



Sustainable growth from bioeconomy

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Contents

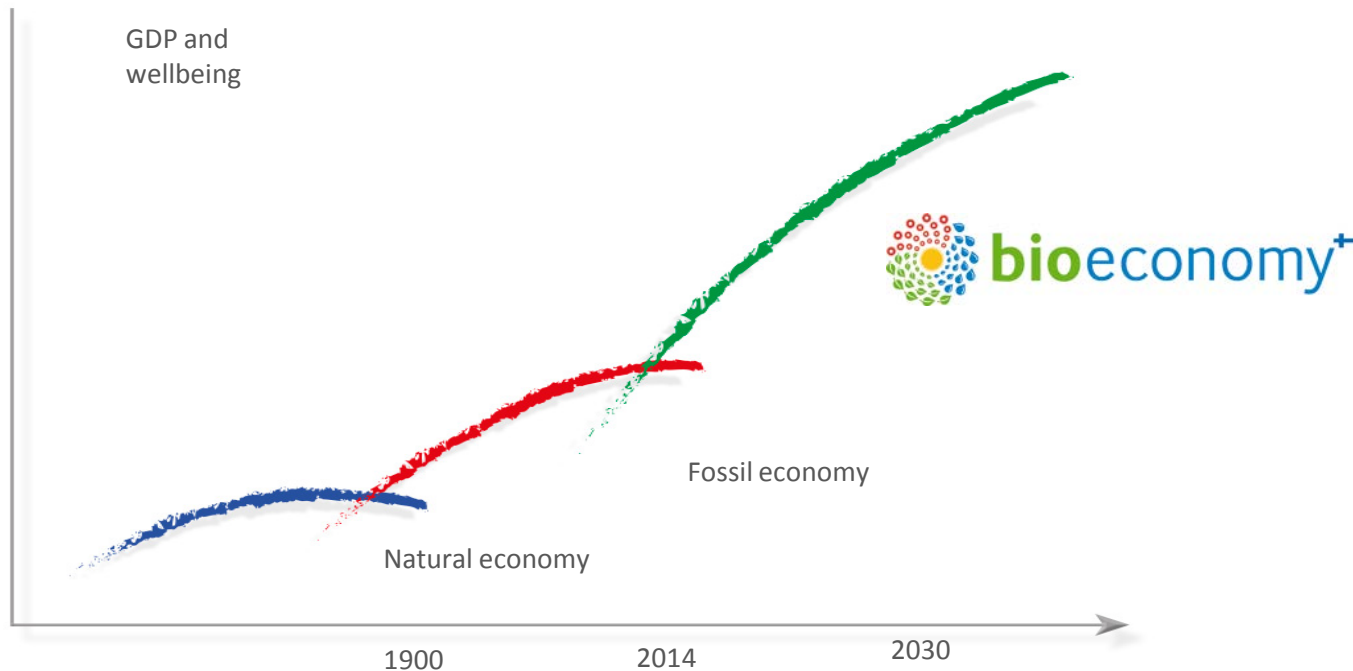
- The Finnish bioeconomy strategy
- From strategy into action
- Maximizing added value and impact from bioeconomy



Sustainable growth from bioeconomy



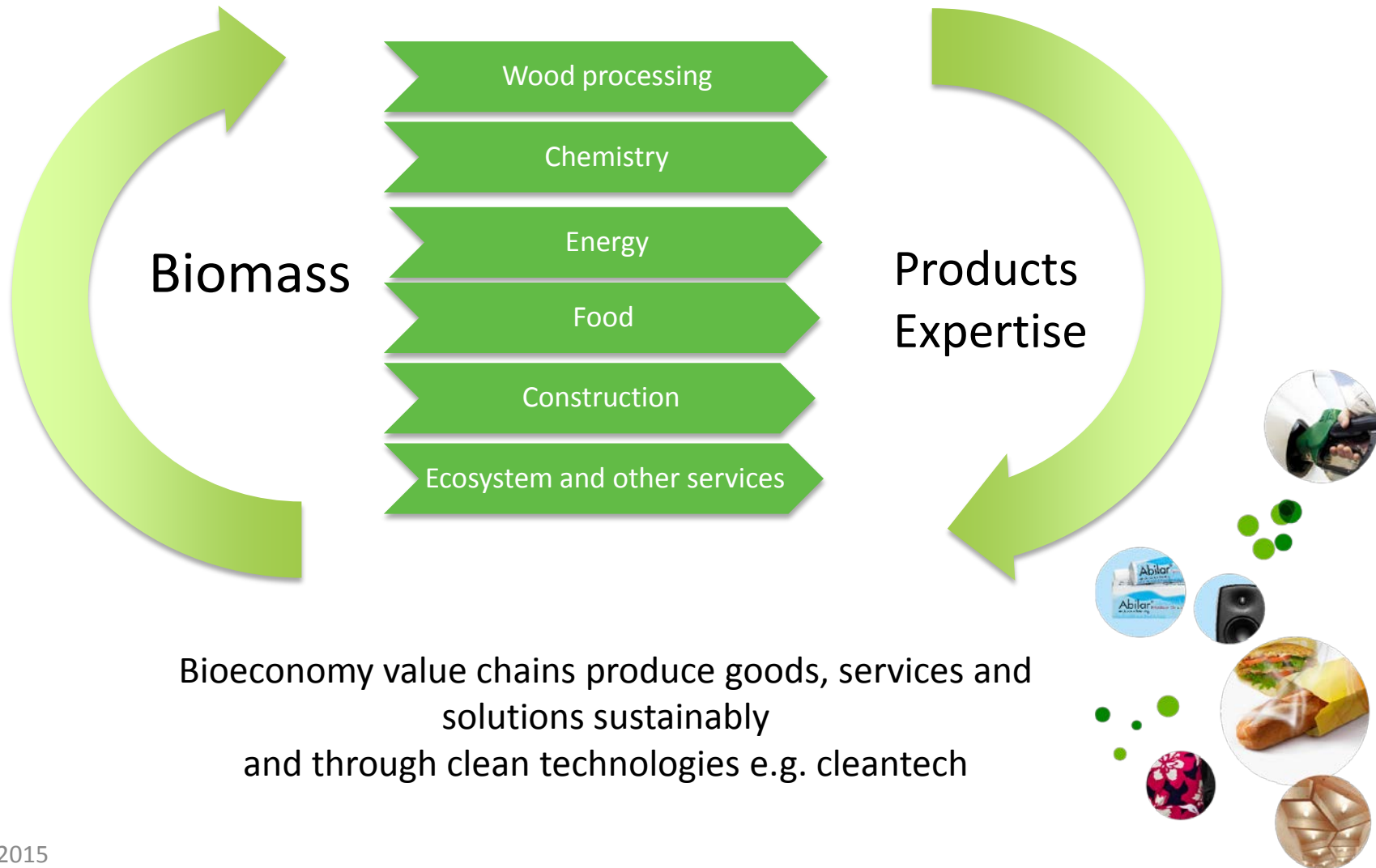
Bioeconomy: The next economic wave



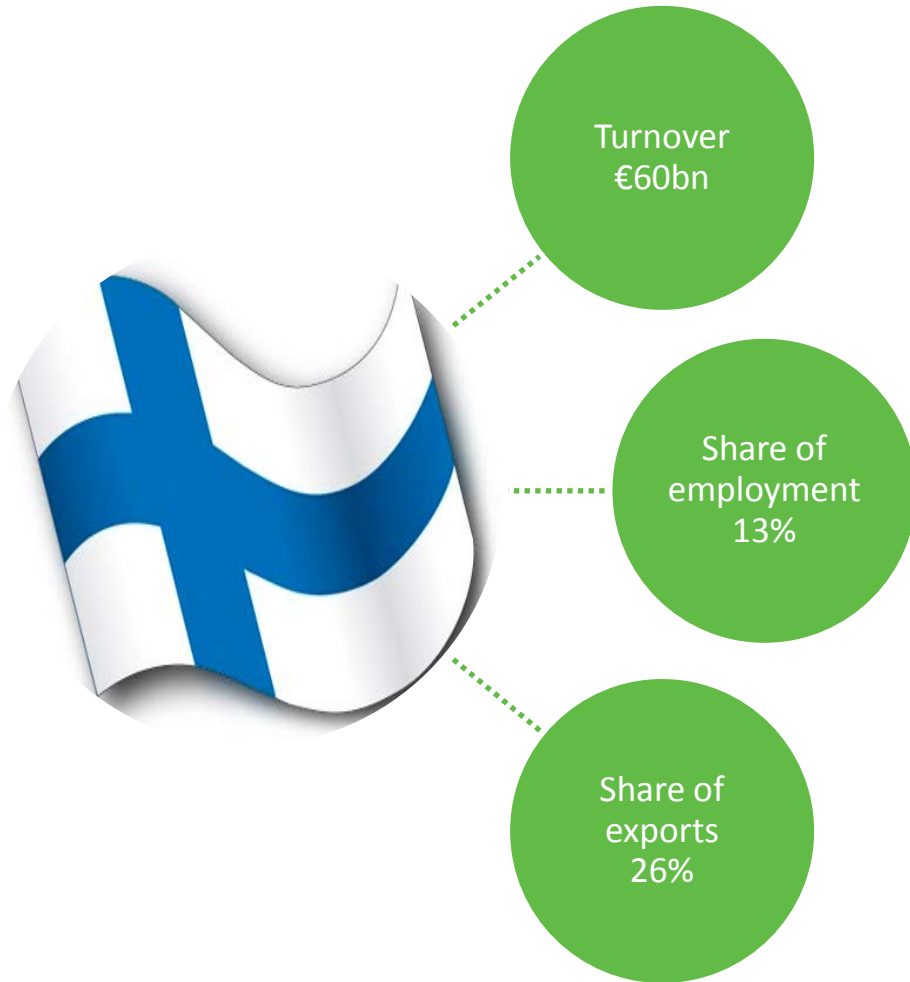
- Bioeconomy uses sustainably biological natural resources to produce materials, energy, food and services
- Aims: Decrease dependency on fossil raw materials, prevent deprivation of ecosystems, promote economic development and create new jobs



Bioeconomy value chains (ecosystem)



Bioeconomy's significance in Finland



Finland seeks to increase its bioeconomy output to 100bn euros by 2025 and to create 100,000 new jobs in the process.

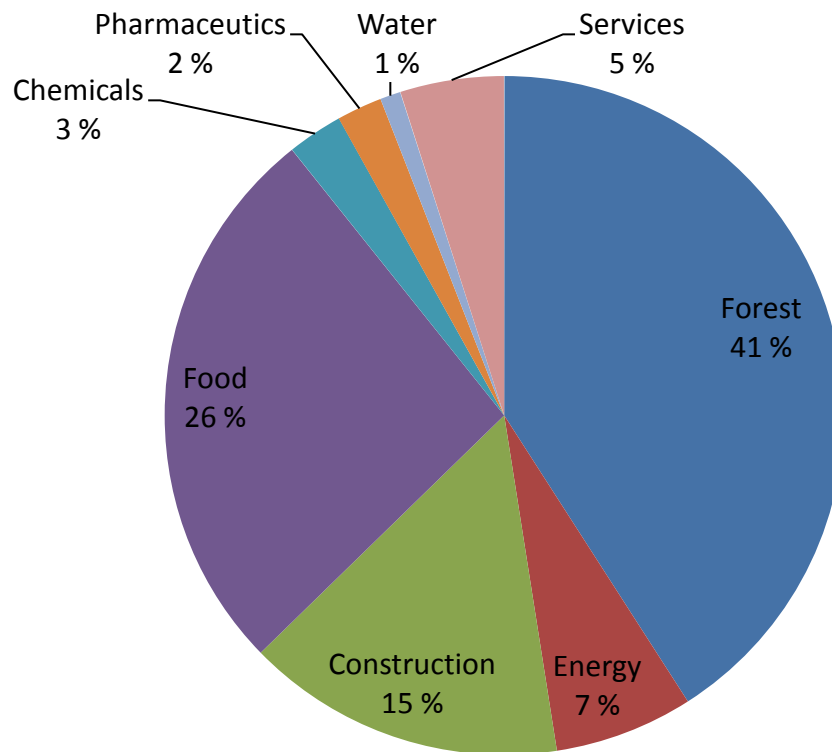
Bioeconomy combines wood processing, chemistry, energy, construction, technology, food and health.

Forest based bioeconomy is really important



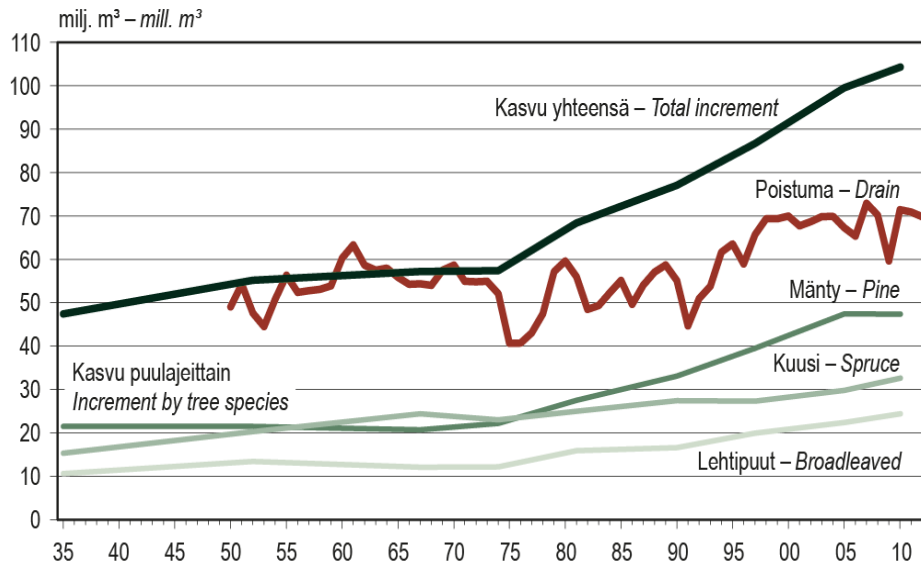
The output of the Finnish bioeconomy

- The total annual turnover is about 60 billion euros.
- More than half of the bioeconomy is forest based.



The potential of Finnish forests

Finland's well-being is based on our ability to use renewable resources efficiently and sustainably. Forests and clean nature have always been the basis of our existence.



Lähde: Metsäntutkimuslaitos – Source: *Finnish Forest Research Institute*

Puuston kasvu ja poistuma
Annual increment of growing stock and drain

Metsätilastollinen vuosikirja 2013



Innovation, collaboration and combination make Finland a pioneer

Biodiesel from tall oil – combined with pulp production



Biogas and -ethanol from residues –
combined with pulp and sawnwood production



Bio oil from forest residues – combined with heath
and power production



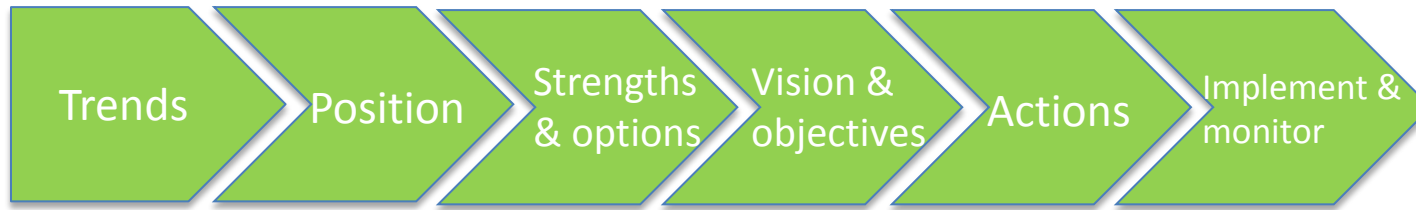
Wood in innovative urban construction



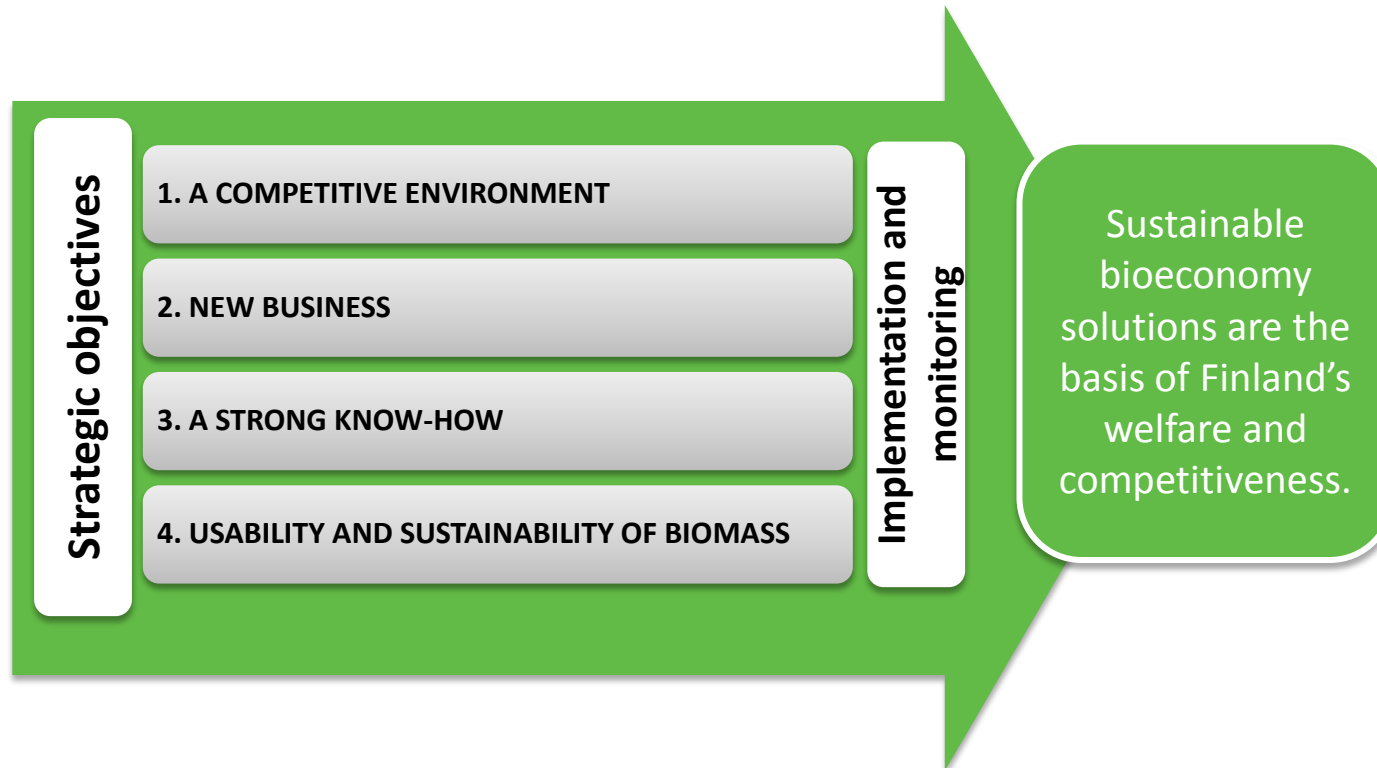
Finland's bioeconomy strategy

Strengths, vision and strategic goals

Process:



Strengths: Natural resources, know-how and the industrial platform



Strategy into action

1. Implemented in cooperation between several ministries and other stakeholders
2. Coordinated by a strategic programme set by the Government
3. Supported by a broad bioeconomy panel of stakeholders chaired by the Minister of Economical Affairs



Implemented policies and actions

1. The government decision on bioeconomy
2. Public funding allocated on bioeconomy
3. An international biorefinery competition
4. A regulatory survey on "Bioeconomy bottle necks and boosters"
5. A project on inventorying biomass resources
6. Tools for promotion and a public discussion
7. Promotion of exports of biobased products and technologies



Implemented policies and actions

1. The government decision on bioeconomy



Programme of Prime Minister Alexander Stubb's Government

“In industrial renewal, the bioeconomy, cleantech and digital business will be the Government's priority sectors...”



Implemented policies and actions

2. Public funding allocated on bioeconomy

Finnish Industry Investment's share capital raised by EUR 50 million

04.09.2014 *Ministry of Employment and the Economy (MEE)*
Press Release 168/2014
4 September 2014



Implemented policies and actions

3. An international biorefinery competition



Scope

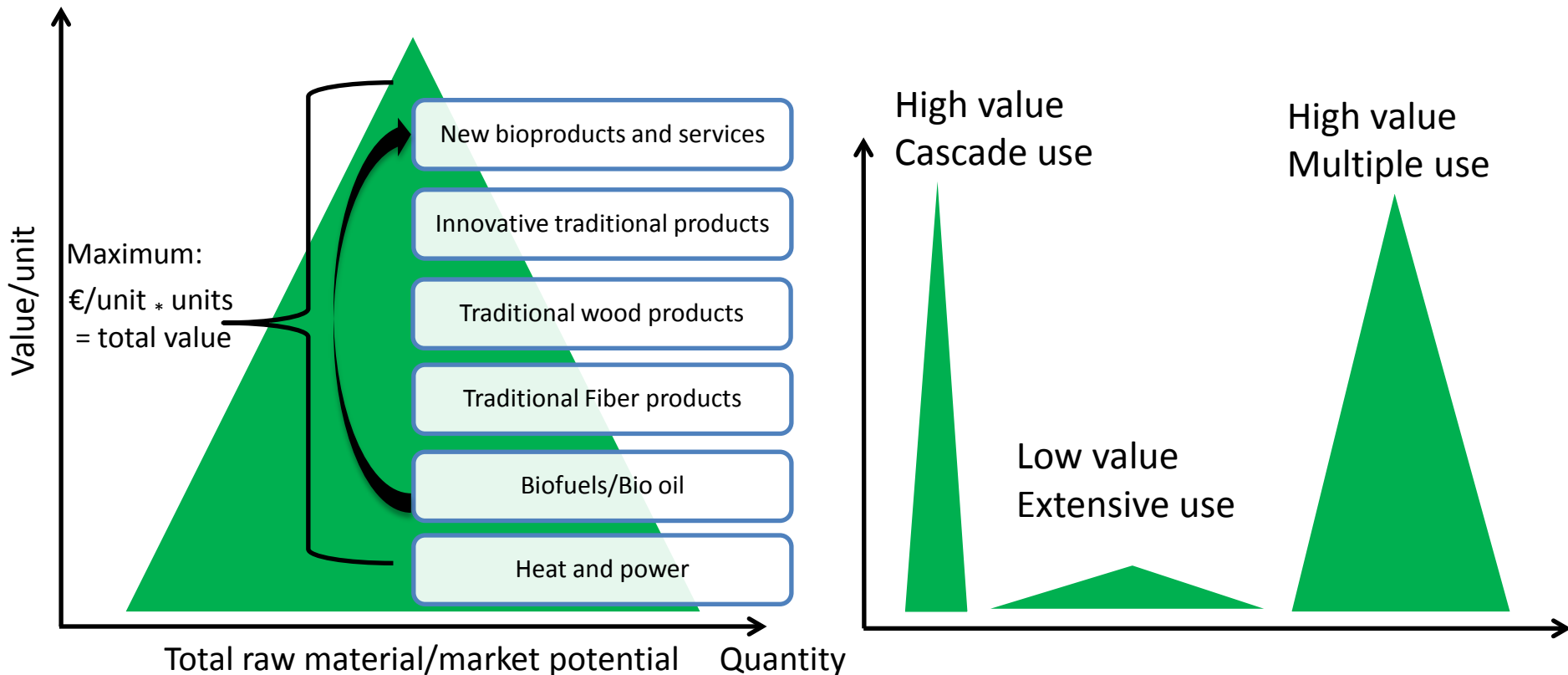
We are looking for proposals for biorefineries that commercialize new innovations or demonstrate them in commercial scale. The proposals need to satisfy following additional specifications:

- The biorefinery is to be located somewhere in Finland and utilizes domestic biomasses.
- Commercial scale biorefineries are expected to include technology that has not yet been in commercial use.
- No investment decision exists of the proposal nor has it received any public investment support.
- The proposal is eligible for public funding.

Value added and impact from bioeconomy

- Multiple use by a market driven approach provides most added value and the greatest impact

Case forest based bioeconomy





bioeconomy⁺

Ask a Finn!