

A PUBLIC PRIVATE PARTNERSHIP
ON BIO-BASED INDUSTRIES

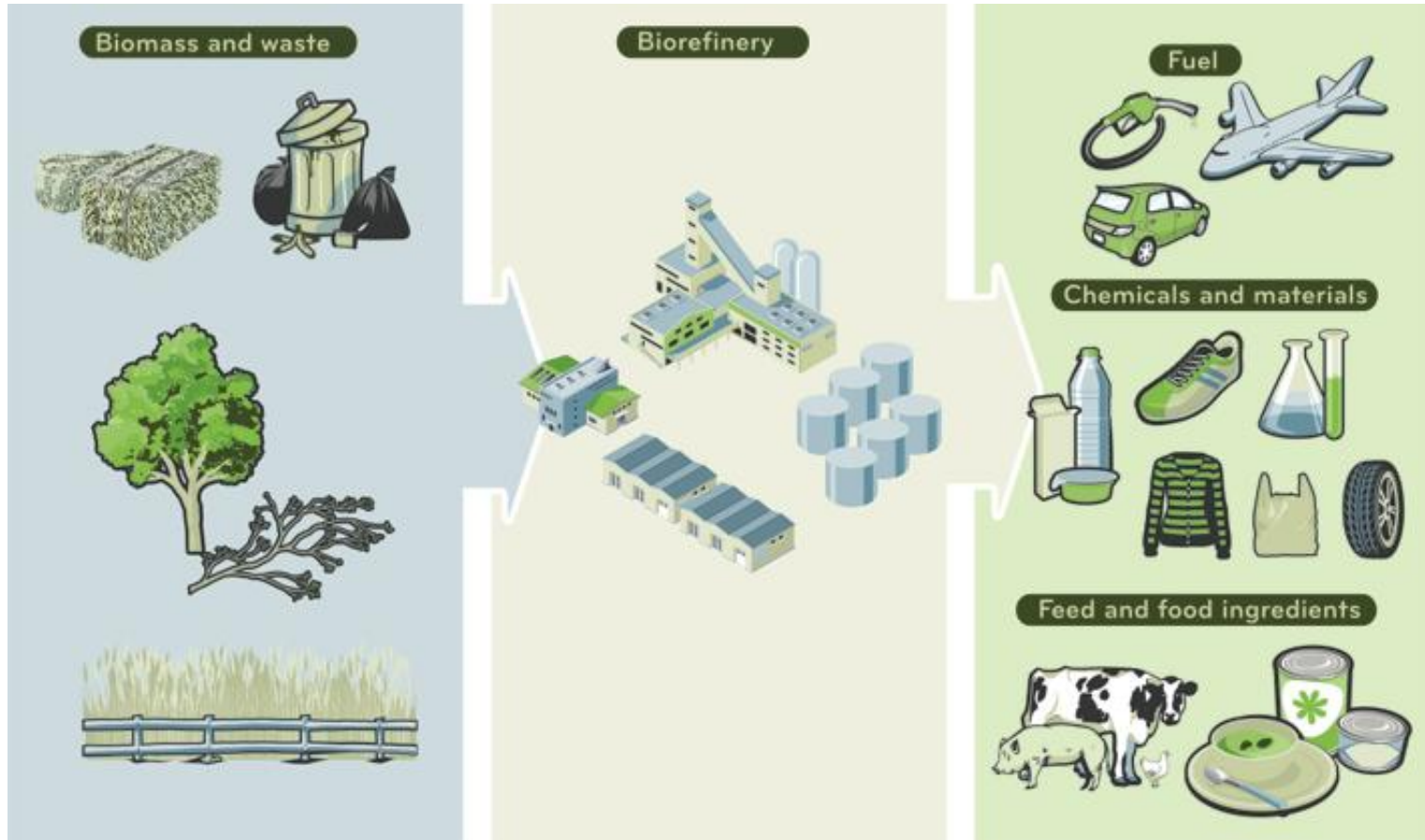
BBI: The industry vision and the strategic
research agenda (SIRA).
How will it work in practice.

Dirk Carrez – Executive Director BIC

Bio-based Industries Public-Private Partnership (BBI). Portuguese Stakeholders
event (Lisbon, 18th December 2013)



The concept



Our vision for Europe

An **economy** that:

- sources domestic renewable raw materials
- produces food, feed, chemicals, materials and fuels locally
- creates jobs in a broad range of sectors in Europe, triggering rural growth across regions
- places sustainability, smart and efficient use of resources at the heart of industrial, business and social activities

What's in it for Europe?



Growth

- A global bio-based market estimated at €200 billion by 2020*



Jobs

- Create over 1 million jobs between 2010 and 2030 mainly in rural areas**



Energy & Products

- Reduce dependence on imports with locally sourced and produced goods and products***



Climate

- Bio-based products can achieve an average GHG emissions reduction potential of least 50% compared to fossil alternatives****

Sources:

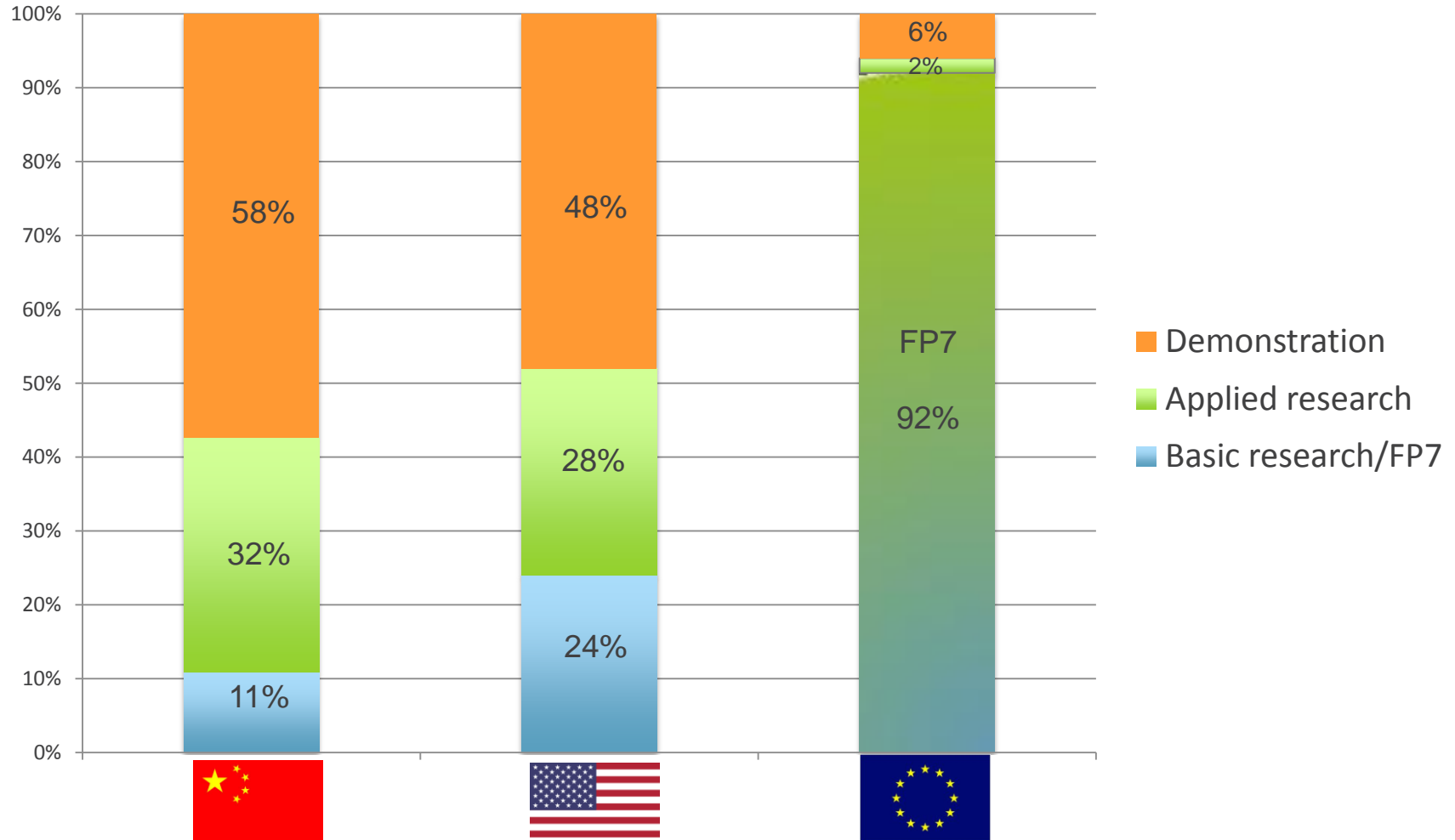
* The Future of Industrial Biorefineries, World Economic Forum, 2010

** Next generation ethanol and biochemicals: what's in it for Europe?, Bloomberg New Energy Finance, 2010

*** Innovating for sustainable growth: a bioeconomy strategy for Europe, European Commission, 2012

**** Strategic Innovation and Research Agenda (SIRA), Biobased Industries Consortium, 2012

EU support vs other regions



Source: Key Science and Engineering Indicators, National Scientific Board, 2010 Digest, NSF, <http://cordis.europa.eu/erawatch>, OECD "Research & Development Statistics"

The challenge:

Overcoming the innovation & deployment gap



Europe's ability to commercialise / produce high value products lies in its ability to reach demonstration scale of advanced biorefineries to mature technologies

BIO-BASED INDUSTRIES INITIATIVE

Investing in new and sustainable ways
to organise our economy

About the initiative

- A Public-Private Partnership (PPP) between the Bio-based Industries Consortium and the EU
- A **joint** commitment of €3.8 billion over 2014-2020
 - €1 billion (EU)
 - €2.8 billion (Biobased Industries Consortium)
- Multi-annual funding programmes for bio-based projects
- Enabling rural development and re-industrialisation in Europe

Our sectors



Stage 1 - Reinforce innovation and extend current infrastructure across the economy

The bridges



Stage 2 - Build and strengthen value chains across industry sectors

The PPP community



Stage 3 - Realise a connected biobased economy from field to end consumer

Our focus

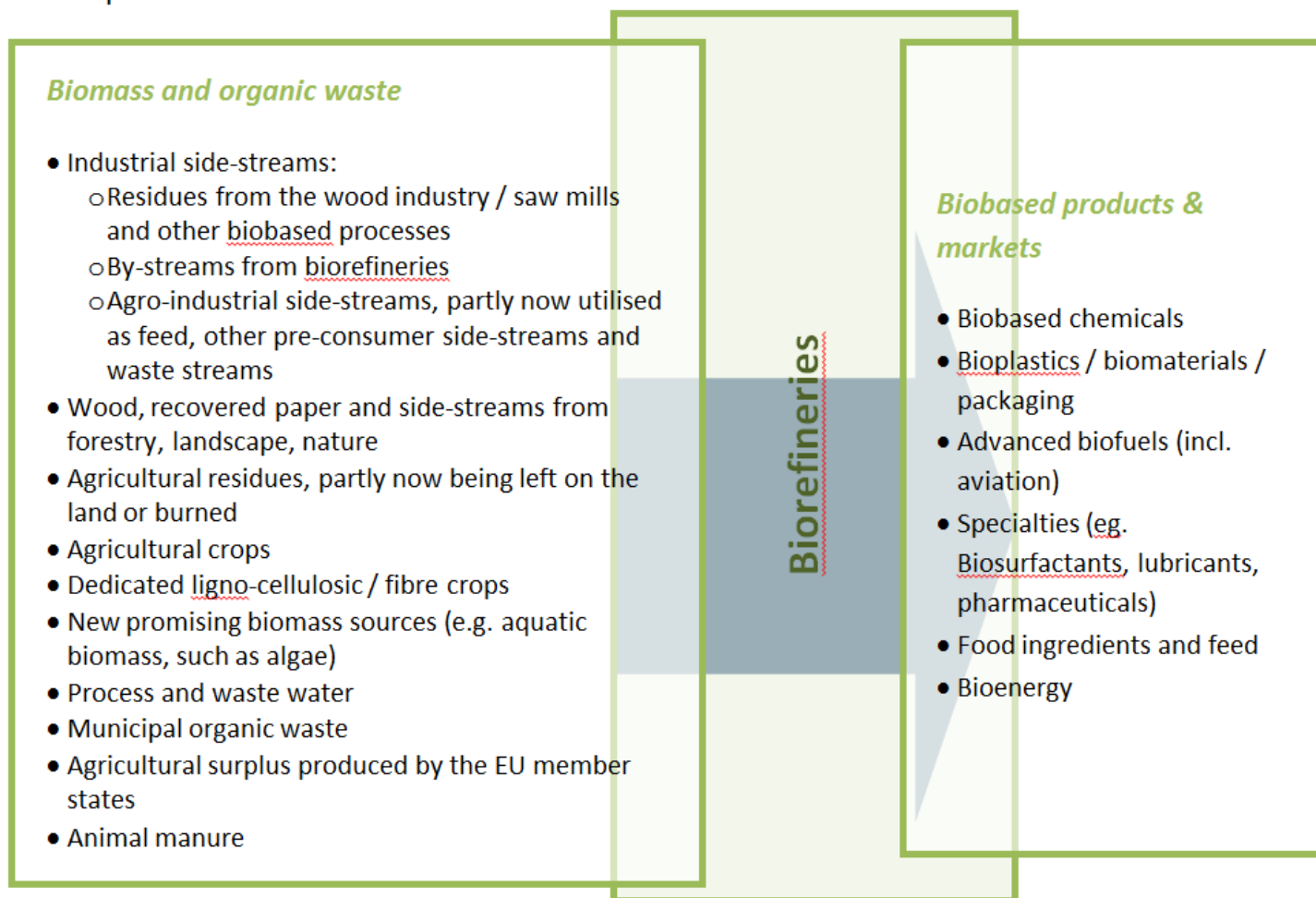
- Interconnections between different sectors
- bio-based value chains: from feedstock → products
- New co-operations throughout industry clusters
- Innovative and sustainable bio-based chemicals and materials
 - locally sourced biomass
 - validated at demonstration scale
- > 5 flagships resulting
 - producing new bio-based materials, chemicals and fuels
 - which have proven to become cost-competitive



Strategic Innovation and Research Agenda



BRIDGE aims at accelerating the building of biobased value chains, starting from sustainable feedstock production and mobilization towards the implementation and use of biobased materials and products



- The SIRA translates PPP ambitions into a coherent set of actions that will deliver tangible and increasingly ambitious results by 2020-2030

VALUE CHAIN APPROACH

- SIRA projects will be developed around **5 value chains**, where specific deliverables will be demonstrated, ultimately leading to flagship projects.
- To have competitive bio-based products in the market in 2020, each step of the value chains needs to be competitive (economically + environmentally):
 - **the feedstock supply**
 - **the processing**
 - **the products and market**
- The PPP focuses on developing, optimising and demonstrating this competitiveness throughout the five value chains.

Five Value Chains

- **Value Chain 1:** From **lignocellulosic feedstock to advanced biofuels, bio-based 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

Different types of projects

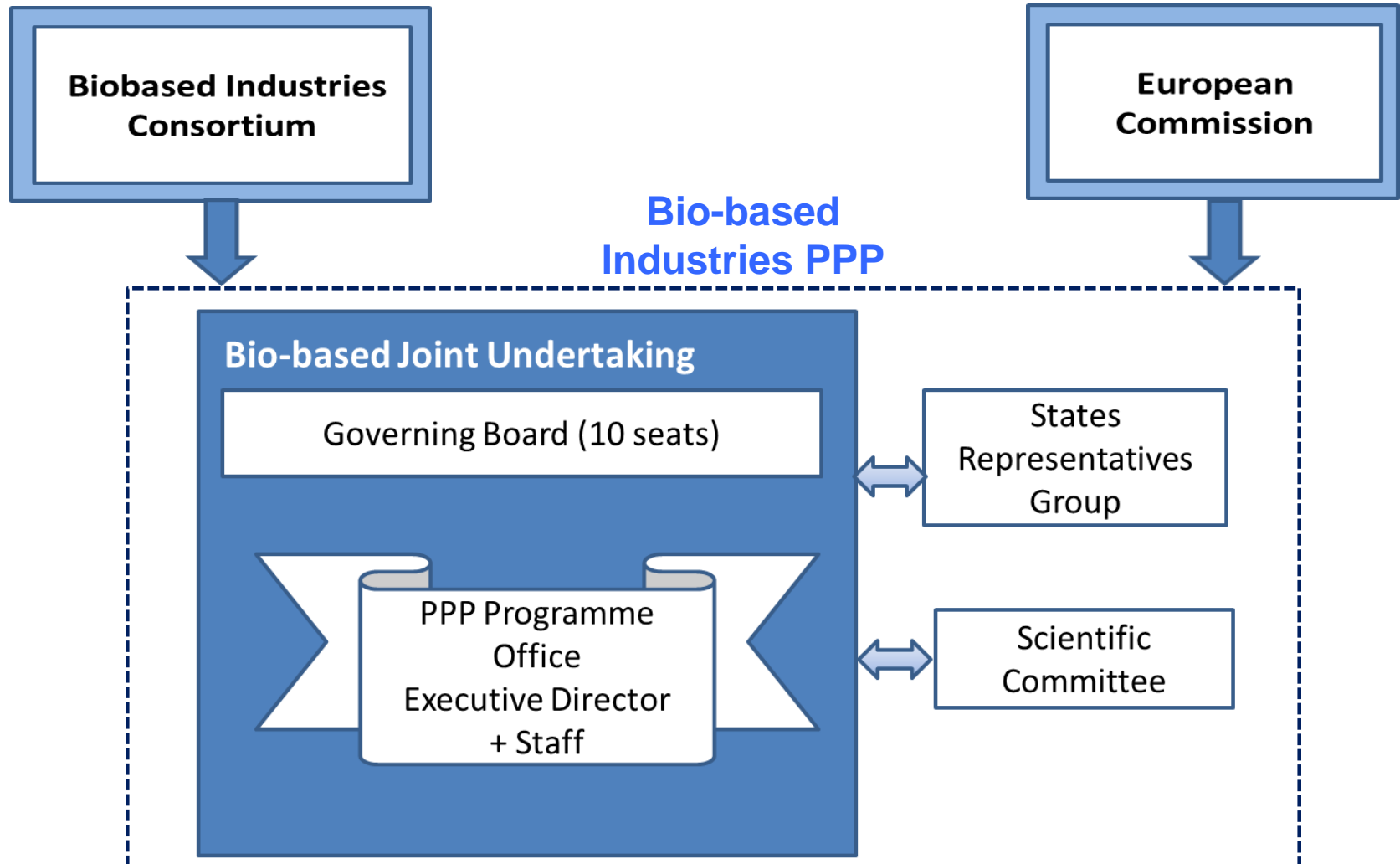
The SIRA includes a balanced combination of projects:

- **R&D PROJECTS** focused on filling the gaps in technological innovations: dedicated projects on the development of specific technologies and concepts needed to realise the value chains, and proving the principles in pilot installations
- **DEMONSTRATION PROJECTS**
 - To integrate and deploy technologies and R&D results into actual value chains
 - To bring technology close to commercial scale through upscaling in demonstration activities
- **FLAGSHIP PROJECTS**
 - To optimise technology for biomass conversion and ensure price-competitiveness: both by building new operations and upgrading existing and abandoned industrial sites to be converted into biorefinery operations
 - Each value chain area will lead to at least one flagship project.
- **SUPPORTING PROJECTS** mainly include Research activities, focused on solving cross-cutting issues arising from the Value Chain demonstration projects.

GOVERNANCE & CALL PROCEDURE

- **OPENNESS:** Applications for financial support will be made following open competitive calls for proposals
- External and independent evaluation of the projects on the basis of **EXCELLENCE**
- Strong participation of **ACADEMIA, RESEARCH ORGANISATIONS AND SMEs**
 - EU Funding in R&D projects only to academia, RTOs and SMEs
 - Additional industry funding will go to academia, RTOs and SMEs through their participation in R&D and industry-driven demonstration activities
- **MEMBER STATES and REGIONS** will play a key role in the deployment of projects

Governance: structure



Call procedure

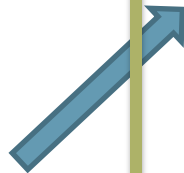
Bio-based Industries Consortium

*Per value chain taskforces
are composed by BIC
partners from different
sectors*

1. BIC Programming WG
(and Task Forces)
prepares multi-annual
roadmaps



2. BIC Programming WG
prepares annual call texts



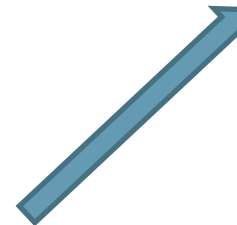
Bio-based Industries PPP

Scientific Committee
Member State Committee

3. **BBI**: first discussion
with scientific committee
and Member State
committee



4. **BBI** publishes the
(**open**) calls

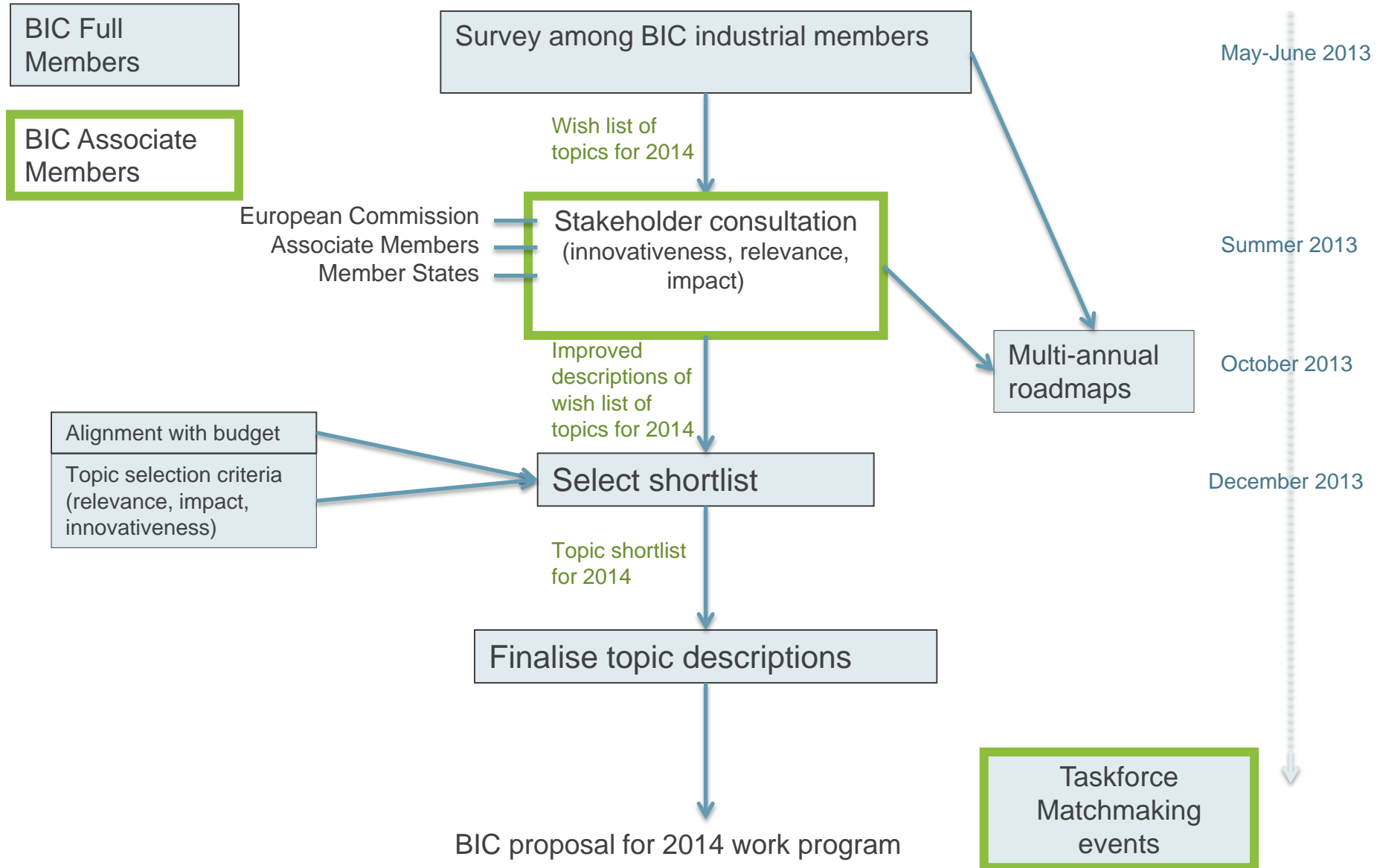


5. **BBI** organises
evaluation by
independent experts
(based on **excellence**)



6. **BBI** negotiates and
signs contract with
winning consortia
(consortium agreement
and grant agreement)

Programming procedure



THE BIO-BASED INDUSTRIES CONSORTIUM

To date we have:
65 Full Members
90 Associate Members

Coverage so far

- 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)





ainia
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ifp *Energies nouvelles*

IK4 OTEKNIKER
Research Alliance

Universidade de Vigo

Ciemat
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Graz University of Technology

aitip
centro tecnológico

INIA
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UNIVERSITÄT HOHENHEIM

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CNTA

PTS
FIBRE based solutions

dbA
centre de desenvolupaments biotecnològics i agroalimentaris

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BUILDING SYNERGIES & INCREASING ACTION EFFICIENCIES

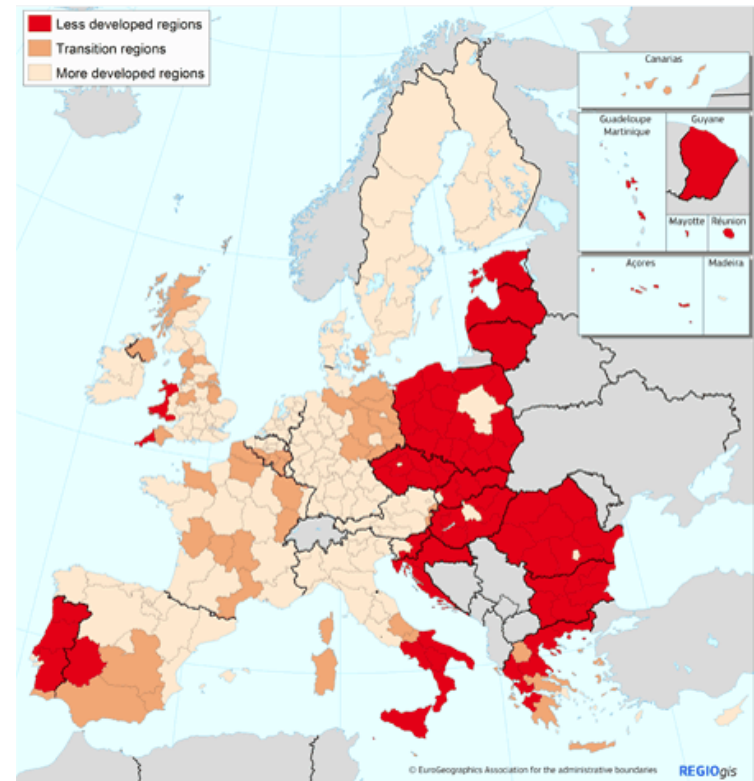
**Bio-based Industries JTI
&
Smart Specialisations**



Why Smart Specialisations?

- **Smart specialisation:** priority-setting in national/regional innovation strategies

- Reduce growth disparities in the EU
- Re-focus Structural Funds on investments that:
 - trigger innovation
 - achieve economic transformation and industrial renewal
 - boost growth and jobs
- ...while measuring performance.



Source: European Commission

Building synergies and increasing efficiencies

Perfect complementarity between the objectives of the JTI and those of the Structural and Investment Funds

Bio-based Industries JTI

- **€3.8bn** public-private investment in the deployment of the European bio-based economy over 2014-2020 (€1bn public contribution and €2.8bn private investments)
- Massive potential for **growth and jobs**, especially in **rural areas**
- **Feedstock** such as sustainable biomass at the centre of this JTI - Five value chains approach.
- Bio-based products are/must be **locally sourced and produced** – hence connecting farmers and foresters with consumers.
- **Deployment Committee** for national, regional and local authorities with ‘bioeconomy’ as Smart Specialisation



Synergies & efficiencies potential

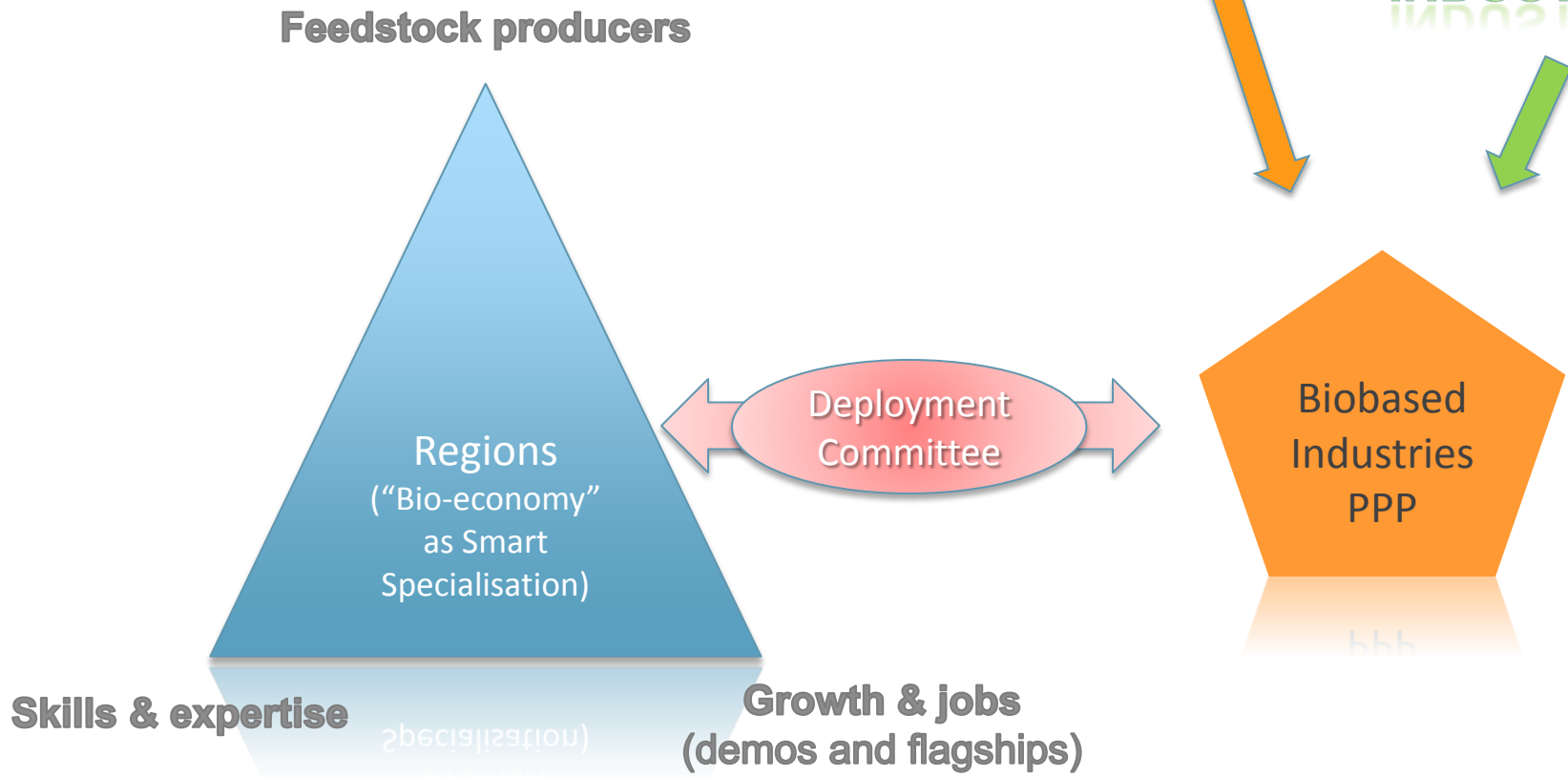
- **Leverage effect:** regions can compete, co-invest in, and host demonstration / flagship projects
- **Smart specialisations in action:** building on, and/or leveraging regional natural resources, skills, innovation and technological expertise
- **Regions as bioeconomy clusters across the EU** enabling a sustainable and competitive force in the ongoing global bioeconomy race.

Summary

REGIONAL DEVELOPMENT

HORIZON 2020

INDUSTRY



Next steps

- **Regions: elect “bio-economy” as a Smart Specialisation**
- **How it works in practice**
 - Clear guidelines on the *modus operandi* between eligible areas, the combination of funds and initiatives such as the JTI on Bio-based Industries
- **Identify other synergies/efficiencies**
 - To make the best out of the available tools
 - Identify possible synergies and efficiencies

NEXT STEPS

Next steps - indicative timeline

April 2014	EP opinion / Council decision
	Start of the Bio-based Industries PPP
Mid-2014	Publication of first calls for proposals
Q3-Q4	Joint Undertaking (JU) operational (office & staff) (until then, the JU will be operated by the Commission)

A photograph of a dense forest with tall, thin trees. Sunlight is streaming through the canopy, creating a hazy, golden atmosphere. The ground is covered in fallen leaves and ferns. A semi-transparent dark grey horizontal bar is overlaid across the middle of the image, containing the text "Thank you".

Thank you

Contact us!

www.biconsortium.eu