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COMMISSION STAFF WORKING DOCUMENT

Annex 3 (Part 3) of the Impact Assessment

Accompanying the document

**Proposal for a
COUNCIL REGULATION**

on the Bio-Based Industries Joint Undertaking

{COM(2013) 496 final}
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4. STAKEHOLDER INVOLVEMENT

A group of 40 leading companies and clusters from current and future biobased sectors, across Europe, together developed this underlying Strategic Innovation and Research Agenda. The cooperation and exchange across a broad range of sectors such as chemical, pulp and paper, agro-food, biofuel and energy companies and well as technology providers (e.g. biotechnology) is exceptional and promises to be extremely fruitful and holds great potential. Partners cover all the key phases of a general biobased value chain, as well as nearly all countries in the EU. SMEs are well involved and integrated in the PPP partnership. Research organisations and academics are joining and supporting the research and demonstration priorities.

4.1. Industrial partners in BRIDGE

4.1.1. The Industry Grouping

Currently 41 industrial partners (large enterprises, SMEs and clusters) contribute financially and in-kind to the founding of the PPP (see figure 6). The industrial partners have grouped themselves into a legal entity (BIC AISBL), with a General Assembly and a balanced representation of the relevant industrial sectors.



Figure 6: The BIC industrial members (large enterprises, SME, clusters)

The industrial partners are supported and advised by their European Associations (figure 7).



Figure 7: European Associations contributing to BRIDGE

4.1.2. *SME participation*

A substantial part of the transition to a biobased economy will be initiated and/or developed by innovative starters and SMEs. These SMEs are essential in offering and developing specific services, technologies, equipment and instruments, both in enhancing developments at large enterprises as well as in stand-alone projects or local cooperation. In addition, innovative SMEs capture the potential of new technologies extremely fast, thus pushing the bioeconomy as a whole. This PPP will develop supportive measures for SME concerning critical issues such as financing, market information and forecasts, legal obstacles and international partnering.

SME representation will take place through the different clusters participating in BRIDGE, but also through individual membership of BIC. Already among the current partner consortium, SMEs are already well involved, either directly or via clusters.

Direct SME partners

Currently 5 SMEs are direct members in BIC:

- IUCT (a high-tech company for industrial technological innovation aimed at developing, implementing and promoting new technologies in the chemical, pharmaceutical, and environmental fields)
- CLEA Technologies (core competencies in the development of green, sustainable biocatalytic processes and a proprietary technology for enzyme immobilization as Cross-Linked Enzyme Aggregates (CLEAs). 16-20 employees)
- Biobase Europe Pilot Plant (open innovation pilot and demo facilities for the biobased economy)
- Direvo – Engineering Biomass (develops and implements biology-based solutions for partners and customers in the fast growing biomass conversion market)
- Biorefinery Process Facilities (open innovation pilot and demo facilities for the biobased economy)

SMEs in Clusters

Many SMEs are currently involved via four cluster-members in BIC: IAR, GFP, DBC and CLIB2021.

GFP – German Federation of Private Plant Breeders

A cluster of 60 German plant breeders of which 2/3 is SME

IAR ("Industries et Agro-ressources") cluster, France

90 SMEs represented and, in particular, the companies:

- Deinove (microbiological technologies for lignocellulose conversion into biofuels and chemicals)
- YNSECT (novel molecules from biomass using insects)
- CIMV (novel organosolv technology for lignocellulosic feedstock fractionation)
- Omega Cat System (novel catalysts and solutions in the field of olefin metathesis).
- Maguin (novel extraction process using pulsed electric fields)
- Alderys (disruptive synthesis for the production of chemical compounds by micro-organisms)

Dutch Biorefinery Cluster (DBC)

- Via the association of Dutch paper and board mills: 2 SME specialty paper mills
 - Coldenhove Papier
 - Meerssen Papier
- Via the Product Board Arable Products
 - Several SMEs converting arable biomass to food and materials
- Via the Product Board Horticultural Products
 - Several SMEs converting arable biomass to food and materials

Biobased Innovations

- Involvement of SMEs is arranged on project bases. Two projects active (biobased innovations & biofunctionals). Active SMEs
 - 5 SMEs in biobased innovations (advisory, fermentation, agrofood, biobased cleaning)
 - 13 SMEs in biofunctionals (biogas, textile, advisory, agrofood, biomaterials, technology, packaging, filtration, paper, 1 torrefaction)

CLIB2021 Cluster Industrial Biotechnology, Germany

26 PPP-relevant SME members from Germany, EU27 and other countries represented, in particular 5 companies.

- SME are active in a variety of biotech sectors (see figure 8):
 - Technology development/services (enzyme/strain development and optimisation, bioproducts, fermentation/reaction technology, purification, downstream processing, process optimisation, pilot plant/pilot services, biofuels, analytics)
 - Biomass processing
 - Biomaterials
 - Policy/market analysis

<p>Tech development, enzymes/strain development and optimisation, bioproducts</p> <ul style="list-style-type: none"> • ARTES Biotechnology GmbH • Autodisplay Biotech GmbH • c-LEcta GmbH • Dyadic Nederland BV (NL) • DIREVO Industrial Biotechnology GmbH (also individual member of the Biobased PPP) • Senzyme GmbH • BUTALCO GmbH • BIRD Engineering BV (NL) • Emcid Biotech GmbH • evocatal GmbH • SeSaM-Biotech GmbH • Phytowelt GreenTechnologies GmbH (specialisation on plants) 	<p>Tech development: pilot plant/pilot services</p> <ul style="list-style-type: none"> • Bio Base Europe Pilot Plant (BE) (also individual member of the Biobased PPP) <p>Tech development/services: purification, downstream processing, process optimisation</p> <ul style="list-style-type: none"> • instrAction GmbH • Insilico Biotechnology AG • Schaumann BioEnergy GmbH • BIRD Engineering BV (NL) <p>Policy/market analysis</p> <ul style="list-style-type: none"> • nova-Institut GmbH 	<p>Biomass logistics/processing</p> <ul style="list-style-type: none"> • Camelina Sativa Projekt GmbH <p>Biomaterials</p> <ul style="list-style-type: none"> • Emery Oleochemicals GmbH • Mitsui & Co Deutschland GmbH • SpecialChem SA (FR, marketing/innovation services) • Solutex (ES) <p>Tech development/services: Analytics</p> <ul style="list-style-type: none"> • AQura GmbH • B&S Analytik GmbH • Taros Chemicals <p>Tech development: biofuels</p> <ul style="list-style-type: none"> • Greasoline GmbH
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Figure 8: SMEs in CLIB2021

BRIDGE will have a clear direct impact on SMEs' competitiveness. European SMEs offer a wide range of biobased products, processes and technologies in different stages of development. For example, in Spain it is estimated that 95 bioprocesses, 91 bioproducts (49 of which are advanced biofuels) and 53 biobased technologies are currently being developed by biobased companies, most of which are SMEs¹. However most of the SMEs do not have a product or a process ready for demonstration and still require substantial research work to be carried out.

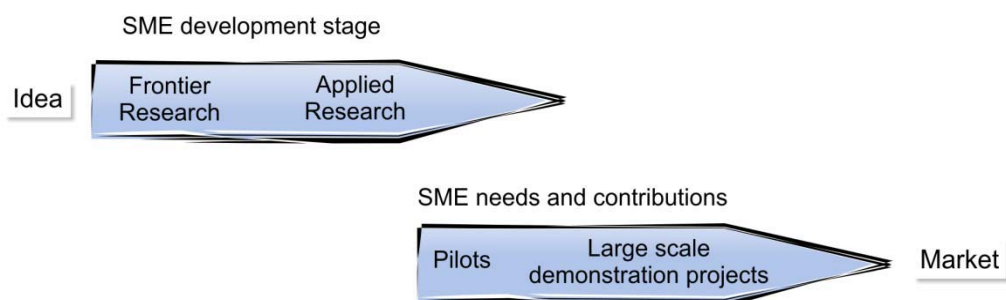


Figure 9: Positioning of SMEs along the innovation chain

The Biobased Industries PPP will contribute to bringing these products and processes led by SMEs to the market, which will significantly contribute to fulfilling the 2030 objectives associated with the PPP's ambitions. SMEs can also provide valuable support to large industrial players with technical assistance and support, often in tight cooperation with RTOs. They are experts in high technological solutions and are technology developers. Bioreactor design, process optimization, new biocatalyst for biomass processing, are some examples of areas where SMEs are deeply involved. These technologies and expertise could be instrumental for the implementation and deployment of demonstration projects.

¹ Data collected from the Industrial Biotechnology of ASEBIO, ASEBIO report 2011

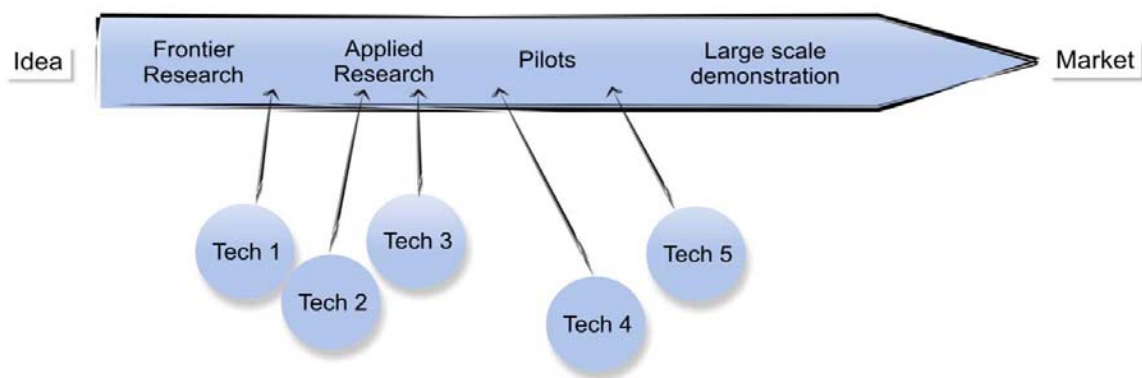


Figure 10: Potential contribution of SMEs along the innovation chain

The industrial interest of this type of SME will be to develop a new product, process or services to be licensed or used by larger players in traditional and new value chains. BRIDGE, with a strong presence of SMEs, will become a platform for the most effective exploitation of the available resources to have new technologies going to the market. This will result in a greater number of new innovative products on the market.

BRIDGE will ensure that innovative SME will be an integral part of the PPP execution by having a visible and easy accessible SME portal, easy access to market information and financing instruments dedicated to SME. Furthermore, it is envisaged that a significant number of PPP funded projects will include a minimum of SME involvement, including special SME-calls for technology development.

4.1.3. Biomass production

Sustainable biomass supply is an essential part of biomass value chains. This includes the increased production and mobilisation of existing biomass (forestry and agriculture), as well as the development of new dedicated crops. PPP partners investing in this part of the value chain are:

Plant breeders

- Federation of German Private Plant Breeders (60 plant breeders)
- Via Dutch Biorefinery Cluster
 - Productboard Arable farming
 - Productboard Horticulture

Fertilizer companies

- Fertiberia

Farmers / Farmers associations / Farmers cooperatives

- Nordzucker (16,000 beet growers as biomass suppliers, all shareholders are farmers)
- Südzucker (56% share holders are farmers – beet growers cooperative)
- Via Dutch Biorefinery Cluster
 - FrieslandCampina (cooperative of dairy farmers)
 - Cosun (cooperative of beet growers)
 - Avebe (cooperative of potato growers)
 - Productboard Arable farming
 - Productboard Horticulture

- Via IAR:
 - Tereos (cooperative, 12 000 farmers as shareholders)
 - Sofiproteol (leading player in the French vegetable oil and protein industry with agricultural shareholders)
- Via ARD:
 - Cristal Union, 9500 farmers involved as cooperators
 - Vivescia, the main cooperation of Siclae, has 12.000 farmers also cooperators.

Forest cooperatives

- Holmen: 60% of their wood consumption is from own forest: 1Mha
- Metsä Group (Metsäliitto Osuuskunta): cooperative of 125.000 Finnish forest owners
- SCA: Europe largest private forest owner – 50% of own wood consumption: 2.5 Mha
- Södra (cooperative) has a total of 36,000 forest properties and 51,000 people as members
- UPM: own forests in EU area 0,9 Mha – 16 % of annual wood consumption originate from own forests and plantations

4.1.4. Participation across Europe

The current PPP members cover whole Europe with their businesses. Except for Malta, production and conversion activities are in all EU member states. Especially in terms of contributing to an EU wide supply of sustainable biomass, the potential of the EU12 is substantial. Agricultural and forestry production levels are relatively low and leave significant room for progress. The Bloomberg New Energy Finance study estimates the potential of agricultural & forestry residues & municipal waste across the EU27 and concluded that 25.4 % of the total EU potential is located in the EU12, with Poland ranking in 5th position overall in the EU. For reasons of efficiency, biorefineries need to be close to the biomass sources.

The EU12 could not only benefit from being purely biomass suppliers, thus creating additional income opportunities for farmers and foresters, but even more so in terms of establishing the required industrial conversion/biorefinery capacities. This approach would allow addressing difficulties of the EU12 to identify a sufficient number of economically viable projects that can "absorb" the resources available to them in rural development funds. The concept of "Smart Specialisation" in this regard would allow EU12 Member States to build on their individual strengths, e.g. in terms of agriculture and forestry and in terms of fermentation know-how, giving priority to related investments in R&D&I. DG REGIO in cooperation with DG RTD and other services is currently preparing a "Practical Guide for Managing Authorities", assisting managing authorities (MAs) in integrating green growth into the regional research and innovation strategies for smart specialisation, thus making optimal use of the EU Structural Funds to address issues of sustainable energy, eco-innovation and eco-system and nature protection.

Independent from or as a follow-up to BRIDGE, the development of a network of biorefineries in EU12 Member States can provide an excellent opportunity to leverage the necessary structural funds under the EU Cohesion Policy, creating new sources of employment and economic growth.

In addition, PPP information and brokerage events will need to be organised in cooperation with the industry, specifically focusing on the EU12.

Therefore, BRIDGE will also stimulate demonstration activities at the production locations in EU-12 countries. Below an overview is given from the production facilities of the current BIC members:

- Billerud: Lithuania
- Borregaard: Czech Republic
- Cargill: Poland
- Clariant: Czech Republic, Poland
- Holmen: Estonia
- Metsä Group: Poland, Slovak Republic, Estonia
- Mondi: Slovakia (2x), Czech Republic (5x), Bulgaria (1x), Poland (11x), Hungary (3x)
- Nordzucker: Lithuania, Poland, Slovak Republic, Czech Republic
- Roquette: Bulgaria, Estonia, Romania
- SCA: Poland, Slovak Republic
- Smurfit Kappa: Poland, Czech Republic, Slovakia, Romania, Latvia, Lithuania
- Stora Enso: Estonia, Hungary, Latvia, Lithuania and Poland.
- Südzucker: Poland, Hungary, Romania, Slovak Republic, Czech republic
- Tereos (via IAR): 5 plants in Czech Republic.
- Siclae (via ARD), via its subsidiaries: Hungary, Romania and Poland
- Sofiproteol (via IAR): Romania.
- UPM: Poland, Estonia
- Unilever: Czech Republic, Romania

In order to benefit from scientific and technological expertise from institutes and academia from all over Europe, BRIDGE will cooperate with the relevant ERA NETs. Results of ERA NETs will be incorporated and implemented in BRIDGE and the PPP will advise on their research topics. Moreover, involved industrial partners in ERA NETs will be stimulated to become partners in BRIDGE.

In the ERA-NET ERA-IB (industrial biotechnology) partners and observers from 15 different countries joined forces to reduce fragmentation of national research efforts, and to encourage academics and industrial researchers to work together. The fact that member states such as Romania, Croatia and Poland are also participating, illustrates the growing interest of the Eastern European countries. Some of the clusters in BRIDGE have strong ties to academic institutions in EU-12 countries (e.g. CLIB2021 with Poland and the Slovak Republic).

4.1.5. Participation research organisations

Research organizations, consisting of Research and Technology Organisations (RTO) and universities, play an important role in the implementation of the European Framework Programme for Research & Technology Development². They also have an essential role in BRIDGE, through supporting the demonstration activities by executing research and development required to realize the vision of the Joint Undertaking. They furthermore contribute by evaluating and disseminating the scientific achievements as described in the

² Research and Technology Organisations in the Evolving European Research Area – A status report with Policy Recommendations by EARTO

annual activity reports and advise in setting the R&D agenda and Annual Implementation Plans.

A large network consisting of over 200 representatives of research organizations from different European member states expressed their interest in the SIRA (see Figure 11). In their combined response to the prioritization of the SIRA research topics, it was shown that the research organizations have a quite similar prioritization of the research topics as the industrial partners.

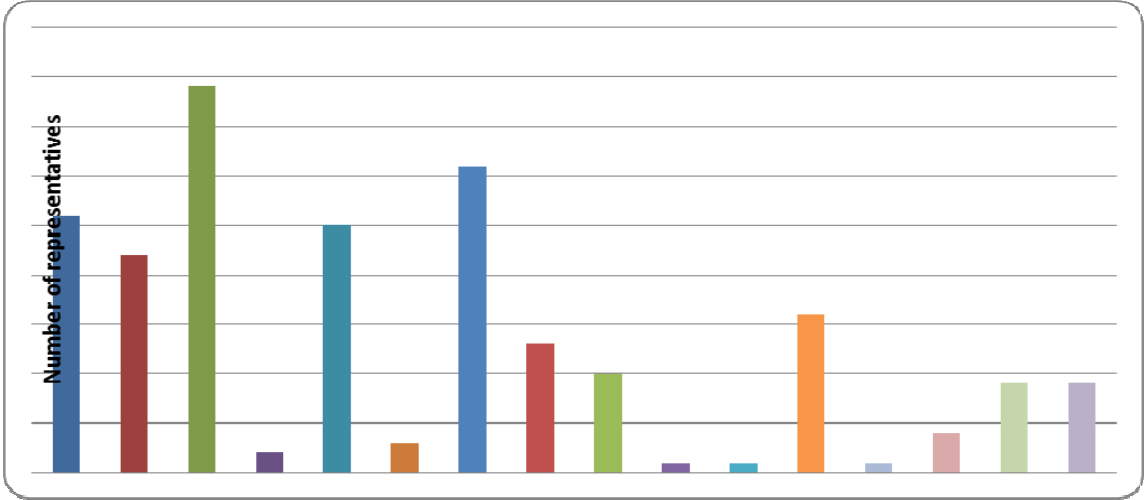


Figure 11. Distribution of RTOs and universities interested in the BioPPP over different European member states

4.1.6. *Regions*

Many regions in Europe have already developed a regional strategy for the biobased economy, and several have set up local clusters and PPPs. Also the Committee of the Regions (CoR) recently emphasized the important role of public-private partnerships (PPPs) in accelerating the transition towards a bioeconomy³. More specifically, the CoR suggested that advanced regions in the bioeconomy field should be supported in taking the steps required by bioeconomy value chains and in connecting to other less advanced regions, and believes that this approach leads to an effective use of resources, while fostering cohesion.

Through the “Smart Specialisation Strategy” the European Commission encourages national and regional authorities across Europe to draw up research and innovation strategies for smart specialisation, so that the EU’s Structural Funds can be used more efficiently. Synergies between different EU, national and regional policies, as well as public and private investments, can be increased.

The Biobased Industries PPP is a key enabler in this respect since several of the regional clusters participate. BRIDGE will contribute to the creation of the “bridge” between Horizon 2020 and Structural Funds since it will trigger the participation of the regions in planning actions and measures well aligned with the intrinsic capabilities of each local areas.

³ Conference 'Partnering for the Bioeconomy in European Regions', 12 October 2012, Brussels

5. THE EU ADDED VALUE

In February 2012, the European Commission has adopted a strategy and action plan “Innovating for Sustainable Growth: a Bio-economy for Europe²” to shift the European economy towards greater and more sustainable use of renewable resources. This bio-economy strategy is part of the Europe 2020 flagship initiatives "Innovation Union" and "A Resource Efficient Europe". The goal is a more innovative and low-emissions economy, reconciling demands for sustainable agriculture and fisheries, food security, and the sustainable use of renewable biological resources for industrial purposes, while ensuring biodiversity and environmental protection. This PPP is part of the implementation of this strategy.

5.1. Added value of action at EU level and of public intervention using EU research funds

The multi-sectoral approach in the biobased PPP will combine the strengths of industries, regions and EU countries enabling the transition from oil & gas to a biobased sustainable economy. Neither single stakeholders nor individual member states will reach the required critical mass on their own, justifying the clear added value of tackling these ambitions on a EU27 scale. Highly forested countries and highly productive agricultural regions will be linked to industrial centres in Europe to generate new value propositions through the development of integrated value chains.

The EU approach has a distinct added value, complementing and bringing together national approaches. The EU mandates on the Common Agricultural Policy and the EU Horizon 2020 programme that combines knowledge and expertise from member states with the technologies available in other member states and the value chains in the different EU regions add up to a much larger effort than single projects alone. BRIDGE projects will therefore, where possible, be combined with national projects and structural and regional funds to achieve a multiplier effect.

Another rationale for an EU-led PPP is evident: most of the barriers/challenges to kick-start a biobased economy – from sustainable biomass supply to market pull via targets, product standardisation and green public procurement schemes – are not adequately addressed at national level but rest firmly on Community-level regulation, i.e. the Common Agricultural Policy, environmental regulations and the single market. In this context, BRIDGE will report on policy feedback on several cross-sectoral policies of relevance for the industry (from supply to market pull measures).

A clear EU added value for the Biobased Industries PPP is its key enabling role for implementing the European Commission's strategy and action plan, "Innovating for Sustainable Growth: a Bioeconomy for Europe". It will also contribute to the implementation of several European policies and existing EU actions, deliverables and recommendations (i.e. the Lead Market Initiatives for Bio Based Products) which will help to increase coherence of market pull measures for biobased products across member states: green public procurement, standardisation, mandates, tax incentives for sustainable biobased product categories, setting indicative or binding targets for certain biobased product categories where they contribute to achieving the objectives of existing and future EU sustainability policies. The creation of a

permanent policy desk within the initiative will also contribute to an improved and more informed dialogue between public and private biobased economy stakeholders.

Tackling these challenges in a cooperation between industry and the European Commission within the framework BRIDGE is justified by:

- **the research needed which is so complex** that no single company or public research institution can perform it alone,
- the **absence of an agreed long-term budget plan** and strategic technical and market objectives to encourage industry and the research community to commit more of their own resources will slow down the pace of innovation,
- the sub-optimal allocation of funds leaving **gaps and overlaps in a fragmented research coverage**, when member states do not align their funding,
- an **insufficient volume of funds for an integrated and continuous programme** covering fundamental research, applied research and EU-level demonstration and flagship activities,
- the fact that the **value chains are dispersed across different countries and sectors** which restricts the exchange and pooling of knowledge and experience.

This summarizes the **clear European added value in having BRIDGE** as a EU wide long term research and demonstration programme to allow large industrial companies and SMEs, including those in the new Member States, to collaborate between themselves and with European RTOs, universities, national governmental organisations and NGOs, working towards shared short, medium and long-term objectives across value chains.

5.2. Additionality to existing activities

This SIRA aims at providing research and innovation priorities for the period 2014-2020 with the ultimate goal of accelerating the pace of innovation towards a sustainable biobased economy.

In this framework, there are three components of additionality:

- **Input Additionality:** collaborative Research and Innovation activities around an industry-led programme in close dialogue with different EC services could not be launched without public support, at first due to the current economic and financial challenge, but also because of the specific nature of the sectors involved and their complex value chains.
- **Process Additionality:** the innovation process is managed and implemented in a more efficient way due to the value chain approach, well aligned with the Horizon 2020 objectives.
- **Output Additionality:** the partners have drawn pathways to meet the 2030 vision, whatever economic scenarios may be faced by investors. This means a European roadmap towards demonstration and flagship projects and the tests of various business models and associated value propositions. It brings direct benefits to the participants and to the represented sectors and industries, showing that the barriers towards a sustainable biobased economy are not insurmountable.

Synergy, optimal alignment, cooperation and exchange with all main running initiatives in EU, is required to facilitate practical realisation. We will actively work with, for example, the following EU initiatives to deliver the objectives described in this document:

- **European Innovation Partnerships (EIPs)** aim to address weaknesses in the European research and innovation system, which might prevent the entry of innovations into the market. They provide a working interface between practice, science, policy makers, advisors, and other stakeholders at EU, national and regional level. Three candidate EIPs are of relevance to the biobased PPP: Agricultural Productivity and Sustainability, Raw Materials and Water Efficiency.
- **EIBI (European Industrial Bioenergy Initiative)** supports the demonstration of reference plants for innovative bioenergy value chains which are not yet commercially available (excluding existing biofuels and heat & power technologies) and which could be deployed on a large scale. The biobased PPP will develop competitive biorefineries optimising the creation of economic, social and environmental values, including energy conversion from waste streams, thus contributing important developments to the EIBI. In turn, the EIBI's demonstration of successful bioenergy value chains could be valuable for the integrated biorefineries which are the goal of the Biobased PPP.
- **EERA (European Energy Research Alliance)** is a co-operation between the major European RTOs advising the EC on necessary bioenergy-related fundamental and applied research to achieve the policy goals defined in the SET-Plan
- The **PPPs running under the Recovery Plan**, in particular **Factories of the Future PPP** increases the technological base of European manufacturing through the development and integration of enabling technologies. Synergies with the biobased PPP are related to sustainable manufacturing tools, methodologies and processes for cost-efficiently shaping, handling and assembling products composed of complex and novel materials. The **Green Cars PPP** develops sustainable transport methods, including research on greening combustion engines, biomethane use, logistics and transport systems. Synergies with the biobased PPP lie in the realisation of value chains providing sustainable advanced biofuels for transport. The **Energy-efficient Buildings (EeB) PPP** aims at promoting green technologies and the development of energy-efficient systems and materials in new and renovated buildings aiming to reduce their energy consumption and CO₂ emissions. The biobased PPP develops value chains which could deliver sustainable biobased building materials to support the EeB PPP objectives.
- The **SPIRE PPP**, also developed under Horizon 2020, aims to better understand and develop the role of the process industry in resource & energy efficiency. The biobased PPP supports the SPIRE PPP and its stakeholders by developing sustainable value chains, bringing together the critical stakeholders to ensure an infrastructure from field to the output from biorefineries. The SPIRE PPP strengthens the biobased PPP and its stakeholders by developing energy and resource efficient processes (both fossil and biobased) and prepares the current process and manufacturing industry for feeding in biobased building processes and blocks. Biobased Industries PPP, together with the Bio PPP, has identified docking points between the two PPPs to ensure mutual support and complementarity.

An overview of complementarities and synergies is provided in the following picture.

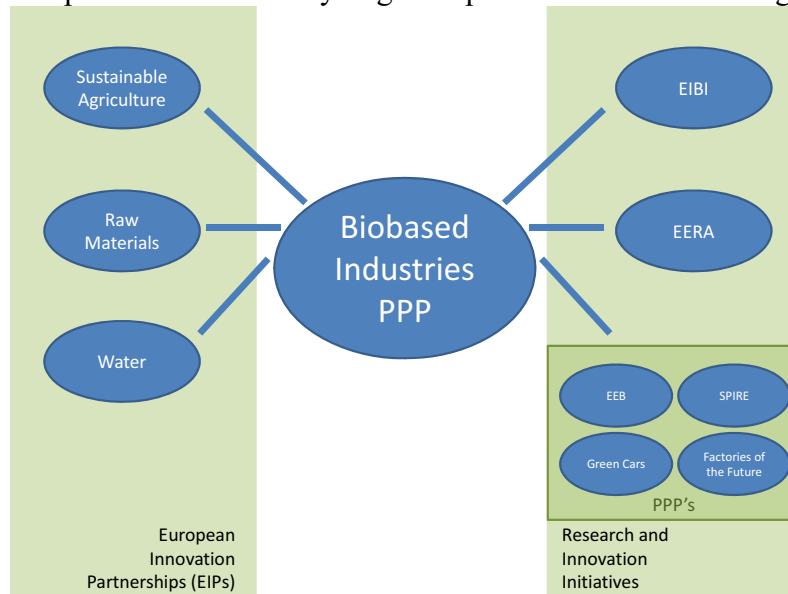


Figure 12: Complementarity and synergy of biobased PPP with main EU initiatives

The intended biobased PPP is fully complementary and synergetic to the Lead market initiatives and its recommendations, aiming at:

- Continuing to stimulate and enhance technological innovation and the development and application of technology.
- Increasing public funding for demonstration projects via public-private partnerships.
- Increasing public funding for demonstration projects and stimulating the construction of demonstrators via Public-Private Partnerships.
- Setting up a specific “EU Innovation Fund” which could also serve to aid the transition of the results to full-scale implementation and to the marketplace.
- Developing incentives for the conversion of production plants and industrial processes into biobased ones, provided that they have proven to be sustainable and that applicable EU State Aid rules are respected.
- Developing incentives (taxation or state aid measures, grants) to support the development of new, sustainable biobased products’ production processes.

Ultimately, this SIRA builds heavily on the findings of the previous CSA projects BECOTEPS⁴ and Star-COLIBRI⁵. In particular the industrial stakeholders have further elaborated their findings and aligned them with the overall vision towards 2030, based on the integrated value chain approach.

⁴ [http:// www.becoteps.org](http://www.becoteps.org)

⁵ <http://www.star-colibri.eu>

6. FINANCIALS

Budget

It is estimated that, to realise this Strategic Research and Innovation Agenda, a total budget of €3.8 billion is needed (see Figure 13). The founding partners together intend to invest above €2.8 billion in research and innovation efforts between 2014 and 2020, if the right framework conditions can be developed. This means that an additional € 1 billion funding from the Horizon 2020 budget of the European Commission will be needed to implement this proposed agenda.

The prioritisation in this research and innovation agenda, as well as the budget, is based on the ambitions of the BIC members in March 2013. A regular review will be performed on both the topics and budget distribution, based on obtained results and updated ambitions of the industrial partners (at least every 2 years).



Biomass supply

Many partners representing the 'biorefinery-sector' as well as the 'bio-products and bio-fuels' part of the chain recognize that the 'biomass supply' is an important area to invest more resources in. This stresses the importance for either increasing the involvement of partners active in the biomass supply chain, or stimulating research, development and demonstration via other funds.

Enable to realise the objectives on increasing the biomass supply, BRIDGE will actively cooperate with the EIP Agricultural Productivity and Sustainability to align on the relevant R&D and demonstration topics. Only by a strong cooperation with the agricultural and forestry sectors, a sustainable and secure supply of biomass for the production of biochemicals, bio-based materials can be secured, in harmony with food and feed applications.

Other funding for demonstration and flagship projects

Demonstration and flagship activities are a key output of BRIDGE. This is an area where significant public co-investments will be deployed jointly with large investments by industry to firstly implement their technologies on the market. Demonstration and flagship activities in BRIDGE include both smaller demonstrators (TRL 4-6) and bigger demonstrators (TRL 7-8) - see Table 3, the latter however not being fully eligible under Horizon2020. Thus, these developments require a close synergy between research and innovation grants available through H2020 on one side and cohesion and structural funds as well as debt facilities and risk finance instruments by EIB on the other side. The involvement of the EIB can act as a catalyst, encouraging other banks, financial institutions and the private sector to participate in an investment. Eventually EIB loans can be combined with EU grants depending on the scope and definition of the individual project fully in line with the overall ambition of the Innovation Union and H2020.

Structural Funds may complement local financial needs in terms of deployment of technologies, processes and products. Within the structural funds there are also regional development funds (cohesion funds for regional development); they will be addressed for instance for improved logistics, roads, required education, help SMEs to start-up. Within the integrated approach targeted by BRIDGE also the second pillar of the CAP is considered, which provides funds for rural development, in particular to help farmers to place investments that benefit the rural development. These should also be addressed for biobased economy related themes, for instance machinery to mobilise the residues, improve storage at the farms, etc.

Details on the finances and funding rules within BRIDGE are described in a separate document.