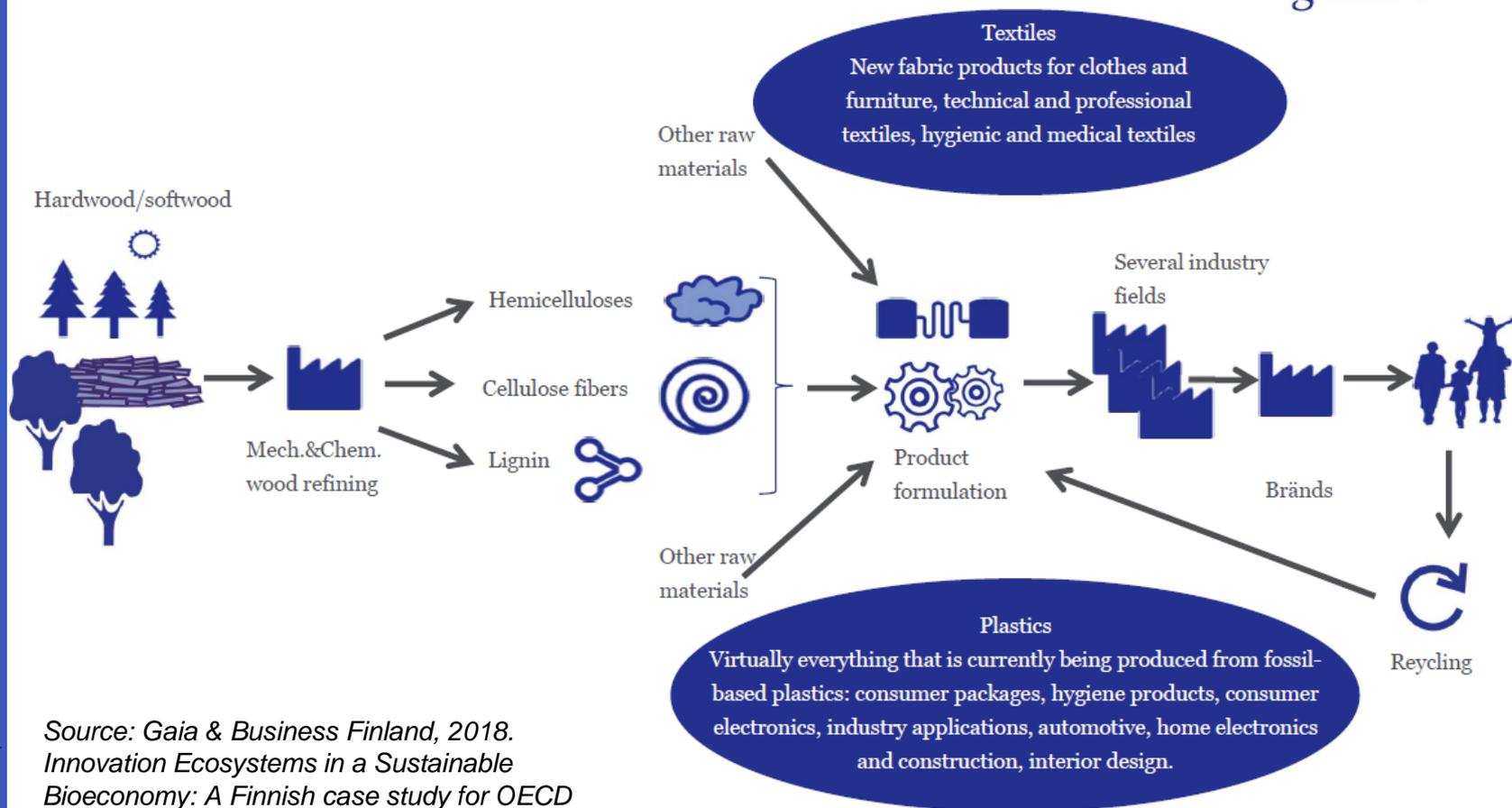
Forest-based bioeconomy creates new high value networks; example on actors in the value chain



Source: *Biotalouden vaikuttavuuspolku: Tekesin merkitys Suomen biotalouden uudistumiselle (2018)*



Value chain producing wood based textiles or bioplastics



Source: Gaia & Business Finland, 2018.
Innovation Ecosystems in a Sustainable
Bioeconomy: A Finnish case study for OECD



Examples

Biobased textiles: Metsä Group, a Finnish forest industry company and Japanese Itochu Corporation are building a test plant in Finland, with the aim to demonstrate a new technology for converting paper-grade pulp into textile fibres. Based on the results of the demonstration project, the technical and economic realities of building a clearly larger plant in Finland in the future can be evaluated.

Biobased plastic like materials and packaging: Sulapac is a start-up company that has developed a new packaging material that is biodegradable and microplastic-free and has plastic like properties. It biodegrades completely and leaves no microplastics behind. Made of FSC-certified wood and natural binders, Sulapac® solutions are also water, oil and oxygen resistant. They can thus be used to replace plastics e.g. in cosmetics packaging.



More info on the Finnish bioeconomy:

www.bioeconomy.fi