



**Bio-based Industries**  
**Joint Undertaking (BBI JU)**  
**Amendment nr. 1 to**  
**ANNUAL WORK PLAN 2015**

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## Bio-based Industries Joint Undertaking (BBI JU)

### Amendment nr. 1 to ANNUAL WORK PLAN 2015

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<b>Revision History Table</b>		
<i>Version n°</i>	<i>Issue date</i>	<i>Reason for change</i>
V1	09/12/2014	Adoption BBI GB
V2	05/05/2015	Amendment nr. 1 reflects the split of the 2015 call into Flagship 2015 CALL and RIA-DEMO-CSA 2015 CALL*. The current version only updates the information related to the flagship call. A further amendment of this document as well as the supporting call documents (i.e. guide for applicants) will be made available in July 2015 in view of the publication of the second call (RIA-DEMO-CSA 2015 CALL). The referred amendment will entail the addition of the second call text (topics). Specifically this document contains the following updates: Subchapter 3.4.5. added including the content of the Flagship 2015 call. Two subchapters added (3.5.1.1 and 3.5.1.2) including the conditions of the FLAGSHIP 2015 CALL and the conditions of the RIA-DEMO-CSA 2015 CALL. Subchapter 5.3 added including risk management of the BBI JU Annual Work Plan 2015

\* The split into two calls reflects on the one side the intention to front-load flagship actions as described in section 3.4.4 and on the other to maximise the timing in which the second call (RIA-DEMO-CSA 2015 CALL), where a high participation is expected, will remain opened.

## TABLE OF CONTENTS

<b>1. INTRODUCTION: MISSION, OBJECTIVES AND CHALLENGES</b>	<b>Page 6</b>
1.1. BACKGROUND AND MISSION	Page 6
1.2. OBJECTIVES	Page 7
<b>2. GOVERNANCE</b>	<b>Page 8</b>
2.1. GOVERNING BOARD	Page 8
2.2. EXECUTIVE DIRECTOR AND PROGRAMME OFFICE	Page 10
2.3. SCIENTIFIC COMMITTEE	Page 10
2.4. STATES REPRESENTATIVES GROUP	Page 11
<b>3. OPERATIONAL ACTIVITIES: OBJECTIVES AND INDICATORS</b>	<b>Page 13</b>
3.1. STRATEGIC ORIENTATIONS FOR 2015	Page 13
3.1.1 CROSS-SECTORIAL INTEGRATION ALONG & ACROSS VALUE CHAINS	Page 13
3.1.2 ENSURING SUFFICIENT AND SUSTAINABLE BIOMASS SUPPLY	Page 13
3.1.3 DEVELOPMENT OF BIOREFINERY TECHNOLOGIES	Page 14
3.1.4 SECURED MARKET DEMAND AND CUSTOMER AWARENESS	Page 14
3.2. EXPECTED RESULTS, IMPACTS AND KEY PERFORMANCE INDICATORS	Page 16
3.3. OUTCOME OF THE 2014 CALL FOR PROPOSALS	Page 17
3.4. THE 2015 CALLS FOR PROPOSALS	Page 17
3.4.1. MAIN PRIORITIES	Page 17
3.4.1.1 CROSS-SECTORIAL INTEGRATION ALONG & ACROSS VALUE CHAINS	Page 17
3.4.1.2 ENSURING SUFFICIENT AND SUSTAINABLE BIOMASS SUPPLY	Page 18
3.4.1.3 DEVELOPMENT OF BIOREFINERY TECHNOLOGIES	Page 18
3.4.1.4 SECURED MARKET DEMAND AND CUSTOMER AWARENESS	Page 19
3.4.2. IMPLEMENTATION	Page 19
3.4.3. INVOLVEMENT OF SMEs	Page 19
3.4.4. DISTRIBUTION OF FUNDING OVER THE DIFFERENT ACTIONS	Page 20
3.4.5. CONTENT OF THE FLAGSHIP 2015 CALL	Page 20
3.5 CALL MANAGEMENT	Page 24
3.5.1. CONDITIONS FOR THE 2015 CALLS	Page 24
3.5.1.1. CONDITIONS OF THE FLAGSHIP 2015 CALL	Page 24
3.5.1.2. PROVISIONAL CONDITIONS OF THE RIA-DEMO-CSA 2015 CALL	Page 25
3.5.2. LIST OF COUNTRIES AND APPLICABLE RULES FOR FUNDING	Page 26
3.5.3. ADMISSIBILITY CONDITIONS FOR GRANT PROPOSALS AND RELATED REQUIREMENTS	Page 26
3.5.4. ELIGIBILITY CRITERIA	Page 26
3.5.5. TYPES OF ACTIONS: SPECIFIC PROVISIONS AND FUNDING RATES	Page 27
3.5.5.1 RESEARCH AND INNOVATION ACTIONS	Page 27
3.5.5.2 INNOVATION ACTIONS	Page 27
3.5.5.3 COORDINATION AND SUPPORT ACTIONS	Page 27
3.5.6. TECHNOLOGY READINESS LEVEL (TRL)	Page 28

3.5.7. EVALUATION	Page 28
3.5.8. BUDGET FLEXIBILITY	Page 31
3.5.9. FINANCIAL SUPPORT TO THIRD PARTIES	Page 31
3.5.10 CONSORTIUM AGREEMENT	Page 31
<b>4. HORIZONTAL AND SUPPORT ACTIVITIES</b>	Page 32
4.1. POLICY AND COMMUNICATION	Page 32
4.2. OTHER SUPPORT ACTIVITIES	Page 33
4.3. IT TOOLS	Page 34
4.4. ACCOUNTING SYSTEM – ACCOUNTING OFFICER	Page 34
<b>5. PROGRAMME REPORTING AND CONTROL</b>	Page 34
5.1. ANNUAL ACTIVITY REPORT	Page 34
5.2. MANAGEMENT CONTROL AND INTERNAL CONTROL PROCEDURES	Page 35
5.3. RISK MANAGEMENT BBI JU ANNUAL WORK PLAN 2015	Page 36

# 1. INTRODUCTION: MISSION, OBJECTIVES AND CHALLENGES

## 1.1. BACKGROUND AND MISSION

This document establishes the second Annual Work Plan (AWP) of the Bio-based Industries Joint Undertaking (BBI JU), outlining the scope and details of research and innovation activities prioritised for the second Call for Proposals in 2015. It also describes the objectives of the BBI JU, the policy and global context, assessment criteria, technical targets and rationale for individual activities.

The Bio-based Industries Consortium (BIC) developed a vision paper and a Strategic Innovation and Research Agenda (SIRA<sup>1</sup>), based on extensive consultation with public and private stakeholders. The Strategic Innovation and Research Agenda describes the main technological and innovation challenges that need to be overcome in order to develop sustainable and competitive bio-based industries in Europe and identifies research, demonstration and deployment activities to be carried out by a Joint Technology Initiative on Bio-based Industries.

BIC is a non-profit organisation that was created to represent the industry group that supports the BBI Initiative. Its members cover the entire bio-based value chain and consist of large industries, small and medium-sized enterprises (SMEs), regional clusters, European trade associations, and European Technology Platforms. The aim of BIC is to ensure and promote the technological and economic development of the bio-based industries in Europe. Any interested stakeholders along the bio-based value chain may apply for membership. It applies general principles of openness and transparency regarding membership, ensuring a wide industrial involvement.

The Commission Communication of 13 February 2012 entitled "Innovating for Sustainable Growth: A Bioeconomy for Europe", and in particular its Action Plan, calls for a public-private partnership to support the establishment of sustainable and competitive bio-based industries and value chains in Europe. In view of the move towards a post-petroleum society, the Communication aims to integrate better biomass producing and processing sectors in order to reconcile food security and natural resource scarcity and environmental objectives with the use of biomass for industrial and energy purposes.

The Commission Communication of 10 October 2012 entitled "A Stronger European Industry for Growth and Economic Recovery" confirms the strategic importance of bio-based industries for the future competitiveness of Europe, as identified in the Commission Communication of 21 December 2007 entitled "A lead market initiative for Europe", and stresses the need for the BBI Initiative.

On 6 May 2014, the Council adopted Regulation (EU) No 560/2014 establishing the Bio-based Industries Joint Undertaking (BBI Regulation). According to Article 19 of the Regulation, the Commission shall be responsible for the establishment and initial operation

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<sup>1</sup> [http://biconsortium.eu/sites/default/files/downloads/BIC\\_BBI\\_SIRA\\_web.pdf](http://biconsortium.eu/sites/default/files/downloads/BIC_BBI_SIRA_web.pdf)

of the BBI Joint Undertaking until it has the operational capacity to implement its own budget. Autonomy should be achieved in the course of autumn 2015.

## 1.2. OBJECTIVES

The objective of the BBI Initiative is to implement a programme of research and innovation activities in Europe that will assess the availability of renewable biological resources that can be used for the production of bio-based materials, and on that basis support the establishment of sustainable bio-based value chains. Those activities should be carried out through collaboration between stakeholders along the entire bio-based value chains, including primary production and processing industries, consumer brands, SMEs, research and technology centres and universities.

The objective of the BBI Joint Undertaking should be achieved by means of supporting research and innovation activities by using resources from the public and private sectors. To this end, the BBI Joint Undertaking should organise calls for proposals for supporting research, demonstration and deployment activities.

To achieve maximum impact, the BBI Joint Undertaking should develop close synergies with other Union programmes in areas such as education, environment, competitiveness and SMEs, and with the European Structural and Investment Fund (ESIF), which can specifically help to strengthen national and regional research and innovation capabilities in the context of smart specialisation strategies.

The founding members of the BBI Joint Undertaking are the European Union and BIC.

In particular, the BBI JU will contribute to the objectives of the BBI Initiative of a more resource efficient and sustainable low-carbon economy and increasing economic growth and employment, in particular in rural areas, by developing sustainable and competitive bio-based industries in Europe based on advanced biorefineries that source their biomass sustainably, and in particular to:

- demonstrate technologies that enable new chemical building blocks, new materials, and new consumer products from European biomass which replace the need for fossil-based inputs;
- develop business models that integrate economic actors along the whole value chain from supply of biomass to biorefinery plants to consumers of bio-based materials, chemicals and fuels, including by means of creating new cross-sector interconnections and supporting cross-industry clusters; and
- set up flagship biorefinery plants that deploy the technologies and business models for bio-based materials, chemicals and fuels and demonstrate cost and performance improvements to levels that are competitive with fossil-based alternatives.

The Strategic Innovation and Research Agenda (SIRA) prepared by the Bio-based Industries Consortium outlines the main challenges that need to be addressed in order to fully realise the potential of bio-based industries in Europe on the basis of the 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.

## 2. GOVERNANCE

The BBI JU is composed of two Executive bodies: the Governing Board and the Executive Director. In addition, there are two advisory bodies: the Scientific Committee and the States Representatives Group.

### 2.1. GOVERNING BOARD

The Governing Board has overall responsibility for the strategic orientation and the operations of the BBI Joint Undertaking and shall supervise the implementation of its activities, in accordance with Article 7 of the BBI JU Statutes<sup>2</sup>.

The EC and BIC each have five representatives with the same voting rights.

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<sup>2</sup> Annex to the Council Regulation (EU) No 560/2014 of 6 May 2014 establishing the Bio-based Industries Joint Undertaking ("BBI Regulation").



The Governing Board was established at its first meeting on 27 June 2014. In 2015, the Governing Board is planning to hold two ordinary meetings, as well as one extraordinary meeting for the request for autonomy.

The key activities are listed below:

<b>Key activities in 2015 – timetable</b>	
Adopt/approve the key documents for the BBI JU's operations: 2015 Annual Report, reference documents relating to Call for proposals, 2014 Annual accounts, etc.	Q1
Appoint the Executive Director of the BBI JU and delegate the appointing authority	Q1-Q2
Adopt appropriate implementing rules as regards the Staff Regulations and the Conditions of Employment	Q1
Approve the list of actions selected for funding on the basis of the ranking list produced by a panel of independent experts of the 2014 Call for proposals	Q1
Adopt an amendment of the 2015 AWP including the addition of the content (topics) and conditions of the Flagship Call 2015 to be opened in April 2015	Q2
Adopt the practical arrangements for implementing Regulation (EC) No 1049/2001 regarding transparency and access to EU documents	Q2
Adopt the practical arrangements for implementing "Regulation (EU, Euratom) No 883/2013 of the European Parliament and of the Council of 11 September 2013 concerning investigations conducted by the European Anti-Fraud Office (OLAF) and repealing Regulation (EC) No 1073/1999 of the European Parliament and of the Council and Council Regulation (Euratom) No 1074/1999 (OJ L 248, 18.9.2013, p. 1)."	Q2
Adopt an amendment of the 2015 AWP including the addition of the content (topics) and conditions of the RIA-DEMO-CSA call 2015 to be opened in June 2015	Q2
Arrange, as appropriate, for the establishment of an internal audit capability of the BBI Joint Undertaking	Q4
Adopt/approve the key documents for the BBI JU's operations in 2016: 2016 Annual Work Plan, 2016 budget and staff establishment plan	Q4
Approve the request for autonomy of the BBI JU	Q2

## 2.2. EXECUTIVE DIRECTOR AND PROGRAMME OFFICE

According to Article 9 of the BBI JU Statutes, The Executive Director is the chief executive responsible for the day-to-day management of the BBI Joint Undertaking in accordance with the decisions of the Governing Board. The Executive Director is the legal representative of the BBI Joint Undertaking. The Executive Director is accountable to the Governing Board. He is supported by the staff of the Programme Office.

The Commission is responsible for the establishment and initial operations of the BBI JU until it has the operational capacity to implement its own budget. The Commission will carry out, in accordance with Union law, all necessary actions in collaboration with BIC and with the involvement of the competent bodies.

For that purpose, until such time as the Executive Director takes up his/her duties, the Commission has assigned a limited number of its officials, including one to fulfil the functions of the Interim Executive Director, as of 23 July 2014. He will fulfil the functions of the Executive Director until such time he/she takes up his/her duties.

The interim Executive Director may authorise all payments covered by the appropriations provided in the annual budget of the BBI Joint Undertaking once approved by the Governing Board and may conclude agreements, decisions and contracts, including staff contracts, following the adoption of the BBI Joint Undertaking's staff establishment plan.

The interim Executive Director shall, with the agreement of the Executive Director of the BBI Joint Undertaking and subject to the approval of the Governing Board, determine the date on which the BBI Joint Undertaking will have the capacity to implement its own budget. From that date, the Commission shall abstain from making commitments and executing payments for the activities of the BBI Joint Undertaking.

Autonomy is aimed to be achieved in the course of the autumn 2015.

## 2.3. SCIENTIFIC COMMITTEE

According to Article 10 of the BBI JU Statutes, the Scientific Committee is an advisory body to the Governing Board. It was established at its first meeting on 1 September 2014. It conducts its activities in close liaison and with the support of the Programme Office.

The members reflect a balanced representation of world-wide recognised experts from academia, industry, SMEs, non-governmental organisations and regulatory bodies. Collectively, the Scientific Committee members have the necessary scientific competencies and expertise covering the technical domain needed to make science-based recommendations to the BBI Joint Undertaking. At present, the Scientific Committee consists of fourteen members. It can be composed of no more than fifteen members.

The Scientific Committee carries out the following tasks:

(a) advise on the scientific priorities to be addressed in the annual work plans;

(b) advise on the scientific achievements described in the annual activity report.

The Scientific Committee was consulted on the preparation of this Work Plan.

During the year 2015, at least two meetings of the Scientific Committee are planned (Q1 and Q3/Q4). Additional meetings could take place to address major issues.

<b>Key activities in 2015 - timetable</b>	
2 <sup>nd</sup> Meeting of the SC. The SC would:  - Provide advice on the scientific achievements described in the annual activity report 2014  - Provide advice on the detailed plan of the research and innovation activities for 2015 Call.	Q1
3 <sup>rd</sup> Meeting of the SC. The SC would:  - Advise on the scientific priorities to be addressed in the annual work plan 2016  - Provide advice to the GB on the programme progress of the BBI (in relation to work plan 2016) and other strategic issues	Q3/Q4

## 2.4. STATES REPRESENTATIVES GROUP

The States Representatives Group was established at its first meeting on 3 September 2014. According to Article 11 of the BBI JU Statutes, the States Representatives Group consists of one representative of each Member State and of each country associated to Horizon 2020. It elected a chair and a vice-chair among its members.

The States Representatives Group is consulted and, in particular, reviews information and provides opinions on the following matters:

(a) programme progress of the BBI Joint Undertaking and achievement of its targets, including the calls for proposals and proposals evaluation process;

(b) updating of strategic orientation;

(c) links to Horizon 2020;

(d) annual work plans;

(e) involvement of SMEs.

The States Representatives Group was consulted on the Annual Work Plan 2015 of BBI.

The States Representatives Group also provides information to, and acts as an interface within, the BBI Joint Undertaking on the following matters:

(a) the status of relevant national or regional research and innovation programmes and identification of potential areas of cooperation, including deployment of relevant technologies, to allow synergies and avoid overlaps;

(b) specific measures taken at national or regional level with regard to dissemination events, dedicated technical workshops and communication activities.

(c) specific measures taken at national or regional level with regard to deployment activities in relation to the BBI Initiative.

The States Representatives Group may issue, on its own initiative, recommendations or proposals to the Governing Board on technical, managerial and financial matters as well as on annual plans, in particular when those matters affect national or regional interests.

During the year 2015, at least two meetings of the States Representatives Group are planned (Q1 and Q3/Q4). Additional meetings could take place to address major issues.

<b>Key activities in 2015 - timetable</b>	
<p>2<sup>nd</sup> Meeting of the SRG. The SRG would:</p> <ul style="list-style-type: none"> <li>- Provide an opinion on the detailed plan of the research and innovation activities for the 2015 call.</li> <li>- Select the Vice-chair of SRG (the second one).</li> <li>- Amend the Rules of Procedures.</li> <li>- Discuss on measures to be taken at national or regional level to strengthen the Bioeconomy in Europe and the deployment of bio-based industries.</li> </ul>	Q1
<p>3<sup>rd</sup> Meeting of the SRG. The SRG would:</p> <ul style="list-style-type: none"> <li>- Provide opinions to the GB on the programme progress of the BBI (in relation to work plan 2016) and other strategic issues</li> <li>- Provide updated information and discuss initiatives on: regional and national research and innovation programmes to allow synergies; dissemination and communication activities; and deployment activities in relation to BBI.</li> </ul>	Q3/Q4

### **3. OPERATIONAL ACTIVITIES: OBJECTIVES AND INDICATORS**

#### **3.1. STRATEGIC ORIENTATIONS FOR 2015<sup>3</sup>**

##### **3.1.1. Cross-sectorial integration along and across value chains**

Achieving the full potential of the bio-based industries requires swift and concerted action of today's dispersed stakeholders across various sectors, disciplines and Member States. This strategic orientation aims at accelerating biorefinery development by overcoming fragmentation and by identifying and exploiting cross-sectorial synergies. It deals with the establishment of new collaborations and business models that integrate economic actors along whole value chains and enhance strategic cooperation between sectors: linking actors involved in biomass supply (breeding and plant production, forestry, valorisation of waste, farming), to biorefineries and to consumers of bio-based products. Integration along value chains will particularly benefit SMEs as it will provide them with up- and down-stream partners.

A major contribution to biorefinery development is the realization of a cascading use of biomass<sup>4</sup>. Again, the development and deployment of schemes for cascading use of biomass requires the establishment of new partnerships along the value chain and across sectors. With sustainability and competitiveness as a guiding principle, they can substantially optimise the use of biomass as a resource and maximise the derived value.

##### **3.1.2. Ensuring sufficient and sustainable biomass supply**

Biological resources are limited and have a number of competing uses. Competition between food/feed, energy and industrial applications is expected to worsen with the decline of natural and fossil resources (and the associated price increase) and in the context of a growing world population and climate change effects. Thus a first key factor for the success of the European Bioeconomy will be the EU's capacity to sustainably mobilise the necessary biomass (in sufficient quality and quantity) for energy and industrial uses in a manner which does not compromise the ability to produce food and does not exceed the carrying capacity of the environment (e.g. soil fertility) and does not jeopardise the provision of ecosystem services by agriculture and forestry. This in turn requires a clear understanding of sustainable biomass availability and demand across sectors under different possible future

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<sup>3</sup> These strategic orientations have been considered for 2015-2016 in the pre-final version of the scoping paper.

<sup>4</sup> Commission Staff Working Document accompanying the document Communication on Innovating for Sustainable Growth: A Bioeconomy for Europe: "Biorefineries should adopt a cascading approach to the use of their inputs, favouring highest value added and resource efficient products, such as bio-based products and industrial materials, over bioenergy. The principle of cascading use is based on single or multiple material uses followed by energy use through burning at the end of life of the material, including taking into account the greenhouse gas emissions (GHG) mitigation potential. By-products and wastes from one production process are used to feed into other production processes or for energy. Biorefineries can thus contribute to the principles of a "zero-waste society."

scenarios - considering internal and external dimension, as well as the effect of policies on allocation of biomass to different end-uses (e.g. land competition) . The JU will follow these aspects in close cooperation with EC activities in this field carried out for example by the JRC, the Bioeconomy Observatory and the Bioeconomy Panel, in the frame of the EU Forest Strategy and EIP on Raw Materials, as well as on-going Horizon 2020 projects (e.g. under SC2).

At the same time, there is a need for reinforcing the long-term stability and competitiveness of European primary production sectors (e.g. agriculture, forestry) by increasing productivity and efficiency, diversifying the product portfolio and maximising the use of wastes and residues.

A successful implementation of biomass supply chains will require alternatives for optimising the sustainable production of existing feedstock (forest and agricultural biomass), developing new feedstock supply chains (e.g. forest residues, agricultural lignocellulosic residues or dedicated crops), as well as for unlocking the potential of industrial side streams and organic municipal waste. This can be achieved by developing competitive valorization routes. Albeit essential to ensuring a secure biomass supply is the optimisation of logistics and increased collection. This need is inherent to the scattered, variable and seasonal nature of the biological resources. In the field of biomass availability and mobilisation the JU will build on the results obtained within the various studies as initiated by the Bioeconomy Panel and Bioeconomy Observatory, as well as various other EC-funded projects in these fields. Moreover, the following will also be taken on board: (i) the strict environmental conditions imposed upon farmers by the Common Agricultural Policy, (ii) the new EU Forest Strategy that is identifying objective, ambitious and demonstrable sustainable forest management (SFM) criteria, (iii) the certification approaches for biofuels recognised by the Commission and (iv) the current work on sustainability indicators/criteria and assessment approaches for bio-based products within CEN TC 411.

### **3.1.3. Development of biorefinery technologies**

Technological breakthroughs are required on conversion processes for upgrading existing bio-based industries into integrated biorefineries and for the development of new integrated biorefinery systems.

### **3.1.4. Secured market demand and customer awareness**

There is a strong technology push for the development of bio-based products to be competitive in price and quality with products based on fossil resources (thus independent from premiums), or products that provide entirely new and innovative functionalities and potential for new and existing markets. This strategic orientation aims at aligning technology push and market development thus mitigating the probability of "technology mismatches" e.g. development of technologies and products which face insufficient market demand. One of the key elements in this respect is the life cycle analysis of new products along with their intended and non-intended effects.

Furthermore, this strategic orientation aims at improving the understanding from onset of different stakeholders' interests, needs and aspirations: Newly developed products can face a lack of consumer interest, acceptance and prevalence of consumer fears e.g. new technologies; lack of knowledge regarding environmental impacts and product performance; to increase the consumer awareness on the characteristics of bio-based products; to identify demand-side actions for the uptake of bio-based products not only in consumer markets but also in green procurement, e.g. by developing standards. The JU will follow these aspects in close cooperation with EC activities on this field carried out by the Bioeconomy Panel, the Commission Expert Group for Bio-based Products, and the EC funded research projects on public procurement.

In addition to the previously stated strategic orientations for 2015, one of the overarching goals of the JU is to bridge the gap between technology development and commercialisation. The 2015 calls should have strong focus on funding Innovation Actions, aiming to accelerate the implementation and deployment of the bio-based economy. This includes flagship projects that are based on prior results of research and demonstration at industrial scale.

### 3.2. EXPECTED RESULTS, IMPACTS AND KEY PERFORMANCE INDICATORS

Disclaimer: this table is under elaboration back-to-back with the definition of 2015 topics.

<i>Expected result(s) and impact as a result of successful 2015 actions</i>	TARGET
<p>A significant increase in private research &amp; innovation investment with:</p> <ul style="list-style-type: none"> <li>– Five new building blocks for the chemical industry by 2020</li> <li>– Fifty new biobased materials by 2020</li> <li>– Five flagship biorefinery plants by 2020</li> <li>– Thirty new consumer products by 2020</li> </ul>	<p>3</p> <p>8</p> <p>3</p> <p>7</p>
<p>A shorter time to market with:</p> <ul style="list-style-type: none"> <li>– Ten new bio-based value chains by 2020</li> <li>– A broad participation of SMEs</li> </ul>	<p>3</p> <p>20% Target H2020 EC contribution to SME</p>
<i>Indicators of results and impact</i>	
<ul style="list-style-type: none"> <li>– monitoring of public (EC and other) and private funding;</li> <li>– follow-up of additionality;</li> <li>– selection of projects and allocation of funding;</li> <li>– technical monitoring against well-defined specific programme milestones;</li> <li>– adherence to time schedule;</li> <li>– quantified monitoring of market penetration in target sectors;</li> <li>– level of SME participation and of participation from the newer Member States;</li> <li>– sustainability indicators.</li> </ul>	<p>Public/private funding in line with WP2014 incl. EUR 50 mln IKOP</p> <p>In line with regulation*</p> <p>Time to grant and time to pay in line with H2020</p> <p>in line with SIRA*</p> <p>Budget committed call launched</p> <p>in line with SIRA objectives*</p> <p>Target H2020 EC contribution to SME 20%</p> <p>reduction Green House gas emissions in line with SIRA*</p>

\*Data to be further detailed based on inputs from BIC.



### 3.3. FOLLOW-UP OF THE 2014 CALL FOR PROPOSALS

The call 2014 was closed on 15 October 2014. A total of 40 proposals were received, among which 2 were ineligible. The 38 proposals were evaluated by independent experts first remotely from 10 to 21 November 2014 then centrally from 24 to 28 November 2014. A decision by the Governing Board on the list of projects to be funded and reserve lists will be adopted at the beginning of the year 2015 (Q1). It is expected that the Grant Agreements will be prepared and signed on Q2 2015.

<b>Finalisation of the 2014 call management process (*)</b>	
Finalisation of evaluations (information on outcome of the evaluation)	Q1
Preparation and signature of the grant agreements for the selected proposals	Q2
Pre-financing payments	Q2/Q3
Follow-up implementation of projects	Q3 to Q4

(\*) maximum 8 months from 15/10/2014 according to Horizon 2020 rules

### 3.4. THE 2015 CALLS FOR PROPOSALS

#### 3.4.1 Main priorities

There are a number of distinct features in the following focus areas as compared to the previous work plan: (1) Coverage of biomass supply and market development aspects by embedding in value chain development initiatives (2) Strong emphasis on the cross sectorial integration of actors along but also across value chains; and (3) Introduction of coordination and support actions aimed at knowledge gathering (studies) and networking and in particular on strengthening integration and market uptake of bio-based products.

##### 3.4.1.1. Cross-sectorial integration along and across value chains

Engage actors for the establishment of new schemes for cascading exploitation of biomass with new business and cooperation models, e.g. for primary and secondary economic sector cooperation. Establish networks of biorefineries to enhance knowledge transfer and exploit synergies between concepts and sectors. *Impact: This focus area will result in new partnerships and business models.*

Demonstrate of integrated biomass to bio-based products value chains aimed at the production of (A) Advanced biofuels (based on waste, residues and/or ligno-cellulosic

feedstock) based on integrated biorefinery concepts with the aim to deploy the technology in Europe and reduce costs by process improvement.

(B) Bio-based chemicals and materials such as upstream intermediates (e.g. sugars), 1st transformation products (e.g. glycols, organic acids, monomers, rubber) and 2nd transformation products functionalised for specific applications (e.g. polymers, additives, specialty chemicals).

(C) Bio-based polymers, fibres and composites able to match the performance of competing fossil-based alternatives. *Impact: Contributes to the SIRA objective of 2% of Europe's transport energy demand to be met by sustainable advanced biofuels, 20% of chemicals and materials to be bio-based in 2020, and the objectives of 10 functionalised chemicals and materials, the 5-times market increase with respect to today's share and the objective of 50 new bio-based materials.*

### **3.4.1.2. Ensuring sufficient and sustainable biomass supply**

#### ***3.4.1.2.1. Sustainable increase of productivity and mobilization of biomass through innovations in agriculture and forestry and emerging biomass sources***

R&I actions focused on improved biomass supply for specific value chains under development. Increased productivity, efficiency and mobilisation/harvesting of forest and specific industrial agricultural crops including the possible use of marginal lands. Develop new industrial agricultural crops/tree varieties that are resource efficient, have high production rates and have improved processability. R&I actions on valorisation of emerging alternative feedstock such as algae and aquatic plants to increase their demand. *Impact: It contributes to the SIRA objective of 10% increase in biomass supply.*

#### ***3.4.1.2.2. Unlock the potential of side and waste streams***

Optimise residual biomass supply chains (agricultural/forest residues, municipal waste and industrial side streams and by-products). R&I and Innovation actions on the development of competitive valorisation routes, addressing relevant supply and pretreatment issues, into bulk or higher added value products. *Impact: It contributes to a 15% increase utilisation and mobilisation of these potential resources.*

### **3.4.1.3. Development of biorefinery technologies**

#### ***3.4.1.3.1. Full utilisation of biomass and closing the loops***

Address recovery, full utilisation and valorisation of recalcitrant residues from existing biorefineries (e.g. lignin-and fibre-rich streams), reducing waste streams. Develop of food and feed additives (e.g. proteins, active compounds) from agro-food and forest-industry residues. *Impact: contributes to the SIRA objective of 15% reduced import of proteins.*

#### ***3.4.1.3.2. Addressing biorefinery technological gaps***

Support innovation in pre-treatment, separation, conversion and functionalisation technologies. Develop new conversion routes for bio-based components enabling future replacement of several classes of fossil-based molecules or materials (upstream

intermediates, 1st transformation and 2nd transformation products). Develop technologies to produce a diversity of chemical building blocks from biomass in sustainable and competitive way to enable a new wave of innovation in chemicals, fibres and polymers beyond drop-in. *Impact: Breakthrough innovations enabling new value chains.*

#### **3.4.1.4. Secured market demand and customer awareness**

Evaluate the sustainability (clear definitions and indicators) of the different value chains, by building upon the existing and on-going standardisation work, e.g. under CEN TC 411 as well as the certification approaches for biofuels recognised by the Commission, the strict environmental conditions imposed upon farmers by the Common Agricultural Policy, the new EU Forest Strategy that is identifying objective, ambitious and demonstrable sustainable forest management (SFM) criteria, in view of clarifying the pros and cons of different feedstock options and processes. Develop and qualify novel, broad based communication models to achieve a pan-European awareness, which takes into account the question of public acceptance and involvement within the bioeconomy; Establishing common standards: Develop common definitions and specifications of interfaces as a contribution to the development of standards based on existing and on-going documents and activities allowing to broadening feedstock base and product range; *Impact: It contributes to Consumers engagement and better market uptake of bio-based products.*

#### **3.4.2 Implementation**

It is envisaged that these focus areas are to be implemented through the following types of actions:

- (A) Research and Innovation Actions
- (B) Innovation Actions, including "Demonstration" actions and "Flagship" actions
- (C) Coordination and Support Actions

#### **3.4.3 Involvement of SMEs**

A substantial part of the transition to a bioeconomy 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. They will enhance developments in 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. SMEs are therefore an integral element in the Call development, as well as the activities to be performed.

### 3.4.4 Distribution of funding over the different actions

For the Joint Undertaking to succeed, it is important that at an early stage of its operations a number of successful demonstration or flagship projects are put in place for jobs and growth in Europe. In this context, it is proposed that a major share of the budget of the 2015 Call is dedicated to Innovation Actions, in particular Flagship projects. According to the SIRA, at least 5 Flagship biorefinery plants will be established by 2020. The comparative longer duration of Flagship projects (as compared to Demo and RIAs) which is associated not only to the challenging nature of deploying first of their kind plans but also with regulatory issues (e.g. permits), calls for front loading Flagship projects in the 2015 Calls. This approach should nevertheless be complemented with an adequate coverage of the research and innovation actions.

### 3.4.5. Content of the Flagship 2015 call

This section describes the topics for which proposals will be called in this call.

#### ***BBI VC1.F1 - From lignocellulosic feedstock to advanced bio-based chemicals, materials or ethanol***

**Specific challenge:** Lignocellulosic biomass is one of the most abundant resources of fixed renewable carbon on earth. It is present in resources such as woody crops, agricultural and forest residues, residues from agro-industrial processing and forest-based industries, as well as residues from conventional biomass conversion plants. While bio-based chemicals, materials and ethanol produced from food crops are already on the market, meeting market standards for a wide variety of applications, their production from lignocellulosic feedstock opens up large opportunities in terms of enhancing sustainability, avoiding land conflicts and expanding resource potential. Demonstration activities are already being pursued to exploit this vast renewable resource through the application of biotechnological, chemical or other processes. However, the challenge lies in establishing at industrial scale a first-of-a-kind, cost-effective biorefinery concept leading to the conversion of lignocellulosic feedstock into bio-based chemicals, materials and ethanol.

**Scope:** Demonstration of the techno-economic viability of transformation of one or multiple lignocellulosic feedstock into one of the following bio-based products/applications:

- i) bioethanol targeting a production capacity of at least 50,000 ton/year. Proposals should address the valorisation of co-products and show a credible path towards becoming an integrated biorefinery concept by applying a cascading approach.
- ii) diols and/or diacids as bio-based chemical building blocks targeting a production capacity of at least 5000 ton/year. Proposals should address their further conversion into sustainable biomaterials within an integrated biorefinery concept applying a cascading approach.

Proposals should pursue all possible means of industrial symbiosis and integration of actors along the whole value chain and, wherever possible, make use of existing facilities. Proposals should prove the sustainable and economical access to sufficient raw material to set up the whole value chain, and include activities to ensure the functioning/organisation of a sustainable supply chain. Proposals will

assess market demand of the targeted products and will consider market-pull related activities (e.g. standardisation, consumers' perception) aimed at facilitating their market uptake. Proposals should include a Life Cycle Analysis in order to evaluate the environmental and socio-economic performance of the developed products. Proposals are expected to verify and validate safety, quality and purity of end products to meet commercial requirements. The leading role of relevant industrial partners is considered essential to achieve the full impact.

*It is considered that proposals with a total eligible budget of up to EUR 35 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals with another budget.*

**Expected impact:**

- Demonstration of a new local bio-based value chain maximising the use of lignocellulosic resources for the production of bio-based chemicals, materials or ethanol.
- Opening up significant potential for job creation in rural areas. Creating green jobs and facilitating the development of entrepreneurial activities throughout the entire value chain, with advantages for the primary sector (i.e. agriculture and forest), the secondary sector (e.g. logistics, bioproduct transformation industry) and the tertiary sector;
- Improving cost-efficiency and sustainability of bioethanol/diols/diacids as compared with conventional ones;
- Proposals dealing with bioethanol will reach: a dry matter content in the fermentation process of less than 20%, an improved Capex and decreased energy use, specifications of the bioethanol matching those required by downstream processing and/or regulations where applicable.
- Proposals dealing with diols and diacids will demonstrate at least 2 bio-based materials with more than 80% of bio-based content;
- Contributing to realising the objectives of Biotechnology and/or other Key Enabling Technologies under Horizon 2020 and dedicated EU policy to address the development of scientific and technological know-how in key enabling technologies and its translation into industrial products and solutions to societal challenges.

**Type of action:** Innovation actions – "Flagship" actions.

***BBI VC2.F2 - Valorisation of cellulose into new added value products***

**Specific challenge:** Cellulose is a well-known and widely exploited material. Besides its traditional uses, recent technological developments are opening up the opportunity for the use of cellulose in new and higher added value applications. This does not only enhance the competitiveness of the concerned industrial sectors but also significantly improves their environmental performance. While demonstration activities are being pursued to this end, the challenge lies in demonstrating at industrial scale first-of-a-kind cost-effective biorefinery concepts leading to the production of economically competitive cellulose-based products for bulk materials and volume applications.

**Scope:** Demonstration of the techno-economic viability of biorefinery concepts leading to new cellulose-based products with tailored functionalities into either of the following applications:

i) Microfibrillar cellulose (MFC) based additives providing enhanced properties such as control of rheology, barrier and strength properties for stabilizers of emulsions and dispersions, biodegradable viscosifiers, barrier and strength enhancers, industrial thickeners in glues, paint, pastes and slurries and many more new applications. Proposals should realise an industrial scale process to produce MFC in suitable quantities, for at least 1000 ton/y of MFC-based products with an optimised efficiency in terms of performance, throughput and energy requirements so as to allow a suitable price for a significant industrial production;

ii) Lightweight structural composites based on (bio-based and/or conventional) polymers reinforced with cellulose pulp fibres. Proposals should address the technological challenge represented by the different polarities and viscosities between the cellulose and the matrix. Proposals should realise an industrial scale process of at least 25000 ton/year of composite materials, which can be converted with established processes used in volume applications, especially injection moulding. Application of the developed composites should be demonstrated up to the end products in markets such as structural elements for the automotive and building industry, cases for electronics products or household appliances.

Proposals should pursue all possible means of industrial symbiosis and integration of actors along the whole value chain and, wherever possible, make use of existing facilities. Proposals should address the industrial integration of the developed concepts into a cascading use of forest biomass. Proposals should include testing of the products at relevant scale in potential applications, and prove that the bio-based alternatives match functional and price requirements from the industry. Proposals should prove the economical access to sufficient raw material to set up the new value chain, and elaborate on the actions taken to ensure the functioning/organisation of the supply chain. Proposal will assess market demand of the targeted products and will consider market-pull related activities (e.g. standardisation, consumers' perception) aimed at facilitating their market uptake. A Life Cycle Analysis should be included in order to demonstrate the environmental and socio-economic performance of the developed products. Safety and quality of end products must be verified in order to meet commercial requirements. The leading role of relevant industrial partners is considered essential to achieve the full impact.

*It is considered that proposals with a total eligible budget of up to EUR 35 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals with another budget.*

**Expected impact:**

- Opening up significant potential for job creation in rural areas. Creating green jobs and facilitating the development of entrepreneurial activities throughout the entire value chain, with advantages for the primary sector (i.e. forest), the secondary sector (e.g. logistics, bioproduct transformation industry) and the tertiary sector;
- Proposals dealing with microfibrillar cellulose will demonstrate MFC-based products with validated potential for exploitation in at least 10 applications in 5 market segments (food

and/or industrial applications). MFC-based demonstrated products will match or outperform properties of competing conventional products (e.g. synthetic polymers like acrylics, gums, hydrocolloids, thickeners and high molecular weight polymer stabilizers), and show a CO<sub>2</sub> footprint 25% lower than competing technologies.

- Proposals dealing with structural composites will demonstrate products that replace pure fossil based materials and compete with pure polymer solutions or mineral filled or short-fibre-glass reinforced composites in terms of mechanical properties, while exhibiting a significantly lower weight, reaching at least 25% weight reduction and a 100 times reduced tool wear compared to existing materials. Composite materials will be converted into at least 20 applications, thus increasing the competitiveness of leading European industries such as the automotive or chemical industry, along the value chain.

**Type of action:** Innovation actions – "Flagship" actions.

***BBI VC4.F3 - Innovative processes for sugar recovery and conversion from Municipal Solid Waste (MSW)***

**Specific challenge:** The biodegradable fraction of MSW represents an abundant feedstock rich in sugars and therefore suitable for conversion into bio-based chemicals and fuels through biotechnological processes. However, this fraction is highly variable (both in terms of season and geographic location) and contains other components, such as proteins, fats, ashes and other inhibitor compounds which affect the overall yield of fermentation and enzymatic conversion processes. Despite the existence of MSW-based biorefinery concepts at demonstration plant level, further innovation efforts are needed with a view to demonstrating at industrial scale a first-of-a-kind, cost effective new value chain for the recovery and conversion of MSW-based sugars into bio-based products.

**Scope:** Demonstration of the techno-economic viability of the valorisation of the biodegradable fraction of MSW from sourcing and management of MSW to its conversion. Proposals should address the pre-treatment and/or fractionation of the biodegradable fraction of MSW into a suitable substrate for subsequent biotechnological conversion into sugar derived end products, e.g. bioethanol, biochemical and bioplastics in a cascading approach. When dealing with unsorted MSW, proposals could address the efficient separation of the biodegradable fraction. Proposals should demonstrate technological solutions overcoming inhibitory effects of the various relevant compounds. Proposals should prove the economical access to sufficient raw material to set up the new value chain and ensure the functioning/organisation of the sustainable supply chain. Proposals should pursue all possible means of industrial symbiosis and integration of actors along the whole value chain (including, when relevant, involvement of municipal authorities) and, wherever possible, make use of existing facilities. Safety, quality and purity of the products must be validated in order to meet commercial requirements. Proposals should assess market demand of the targeted products and will consider market pull related activities (e.g. standardisation, consumer perception) aimed at facilitating their market uptake. A Life Cycle Assessment should be carried out in order to evaluate

the environmental and socio-economic performance of the developed products. The leading role of relevant industrial partners is considered essential to achieve the full impact.

*It is considered that proposals with a total eligible budget of up to EUR 35 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals with another budget.*

**Expected impact:**

- Contribute to transforming MSW from a problem into an economic opportunity.
- Improving process parameters such as yields, starting by reaching at least a 70% yield for the saccharification process.
- Reaching purity of the final products in line with EU legislation for immediate access to the market.
- Reduction of CO<sub>2</sub> emissions by 70% with respect to landfilling.
- Opening up new business models and creating new job opportunities in rural and urban areas.
- Contributing to realising the objectives of Biotechnology and/or other Key Enabling Technologies under Horizon 2020 and dedicated EU policy to address the development of scientific and technological know-how in biotechnology and its translation into industrial products and solutions of societal challenges.

**Type of action:** Innovation actions – "Flagship" actions.

## 3.5. CALLS 2015 MANAGEMENT

### 3.5.1 Conditions for the 2015 calls

#### 3.5.1.1 Conditions for the Flagship 2015 call

Call identifier: H2020-BBI-JTI-2015-01

Publication date: 19 May 2015

Deadline: 15 September 2015 - (single stage call)

Indicative budget: 100 Million Euros<sup>5</sup>

Estimate value of the in kind contributions by the members other than the Union or their constituent entities (BIC): Minimum 40 Million Euros

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<sup>5</sup> This figure refers to the EU funding only.



Topics called	Type of action	Indicative budget (million EUR)
BBI VC1.F1 - From lignocellulosic feedstock to advanced bio-based chemicals, materials or ethanol	Innovation Actions - "Flagship" actions	100
BBI VC2.F2 - Valorisation of cellulose into new added value products	Innovation Actions - "Flagship" actions	
BBI VC4.F3 - Innovative processes for sugar recovery and conversion from Municipal Solid Waste (MSW)	Innovation Actions - "Flagship" actions	

#### - indicative timetable for the evaluation and grant agreement

Information on the outcome of the evaluation	Indicative date for the signing of grant agreements
Maximum 5 months from the final date for submission	Maximum 8 months from the final date for submission

#### 3.5.1.2 Provisional conditions for the RIA-DEMO-CSA 2015 call

Call identifier: H2020-BBI-JTI-2015-02

Publication date: July 2015

Deadline: December 2015 - (single stage call)

Indicative budget: 106 Million Euros<sup>6 7</sup>

The key activities for the management of the **RIA-DEMO-CSA** 2015 call for proposals are presented in the table below:

<b>2015 Call management process (**)</b>	
Call preparation	Q1 and Q2
Call publication (June 2015 – deadline December 2015)	Q2
Selection of the experts and evaluation of proposals	Q4 to 2016

(\*\*) The Grant Agreement Preparation will take place in 2016.

<sup>6</sup> In case the budget of a given line cannot be consumed (totally or partially) the corresponding budget will be allocated to the topics under the other budget lines

<sup>7</sup> This figure refers to the EU funding only and it does not include the in-kind contributions from the industry members of the BBI JU (BIC).

The BBI JU follows the rules of the European Union’s Horizon 2020 framework programme (H2020) and in particular the Horizon 2020 Rules for participation<sup>8</sup>.

### 3.5.2. List of countries and applicable rules for funding

Part A of the General Annexes<sup>9</sup> to the EC Work Programme shall apply mutatis mutandis for the actions covered by this Work Plan with the following derogation:

<p>Coordination and Support actions (CSA) and Research and Innovation Actions (RIA)</p>	<p>By way of derogation from Article 10(1) of Regulation (EU) No 1290/2013, with regard to the Bio-Based Industries Joint Undertaking only the following participants shall be eligible for funding from the Bio-Based Industries Joint Undertaking for actions in the area of bio-based industries other than innovation actions:</p> <ul style="list-style-type: none"> <li>(a) small and medium-sized enterprises;</li> <li>(b) secondary and higher education establishments;</li> <li>(c) non-profit legal entities, including those carrying out research or technological development as one of their main objectives;</li> <li>(d) the Joint Research Centre;</li> <li>(e) international European interest organisations.</li> </ul>
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### 3.5.3 Admissibility conditions for grant proposals, and related requirements

Part B of the General Annexes to the EC Work Programme shall apply for the actions covered by this Work Plan.

### 3.5.4. Eligibility criteria

Part C of the General Annexes to the EC Work Programme shall apply for the actions covered by this Work Plan with the following exceptions:

<p>Research and Innovation Actions (RIA) topics (XXX) within Value Chain 2: “the next generation forest-based value chains”</p>	<p>As an additional condition in line with Art. 9(5) RfP, for these topics, it is required that at least one constituent entity of BIC that is not entitled to receive funding according to the Commission Delegated Regulation (EU) No 623/2014 of 14 February 2014, should be among the participants in the consortia funded under the BBI JU 2015 Call for Proposals.</p>
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<sup>8</sup> Regulation (EU) No 1290/2013 of the European Parliament and of the Council of 11 December 2013 laying down the rules for participation and dissemination in “Horizon 2020”.

<sup>9</sup> [http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014\\_2015/annexes/h2020-wp1415-annex-ga\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/annexes/h2020-wp1415-annex-ga_en.pdf)

### **3.5.5. Types of action: specific provisions and funding rates**

Part D of the General Annexes to the EC Work Programme shall apply for the actions (i.e. Coordination and Support Actions, Research and Innovation actions and Innovation Actions) covered by this Work Plan with the following additions:

#### **3.5.5.1. Research and innovation actions**

R&I actions aim to fill the technological gaps within specific value chains. The impact for the whole value chain must be clearly shown

#### **3.5.5.2. Innovation actions**

Innovation Actions should address the whole value chain from feedstock sourcing to the market applications.

A "**demonstration**" action moreover shall include the establishment of a demo-scale production facility in Europe, being it a new installation, substantial modification of an existing facility, or use of existing demo facilities. Demonstration projects cover TRL 6-7.

This requires that access to European biomass is ensured. It also means that they need to include an exploitation plan, sustainability assessment and to address consumer engagement.

A "**flagship**" action aims to support the first application/deployment in the market of an innovation that has already been demonstrated but not yet applied/deployed in the market. Proposers for a flagship project shall provide clear evidence of previous validation of the proposed process at demonstration scale. First means new at least to Europe or to the application sector in question. A flagship action shall address a complete value chain from procurement, growth, supply of feedstock material to the final product(s). It shall include the establishment of a large scale production facility in Europe, being it a new installation or a substantial modification of an existing facility, or reconversion of old or abandoned industrial facilities. Flagships actions cover TRL 8.

Projects may include limited research and development activities.

Flagship initiatives are required to ensure deployment of technologies in biorefineries, and bring new bio-based products to the market, achieve the creation of new jobs and reduction of environmental impact.

#### **3.5.5.3 Coordination and support actions**

Coordination and Support Actions can address cross-sectorial challenges and supporting value chains through knowledge development (studies) and networking.

### 3.5.6. Technology readiness levels (TRL)

Part G of the General Annexes to the EC Work Programme shall apply for the actions covered by this Work Plan.

### 3.5.7. Evaluation

Part H of the General Annexes to the EC Work Programme shall apply for the actions covered by this Work Plan:

- with the following derogation:

The evaluation criteria are applied as follows:

<b>Type of action</b>	<b>Excellence</b>	<b>Impact</b>	<b>Quality and efficiency of the implementation</b>
<b>Coordination and Support actions</b>	<p>Clarity and pertinence of the objectives;</p> <p>Credibility of the proposed approach;</p> <p>Soundness of the concept;</p> <p>Quality of the proposed coordination and/or support measures;</p>	<p>The expected impacts listed in the BBI-JU annual Work Plan under the relevant topic;</p> <p>Effectiveness of the proposed measures to exploit and disseminate the project results, to communicate the project and to manage research data, where relevant</p>	<p>Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources;</p> <p>Complementarity of the participants within the consortium (if relevant)</p> <p>Appropriateness of the management structures and procedures, including risk and innovation management</p>
<b>Research and Innovation actions</b>	<p>Clarity and pertinence of the objectives;</p> <p>Credibility of the proposed approach;</p> <p>Soundness of the concept, including trans-disciplinary considerations, where relevant;</p>	<p>The expected impacts listed in the BBI-JU annual Work Plan under the relevant topic;</p> <p>Enhancing innovation capacity and integration of new knowledge;</p> <p>Strengthening the competitiveness and growth of companies</p>	<p>Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources;</p> <p>Complementarity of the participants within the consortium;</p> <p>Appropriateness of the management structures</p>

	<p>Extent that proposed work is ambitious, has innovation potential, and is beyond the state of the art (e.g. ground-breaking objectives, novel concepts and approaches);</p>	<p>by developing innovations meeting the needs of European and global markets and, where relevant, by delivering such innovations to the market;</p> <p>Any other environmental and socially important impacts (not already covered above)</p> <p>Effectiveness of the proposed measures to exploit and disseminate the project results (including IPR management), to communicate the project and to manage research data, where relevant</p> <p>Extent to which the proposed consortium contribution will help maximising the impact of the action</p>	<p>and procedures, including risk and innovation management.</p>
<b>Innovation actions</b>	<p>Clarity and pertinence of the objectives;</p> <p>Credibility of the proposed approach;</p> <p>Soundness of the concept, including trans-disciplinary considerations, where relevant;</p>	<p>The expected impacts listed in the BBI-JU annual Work Plan under the relevant topic;</p> <p>Enhancing innovation capacity and integration of new knowledge;</p> <p>Strengthening the competitiveness and growth of companies</p>	<p>Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources;</p> <p>Complementarity of the participants within the consortium;</p> <p>Appropriateness of the management structures</p>

	<p>Coverage of the value chain (raw materials, equipment and technology suppliers and end-users);</p> <p>Extent that proposed work is ambitious, has innovation potential, and is beyond the state of the art (e.g. ground-breaking objectives, novel concepts and approaches);</p>	<p>by developing innovations meeting the needs of European and global markets; and, where relevant, by delivering such innovations to the markets;</p> <p>Any other environmental and socially important impacts (not already covered above)</p> <p>Effectiveness of the proposed measures to exploit and disseminate the project results (including IPR management), to communicate the project and to manage research data, where relevant</p> <p>Extent to which consortium contribution, including additional investment, will help maximising the impact of the action</p>	<p>and procedures, including risk and innovation management.</p> <p>Soundness of the business case and business plan</p> <p>Readiness of the technology for the implementation of the pilot phase, demonstration or flagship<sup>10</sup>;</p>
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Unless otherwise specified in the call conditions:

(a) Evaluation scores will be awarded for the criteria, and not for the different aspects listed in the table of Part H of the General Annexes to the EC Work Programme. For full proposals, each criterion will be scored out of 5. The threshold for "excellence" and "implementation" criteria will be 3, whereas for the "impact"

<sup>10</sup> Applicants should demonstrate the readiness of the technology for the implementation of the pilot phase. In particular, for flagships applicants must demonstrate that by the time of the submission of their application they have been operating relative demonstration scale plants at a significant production capacity (justification shall be provided in the proposal).

criterion the threshold will be 4. The overall threshold, applying to the sum of the three individual scores, will be 11.

(b) For Innovation Actions, to determine the ranking, the score for the criterion "impact" will be given a weight of 1.5.

- with the following addition:

Applicants can provide during the electronic proposal submission up to three names of persons or organisations that should not act as an evaluator in the evaluation of their proposal for potential competitive reasons.

As part of the panel review, the BBI-JU may organise hearings with applicants of proposals with consensus scores above the individual and overall thresholds, and identical overall score.

### **3.5.8. Budget flexibility**

Part I of the General Annexes to the EC Work Programme shall apply for the actions covered by this Work Plan.

### **3.5.9. Financial support to third parties**

Part K of the General Annexes to the EC Work Programme shall apply for the actions covered by this Work Plan.

### **3.5.10. Consortium agreement**

The legal entities wishing to participate in a project shall form a consortium and appoint one of its members to act as its coordinator. They will conclude a Consortium agreement among themselves prior to the signature of the Grant agreement.

## 4. HORIZONTAL AND SUPPORT ACTIVITIES

### 4.1. POLICY AND COMMUNICATION

The main objective of policy and communication is to ensure political and public awareness, ongoing projects and overall activities of the BBI JU, in order to gain acceptance and support from various audiences at European and national level.

For that reason, the role of the stakeholders will be essential, especially the State Representatives Group, as interface towards Member States, national and regional policies and programmes. In order to achieve these objectives, a communication strategy, including a short and long-term plan for the BBI JU, will include specific actions in order to ensure outreach to both stakeholders and public.

For that reason, it will be important to:

- Raise awareness of the BBI among key stakeholders across Europe especially in those Countries where participation in the bio-based field is still low. This objective will require work meetings and site visits in targeted regions as well as an established network among the European regions through the European Regions Research and Innovation Network, the Committee of Regions and policy makers.
- Promote stakeholders' engagement along and across the value chains in order to facilitate cooperation and knowledge exchange. This objective will require the organization of fora, conferences on specific topics of the value chains as well as the use of a partnering platform for internal information flow.
- Promote BBI JU within the EU Institutional arena. This objective consists of gaining political support for BBI from the EU institutions and EU Member States through the promotion of BBI JU, its objectives and achievements. Target audience for this objective includes the European Parliament and/or the Council and Policy makers in EU Member States. This objective will require the organization of events inside the European Parliament, the participation in visibility events such as exhibitions, Open Days, publications/ presentations of key achievements.
- Establish and develop a media network of press and media contacts in order to achieve considerable visibility in both specialized and general media. This network could be useful for producing real-time press releases and specific articles for publication.



- Pro-actively publish communication material in regards to external events, meetings, etc. related to BBI. A broad dissemination of factsheets, leaflets, etc. will enhance the visibility of BBI towards other stakeholders, including the general public.
- Mobilise applicants for BBI Calls across Europe. This objective aims at expanding the population of applicants for future BBI calls. In this context particular attention will be paid to facilitate networking among potential applicants, for instance by improving the BBI Partnering Portal tool as well as by attracting multiple participants especially from Countries with low participation.
- Manage the website in order to stimulate the public interaction on key issues and improve public awareness on BBI activities.

The BBI will leverage the following main channels in order to reach its goals:

- Both internal and external events (Conferences and Forums)
- Website
- Partnering Platform
- Newsletter
- Media (articles etc)
- Publications of factsheets, leaflets
- Info Day

## 4.2. OTHER SUPPORT ACTIVITIES

BBI JU's operations in 2015 will be focused on:

- concluding grant agreements following the evaluation of the 2014 Call for proposals;
- recruiting and training the first and second waves of staff members;
- publishing the second call for proposals;
- drafting the reference documents;
- establishing the accounting system and the necessary IT tools;
- putting in place the internal control framework.

### 4.3. IT TOOLS

For the 2015 call for proposals, the Commission H2020 IT systems will be used for the publication of the call, as well as for the submission, evaluation and negotiation of proposals.

### 4.4. ACCOUNTING SYSTEM – ACCOUNTING OFFICER

The European Commission's Accrual Based Accounting system (ABAC) will be used for accounting purposes. The accounting system will be put in place with the assistance of DG BUDGET. A formal request to DG BUDGET was made in this context. The setting-up of the BBI legal entity in ABAC is scheduled to be in place by Q3 2015.

Furthermore, the specific Financial Rules, adopted by the BBI JU Governing Board on 27 June 2014<sup>11</sup>, define powers and responsibility of the BBI JU Accounting Officer, making explicit reference to the possibility that this function could be attributed to the EU Commission Accounting Officer. [Therefore, a request was made to DG BUDGET for the submission of an offer for the provision of accounting and treasury services by the European Commission. Such offer will be duly assessed by the BBI JU Governing Board, to which the specific Financial Rules attribute the power of nominating the Accounting Officer. ]

## 5. PROGRAMME REPORTING AND CONTROL

### 5.1. ANNUAL ACTIVITY REPORT

The Annual Activity Report (AAR) will present the progress made by the BBI JU in each calendar year, in particular in relation to the Annual Work Plan for that year.

It will include information on the performed activities, the costs and the contribution of the BBI JU for any individual project, the participation of SMEs and any other activities during the previous year, with the corresponding expenditure.

The first AAR, together with the annual accounts and balance sheets, will be presented in 2015 to the Governing Board by the Interim Executive Director. Once approved by the Governing Board, it will be made public.

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<sup>11</sup> The Financial Rules for BBI will be readopted by the Governing Board by written procedure to take into account the new provisions of Article 46.

## 5.2. MANAGEMENT CONTROL AND INTERNAL CONTROL PROCEDURES

The BBI JU and its bodies shall avoid any conflict of interest in the implementation of the activities.

According to Article 26 of the Financial Rules, the internal audit function shall be performed by the Commission's internal auditor. The internal auditor shall advise the BBI JU on dealing with risks, by issuing independent opinions on the quality of management and control systems and by issuing recommendations for improving the conditions of implementation of operations and promoting sound financial management.

The BBI JU shall protect the financial interests of the members and implement anti-fraud measures. In particular, the BBI JU shall ensure that the financial interests of its members are adequately protected by carrying out or commissioning appropriate internal and external controls.

Furthermore, the Internal Control Standards from the Commission will be adapted for the purpose of the BBI JU and a Manual of Procedures will be drafted.

### 5.3. RISK MANAGEMENT BBI JU ANNUAL WORK PLAN 2015

The table below indicates the main risks associated with the programme activities and the financial administration of the JU, as well as the corresponding risk mitigation actions.

<b>Process concerned</b>	<b>Risk Description</b>	<b>Mitigation action</b>
Programme management	Conflicts of priorities may happen within industrial partners, or they may change their strategy.	Early warning capability through regular meetings and alert at Governing Board level. Propose re-orientations when needed and possible.
Programme management	Public and private partners may not agree on BBI priorities	Early warning capability through regular meetings. Alert at Governing Board level. Close collaboration between EC and BIC at every step of the Work Plan preparation.
Programme management	The BBI WP2015 do not reach sufficient level of innovation beyond the state of art	Adequate definition of topics in the Work Plan. The template for proposals has a dedicated chapter on the advancement beyond the state of art.
Programme management	The BBI WP2015 do not reach sufficient level of impact	Adequate definition of the impact section of topics in the WP, referring to the BBI strategic objectives
Call/Programme management	System for the Submission and evaluation of proposals (SEP) underperforms	Extensive testing before the publication of the call, including definition and testing of different scenarios and back-up solutions.
Call/Programme management	Taking into account the specificities of the BBI-JU calls and the expected higher number of proposals, there is a risk that an insufficient number of suitable evaluators is available in the H2020 experts database.	Proactive and timely, external communication (e.g. BBI and BIC websites, NCPs...) to promote the registration of experts with appropriate expertise in the H2020 database
Call/Programme management	Low response in RIA actions	Work Plan includes topics which are of interest to wider groups of stakeholders..

Call/Programme management	Low participation of industrial partners in RIA actions	Better communication and partnering events.Reinforcement of the impact part of the topics.
Programme management/ Communication activities	Low participation rate in the 2015 call	Definition of topics which are of interest to wider groups of stakeholders. Proactive and timely, external communication. Qualitative assessment of the participation rate.
Call/Programme management	Grant agreement is delayed or not signed due to disputes within the consortium	Availability and promotion of existing guidelines material on H2020 consortium agreements and use of IPR Help desk.
Call/programme management	Risk that the quality of proposals received in response to the call will be too low	Consortium Agreement prepared at the proposal stage.
Communication activities	Lack of adequate dissemination of result may result in vague information to the end-user/interested party and could compromise the JU impact.	Standardise the dissemination plans. Monitor the dissemination actions. BBI JU promotes the project results.
Administration	Organisational and resources constraints of the BBI JU Executive Office	EC to act on behalf of the JU until autonomy
Financial administration (Running costs)	The actual running costs under title I or title II exceed the budgeted running costs for this title.	GB to amend the budget when the actual total running costs do not exceed the total budgeted running costs.
Financial administration (Running costs)	Actual total running costs exceed the total budgeted running costs	Governing Board to amend the budget (increasing the total running costs budget); extra funding to be asked from industry.
Financial administration (Running costs)	Risk that EU/industry instalments on running costs are not received in due time	Setting early instalments' due dates and amounts