



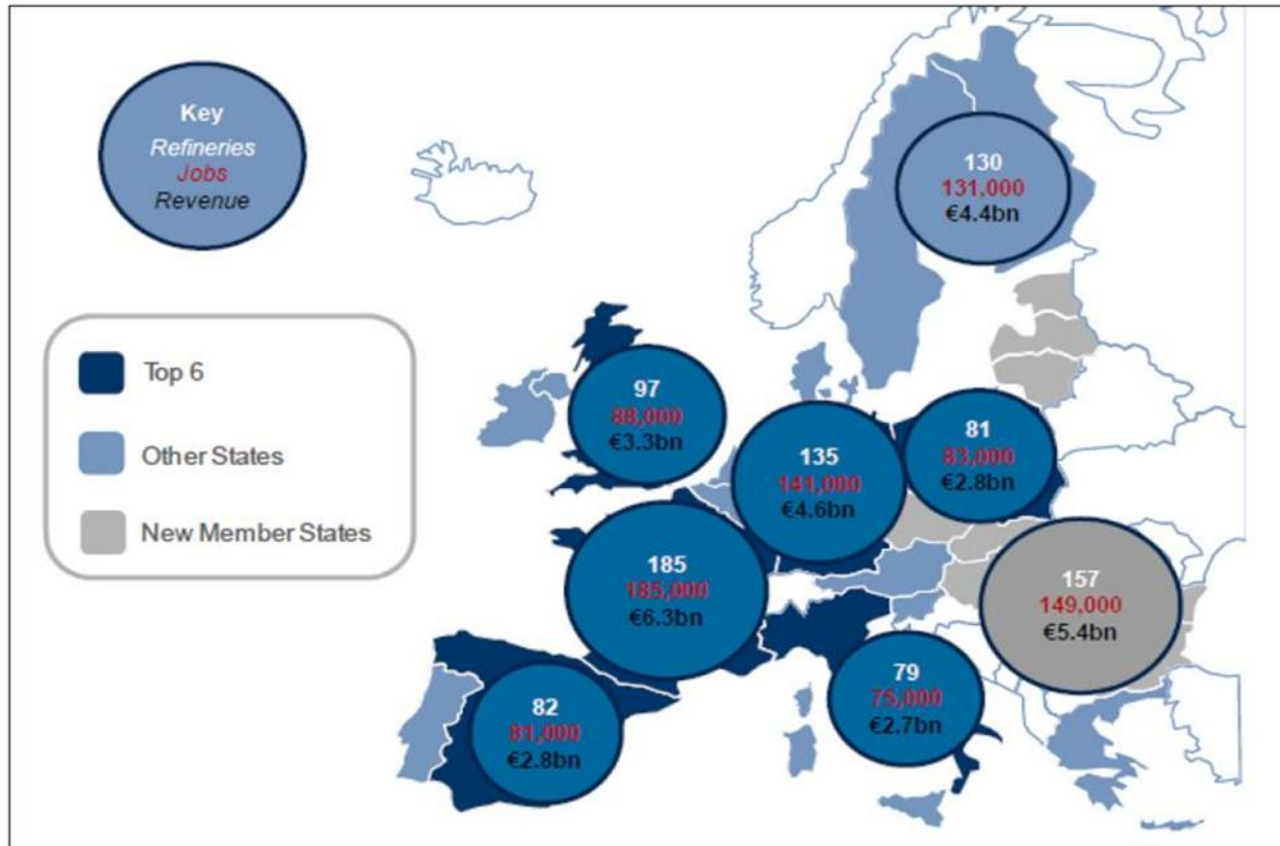
Bio-based Industries Joint Technology Initiative

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- Worldwide, the bioeconomy race is on!
 - ✓ According to Pike Research almost 1800 biorefineries to be commissioned globally until 2022 (e.g. US, Brazil, China, Malaysia, India, Thailand);
 - ✓ \$ 1.4 billion of public funding was allocated to the development of advanced biofuels in the US in 2011;
- Third country investments focussed mainly on using food crops;
- EU focusses on advanced biorefineries, utilizing residues from agriculture, forestry and biowaste fractions, while respecting sustainability criteria.

- Nascent and fragmented industrial sector today, many small and mid-cap companies lacking critical mass;
- Agriculture and Forestry are the prime biomass suppliers;
- EU producers and industries global market leaders, e.g. in enzyme technology (64% of all companies operate from within the EU);
- About 10% of EU chemicals today produced from renewable biomass, expected to rise to 30% in 2030 globally.
- Several EU industrial sectors concerned: chemical, textile, pulp and paper, sugar, starch, woodworking, biotechnology;

The regional potential of bio-based industries



- Building a strong biobased economy in Europe will create both revenues and jobs directly and indirectly
- Next to direct jobs, a biobased economy will also increase farmer income and improve economic activity in developing rural regions

Note: The numbers of biorefineries are determined by the ability of each region or member state within the EU27 to supply bioproducts. Jobs in the chart represent the total man-years of employment between 2010 and 2020, not the number of jobs in 2020 alone. Included jobs are in management, operation and construction of the biorefineries. Revenues are per year
 Source: Bloomberg

Wetenschappelijke en Technologische Commissie
voor de Biobased Economy

Kennis- en innovatieagenda voor de biobased economy

Naar groene chemie
en



Innovating for Sustainable Growth

A Bioeconomy
for Europe

Forskningsrådet

BIONÆR

Research Programme on Sustainable Innovation in Food
and Bio-based Industries

me
22

Swedish Research and Innovation
Strategy for a Bio-based Economy

Distributed
Bio-Based
- Driving Sustain

Päivi Luoma, Juha Vanhanen and
September 2011

SITRA



Towards 2030

Teagasc's Role in Transforming Ireland's
Agri-Food Sector and the Wider Bioeconomy

Foresight Report

May 2008



BioÖkonomieRat

Prioritäten in der
Bioökonomie-Forschung
Empfehlungen des BioÖkonomieRats

- The example of the EU Chemical Industry
 - ✓ in 2010 combined sales of € 491 billion, € 50 billion or 10% thereof bio-based;
 - ✓ Bio-based chemicals share expected to rise until 2030 to 30% of sales (thus € 150 annual sales billion, affecting up to 400.000 jobs);
 - ✓ Technology leadership in support of competitiveness will be instrumental for securing a high market share of EU industries and EU jobs.

- And EU Agriculture and Forestry?
 - ✓ Feedstock costs in biorefineries typically 25-40% of final product value;
 - ✓ Estimated additional € 100 billion bio-based products in the chemical industry would represent an additional market value of € 25 billion for biomass production and logistics in the EU.

A Bio-Based Industries JTI is needed as a catalyzer for the creation of new value chains

- Cross-sectorial collaboration along value chains of previously unrelated sectors and industries
 - ✓ Pooling of resources
 - ✓ De-risking investments at higher TRL levels
- Develops the necessary range of conversion processes for integrated biorefineries
- Demonstrates and deploys advanced large-scale biorefineries
- Facilitates and promotes the uptake of bio-based products

- **A single programme** bringing together three separate programmes/initiatives*
- **Coupling research to innovation** – from research to retail, all forms of innovation
- **Focus on societal challenges** facing EU society, e.g. health, clean energy and transport
- **Simplified access**, for all companies, universities, institutes in all EU countries and beyond.

*The 7th Research Framework Programme (FP7), innovation aspects of Competitiveness and Innovation Framework Programme (CIP), EU contribution to the European Institute of Innovation and Technology (EIT)

- **Vision paper (July 2012): Accelerating innovation and market uptake of bio-based products.**
<http://bridge2020.eu/wp-content/uploads/2013/05/BRIDGE-Vision.pdf>
- **Strategic Research and Innovation agenda (March 2013): Biobased and renewable industries for development and growth in Europe.**
http://bridge2020.eu/wp-content/uploads/2013/06/BRIDGE_SIRA_Full_download.pdf
- **Creation of the Biobased Industries Consortium:**
<http://biconsortium.eu/>

Proposal for a Council regulation on the Bio-Based Industries Joint Undertaking

- **Public consultation: September-December 2012**
- **Stakeholder conference: 9 January 2013**
- **Impact assessment**
- **In coordination with preparations for IMI2, Cleansky2, FCH2 and Electronic components and systems**

- **Clear and ambitious objectives, contributing directly to competitiveness and EU policy goals**
- **Governance to ensure openness to new participants, the allocation of funding on the basis of excellence, and efficient links with national activities**
- **Simple implementation structures and rules for participants**
- **Strong commitments from industry, including substantial financial commitments**

Feedstock

Fostering a sustainable biomass supply and building new value chains

Biorefineries

Optimising efficient processing through R&D and upscaling in large-scale demo/flagship biorefineries

Markets, products and policies

Developing markets for biobased products and optimising policy frameworks



Private partner: Biobased Industries Consortium (BIC)

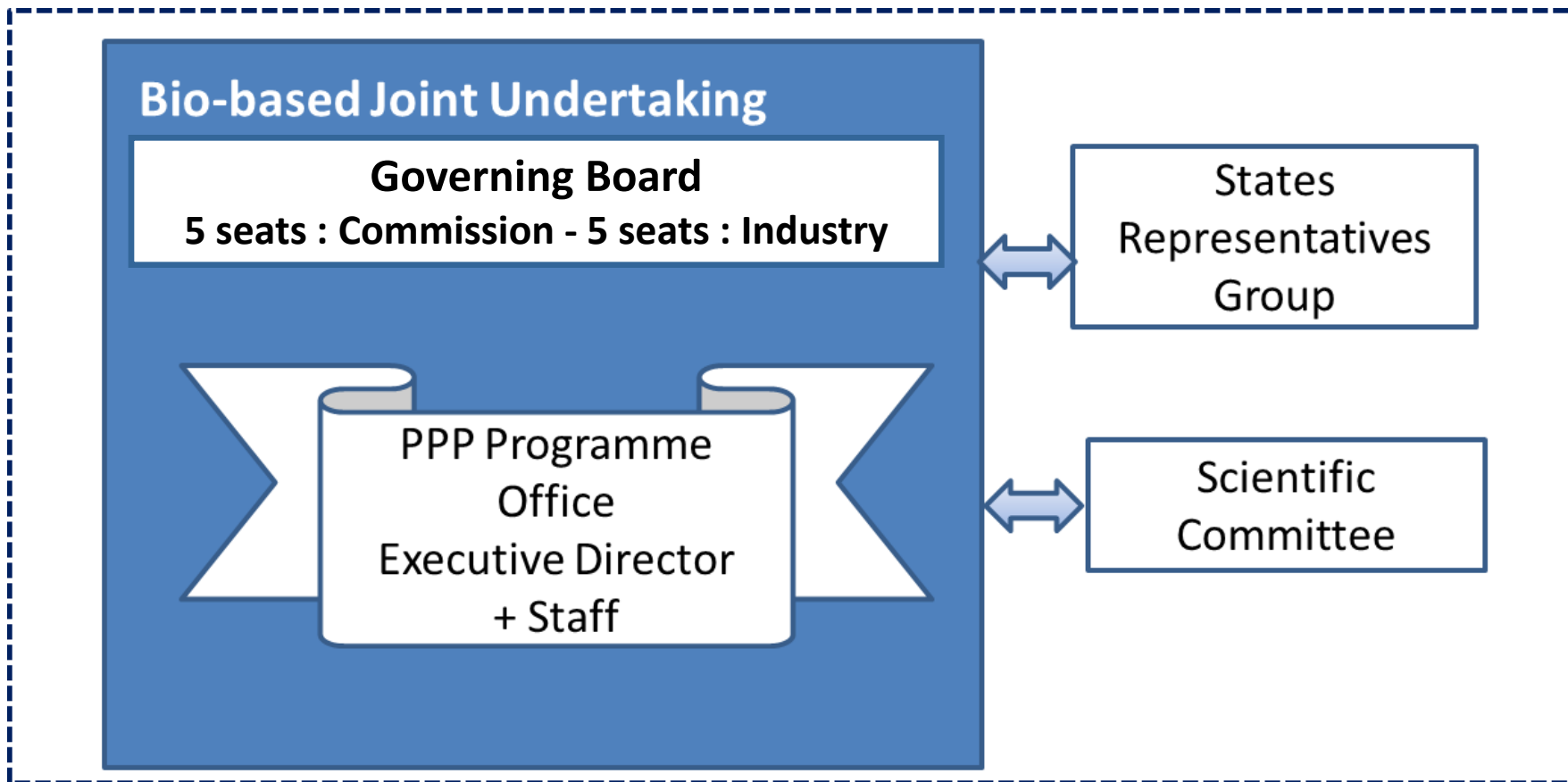
■ 65 Full members

- 39 Large industries
- 15 SMEs
- 11 Clusters

■ 90 Associated members

- 24 Universities
- 51 RTOs
- 8 European trade organisations
- 4 Associations
- 3 European Technology Platforms (ETPs)





- **Not a closed club: BIC open to new members**
- **Consultation of research community and other stakeholders for drafting of work programme**
- **SME friendly measures**

- **Overall principle: implementation according to Horizon 2020 rules**
- **Open competition for any research and innovation organisation**
- **Evaluation with independent experts**
- **Proposals funded on the basis of excellence**

- **Overall budget € 3800 million**
- **EU contribution: € 1000 million**
- **Industry contribution: € 2800 million**

Leverage: 2,8 € private investment for every 1 € public investment

- **Political decision making process in Council and Parliament**
- **Setting up the organisational structures**
- **Launching of the first call for proposals**