

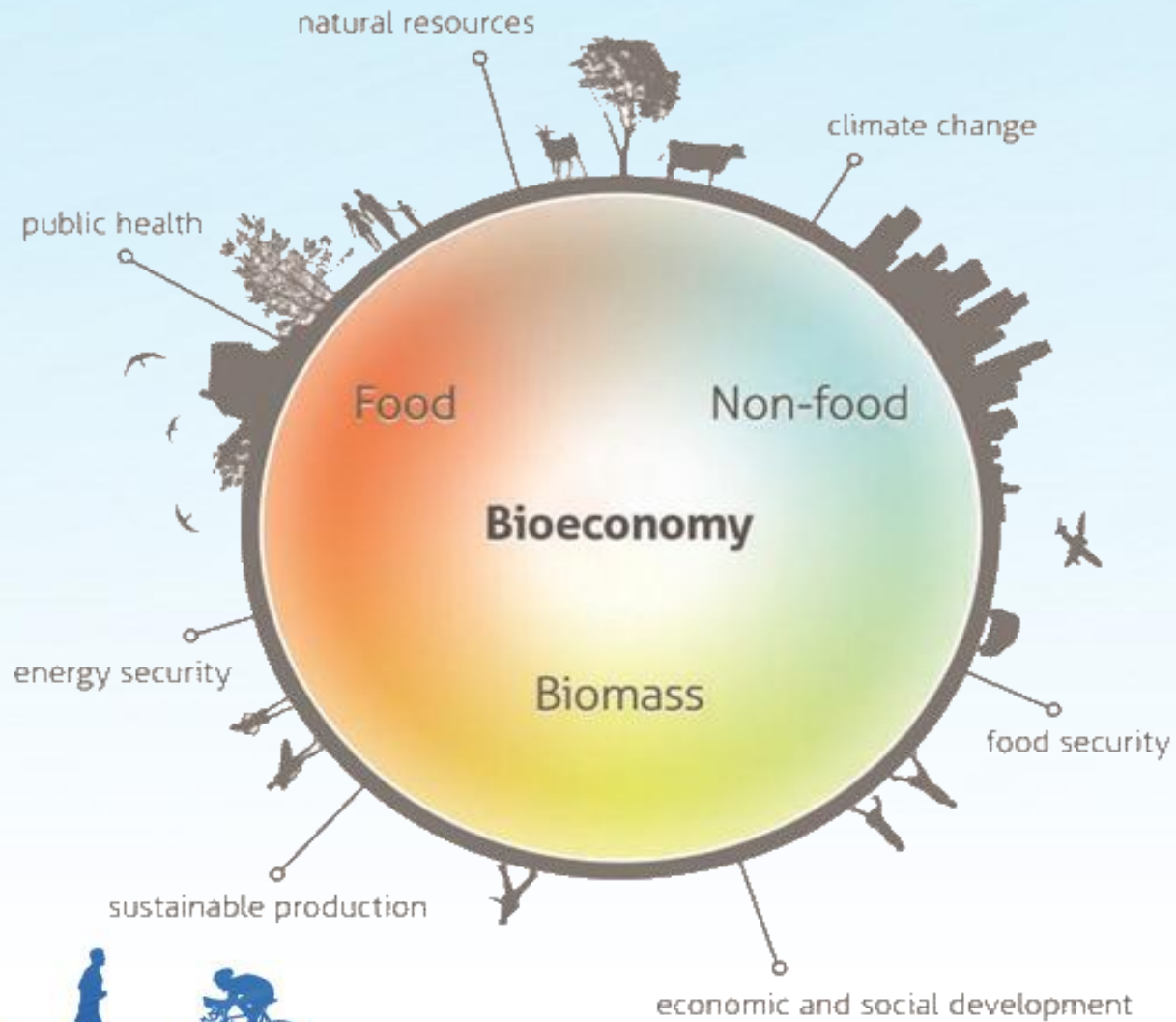
A European Public Private Partnership for Bio-based Industries

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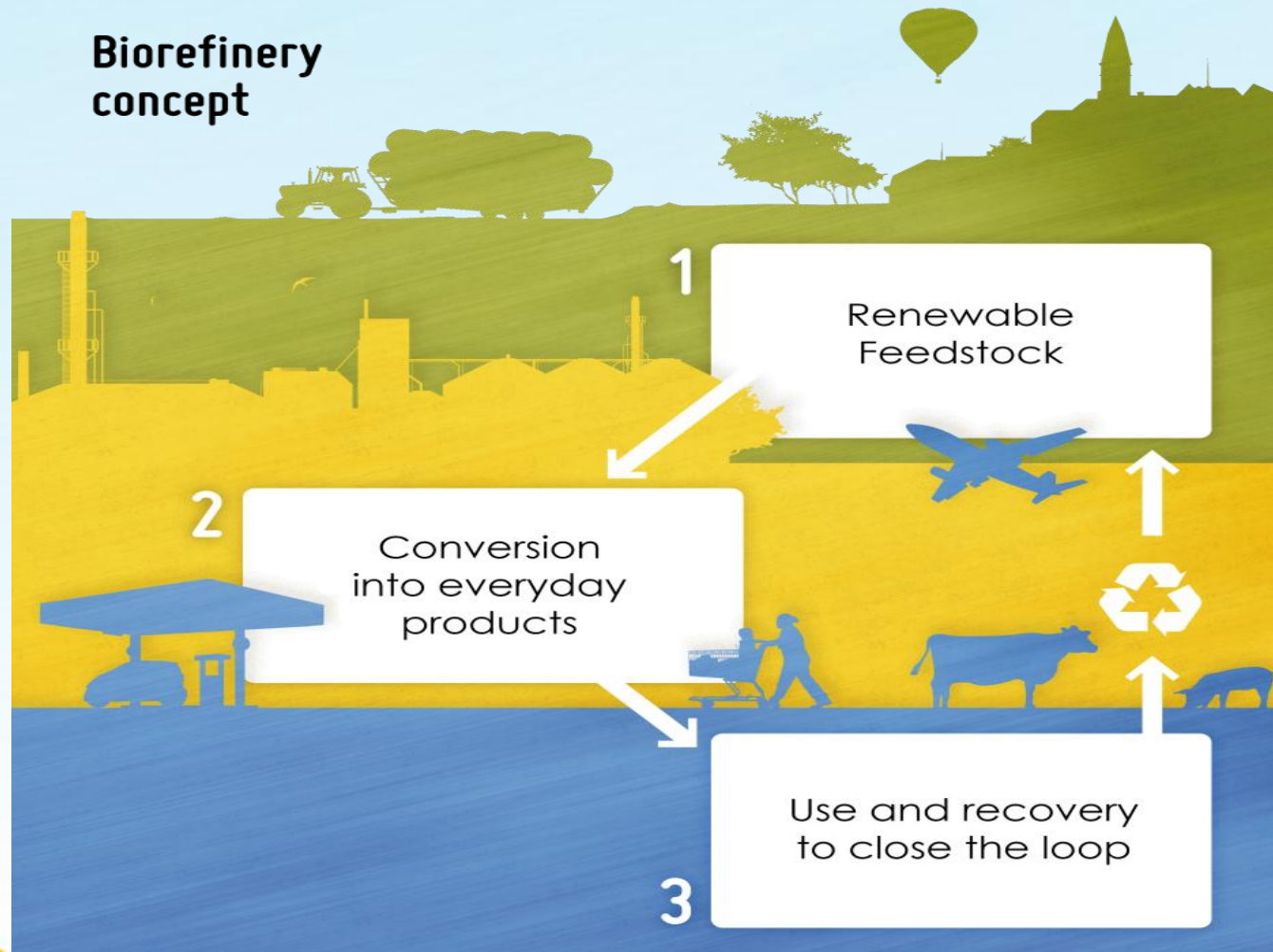
- The European Association for Bioindustries
- Created in 1996 to provide a voice for the biotech industry in Europe
- Representing the entire biotech sector: Healthcare, Agriculture and Industrial
- 56 corporate members operating worldwide, 14 associate members & BioRegions as well as 19 national biotechnology associations (2000 SMEs)

The Bioeconomy



Bio-based industries

Biorefinery concept



Bio-based products



Cosmetics



Vitamins B2



Food - Baking



Dyes for textile



Bio-based polymers



Biofuels



Antibiotics - Cephaxelin

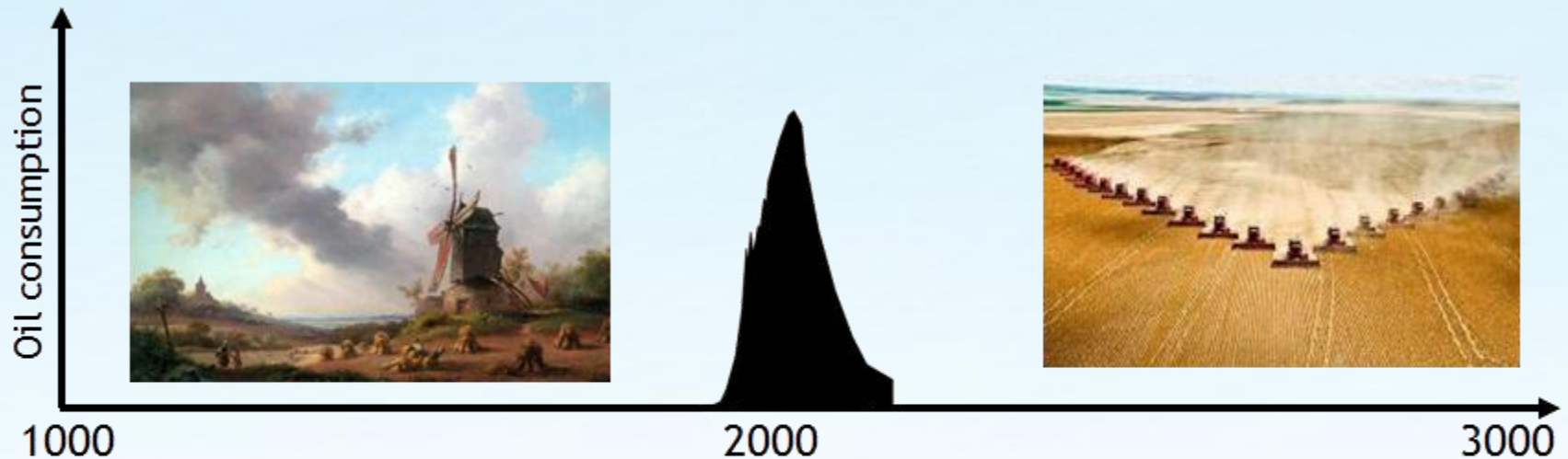


Pulp and paper - bleaching



Why the bioeconomy?

Reducing **dependence on non-renewable resources** as well as mitigating and adapting to **climate change**



Living off the land

A brief
moment
in history

Living off the land



Why the bioeconomy?

- **Creating jobs and maintaining European competitiveness:** €2 trillion and employs more than 22 million people, 9% of total employment in the EU.
- **Revitalising rural and coastal areas**
- **Added value:** €1 invested in EU-funded bioeconomy research and innovation is estimated to trigger €10 of value added in bioeconomy sectors by 2025.



Where are we in Europe?

- Excellent knowledge base
- World leader on industrial biotechnology
- High appreciation towards sustainability

But...

- Lagging behind on implementation & market development
- Strong regulatory environment which tends to slow down developments & industrial growth
- Lack of long term vision and policy coherence

Pre-requisites for a competitive bio-based industry

- Need a coherent, comprehensive and integrated policy
- Ensure access to renewable raw material at competitive prices
- **Support more targeted research and innovation (and particularly) demonstration projects**
- Support market creation and stimulate market demand.



Bridging the gap between research and market

- **Problem:** Time lag from research results to marketable products
- **Outcome:** EU research commercialised elsewhere
- **Root Cause:** Poor access to public money for high-cost demo and flagship plants (eg, biorefineries)



→ Need for an EU biobased industries PPP



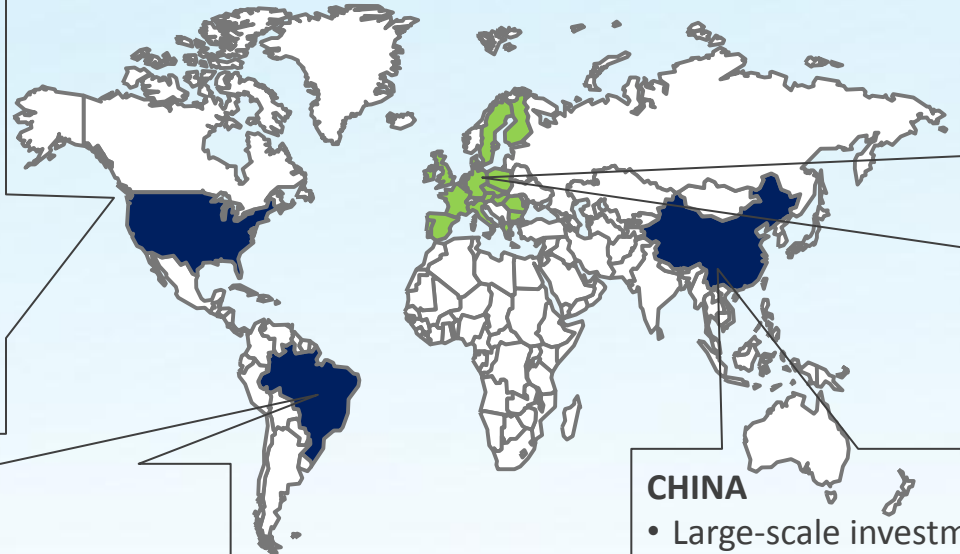
bridge $\frac{20}{20}$

Biobased and Renewable Industries
for Development and Growth in Europe

Brazil, China and the US are making significant public investments in bringing biorefineries to commercial scale

US

- High targets for the replacement of fossil transportation fuels
- Wide range of support schemes including grants, tax credits, loan guarantees, etc
- Focus: bioethanol
- Public support last 5 years: ~ € 1.2 billion



EU

- High targets for the replacement of fossil transportation fuels
- Focus: biodiesel/ biochemicals
- Public support last 5 years¹: ~€ 200 million

BRAZIL

- World leading first generation biofuel production
- Some commercial 2G bagasse refineries in operation
- Aggressive government growth targets for bioethanol by 2025

CHINA

- Large-scale investment in biorefineries
- Plan to substitute 20% of crude oil imports by 2020
- Target of 1.7bgly ethanol by 2010

Background of BRIDGE

- Horizon 2020 aims at tackling societal challenges by helping to bridge the gap between research and the market
- This market-driven approach will include creating Public-Private Partnerships to bring together the resources needed for addressing specific societal challenges including the bioeconomy
- A possible PPP in the field of bio-based industries explicitly mentioned in:
 - Horizon 2020
 - European Bioeconomy Strategy
 - New Industrial Policy Communication



Overall objective of BRIDGE

*“Foster **“radical innovation”**, from R&D and deployment to market pull, to deliver biobased products superior, or at least comparable to, non-biobased products in terms of price, performance and availability, and environmental benefits”*

Feedstock

- Fostering a sustainable biomass supply and building new value chains

Biorefineries

- Optimising efficient processing through R&D and upscaling in pilot, demo/flagship biorefineries

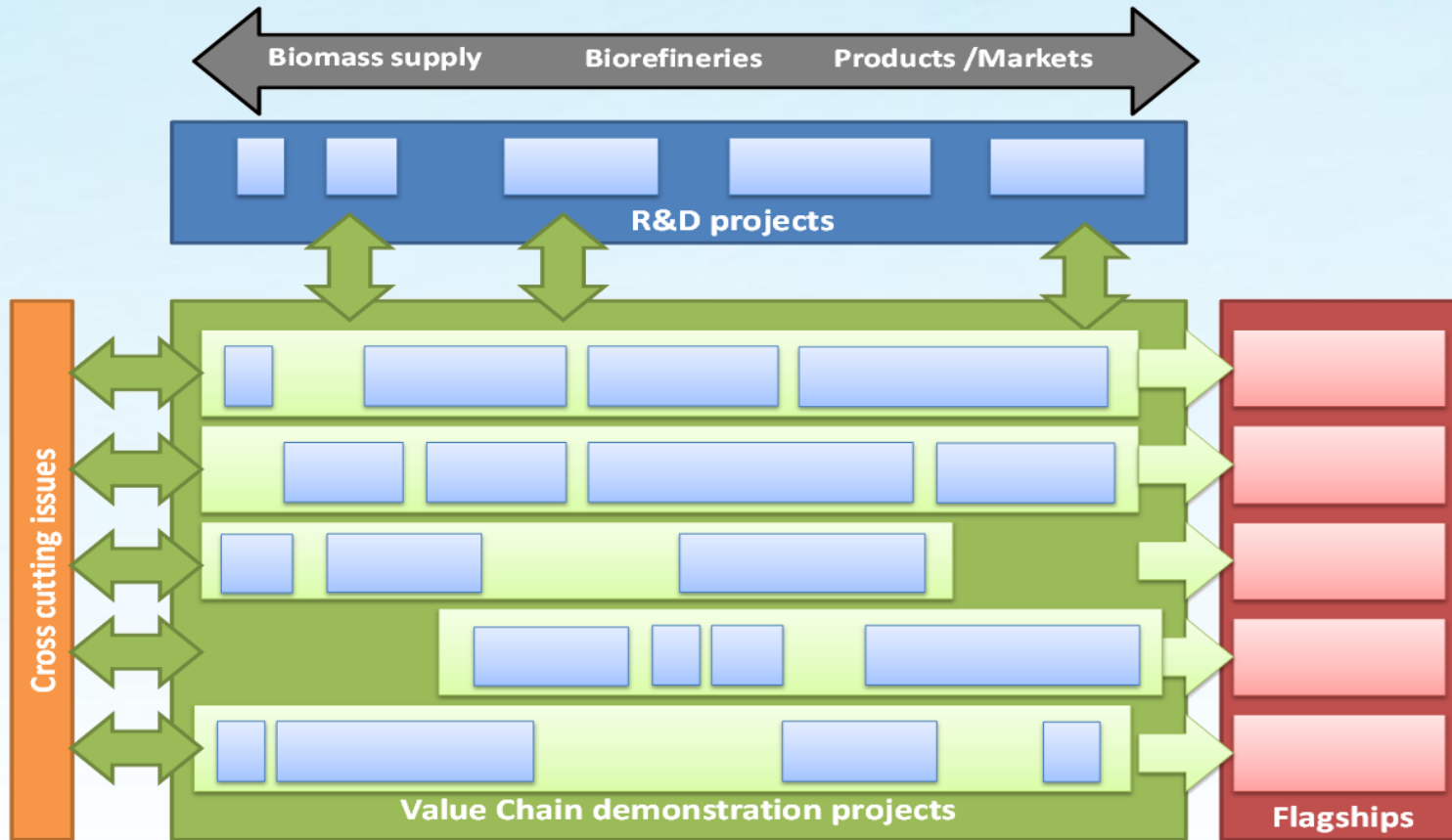
Markets, products and policies

- Developing markets for biobased products and optimising policy frameworks

An integrated value chain approach



Project structure of BRIDGE



Value chain demonstration projects

- **Value Chain 1: From lignocellulosic feedstock to advanced biofuels, biobased chemicals and biomaterials**
 - Realising the feedstock and technology base for the next generation of fuels, chemicals and materials
- **Value Chain 2: The next generation forest-based value chains**
 - Utilisation of the full potential of forestry biomass by improved mobilisation and realisation of new added value products and markets
- **Value Chain 3: The next generation agro-based value chains**
 - Realising the highest sustainability and added value by improved agricultural production, and new added value products and markets
- **Value Chain 4: Emergence of new value chains from (organic) waste**
 - From waste problems to economic opportunities by realising sustainable technologies to convert waste into valuable products
- **Value Chain 5: The integrated energy, pulp and chemicals biorefineries**
 - Realising sustainable bio-energy production, by backwards integration with biorefinery operations isolating higher added value components

R&D Projects

- Foster a sustainable biomass supply to feed both existing and new value chains
 - Increase biomass production by improving agricultural practices and taking advantage from local biodiversity (complementary to the European Innovation Partnership on “Agricultural Productivity and Sustainability”)
 - Mobilising an increasing supply (harvesting collection, storage)
- Optimise efficient processing through R&D and pilot biorefineries
 - Primary conversion processes
 - Secondary conversion processes
- Developing innovative products and accelerating market pull for bio based products
 - New materials & products
 - New application and market development

Supporting projects

- **Clustering and Networking**
 - Key role in the creation of new value chain by connecting agriculture, industry and research network across Europe
- **SME engagement**
 - Supportive measures for SMEs to facilitate active involvement and participation
- **Standards and Regulations**
 - Actively contribute to the development of new standards (CEN)
- **Feedstock sustainability and LCA**
 - Assessment of methodologies for addressing sustainability criteria of the projects and the environmental footprint of the products developed



europaean
bioplastics

EUROPA BIO™

The European Association for Bioindustries



Forest-Based Sector
Technology Platform



copa * cogeca

european farmers

european agri-cooperatives



Thank you



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