



Bio-Based Industries
Joint Undertaking



ANNUAL ACTIVITY REPORT 2017

In accordance with Article 16 of the Statutes of the BBI JU annexed to Council Regulation (EU) No 560/2014, as amended by Council Regulation (EU) 2018/121 of 23 January 2018 and with Article 20 of the Financial Rules of the BBI JU.

The annual activity report is made publicly available after its approval by the Governing Board.

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FACTSHEET

Name	Bio-based Industries Joint Undertaking	
Objectives	<p>The objectives of BBI JU are:</p> <p>To contribute to the implementation of Regulation (EU) No 1291/2013 and in particular Part III of Decision 2013/743/EU;</p> <p>To contribute to the objectives of the BBI JU Initiative towards a more resource efficient and sustainable low-carbon economy and increasing economic growth and employment, particularly 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:</p> <ul style="list-style-type: none"> • 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. <p>The mission of BBI JU is to implement the Strategic Innovation and Research Agenda (SIRA) developed by the Bio-based Industry Consortium (so called BIC) and endorsed by the EC. BBI JU operates its programme as the catalyst to enable the EU and Industry to align their strategy and vision while respecting Horizon 2020 principles of openness, transparency and excellence for the Call for proposals organised each year.</p>	
Founding Legal Act	Council Regulation (EU) No 560/2014, of 6 May 2014, as amended by Council Regulation (EU) 2018/121 of 23 January 2018	
Executive Director	Philippe Mengal	
Governing Board¹	EC (As designated by their respective services according to the	BIC members

¹ Composition in the last Governing Board meeting December 2017.

	Commission Decision 4255 (2014) of 27 June, as amended by the Commission Decisions 3268 (2016) of 6 June 2016 and 1811 (2017) of 23 March 2017)	
	<p>Jack METTHEY, Acting Deputy Director-General for "Research Programmes", DG RTD (Vice-chair)</p> <p>John BELL, Director for "Bioeconomy", DG RTD/F</p> <p>Carlo PETTINELLI, Director for "Consumer, Environmental and Health Technologies", DG GROW/D</p> <p>Peter DROELL, Director for "Industrial Technologies", DG RTD/D</p> <p>Nathalie SAUZE-VANDEVYVER, Director for "Quality, Research & Innovation, Outreach", DG AGRI</p>	<p>Mat QUAEDVLIEG Manufacturing SFPE, Vice-president strategic business project, Sappi (Chair)</p> <p>Krijn RIETVELD, Senior Vice-President Partnering for Innovation and R&D, DSM</p> <p>Christophe LUGUEL, International Affairs manager, IAR Cluster</p> <p>Claus CRONE FUGLSANG, Senior Vice-President for Research and Technology, Novozymes</p> <p>Marcel WUBBOLTS, Chief Technology Officer, Corbion</p>
Other bodies	States Representative Group (SRG) Scientific Committee (SC)	
Staff	20 staff members	
2017 Budget²	Commitment appropriations: € 93 289 868 ³ Payment appropriations: € 92 051 246 ⁴	
Budget implementation	Commitment appropriations: total consumption € 90 177 269 (96.7%) Title 1 – € 2 205 969 (51.4%) Title 2 – € 2 206 434 (68.3%) Title 3 – € 85 764 866 (100%) Payment appropriations: total consumption € 87 990 621 (95.6%) Title 1 – € 2 178 053 (52.3%) Title 2 – € 2 001 706 (60.75%) Title 3 – € 83 810 862 (99.4%)	

² Total budget includes operational budget (used for funding selected projects) & administrative (used for funding programme office activities).

³ Voted commitment appropriations were €92 421 059, subsequently amended to include €846 249 of unused appropriations from prior years. Additionally, €22 560 were received as revenues (mainly from recoveries of administrative expenditure).

⁴ Voted payment appropriations were €76 254 922 and the amendment added € 1 074 974 of unused appropriations from the previous year together with €14 698 790 to supplement the operational budget (Title 3).

Grants	65 signed grants for a total value of € 413 761 616		
Strategic and Innovation Research Agenda	The original SIRA (2013) has undergone a process of revision which started in 2016 and which has delivered the adjusted SIRA (published in July 2017).		
Call implementation	Calls launched/implemented in 2017:	2016 (Implemented)	2017 (Launched)
	Number of proposals submitted:	103	149
	Number of eligible proposals:	103	149
	Number of proposals funded or retained for funding:	29	17 (retained)
	Global project portfolio (since the setting up):	65	82
	Number and value of tenders (if any):	No Horizon 2020 tenders were launched	
Participation, including SMEs	Total number of participations in projects funded and retained for funding ⁵ : 932 of which: % of SMEs beneficiaries: 38% % of private for profit companies: 61%		

⁵ The data refers to all projects funded (Calls 2014-2016) and retained for funding (Call 2017) by the end of activity year 2017.

FOREWORD

BBI JU's core priority for the year 2016 was to build a robust and well-functioning organisation. During 2017, the focus was different: consolidating the work delivered the previous year and monitoring its performance.

I am proud of the achievements of the BBI JU team as, despite the increased workload, work was performed maintaining high levels of efficiency, effectiveness and motivation. The organisation reached maturity in terms of both the work force as well as the processes and procedures. None of the above could have been achieved without the fruitful cooperation of our two founding partners, the European Commission (EC) and the Bio-based Industries Consortium (BIC), as well as the valuable support and advice of our two advisory bodies, the Scientific Committee (SC) and the States Representatives Group (SRG).

Last year, BBI JU put in place a reporting and performance-monitoring dashboard covering four levels:

1. Efficiency monitoring based on Horizon 2020 KPIs,
2. Leverage effect of financial private contribution versus public funding,
3. Project expected outcomes monitored through eight BBI JU specific KPIs and
4. Expected socio-economic and environmental impact of the BBI JU projects.

This dashboard was an absolute necessity. It not only contributes to the proper management of the organisation including accurate and timely reporting to the BBI JU Governing Board and its advisory bodies, but also promptly addresses corrective actions whenever these are deemed necessary. As you will be able to read in the 2017 Annual Activity Report (AAR), with the exception of specific well-identified areas, BBI JU performed extremely well overall and the results delivered are clearly in alignment with its initial goals. Nevertheless, in certain areas further improvements can still be anticipated.

In this context, I would like to refer to the BBI JU interim evaluation report published in October 2017. This evaluation - carried out by the EC with the support of independent experts - states that the specific tasks defined for BBI JU in its Council Regulation are well aligned with its initial long-term objectives, which are still highly relevant in terms of keeping the EU competitive and at the forefront of the global Bioeconomy development. It also concludes that the two main positive effects of BBI JU are i) the structuring effect in the organisation of the value chains across sectors and ii) the innovation-driven mobilizing effect of all key stakeholders.

Following from the above, I would like to underline that BBI JU is an excellent example of a mission-oriented instrument. Its role is instrumental in contributing to the systemic changes

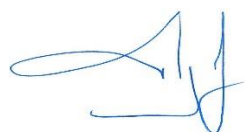
needed for the development of a sustainable and competitive Bio-based industry in Europe, capable of attracting investment and creating value for its citizens!

The current AAR was drafted by the BBi JU team and assessed by the EC and BIC. It demonstrates that the initiative is on the right track vis-à-vis the key objectives of de-risking investment, reaching critical mass and organising the value chains. Even though we are satisfied with the results already achieved, there is still more to be done and BBi JU must continue the good work in order to sustain and promote the momentum created.

Last but not least, I want to thank my team for their work and dedication. Their contribution has been invaluable in making BBi JU the organisation it is today.

Enjoy the reading!

Philippe Mengal

A handwritten signature in blue ink, consisting of a stylized 'P' followed by a series of loops and a final vertical stroke.

Executive Director BBi JU

ABOUT BIO-BASED INDUSTRIES JOINT UNDERTAKING (BBI JU)

The **Bio-based Industries Joint Undertaking (BBI JU)** was established on 6 May 2014 by Council Regulation No 560/2014, published in the OJ on 7 June 2014, entering into force on 27 June 2014⁶ (the 'Council Regulation'). The BBI JU is the body entrusted with the implementation of the public-private partnership established between the European Union, represented by the European Commission (EC), and the Bio-based Industries Consortium (BIC), with total contributions from both partners of € 3.705 billion, of which almost 75% will be contributed by the industry. BBI JU aims to bring together all relevant stakeholders to establish innovative bio-based industries as a competitive sector in Europe, ranging from primary production, large industry, SMEs, clusters, trade associations, academia, RTOs to end-users.

The **mission of BBI JU** is to implement the Strategic Innovation and Research Agenda (SIRA) developed by the Bio-based Industry Consortium (so called BIC) and endorsed by the EC. BBI JU operates its programme as the catalyst to enable the EU and Industry to align their strategy and vision while respecting H2020 principles of openness, transparency and excellence for the call for proposals organised each year.

The **objective of BBI JU** and of its founding partners is to contribute to the development of a 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 and 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 through 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 **interim evaluation** report of BBI JU carried out by the European Commission with the assistance of independent experts, was published in October 2017. The report states that the specific tasks given to BBI JU in the Council Regulation are well aligned with the initial long-term objectives of the BBI JU, which are still highly relevant in order to keep EU competitive and at the forefront of the global Bioeconomy development. It was also concluded that BBI JU respected the rules of transparency and openness with a specific attention to synergies and complementarities with other initiatives. The two main positive effects of BBI JU are the evident structuring effect in organising the value chains across sectors and the innovation-driven mobilizing effect of all key stakeholders. In addition to these key aspects, other important achievements also are highlighted in the report:

- the effectiveness of implementation;

⁶ As amended by Council Regulation (EU) 2018/121 of 23 January 2018 amending Regulation.

- the significant private sector participation with an important mobilisation of private investment enabling to show a high leverage effect;
- the KPIs specific to BBI JU which are all well on track (based on agreed monitoring process);
- the high SME participation of 35.4%

ABOUT THE BIO-BASED INDUSTRY SECTOR IN THE EU

The **Bio-based industry is an emerging sector** organised between inter- connected value chains, aiming at transforming renewable biological feedstocks such as agricultural and forest residues, bio-waste and aquatic biomass, into bio-based products, materials and energy replacing their fossil-based versions. According to EUROSTAT figures from a study published by BBI JU in 2017, in 2015 the bio-based industry sector accounted for 3.7 million jobs in EU28 and achieved a total turnover of € 698 billion.

The Bio-based industry is considered an emerging sector due to the fact that it is extremely fragmented in both the geographical and business organisation contexts. Industry therefore perceives risks in investing in it. It is also facing certain specific challenges and risks in terms of feedstock supply, notably the lack of an efficient logistical infrastructure to transport the feedstock from its place of generation to the biorefinery location. The biorefineries require a substantial level of investment which is not without risk. In addition, the sector is faced with various regulatory hurdles impacting several levels of the value chains.

In **2012, as part of the impact assessment of the initiative**, the EC conducted a public consultation. From the 638 responses received, 94.3 % of them recommended an EU initiative and a large majority requested an Institutional PPP (public-private partnership) between the EU and the bio-based industry. The impact assessment concluded that a Joint Undertaking between public and private sectors was necessary to:

- **de-risk investment** at all levels, from research to full scale deployment;
- **organise the sectors** by building bridges and collaboration between actors that had never collaborated in the past;
- **reach a critical mass** at European level, where a single country or small group of organisations is not sufficiently large to address such strategic challenge.

EXECUTIVE SUMMARY

2017 was a fundamental year for the Bio-Based Industries Joint Undertaking (BBI JU): the organisation reached maturity in terms of both staff composition as well as the main processes and procedures, while dealing with an increasing workload. In this context, BBI JU maintained high levels of efficiency and effectiveness, a fact highlighted by experts and stakeholders in the context of the interim evaluation of BBI JU published in October 2017. In fact, in the context of its KPIs (key performance indicators) BBI JU has performed well and its results are well aligned with its initial goals thanks to a well-balanced project portfolio.

In addition to these operational achievements, the Joint Undertaking managed to strengthen the partnership between its founding members and resolve some residual underlying issues. BBI JU, BIC and the EC addressed the reporting of the in-kind contributions (both IKOP and IKAA), and in particular the financial contribution to the operational costs by BIC and its constituent entities to beneficiaries at project level (here and onwards referred to as in-cash), by clarifying the legal framework through an amendment to the Council Regulation. These steps also allowed an agreement to be reached on how to calculate and monitor the progress of the leverage effect, which at this stage of the initiative is 2.08 euro, against a final target of 2.8 euro per 1 euro of EU funding by 2024.

In the context of the communications initiatives, BBI JU achieved excellent results in 2017 in terms of both visibility and recognition. Promotion of BBI JU calls was very effective, stakeholder engagement was also highly successful and the overall participation in BBI JU events was greater than anticipated.

AN EFFECTIVE AND WELL-BALANCED PROJECT PORTFOLIO

BBI JU's Call 2017 attracted a highly significant response compared to the previous calls: a 45% increase in submission pushed the total number of proposals submitted since the first call to 372 involving 4190 applicants. The final available budget for Call 2017 was € 85.7 million, which was considerably lower compared to the € 188.7 million budget allocated for Call 2016. The high submission rate combined with the low budget made the call very competitive. Consequently, the overall success rate that was significantly reduced from 29% for the Call 2016 to 11% for the Call 2017.

At the end of 2017, the total number of **beneficiaries is 729 covering 65 ongoing projects, with a total funding of € 414 million**. Among the beneficiaries, 24 Member States are represented together with 6 associated countries: Iceland, Norway, Serbia, Switzerland, Turkey and the Faroe Islands.

These data are destined to improve with the signature of the 17 grants awarded following the 2017 call, pushing the project portfolio, by 2018, to **82 projects** with 932 total beneficiaries from 32 countries and a total grant amount of € 498,923,016 million.

The distribution of BBI JU's funding allocated to the different types of actions for the projects from Calls 2014 to 2017, demonstrates that the budget allocation for RIAs and Flagships is in line with the targets (as compared to the distribution announced in the SIRA for the initiative as a whole). Adjustments are still required for DEMO and CSA actions respectively showing higher and lower budget allocations compared to the target. This deviation is being tackled at the level of programming, and in the AWP 2018 relevant adjustments are made to ensure better coverage in terms of types of action and topics.

The different type of feedstock are now better covered. Agri-based, forest based, bio-waste and aquatic biomass, have been covered by RIA and DEMO projects. The majority of RIA projects are mainly clustered around agri-based and forest-based biomass and Call 2017 has further reinforced these groups by delivering four new agri-based projects and two forest-based ones.

The geographical distribution of beneficiaries in BBI JU follows the trend also observed in Horizon 2020 in general, with the majority of funding going to the EU 15. Similarly, EU-13 participation rates in the BBI JU calls are lower than for the EU 15 both at the level of proposals and at the level of projects. In spite of this, EU-13 countries performs better in BBI JU (7.9%) than in other programmes such as for example SC2 (5.5%) or the LEIT KET Biotechnology programme (7.2%). In order to address the unbalanced geographical distribution, BBI JU instigated its widening participation strategy that was developed together with the SRG.

Recent BBI JU calls also managed to address certain shortcomings highlighted by BBI JU stakeholders at the beginning of the initiative:

- **Increased submitted proposals: +45%** in the call 2017
- High quality of proposals: **around 50% of proposals above threshold**
- **Optimal coverage** of the call's topics and of the bio-based industries **value chains**
- Effective widening participation strategy in eastern and central Europe and in Member States from the Mediterranean area

The effectiveness of the BBI JU project portfolio has been confirmed by the interim evaluation of BBI JU. This evaluation was carried out by the European Commission assisted by independent experts and the final report states that the specific tasks given to BBI JU in the Council Regulation are well aligned with the initial long-term objectives of the BBI JU, which are still highly relevant in order to keep EU competitive and at the forefront of the global Bioeconomy development. It was also concluded that BBI JU respected the rules of transparency and openness with a specific attention to synergies and complementarities with other initiatives. The two main positive effects of BBI JU are the evident structuring effect in organising the value chains across sectors and the innovation-driven mobilizing effect of all key stakeholders. In addition to these key aspects, other important achievements are also highlighted in the report:

- Effectiveness in implementation;
- Significant private sector participation, translating private investment into a high leverage effect;
- BBI JU's specific KPIs are well on track;
- Funding of SMEs of 29%, well above the Horizon 2020 target of 20%⁷.

A STRONGER PUBLIC PRIVATE PARTNERSHIP

In order to build trust and commitment between the two founding members, it was essential to set and agree on clear rules for identifying, calculating and certifying the different types of contributions

⁷ Article 22(3) Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 – The Framework Programme for Research and Innovation

to the BBI JU initiative. In 2017 the methodologies on how to report IKOP and IKAA were approved; both of these forms of in-kind contributions are fundamental to monitoring the leverage effect.

Already in 2016, each element of the calculation of the leverage effect was followed by BBI JU, but no clear formulation was agreed for evaluating the progress of this indicator towards the 2024 target. This subject was discussed during the Governing Board of June 2017 and – on the basis of a proposal from the Commission - a methodology to monitor the leverage effect of the initiative on a yearly basis was presented and agreed. According to this calculation **the leverage effect in 2017 is at 2,08 euros of private investment per 1 euro of EU funding**, against an expected level of 2,26 euros at this stage of the initiative.

With regard to the in-cash from the member other than the Union to the operational costs of the Joint Undertaking, the objective is still far from being reached. This issue has been subject of intense work in 2017, particularly in the context of the task force in charge of presenting different solutions to the BBI JU Governing Board to facilitate the in-cash contributions. The solution retained by the Governing Board – and implemented in the BBI JU annual work plan 2018 – is to restrict participation under certain topics only to consortia including at least one BIC “large industry” constituent entity. In order for those financial contribution to be taken into account, an amendment of the Council Regulation was launched by the Commission. The recent approval and entry into force of the amendment **sets the ground for an increase in financial contributions among partners at project level**.

The close collaboration of BBI JU with the Scientific Committee and the State Representatives Group has further contributed to the optimal operation of BBI JU. More specifically, in 2017, the two advisory bodies made useful contributions towards the update of the SIRA as well as the preparation of the 2018 annual work plan, and continued to support BBI JU’s work toward widening participation. Moreover, the composition of the Scientific Committee was revised and enlarged in order to cover key missing scientific areas like algae biology, or synthetic biology, aligning better with the emerging advancements relevant for BBI JU.

A MORE MATURE ORGANISATION WORKING EFFECTIVELY

In 2017, BBI JU priorities focused on finalising the recruitment process, dealing with the **growing workload** (from 36 to 65 running grants in the course of the year), fine-tuning internal processes and dealing with a larger number of new reporting duties and audits. The management particularly emphasised the need to find the right balance between the growth of both the project management and horizontal tasks in order to maintain operational efficiency and effectiveness. While on the one hand reaching a certain maturity as an organisation, BBI JU had on the other hand to deal with the departure of 3 staff members. Recruitment procedures were launched and the programme office was reinforced with 4 new staff members. As of end 2017, BBI JU employs 20 staff members out of the 23 available posts.

In this context the programme office managed nevertheless to carry out its duties efficiently – as confirmed by the interim evaluation report – and to implement its activities in compliance with the applicable rules and procedures. The performance quality was also confirmed by external project coordinators surveyed by the Commission about their satisfaction in dealing with the joint undertakings.

Risk Management has been an integral part of the management processes in place at BBI JU since its outset adding value to the organisation by efficiently and effectively supporting the achievement of objectives. The most significant risks currently requiring further actions in addition to existing controls are in HR management (risks potentially affecting availability and efficient allocation of human resources) and at Programme Management level in two aspects. The first significant risk relates to the achievement of the objective set in the Council Regulation relating to the financial contributions to the operational costs of BBI JU by the members other than the Union. The amendment to the Council Regulation adopted in 2018 aims to improve the level of these contributions at project level in the remaining three calls for proposals currently being planned by BBI JU until 2020. The second significant risk relates to the legality and regularity aspects potentially affecting ex-post controls on operational expenditure and the timely implementation and reporting of their results.

Key business processes analysed in 2016 are now established and documented, allowing staff to complete tasks and achieve objectives whilst respecting applicable rules and policies. In addition, the report from the **European Court of Auditors on the 2016 annual accounts** contained qualification and confirmed that BBI JU processes are well established.

This result is highlighted by the performance of BBI JU in the context of the three main Horizon 2020 KPIs (Time to inform, Time to grant and Time to pay), which shows that the organisation is operating effectively, achieving:

- TTI of 99 days against a target of 153 (100% on time);
- TTG of 231 days against a target of 245 days (100% on time);
- TTP of 11,3 days for pre-financing against a target of 30 days (100% on time)
- TTP of 83,7 days for periodic payments against a target of 90 days (80% on time).

TANGIBLE IMPACT OF THE INITIATIVE THROUGH BBI JU'S SPECIFIC KPI MONITORING

The efficiency of the operational results is highlighted through – in addition to the monitoring of the H2020 KPIs - an improved performance monitoring system which was revised in 2017. The results recorded in 2017 confirm the positive trends recorded in the past:

- **Financial contribution and leverage effect:** IKOP and IKAA are reported on an annual basis resulting in a **leverage effect of 2.08**. This value is lower than 2.26 as expected at this time of the initiative.
- **Project portfolio outcome:** 8 KPIs are defined in the updated SIRA and are monitored on an annual basis through a questionnaire sent to project coordinators⁸. As indicated in the list below – and after launching calls for proposals for the 3 first years out of 7 – the forecast **for most KPIs BBI JU is exceeding the targets set for the end of the initiative**, further confirming the contribution to the systemic evolution of the sector in bridging the gap between the research and the market.

⁸ 2017 questionnaire was sent to coordinators of project from call 2014, 2015 and 2016

1. 170 cross-sector interconnections expected against a target of 36 by 2020. These data show the **impact of collaborative research in accelerating at a faster rate than expected the cross-sectorial integration along and across value chains**;
 2. 136 new bio-based value chains expected against a target of 10 by 2020, 43% of them being linked to **new technologies** and 63% of them offering **new products and/or markets**. Although not all value chains are covered equally well, this suggests the significant structuring effect of the BBI JU programme and the fact that the future of the sector is also concerned with the creation of a network of a higher number of new, interconnected value chains than initially estimated;
 3. 65 signed grant agreements (against a target of 200 by 2020);
 4. 57 new bio-based building blocks based on biomass of European origin expected against a target of 5 by 2020, 35% of them being breakthrough building blocks with not fossil-based equivalent, and 18% of them offering a **better performance** than their fossil-based equivalent;
 5. 127 bio-based materials expected against a target of 50 by 2020, 52% of them offering a better performance and 17% of them being **breakthrough**;
 6. 58 new demonstrated bio-based consumer products expected against a target of 30 by 2020, 58% of them **ensuring a reduction in CO² emissions**;
 7. 6 flagship grant agreements signed (against a target of 5 by 2020);
 8. 24 expected **“TRL gain” technologies** (against a target of 20 by 2020);
- Socio-economic and environmental impact: current results show that 68% of projects are expected to produce bio-based products with lower GHG emissions, 66% of them are announcing valorisation of waste, 52% expect decreases in energy consumption and 45% expect improvement of land use.

BBI JU IMAGE GAINING RECOGNITION

In 2017, BBI JU communication activities focused on promoting BBI JU calls, improving stakeholder engagement, ensuring support from policy makers and promoting impact and projects results to a wider audience. This considerable effort from the Programme Office obtained significant results that can be quantified from an analysis of BBI JU's main communications events in 2017:

- BBI JU held its 4th Info Day on 28 April 2017 in Brussels, gathering **567 registered participants**, a 7% increase compared to 2016. Attendees originated from 27 EU Member States and 11 associated countries. An additional 388 persons watched the conference via web-streaming and 210 tuned in during the days following the event. The programme office led the organisation - via the BBI JU's partnering platform - of **810 face-to-face meetings** amongst the participants in order to facilitate and create structured networking opportunities. On the social media side, BBI JU tweets gathered 11.800 impressions and more than 160 re-tweets.
- In cooperation with MEP Poche (rapporteur of the JU's 2015 discharge procedure), BBI JU organised in October 2017 a joint exhibition at the European Parliament in Strasbourg: the “Innovation in Action” Joint Undertakings’ exhibition”. This event was aimed at presenting to

the MEPs the role and added value of the JUs in promoting high level research, while significantly leveraging private sector investments in Europe. This occasion was also useful to **raise the awareness of key stakeholders about bio-based products, promote BBI JU's activities through promotional videos and hold face-to-face meetings with key political personalities**, to discuss the future of European research programmes and BBI JU's role in this context.

- The inaugural BBI JU Stakeholder Forum took place in Brussels on the 6th and 7th of December. This event was dedicated to engaging directly with BBI JU's project representatives and stakeholders via discussions in different "breakout sessions" as well as by taking advantage of networking opportunities. Almost **600 participants attended** the main conference featuring speakers and experts discussing the strategic importance of the bio-based economy in Europe, and BBI JU's key role in implementing it. The Stakeholder Forum presented a comprehensive agenda of **41 inspiring speakers among which was Phil Hogan**, Commissioner for Agriculture and Rural Development, as well as organising parallel sessions, networking sessions and a project exhibition, in which participants had the chance to interact with BBI JU's project representatives and get first-hand information about them.

In conclusion, the 2017 Annual Activity Report of BBI JU clearly demonstrates that the organization is performing efficiently and effectively despite the growing workload, while continuing to mature and evolve in a positive direction. Objectives are being achieved in terms of call attractiveness, project implementation, as it was further confirmed by the interim evaluation of BBI JU.

The public private partnership has been strengthened from its foundations, providing clarity for both the public and private partners about the reporting methodology for in-kind contributions. The issue of BIC's in-cash contribution has been addressed and the amended Council Regulation provides for a legal framework that allows financial contributions at project level to be taken into account for the leverage effect calculation.

BBi JU's image is shifting steadily from "awareness" to "building reputation" and is gaining considerable recognition. The participation in BBI JU events and the interest shown by stakeholders, project beneficiaries, applicants and representatives of the institutions all reflect the momentum gained by the BBI JU initiative.



01

**IMPLEMENTATION
OF THE ANNUAL WORK 2017**

1.1. KEY OBJECTIVES 2017 AND ASSOCIATED RISKS

1.1.1. Overall operational objectives from AWP 2017

Call 2017⁹ focused on the need to better integrate biomass feedstock suppliers at the front end of the chain to create a demand for biomass feedstock from biorefining processes. Similarly, Call 2017 aimed at stimulating partnerships involving end-market actors to create a 'market pull' for bio-based products for identified applications.

Thus, as initiated in 2016, the 2017 call moved away from a strict biomass feedstock 'push' based on traditional value chains, towards a demand for biomass to enable processing which could respond adequately to a 'pull' from the end markets.

Call 2017 continued and expanded on the four strategic orientations from 2016, linked in a matrix with three 'vertical' orientations and one "horizontal", cutting across the three vertical ones.

The strategic orientations for 2017 were:

1. Fostering a sustainable biomass-feedstock supply to feed both existing and new value chains, by expanding and diversifying the biomass feedstock portfolio through the improvement and utilisation of existing sources as well as tapping into new sources;
2. Optimising efficient processing for integrated biorefineries by developing new breakthrough processes, and by improving the efficiency and sustainability of biorefining biomass into compounds for chemicals (including food and feed ingredients) and materials;
3. Developing innovative bio-based products for specific market applications by increasing the applicability of high value-added bio-based products, and avoid price competition with fossil-based products by pursuing advanced functionalities and unmatched performance;
4. Creating and accelerating the market uptake of bio-based products and applications by responding to the concerns of society about bio-based products, by engaging in dialogue with societal and consumer groups about benefits and how potential risks are addressed and managed.

The implementation and achievement of the strategic orientations developed in the AWP 2017 are reported in sections 1.2 and 1.3 of the current report. 2017 Management objectives and achievements

Each year the Executive Director presents his proposals of priorities for the coming year to the Governing Board. The priorities are translated into yearly objectives for the Programme Office, which are then cascaded into individual objectives for all staff members according to SMART principles.

The 2017 priorities related mainly to finalising the building of the organisation: the team, its tools, its processes and procedures, while at the same time dealing with the increase in the workload and

⁹ https://www.bbi-europe.eu/sites/default/files/awp_2017.pdf

maintaining the high level of performance delivered in 2016. Two other important priorities of 2017 were to improve the profile of the project portfolio and confirm the commitment of the industry.

The objectives 2017 were organised around five priorities:

1. Finalise the building of the organisation while absorbing the increased workload;
2. Continue to build an effective and well-balanced project portfolio;
3. Confirm the industry commitment to the overall initiative;
4. Reinforce BBI JU's operational excellence;
5. Shift BBI JU's image from "awareness" to "reputation" and "recognition".

ACHIEVEMENTS FOR 2017

FINALISE THE BUILDING OF THE ORGANISATION WHILE ABSORBING THE INCREASED WORKLOAD:

In 2017 the organisation managed to deal with a significant increase in workload linked to a growing project portfolio (from 36 projects in 2016 to 65 in 2017), a 45 % increase in of proposals submitted for the 2017 call and several reporting and audit activities happening for the first time. As a priority it was critical to finalize the recruitment and training of the team and the implementation of certain corrective actions in the IT systems and tools. It was also of particular importance to ensure a healthy balance between the growth of the programme management workload and the time spent on horizontal tasks.

Most of the staff is now in place, sharing common values, a clear mission, having well-defined tasks, objectives and a consolidated training plan. In this context, BBI JU had to deal with the replacement of two project officers who left the organisation just before the central evaluation of the Call 2017. This was achieved without negatively affecting the operations, showing that the business continuity process is effective.

CONTINUE TO BUILD AN EFFECTIVE AND WELL-BALANCED PROJECT PORTFOLIO:

BBI JU delivered the expected portfolio of projects from Calls 2016 and 2017 showing an overall improvement compared with the first two years' calls:

- Increased participation;
- Higher quality of proposals;
- Better coverage of the call's topics and of the bio-based value chains;
- Excellent SME participation.

For the calls of the first three years, BBI JU received proposals covering a total of 4190 applicants. At the end of 2017, the total number of beneficiaries is 729 for 65 projects, and €414 million of funding. In 2018 the project portfolio will be increasing to 82 projects. In the current portfolio 24 Member States are represented as beneficiaries and third countries such as Iceland, Norway, Serbia, Switzerland, Turkey and Faroe Islands are also represented.

CONFIRM THE INDUSTRY COMMITMENT TO THE OVERALL INITIATIVE:

An important aspect for trust-building and commitment was to solve the key issues remaining from the start-up phase of BBI JU, and in particular the BIC's in-cash contribution, the methodology to report IKOP and IKAA and consequently the monitoring of the leverage effect.

The IKOP reporting procedure was endorsed by the Governing Board in 2017. The procedure for checking the IKAA plan, its alignment towards BBI JU objectives and its reporting were also finalised and formalised into a guideline document. It is also expected that the issue of the in-cash contribution will improve through the amendment of the Council Regulation. Further details are provided in section 1.7 of the current report.

For what concerns each element of the calculation of the leverage effect, they were already monitored by BBI JU, but no clear formulation was agreed for calculating the progress of this indicator towards the 2024 target. This subject was discussed and presented to the Governing Board on June 2017 and used in the AAR as requested by the EC in its assessment of the AAR 2016. The details about the leverage effect calculation are further developed in section 1.3.1.

With respect to the BIC's in-cash contribution issue, a specific Task-force (TF) was established in 2016 to prepare a proposal to the Governing Board. At the same time, an amendment of the Council Regulation was launched by the EC to allow in-cash to be contributed at project level. The "in-cash TF" presented different solutions to the BBI JU GB to increase the in-cash contribution; in the solution retained the participation in certain topics would be restricted to consortia having at least one BIC "large industry" constituent entity which would then pay a financial contribution to the beneficiaries at the level of the project. The ECOFIN Council adopted the amendment to the Council Regulation on 23 January 2018. In parallel, the BBI JU Annual Work Plan 2018 includes topics with an additional eligibility criterion' that should enable the projects to particularly benefit from the practical knowledge and technical capabilities of relevant industrial actors in the bio-based industry, and which have the potential to increase the delivery of financial contributions at project level.

The KPIs dashboard and reporting procedure has been completely reviewed, taking into account all legally mandatory reporting as well as BBI JU's specific KPIs. BBI JU's performance monitoring model developed in 2016 was revised in 2017 based on discussions with the EC and BIC and taking into account the recommendations of the interim evaluation report of BBI JU. It is now organized on 4 levels:

1. Financial contribution and leverage effect
2. Outcome of project portfolio,
3. Socio-economic and environmental impact
4. BBI JU efficiency and cross-cutting issues.

More details about these indicators are included in section 1.3.1.

REINFORCE BBI JU'S OPERATIONAL EXCELLENCE:

At the beginning of 2017, operational efficiency and effectiveness was normal practice for the Programme office team, with some room for improvement in certain well- identified areas. Those issues were specifically addressed in 2017.

Key processes are well established and described through SOPs aimed at facilitating task execution and at achieving objectives in respect of rules and policies specific to the JU. The general organizational structure is in place, with the necessary infrastructure, all foreseen reporting levels, and sound practices and tools for project management and activity planning.

The audit reports from the European Court of Auditors included no qualification on BBI JU's annual accounts for the second year running. BBI JU's first discharge process, on the 2015 accounts, went smoothly. The 2016 accounts were audited in 2017 without giving rise to any qualification. Finally, BBI JU was able to demonstrate a high degree of maturity of its ICS (Internal Control Standards) as confirmed by the preliminary findings of the audit performed by the IAS. These are all elements of assurance that BBI JU's processes are under control.

The interim evaluation report of BBI JU was published in October 2017. The report states that the specific tasks given to BBI JU in the Council Regulation are well aligned with the initial long-term objectives of the BBI JU, which are still highly relevant in order to keep EU competitive and at the forefront of the global Bioeconomy development. It was also concluded that BBI JU respected the rules of transparency and openness with a specific attention to synergies and complementarities with other initiatives. The two main positive effects of BBI JU are the evident structuring effect in organising the value chains across sectors and the innovation-driven mobilizing effect of all key stakeholders. Other main achievements highlights are:

- the effectiveness in implementation;
- the significant private sector participation, translating private investment into a high leverage effect;
- BBI JU's specific KPIs are well on track according to agreed monitoring;
- Participation of SMEs of 35.4%.

SHIFTING THE BBI JU IMAGE FROM "AWARENESS" TO "REPUTATION" AND "RECOGNITION"

BBI JU reached a much higher level of visibility and recognition in respect of a large group of key stakeholders. This was possible thanks to the clear communication and stakeholder management strategy¹⁰, translated into corresponding actions successfully executed by the programme office in 2017. Additional details about the 2017 achievements are reported in the 2.1 of the current report.

1.1.2. Associated risks

In line with the BBI JU procedures for identifying risks and their preventive measures, the 2016 risk assessment performed on the 2017 objectives identified 20 risks. These risks were described in the Risk Register of the organisation together with individual responsibilities, the relevant risk responses and deadlines for the Programme Office to implement them. The management monitored and reported possible threats as needed during the year.

¹⁰ The communication and stakeholder management strategy including key messages, target audience, tools and action plan was presented to the GB of BBI JU in September 2016.

As a result, the Programme Office implemented the mitigating actions effectively: all the risk responses planned for 2017 have been timely and adequately implemented and/or they have been updated. These results increased the control of the Programme Office over the identified threats and the relevant information was used to reassess the risk exposure of the organisation as detailed in section 4.6 below.

The following operational risks were realised during 2017 despite the preventive measures implemented:

- Insufficient dotation of payment appropriations in the BBI JU voted 2017 budget to ensure adequate pre-financing of projects arising from BBI JU's Call 2016. An amendment of the BBI JU annual work plan and budget was needed to incorporate the additional payment appropriations requested and obtained;
- Two cases of bankruptcy of beneficiaries requested a prompt reaction to preserve the projects' implementation;
- Detection of gaps and blockages in the IT tools used for projects' reporting, review and payment. These problems were addressed through continuous monitoring and anticipating identified gaps;
- Limited availability of human resources in the Programme Office: three staff members unexpectedly left the organisation, representing one third of the Programme Unit's staff quota. The recruitment procedures started promptly and access to interim services was used to ensure business continuity.

Reactions to all these adverse events were adequately anticipated in the Risk Register of BBI JU and the planned actions mitigated their impact.

1.2. RESEARCH & INNOVATION ACTIVITIES

The mission of BBI JU is to implement, under Horizon 2020 rules, the industry-driven Strategic Innovation and Research Agenda (SIRA) by organizing calls for proposals to support research, demonstration and deployment activities, enabling the collaboration between stakeholders along the entire value chains and covering primary production of biomass, processing industry and final use.

The section below provides an overview of the status of BBI JU's achievements so far, with respect to the implementation of its Annual Work Plans and the management of its project portfolio, in addition to its contributions to the SIRA 2017 (see section 1.2.1). More specifically, sections 1.2.2 and 1.2.3 provide an overview of the BBI JU calls, the various types of actions and current project portfolio. Finally, section 1.2.4 outlines the BBI JU project monitoring activities carried out in 2017.

1.2.1. Strategic Innovation and Research Agenda (SIRA)

The aim of the BBI JU is to act as a catalyser for the development of competitive and sustainable European bio-based industries that transform renewable natural resources into bio-based products, materials and fuels, thereby enabling the transition from a fossil-based economy to a bio-based economy.

The Strategic Research and Innovation Agenda (SIRA) presents the overall strategic orientation of BBI JU and has been developed by industry based on extensive consultation with the European Commission and other public and private stakeholders. The original SIRA (2013) has undergone a process of revision which started in 2016 and was concluded with the publication of the adjusted SIRA (so called SIRA 2017) in July 2017.

The SIRA 2017 presents a broadened scope that reflects the changes occurring in the rapidly-evolving the bio-based industries, such as the inclusion of new sectors and the incorporation of new sources of feedstock, such as aquatic biomass, bio-waste and CO₂. In addition, the SIRA 2017 pursues the crossover between 'traditional' value chains, moving to a multi-value chain approach that increases the opportunities to transform and valorise new feedstock into numerous new bio-based products for a wide range of applications.

The SIRA defines four strategic orientations of the bio-based industry in Europe (Figure 1):

- foster supply of **sustainable biomass feedstock** to feed both existing and new value chains (Strategic Orientation 1 (SO1));
- optimise **efficient processing for integrated biorefineries** through research, development and innovation (R&D&I) (SO2);
- develop **innovative bio-based products** for identified market applications (SO3); and
- create and accelerate the **market-uptake** of bio-based products and applications (SO4).

The first strategic orientation (SO1) refers to the four main sources of biomass feedstock for bio-based industries in Europe: agri-based feedstock, comprising agriculture, agro-food sector and their residuals and side streams; forest-based feedstock, including forestry, forest-based sector and their residuals and side streams; aquatic feedstock, including aquatic organisms, fisheries and aquaculture sectors and their residues; and bio-waste and CO₂, including municipal solid waste, sludge from wastewater and CO₂ effluents.

The SO2 focuses on the technological developments for the optimisation of all industrial processes involved in integrated bio-refineries, covering the pre-treatment of biomass, the conversion of the pre-treated feedstock to bio-based chemicals and materials, the downstream processes and the system modelling.

The development of innovative bio-based products is addressed by the SO3, which aims at creating a wide range of bio-based products, including drop-in solutions, bio-based products that outperform their fossil-based counterparts, new breakthrough chemicals and proteins and active ingredients for feed/food, pharmaceuticals and cosmetics, among others.

The SO4 aims at facilitating the market-uptake of the new bio-based products by addressing different non-technological hurdles, such as standardization, policy and regulations; increasing consumer awareness on the societal benefits of the bio-based products and fostering strategic aspects such as knowledge-gathering and networking.



Figure 1: SIRA strategic orientations

The SIRA 2017 includes an updated description of the BBi JU Key Performance Indicators (KPIs) and the inclusion of the new KPI (KPI 8) on “TRL gain”, defined to monitor the number of new and improved processing technologies validated with BBi JU RIA projects. The updates related to the BBi JU specific KPIs and their monitoring process are further described in section 1.3.1.2.

1.2.2. BBi JU types of actions and scale of impact of projects (Technology Readiness Level)

BBi JU is a public private partnership between the EU and the Bio-based Industries Consortium (BIC) implementing a research and innovation programme driven by the SIRA. One of its main objectives is to accelerate the innovation and market-uptake of bio-based products with the ultimate aim of positioning Europe as a world-leading, competitive bio-based economy. It is implemented via four types of actions as defined in the Annual Work Programmes:

- Research and Innovation Actions (RIAs);
- Innovation Actions (IAs), namely Demonstration Actions (DEMOs) and Flagship Actions (Flagships);
- Coordination and Support Actions (CSAs).

Each of these actions (except CSAs) corresponds to a different Technology Readiness Level (TRL) (Figure 2). The TRL scale is used as a tool for decision-making on research, development and innovation investments at EU level. It was developed to enable the assessment of the maturity of a particular technology and the consistent comparison of maturity between different types of technologies.

RIAs cover various activities to develop (TRL 3) or validate (TRL 4-5) technologies to fill gaps in value chains and enable new bio-based chemical building blocks, new bio-based materials, and new bio-based ‘consumer products’ or applications.

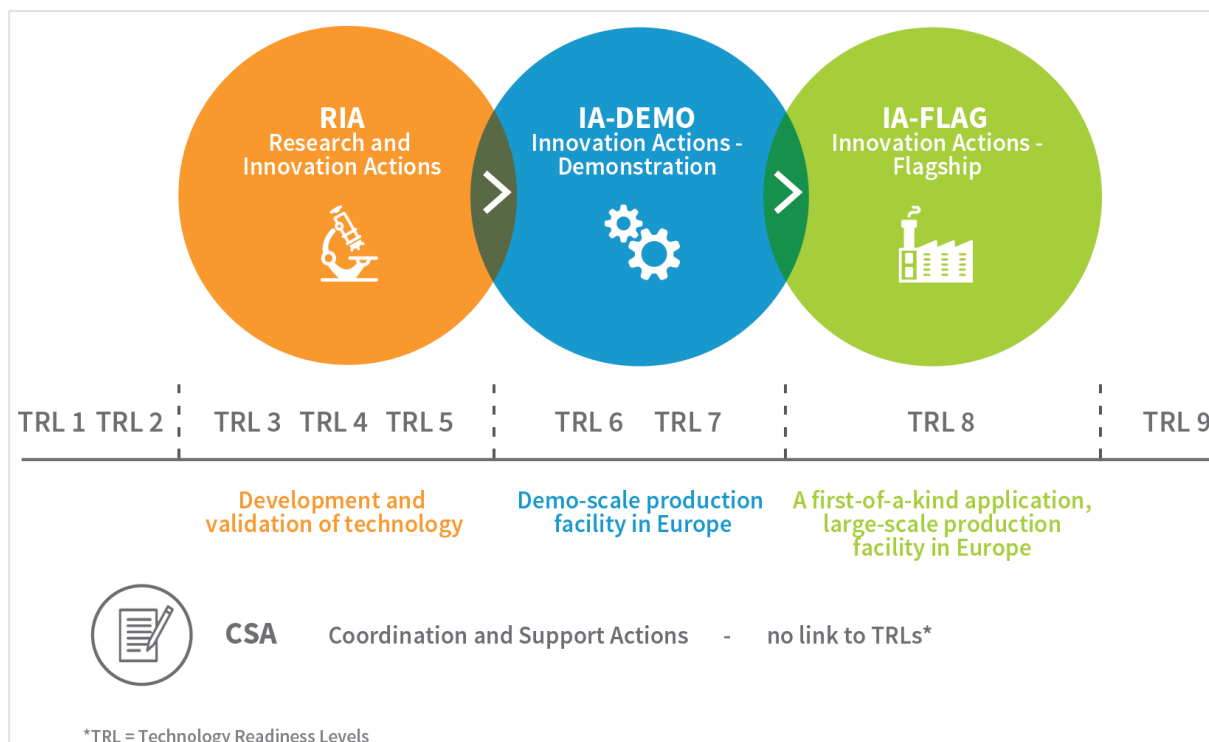


Figure 2: Technology Readiness Levels (TRLs) and connection to BBI JU types of actions

The DEMOs conduct activities to demonstrate the technical and economic viability of a new or improved technology (or a combination of linked technologies), process, or product in a relevant environment (TRL 6) or a system prototype in an operational environment (TRL 7). DEMOs at higher TRL perform a full value chain demonstration at pilot scale demonstrating also an optimised feedstock pre-treatment and downstream processing combination.

Flagships deal with the deployment of the demonstrated technologies and shall deliver – by the end of the project - a system that is complete and qualified (TRL 8) for successful commercial operation (“first of a kind” large-scale production facility in Europe). Flagship projects provide improved environmental and economical processes for the industry when competing with fossil-based technologies (e.g. reduction in CO₂ footprint) and have a positive socio-economic impact. Flagships’ main aim is to deliver specific product(s) possibly with new functionalities at a full-scale application, and subsequently to introduce those products on the market.

Further information is also available in BBI JU’s Call 2017 brochure¹¹.

¹¹ https://www.bbi-europe.eu/sites/default/files/bbi_ju-2017-call_for_proposals-brochure_0.pdf

1.2.3. Overview of BBI JU Calls and Project Portfolio

CALL AND PROJECT MANAGEMENT OVERVIEW

The Annual Work Plan announces the scope and the details of the R&I activities implemented through the yearly calls. BBI JU has successfully implemented four calls¹² out of a total seven foreseen until the end of 2020 concluding grants for € 413 761 616 that represent about 99% of the cumulative available budget, and 44% of its overall budget foreseen for all Calls until 2020. Figure 3 summarises the main activities that occurred during 2017, and which included the following:

- Finalisation of the grant agreement preparation (GAP) process of Call 2016 projects, resulting in the signature of 29 projects;
- Implementation of Call 2017 starting with the publication of the call in April, remote evaluation from September until October, central evaluation during the months of October and November;
- Launch of the GAP for Call 2017 in December upon approval of the ranking list by the BBI JU Governing Board;
- Finalisation of the AWP 2018 followed by its publication on the BBI JU website on 21 December;
- Analysis of periodic reporting and review of projects from Call 2014.

¹² The two Calls of 2015 – Call 2015.1 for flagships and Call 2015.2 for RIAs, DEMOs and CSAs – are counted as one single call here.

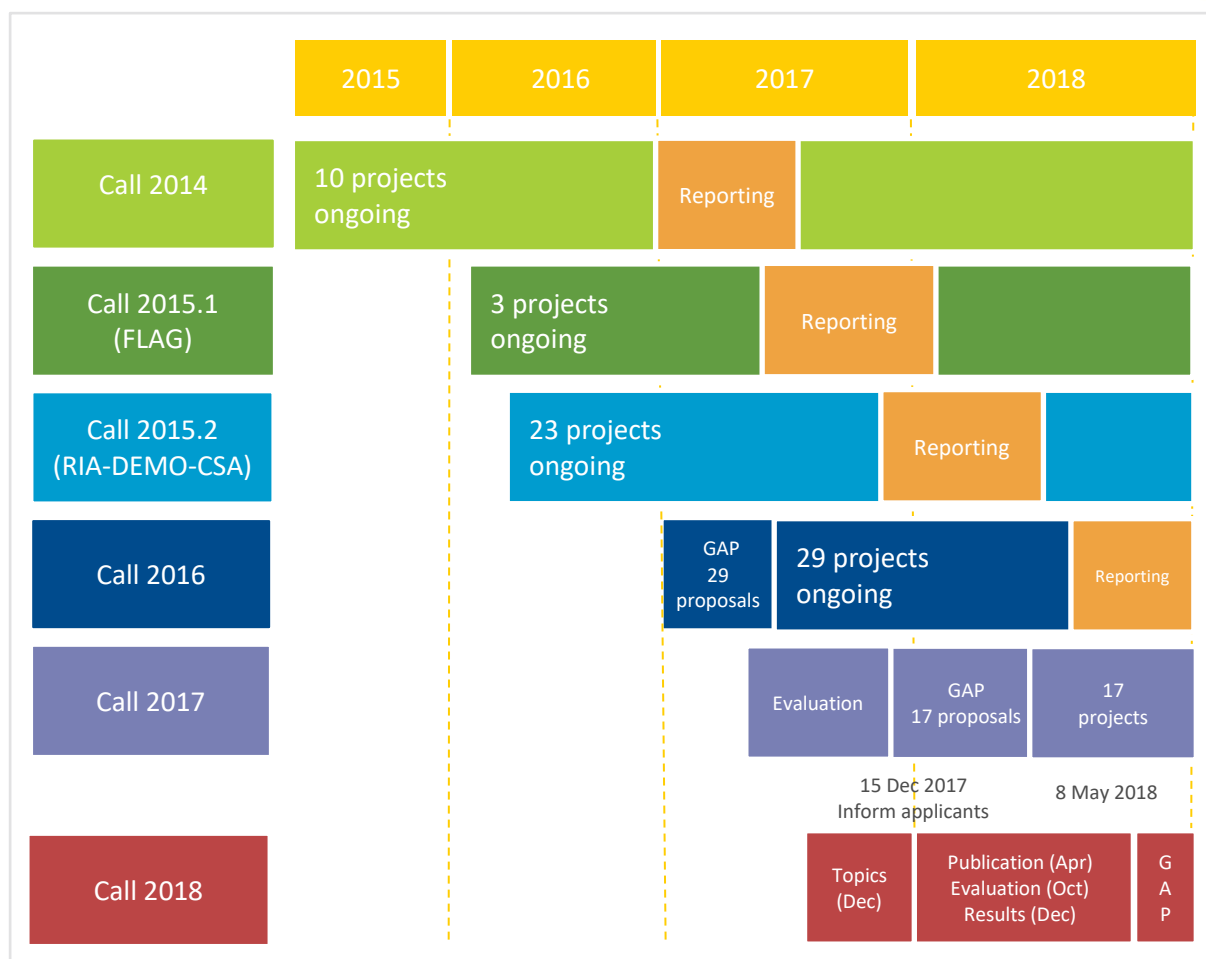


Figure 3: Call and project management overview (as of 31 December 2017)

Regarding the distribution of the operational budget, Figure 4 shows the distribution of BBI JU's funding allocated to the different types of actions for the projects from Calls 2014 to 2017, as compared to the distribution announced in the SIRA for the initiative as a whole. This data demonstrates that while the budget allocation for RIAs and Flagships is more or less in line with the targets, adjustments are still required for DEMO and CSA actions. In particular, the number of CSAs funded is still below the target. This deviation is being tackled at the level of programming, and in the AWP 2018 relevant adjustments are made to ensure better coverage in terms of types of action and topics. The targets set out in the SIRA are expected to be reached by the last call in 2020 and will be monitored accordingly.

FIGURE 4A: BBI JU OPERATIONAL BUDGET 2014 - 2017

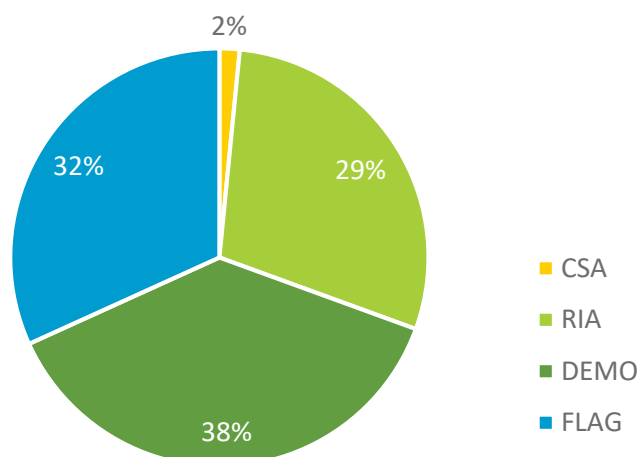


FIGURE 4B: BBI JU OPERATIONAL BUDGET OBJECTIVES 2020

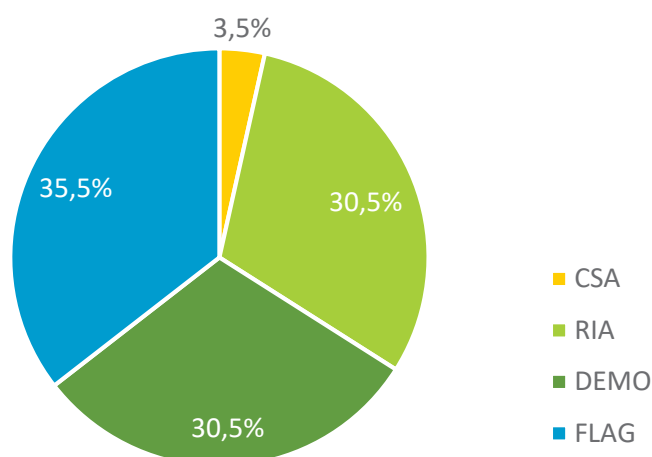


Figure 4a & 4b: BBI JU overall operational budget: allocation of funding between types of actions. Cumulative figures for the period 2014-2017 as compared to the objectives at the end of 2020 (SIRA 2017). Data for 2017 refer to proposals currently in GAP.

The share of funding allocated across the various types of action in BBI JU is rather comparable over the four calls implemented to date (Figure 5), with the majority of funding going to IAs. Moreover, a positive trend can be observed with respect to the allocation of funds across the different types of action in order to better align with the targets set out in the SIRA. More specifically, in Call 2017 there was an increase in the funds allocated to RIAs as compared to Call 2016, complemented by a decrease in funding allocated to DEMOs.

Further details on the performance of BBI JU against H2020 and specific KPIs are provided in section 1.3.1. Details on the implementation of Call 2017 are provided in section 1.3.2.

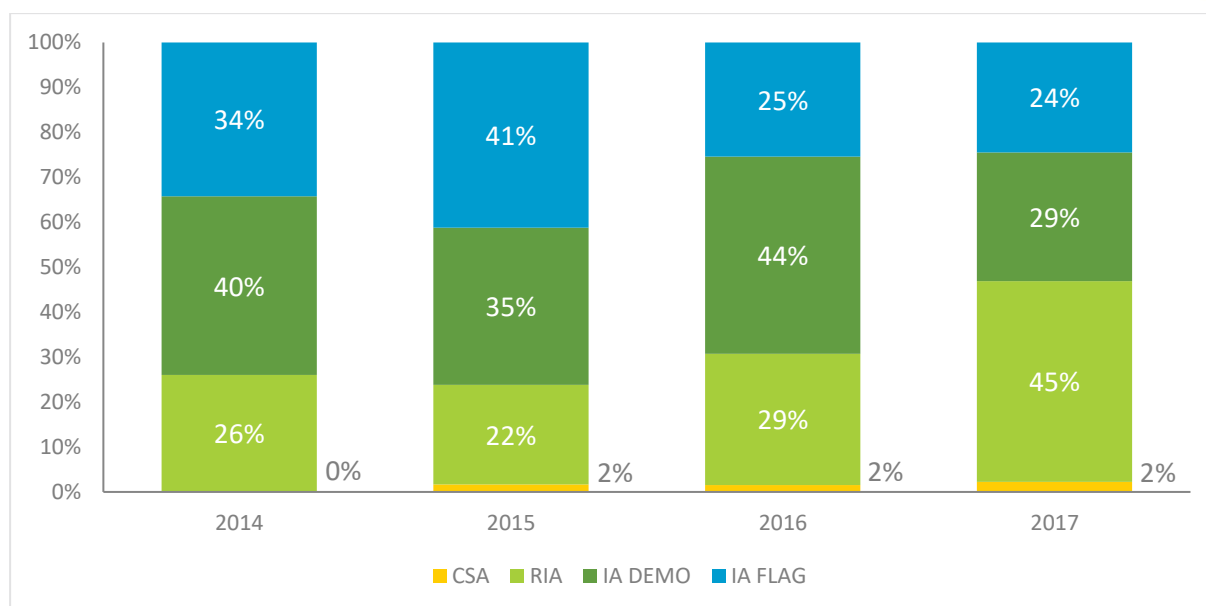


Figure 5: BBI JU overall operational budget expenditures in Calls 2014 - 2017 (the data for the Call 2017 refers to retained proposals)

OVERVIEW OF BBI JU'S PROJECT PORTFOLIO

The current BBI JU project portfolio consists of 65 ongoing projects (33 RIAs, 20 DEMOs, 6 Flagships and 6 CSAs, resulting from Calls 2014, 2015 and 2016). After the finalization of GAP process from Call 2017, 10 RIA, 4 DEMO, 1 Flagship and 2 CSA projects will be added to the BBI JU project portfolio. Table 1 summarises the number of projects by call and action for each year and the plan for Call 2018.

Call 2014	10 projects: 1 Flagship, 2 DEMOs, 7 RIAs (first periodic reports were submitted in March 2017)
Call 2015	26 projects: 11 RIA, 9 DEMOs, 3 CSA, 3 Flagship projects
Call 2016	29 projects: 15 RIAs, 9 DEMOs, 2 Flagships, 3 CSAs
Call 2017	17 projects invited to GAP: 10 RIAs, 4 DEMOs, 1 Flagships and 2 CSAs
Call 2018	BBI JU contributed to AWP drafting (non-topic part, coordination of consultation process with BBI JU advisory bodies) Call publication on the BBI JU website (mid Dec 2017) Call opening (expected April 2018)

Table 1: BBI JU summary of calls: achievements by the end of 2017

As explained in section 1.2.1, the SIRA 2017 focuses on four strategic orientations (SOs). In the SO1, BBI JU has broadened its VC approach with more focus on 'multi-value-chains' fostering the supply of new biomass sources or combining different feedstock sources. According to the new VC approach described in SO1, the following feedstock distribution was introduced:

- Agri-based feedstock including by-products from the agro-food chain
- Forest-based feedstock including side streams and residues
- Aquatic feedstock
- Bio-waste including municipal waste and waste water and CO₂

In Table 2 the project distribution is presented according to the main sources of feedstock described in the SO1 and type of action, for each of the four calls implemented by BBI JU so far. More specifically, the table indicates project acronyms from Call 2014 (marked in orange), Call 2015.1 and 2015.2 (green) and Call 2016 (red). Projects marked in violet dots are from Call 2017 currently in GAP.

As shown, all feedstock sources, namely agri-based, forest based, bio-waste and aquatic biomass, have been covered by RIA and DEMO projects. Together with Call 2017, there are now 4 new RIA projects assigned to non-specific biomass feedstock. The majority of RIA projects are mainly clustered around agri-based and forest-based biomass and Call 2017 has further reinforced these groups by delivering four new agri-based projects and two forest-based ones.

Supply of Biomass	RIA	DEMO	Flagship
Agri-based	Carbosurf, PROMINENT, LIBBIO, HYPERBIOCOAT, Zelcor, BIOrescue, BioBarr, SSUCHY *****	Pulp2Value, AgriMax, Funguschain, GreenProtein, LIPES, GRACE, LigniOx *	FIRST2RUN, LIGNOFLAG, AgriChemWhey, PEference
Forest based	SmartLi, Greenlight, PROVIDES, US4GREENCHEM, NeoCel, LIBRE, TECH4EFFECT, EFFORTE, SHERPACK **	ValChem, BIOFOREVER, GreenSolRes, PULPACKTION, FRESH, Dendromass4Europe SYLFEED EUCALIVA	BIOSKOH, EXILVA *
Bio-waste and CO ₂	NewFert, AFTERLIFE, PERCAL, BARBARA	EMBRACED, URBIOFIN, DEMETER	
Aquatic Biomass	MACROCASCADE, BIOSEA, ABACUS, MAGNIFICENT, VALUEMAG	*	
Non-specific Biomass	EnzOx2, InDIRECT, ReSolve, BIOSMART, ECOXY, REFUCOAT, POLYBIOSKIN *****	OPTISOCEM, BIOMOTIVE **	

Table 2: BBI JU RIA and IA ongoing projects from Call 2014 (yellow), Call 2015 (green), Call 2016 (light blue) and the proposals in GAP at the end of 2017 (asterisks)

Up to now, IA projects have been mainly grouped in the agri-based and forest-based feedstock. In Call 2017, there is one new DEMO allocated to agri-based feedstock and two new DEMO projects are foreseen to start on the across-biomass feedstock. A novelty of Call 2017 is that, for the first time ever in BBI JU's project portfolio, a DEMO project on aquatic biomass has been retained for funding. So far, six flagship projects from the first three calls are being funded either in agri-based or forest-based biomass supply. In Call 2017, one new flagship project is dealing with forest-based feedstock.

CSA projects address non-technological challenges of the bio-based industries and provide support to the development of new policies and regulations, raising public awareness about the bio-based economy, thereby facilitating greater market acceptance for bio-based products and applications. From this perspective, CSA projects are greatly contributing to SO4 and they are transversal to the whole BBI JU project portfolio. Moreover, IA projects are strategically supported by CSAs that are working on market acceptance and consumer attention to bio-based products.

The first CSA projects were funded in Call 2015. As a result, there are in total six ongoing projects in the BBI JU project portfolio. Following Call 2017, two new CSA projects will be added to the portfolio (Table 3).

SO4	CSA
Policy, regulations & standardization	STAR4BBI
Consumer awareness of the benefits of the bio-based products	BioCannDo, BIOWAYS *
Knowledge gathering and networking	BIOPEN, Pilots4U, RoadToBio *

Table 3: BBI JU ongoing CSA projects from Call 2015 (green), Call 2016 (light blue) and the proposals in GAP at the end of 2017 (asterisks)

In the current portfolio, several projects also target specific sub-aspects of SO2 and SO3. The focus of SO2 is on the process optimization of integrated biorefineries through R&D&I actions. Some examples, including projects contributing to SO2, include the following;

- NewFert, which is a RIA project funded in Call 2014, is focusing on production of fertilizers by improving the nutrient recovery technologies while simultaneously seeking for solutions to reduce CO₂ footprints of the specialized recovery technology.
- TECH4EFFECT, which is a RIA project funded in Call 2015, is working on optimized techniques and technologies for effective wood processing.
- DEMETER, which is a DEMO project funded in Call 2015, is working on the optimization of fermentation technology for waste and complex feedstock resources to achieve higher conversion efficiencies.
- OPTISOCHEM, which is a DEMO project funded in Call 2016, will optimise the wheat straw hydrolysate fermentation processes for the demonstration of improved process yield.

Some examples, which contribute to SO3, can be listed as follows:

- CARBOSURF, which is a RIA project funded in Call 2014, is developing new bio-based functional chemicals that will be used in the surfactant production. This project is using an innovative approach to deliver newly derived molecules.
- GreenProtein, which is a DEMO project funded in Call 2015, is establishing a pilot plant for the production of industrial high-value functional proteins and other food ingredients from agri-based feedstock.
- POLYBIOSKIN, which is a RIA project funded in Call 2016, deals with the production of functional bio-based skin contact materials via the combination of different feedstock.
- PEFerence, which is a Flagship project funded in Call 2016, is working on the development of advanced bio-based materials from agri-based feedstock.

When looking at the geographical distribution of BBI JU DEMO and FLAG projects, it is evident that after only four calls BBI JU has delivered a balanced coverage of demonstration and full- scale plants throughout Europe (Figure 6). BBI JU DEMO plants have a wide coverage of Northern, Southern and Western European countries, and there are two DEMO plants, retained for funding, planned to be set up in Slovenia and Austria. The plant of the DEMO proposal retained for funding, which will be operated in Slovenia, also foresees extending to some other pilot plants in Italy and Croatia. Flagship projects have a good geographical spread and are located in different regions across Europe.

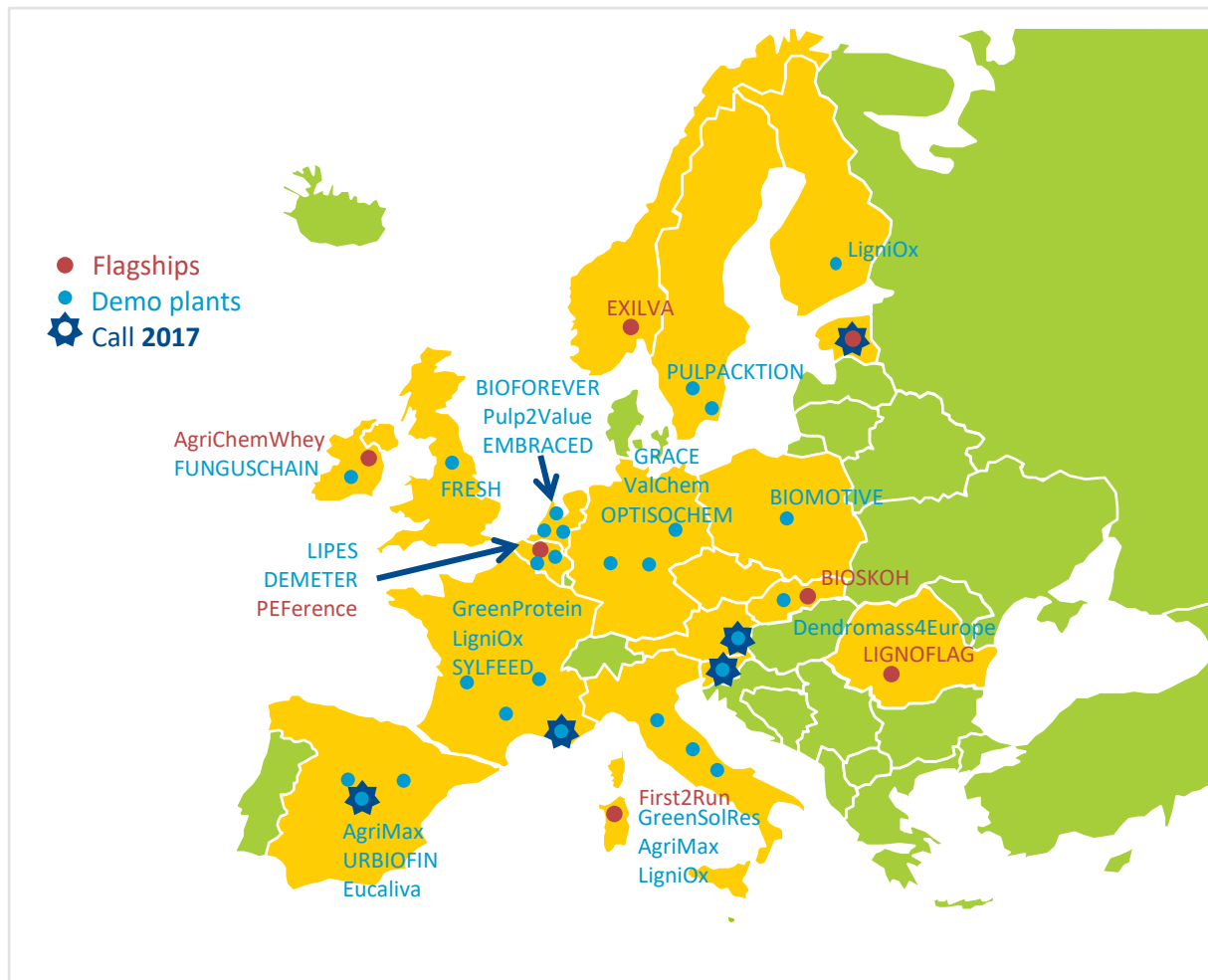


Figure 6: BBI JU Flagship & Demo on-going projects and proposals selected for funding in Call 2017.

The IA projects as a whole demonstrate the complete coverage of geographical diversity of feedstock, regional market potentials, and expertise in variable applications. Some examples of IA projects covering different aspects of SO1, SO2, SO3 and SO4 in different geographical locations include the following:

- BIOMOTIVE, which is a DEMO project funded in Call 2016, is located in Poland and aims to validate on an industrial scale polymer production for the automotive industry while valorising regional agri-based feedstock;
- Pulp2Value, which is a DEMO project funded in Call 2014, focuses on an integrated and cost-effective cascading biorefinery system to valorise regional feedstock of low-value sugar beet pulp;
- A DEMO project has been funded in Call 2017 for the pilot plant facility establishment to process aquatic biomass valorisation in the Mediterranean region;
- BIOSKOH and LIGNOFLAG are two separate Flagship projects funded in Call 2015. The industrial scale facilities are being developed in Slovakia and Romania to establish a unique, industrial scale, cost-effective biorefinery for bio-ethylene and cellulosic bioethanol.

Overall, the BBI JU project portfolio effectively covers different aspects of SOs as defined in the SIRA 2017, with a very good geographical distribution across Europe. Moreover, the distribution of action types progresses towards the objectives in the SIRA, even though, the number of CSAs remains low. The overall evolution of the BBI JU portfolio nevertheless reflects the rapid development of bio-based industries in Europe and the structuring effect delivered through the collaborative model of BBI JU's actions. More detailed information on the BBI JU projects can be found on the website¹³.

1.2.4. Project Monitoring Activities

Project monitoring encompasses all project management activities performed by BBI JU from the moment that the Grant Agreement (GA) is signed until the final payment has been made. In all project monitoring activities, BBI JU fully applied Horizon 2020 rules, procedures and IT tools¹⁴. BBI JU-specific elements are further clarified in the 'Project Management' part of BBI JU's website¹⁵, which includes "Frequently Asked Questions" (FAQ) for project coordinators.

Kick-off meetings. After GA signature, project coordinators typically organise project kick-off meetings, where all consortium members meet to discuss the practical implementation of the project. In 2017, 29 kick-off meetings for the projects from Call 2016 took place, and BBI JU participated in the vast majority.

Project reviews are carried out by external experts in order to monitor the implementation of on-going projects. In 2017, BBI JU organised project reviews for the first time: 11 BBI JU reviews took place for all 10 projects from Call 2014 and 1 project from Call 2015.

Periodic reporting and payments. In line with the overall Horizon 2020 project monitoring process, all BBI JU projects are divided into periods with a typical duration of 12-18 months. Throughout the project's lifetime, projects are expected to perform 'continuous reporting' activities, such as submitting project deliverables following the timing described in their GA. After each period, project coordinators have 60 days to submit a periodic report via the Participant Portal. After submission, BBI JU then has 90 days (the so-called 'Time To Pay', TTP) to assess the periodic report - including cost statements and relevant continuous reporting data - to complete the periodic payments. The results of project reviews (see above) are taken into account during the assessment.

In 2017, BBI JU completed 10 periodic assessments for projects from Call 2014 and finalised the related interim payments based on assessed costs statements. The average processing time for the 10 assessments and payments was 83,7 days. 8 of the 10 assessments and payments were finalised within the TTP deadline of 90 days, and 2 project payments were delayed by 1 day. The main reason for these delays was the fact that 2017 was the first time that periodic reviews, assessments and payments were organised within BBI JU, and some IT applications were not yet functioning in an optimal way. Corrective actions have been implemented in order to ensure that future payments will respect the 90-day TTP deadline. The assessment of the one project from Call 2015 will be finalised in 2018.

¹³ <https://bbi-europe.eu/projects>

¹⁴ http://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/grant-management_en.htm

¹⁵ <https://www.bbi-europe.eu/participate/project-management>

Amendments. Using Horizon 2020 procedures¹⁶, BBI JU assessed and processed 30 GA amendment requests initiated by project coordinators in 2017. Besides the GA amendment requests initiated by project coordinators, BBI JU also initiated and finalised 17 GA amendments linked to the increase of pre-financing amounts of Call 2016 projects. All processed amendments were successfully concluded.

1.2.5. Synergies with other initiatives

The BBI JU objective is to maximise the impact of the BBI JU funding to support the growth of a sustainable and competitive bio-based industrial sector in Europe. According to the Council Regulation, BBI JU should develop close synergies with other EU programmes in areas such as education, environment, competitiveness and SMEs, and with the Cohesion Policy funds and Rural Development Policy as well as the European Structural and investment funds (ESIF). Such synergies can help to strengthen local, regional and national research and innovation capabilities in the area of the BBI JU.

The BBI JU has taken actions to promote synergies, to identify complementarities and to avoid overlaps with other funding programmes. More specifically, the BBI JU work on synergies during 2017 focussed on the following:

- synergies and complementarities with the public-private partnership **SPIRE**¹⁷. SPIRE's activities cover the area of sustainable process industry through resource and energy efficiency. In 2016, a joint working group between SPIRE and BBI JU was created with the objective of working at several levels including: strategic (towards synergies between BBI JU and SPIRE work programmes); implementation (towards synergies between funded projects); and dissemination and stakeholders' networking (towards dissemination of information and promotion of networking between SPIRE and BBI JU communities). In 2017, two meetings (May and November) were organised and these are the main achievements:
 - Strategic alignment in work plans, adding complementarity and striving for synergy between topics. This is the case in all strategic orientations, being feedstock, processing, products and creating the 'environment' for successful industries, both existing and emerging. Where relevant, BBI JU refers in its annual work plan to topics in the SPIRE multi-annual work programme to avoid double funding. The two programmes pay particular attention to CO² utilisation as a feedstock so that they complement each other: BBI JU focusses on CO² from all origins but converted via biological processes. SPIRE addresses CO² from all sources via non-biological conversion processes;
 - Exchange of information on the monitoring of impact through defined 'key performance indicators';
 - Close coordination of communication activities, for example at Info Days and brokerage events, access to respective communication channels for promotional purposes (e.g. BBI JU Call 2017 brochure includes a section on synergies where SPIRE is presented), joint events for BBI JU and SPIRE projects networking under discussion;

¹⁶ http://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/grant-management/amendments_en.htm

¹⁷ <https://www.spire2030.eu/>

- Preparation of a common document outlining the teaming-up of the two partnerships for synergy of actions, assessing the added-value generated by having the two initiatives working in parallel and specifying the main achievements of the cooperation at three levels: strategic (avoiding overlaps in the work programmes), implementation (supporting connections between funded projects) and communication and networking. This document is foreseen to be adopted by the Boards of BIC and SPIRE and communicated publicly in the course of 2018.
- BBI JU should seek to develop close interactions with **ESIF**, combining it with BBI JU funding in order to strengthen national and regional research and innovation capabilities in the context of smart specialisation strategies (S3). Complementarities between the BBI JU funding programme and ESIF represent an important opportunity for these regions that have identified - among their S3 priorities - activities oriented to support the bio-based industries. It should be noted that with respect to synergies, BBI JU's focus is mainly addressed at other EU funding programs and initiatives, aimed at avoiding overlaps and identifying of gaps. On the contrary, BIC's focus is on facilitating access to finance for its members in order to keep bio-based industries investments within Europe.
- Responding to a request from the **European Bank for Reconstruction and Development (EBRD)**, a meeting was organised in November 2017 to explore potential synergies and collaborations between EBRD, BIC and BBI JU. As a result of this meeting, BIC included detailed information on EBRD, among other financial instruments (including ESIF) suitable for the bio-based industry, in its report "Access to EU Financial Instruments" published in December 2017.¹⁸
- In October 2017, BBI JU and BIC participated in a meeting with the European Commission's Joint Research Centre (JRC) to explore synergies in the context of the project **Stairways for Excellence**. The Stairway to Excellence (S2E) project aims to support EU13 Member States and their regions in developing and exploiting the synergies between the European Structural and Investment Funds (ESIF), Horizon 2020 (H2020) and other EU funding programmes, assisting them in closing the innovation gap, promoting excellence in all regions and EU countries and stimulating the early and effective implementation of national and regional Smart Specialisation Strategies. As a follow up to this interaction BBI JU will participate in a workshop that will be co-organised in March 2018, by the JRC and the Committee of Regions together with two other JUs.
- BBI JU is also exploring synergies with different ERA-NETs such as **EraCoBiotech**, an ERA-Net Cofund Action under H2020, which aims to strengthen the European Research Area (ERA) in the field of Biotechnology through the enhanced cooperation and coordination of different national and regional research programs, promoting *systems biology* and *synthetic biology* as technology drivers to speed up research and innovation in *industrial biotechnology*. A meeting between ERACoBiotech and BBI JU took place in April 2017 to explore such synergies. Following that, BBI JU presented its programme to ERACoBiotech stakeholders during a project meeting organised in Brussels on the 10th of May 2017.

¹⁸ http://biconsortium.eu/sites/biconsortium.eu/files/downloads/BIC_Financial_Instruments_web.pdf

- EIT-KICs: Potential synergies arising from the **EIT** and its **KICs** have also been addressed during 2017, namely, the identification of projects aimed at sustainably transforming natural resources into bio-based products, materials and fuels. BBi JU had the opportunity to present its activities and the funding potential during a meeting organised by KIC Climate in March 2017.

Future synergies and complementarities will be explored with other EU programmes and initiatives as they arise. Further information on EU funding synergies can also be found on the BBi JU website¹⁹.

¹⁹ <https://www.bbi-europe.eu/about/reference-documents>

1.3. CALLS FOR PROPOSALS AND GRANT INFORMATION

In 2017, BBI JU operations included the conclusion of the GAP for Call 2016, which resulted in the signature of 29 grant agreements, bringing the total number of projects of the BBI JU portfolio to 65.

In addition, BBI JU successfully implemented Call 2017. The final ranking list was adopted by the BBI JU GB on 13 December 2017, the letter of information was sent to applicants on 15 December 2017, and the Grant Agreement Preparation process was initiated before the end of the year for 17 retained proposals.

The two sections below are structured as follows:

- Section 1.3.1 describes the progress of the current project portfolio, including the ongoing projects from Calls 2014, 2015, 2016 and projects invited to GAP as a result of the Call 2017 evaluation). The description covers specifically the statistics and KPIs which are common to all Horizon 2020 programmes as well as indicators specific to BBI JU.
- Section 1.3.2 describes the Call 2017 statistics at the stage of submission and evaluation, the finalisation of GAP for projects from Call 2016 and some key lessons learned.

1.3.1. Progress against KPIs / Statistics

The progress of the BBI JU programme is monitored at four levels:

- Efficiency monitoring is based on Horizon 2020 KPIs common to all Joint Undertakings (JU)²⁰ and further indicators linked to programme monitoring²¹ and cross-cutting issues, like gender dimension, widening participation, SME participation and type of organisation. Achievements of objectives at the end of 2017 are presented in section 1.3.1.1 and in the tables in annexes 7.5 and 7.6;
- The leverage effect of private contribution versus public funding is monitored on a yearly basis. The BBI JU reports in-kind contribution in projects (IKOP) and in-kind additional activities (IKAA) on a yearly basis, together with the calculation of the leverage effect. Achievements of objectives at the end of 2017 are presented in section 1.3.1.2;
- Project outcomes are monitored through BBI JU specific KPIs described in the SIRA, measured against yearly project reporting and agreed objectives. Achievements of objectives at the end of 2017 are presented in section 1.3.1.3;
- Monitoring of the expected socio-economic and environmental impact of the BBI JU projects. Achievements at the end of 2017 are presented in section 1.3.1.4.

²⁰ Based on Annex II (PERFORMANCE INDICATORS) and Annex III (MONITORING) of Council Decision 2013/743/EU.

²¹ Indicators linked to monitoring of programme implementation, e.g. evaluation (time to inform the applicants, time to grant, etc).

1.3.1.1. Horizon 2020 KPIs and cross-cutting issues

Under Horizon 2020, the BBI JU has a legal obligation to monitor its programme implementation, to report annually and to disseminate the results of this monitoring. In addition, BBI JU reports on a quarterly basis to its Governing Board (GB). The three main KPIs through which the performance of BBI JU is monitored are Time To Inform (TTI), Time to Grant (TTG) and Time to Pay (TTP) (part of the Horizon 2020 common KPIs - see section 7.5).

In 2017, the efficient performance of BBI JU in all core operations was confirmed, continuing the positive trends observed in previous years. More specifically, all applicants of Call 2017 were informed about the evaluation results 99 days after the closure of the call, well in advance of the TTI target set for Horizon 2020 (153 days). All the GAs for proposals retained for funding from Call 2017 should be signed by 7 May 2018.

With respect to TTG, all GAs from GAP 2016 were signed on time, within an average of 231 days after the closure of the call, against a target of 245 days. The average time to pay (TTP) for pre-financing to projects from GAP 2016 was 10.4 days compared to the target of 30 days. All of them were paid on time.

Finally, in 2017, BBI JU assessed the first periodic reports (technical and financial) submitted by the projects funded under Call 2014. The average time to pay of the cost claims derived from the periodic reporting was 83,9 days compared to the target of 90 days. 80% of these payments were performed on time, two of them were late by one day.

Overall, BBI JU has operated efficiently and its performance against the three main KPIs of Horizon 2020 is better than the set targets. The high level of BBI JU's operational efficiency and the effectiveness of the implementation of the programme, as measured against the three main Horizon 2020 KPIs, was further confirmed by the interim evaluation of the initiative²². This report also confirms that the 20% target funding for SMEs has been surpassed, which demonstrates that the BBI JU programme is contributing to the development of the bio-based SMEs' landscape in Europe. Moreover, the private sector participation in the funding allocated is very pronounced, which is a cornerstone of the BBI JU. In the next paragraphs a more detailed overview of the main Horizon 2020 cross-cutting issues is provided:

- geographical distribution of participants, widening participation;
- type of organisations participating in BBI JU actions
- SME participation;
- gender dimension;

²² <https://ec.europa.eu/research/evaluations/pdf/bbi.pdf>

GEOGRAPHICAL DISTRIBUTION OF PARTICIPANTS, WIDENING PARTICIPATION

The geographical distribution of beneficiaries in BBI JU follows the trend also observed in H2020 in general, with the majority of funding going to the EU 15 (Figure 7). Similarly, EU-13 participation rates in the BBI JU calls are lower than for the EU 15 both at the level of proposals (Figure 8) and at the level of projects (Figure 9). Notably, the overall success rate of EU-13 countries in BBI JU calls is 17% compared to an overall success rate of 23% for the EU-15.

In spite of this, and although EU-13 countries receive a much lower share of the BBI JU contribution than EU-15 ones, overall this group performs better in BBI JU (7.9%) than in other programmes such as for example SC2 (5.5%) or the LEIT KET Biotechnology programme (7.2%), as pointed out in the report of the interim evaluation of the BBI JU²³.

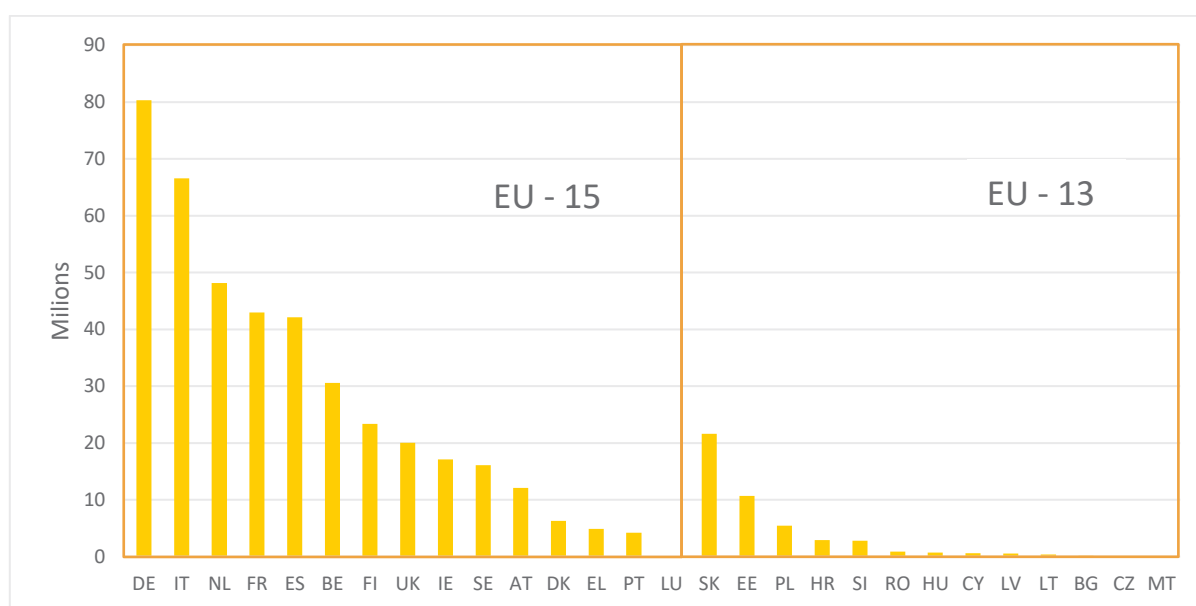


Figure 7: Grants (in € millions) per EU-15 and EU-13 Member States in Calls 2014-2017 (the data for the Call 2017 refers to retained proposals)

²³ Interim Evaluation of the BBI JU (2014-2016) operating under H2020

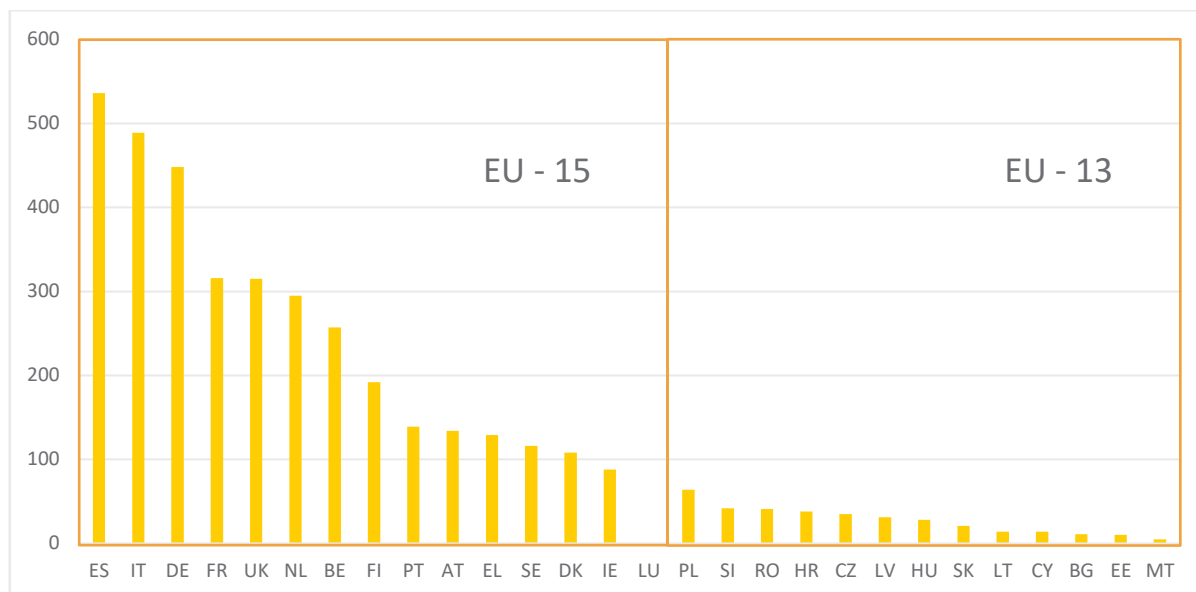


Figure 8: Distribution of applicants per country from EU-15 and EU-13 in Calls 2014-2017

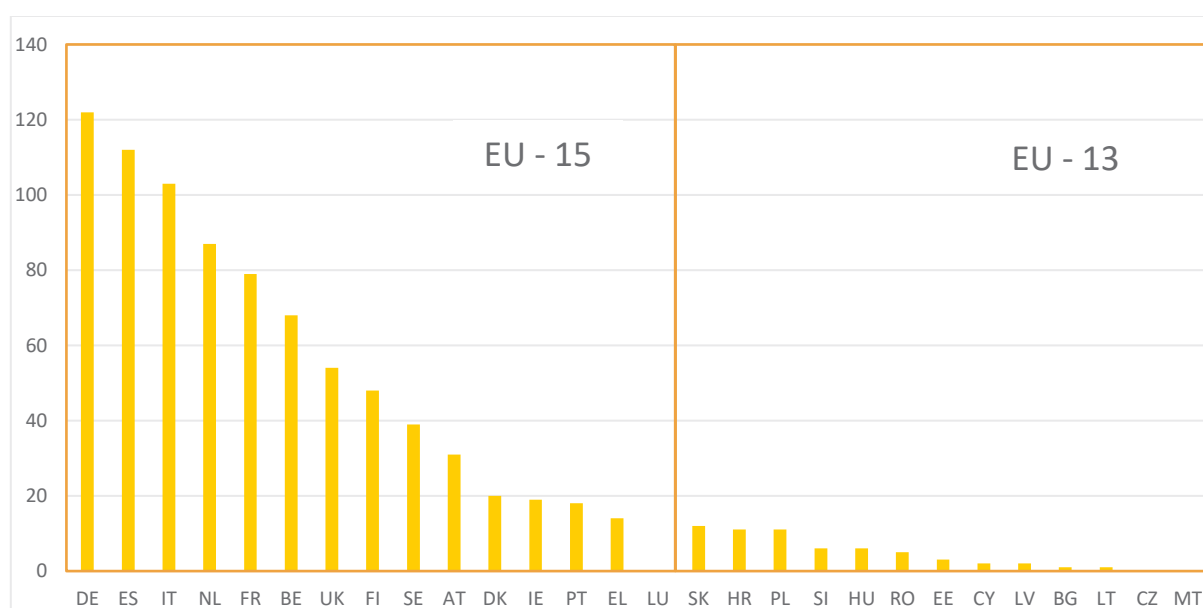


Figure 9: Distribution of beneficiaries per country from EU-15 and EU-13 in Calls 2014-2017 (the data for the Call 2017 refers to retained proposals)

The level of participation of associated and third countries in proposals (Figure 10) and projects (Figure 11) indicates a strong mobilisation from countries such as Norway, Switzerland, Turkey and Israel and a general interest in the BBI JU initiative from a broader set of countries. However, with respect to financial contributions going to associated and third countries, the budget distribution is not fully aligned with the level of participation (Figure 12), one of the main reasons being the large contribution going to Norway for a flagship.

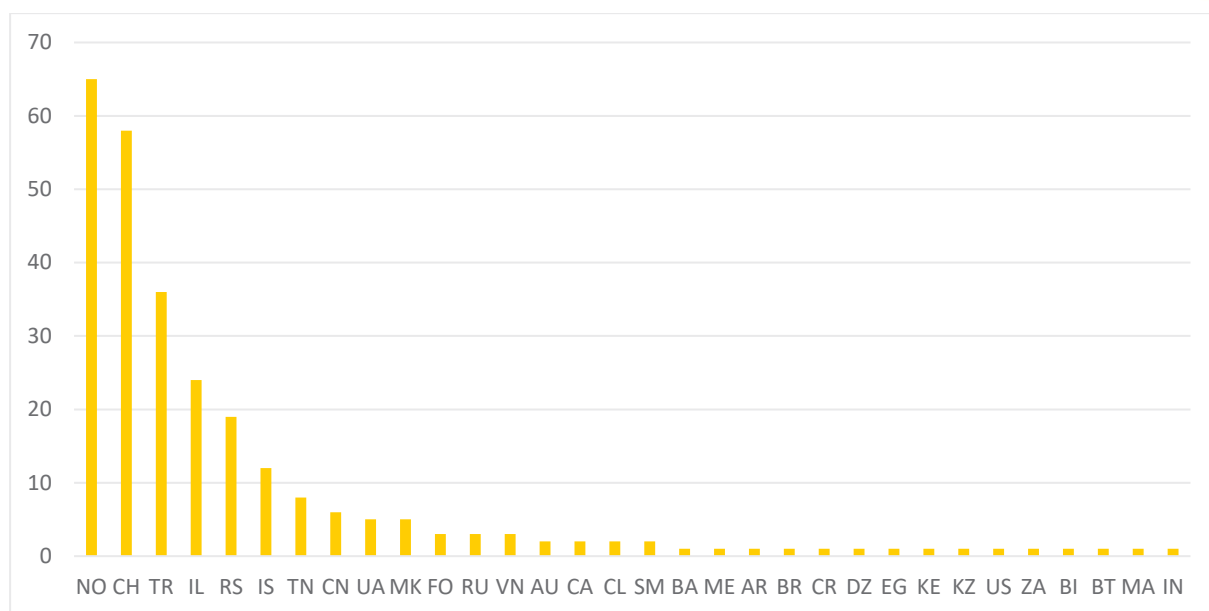


Figure 10: Distribution of applicants from associated and third countries industrialised countries and emerging economies and developing countries) in Calls 2014-2017 (the data for Call 2017 refers to retained proposals)

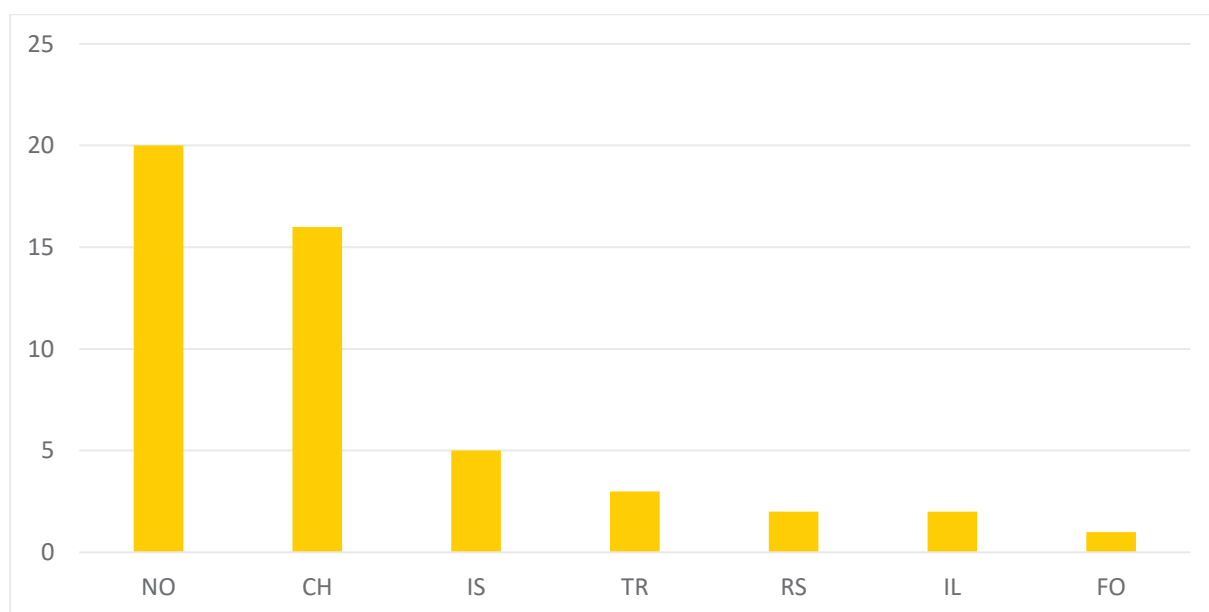


Figure 11: Distribution of beneficiaries from associated countries in Calls 2014-2017 (the data for Call 2017 refers to retained proposals)

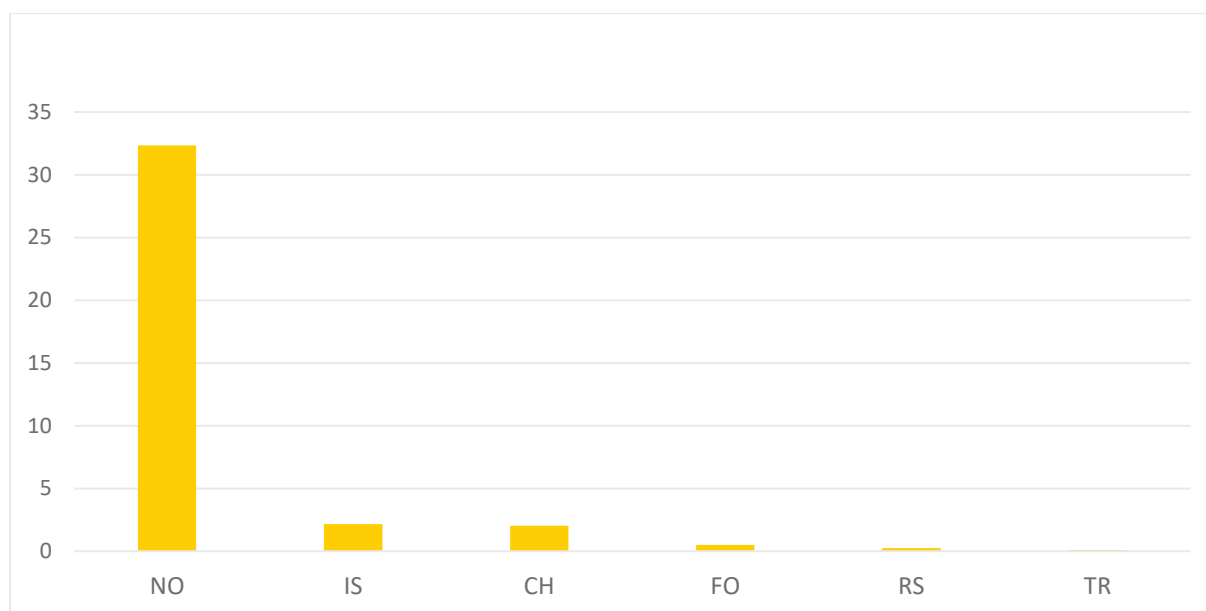


Figure 12: Grants (in € millions) per Associated Countries in Calls 2014-2017 (the data for Call 2017 refers to retained proposals)

In order to address the unbalanced geographical distribution within the EU, BBI JU instigated its widening participation strategy that was developed together with the SRG. In September 2015, BBI JU launched the strategy with the objective of improving the participation of under-represented countries in the BBI JU programme, and aimed at leveraging the full potential of the bio-based industries across Europe. The strategy includes an action plan at European, national and regional levels to mobilise stakeholders in BBI JU related areas.

The actions to be taken forward by BBI JU, BIC, the European Commission and the SRG are grouped under the following pillars:

- promoting and raising awareness of the BBI JU programme at European and national levels;
- encouraging wider and more inclusive participation in the calls;
- developing knowledge, know-how and partnerships;
- supporting the market-uptake of the results.

The actions that were undertaken in 2017 focussed mainly on the first and second pillars (i.e. promoting and raising awareness) and went further in encouraging wider participation together with development of knowledge, know-how and partnerships, as well as through the mobilisation of regional stakeholders. Relevant actions are further detailed below:

SRG

Information on national activities by SRG members: the SRG now has a dedicated member's area in BBI JU's website platform to exchange information with all Member States and associated countries. During the SRG meetings that took place in 2017, information on national activities to deploy and support the development of the bio-based industrial sector was presented.

CENTRAL AND EASTERN EUROPE

Participation in the V European Bioeconomy Congress in Lodz (20-21 November 2017). The objective of the Congress is to give the opportunity for networking to Central and Eastern European Bioregions, to support knowledge transfer between European bioregions, to increase industry involvement in local bioeconomy value chains as well as to increase participation in the European and national programmes supporting bioeconomy development. Participation in this event is linked to the letter of intentions signed in 2016 between BBI JU, BIC and the Polish regions interested in developing their local bioeconomy capabilities, representing a valuable opportunity for BBI JU to demonstrate its engagement with Eastern MS.

Study visit 'Polish excellence for sustainable development of Bioeconomy in Europe', organised by the Embassy of the Republic of Poland (17th – 18th October 2017). BBI JU participated in the panel "Bioeconomy opportunities for the European industry: "the role of Bioeconomy in the European R&D&I policies and the opportunities for Polish stakeholders" to explore industrial cooperation opportunities under H2020 with the participation of EC representatives, BIC and the European Technology Platform Plants for the Future.

MEDITERRANEAN REGIONS

BBI JU participated in the conference "Sustainable Mediterranean Bioeconomy" organised by the Italian Green Chemistry Cluster during Ecomondo 2017, in collaboration with BLUEMED and PRIMA initiatives. PRIMA and BLUEMED initiatives aim at a long-term coordination of European and non-European Countries of the area towards R&I activities in the field of bioeconomy. They are creating the trans-national synergies and complementarities, providing added value to regional, national and EU investments, required for the promotion of Mediterranean primary production and industry.

OTHER ACTIONS

Supporting national Info Days. In 2017, BBI JU participated in 9 national Info Days to EU MS and associated countries with a broad geographical coverage including less active MS in BBI JU such as Lithuania, Portugal, Greece and Croatia and associated countries such as Israel. The main purpose of national Info Days is to ensure effective dissemination of information on the 2017 call for proposals and improve the quality of proposals submitted. In addition, BBI JU communicates widely about its calls to stakeholders through its events and website. For more detailed information on the list of national Info Days see table 15 in section 2.1.2 Outreach activities.

Dedicated training to NCPs. During the 2017 meetings, the States Representatives Group drew attention to the need to provide training to NCPs to make them aware of the particularities of the BBI JU programme and to address general questions that they receive from applicants. BBI JU welcomed this request, organising on 27th April 2017 a dedicated training on the BBI JU calls for proposals in collaboration with the BioHorizon project. The training was followed by 36 NCPs from 31 countries and the agenda included the suggestions and needs received from NCPs with an interactive and participative approach. The main objectives of the training were the following:

- Explain the particularities and specificities of the BBI JU programme, including the types of projects and legal and financial aspects;

- Present in a practical and interactive way the aspects to be considered during the preparation of the proposals in the different sections (1. Excellence, 2. Impact, 3. Implementation, 4. Members of the consortium, and Budget);
- Provide a better understanding of the guide for applicants in relation to the evaluation criteria, to support a high quality of proposal submissions.

The widening participation strategy results are reflected in the evolution of the participation of Member States and associated countries in Call 2017 as compared with previous calls. Figures 13 and 14 show the number of applicants in submitted proposals per country for the four calls implemented thus far, for EU 15 and EU13 respectively. An increased mobilisation is observed for certain countries in the EU-15, especially from the Mediterranean region (e.g. Spain, France, Italy, Portugal and Greece). Similarly, the participation rates of a few EU-13 countries (e.g. Hungary, Poland, Slovenia, Romania, Czech Republic) have also increased since Call 2016. However, at the level of the beneficiaries, EU-15 countries (Figure 15) perform better than EU-13 (Figure 16), rendering their overall success rates lower than those of EU-15 applicants. This indicates that further work remains to be done to improve the quality of proposals submitted by under-represented countries (3rd pillar). BBI JU will thus be focussing its efforts in this direction.

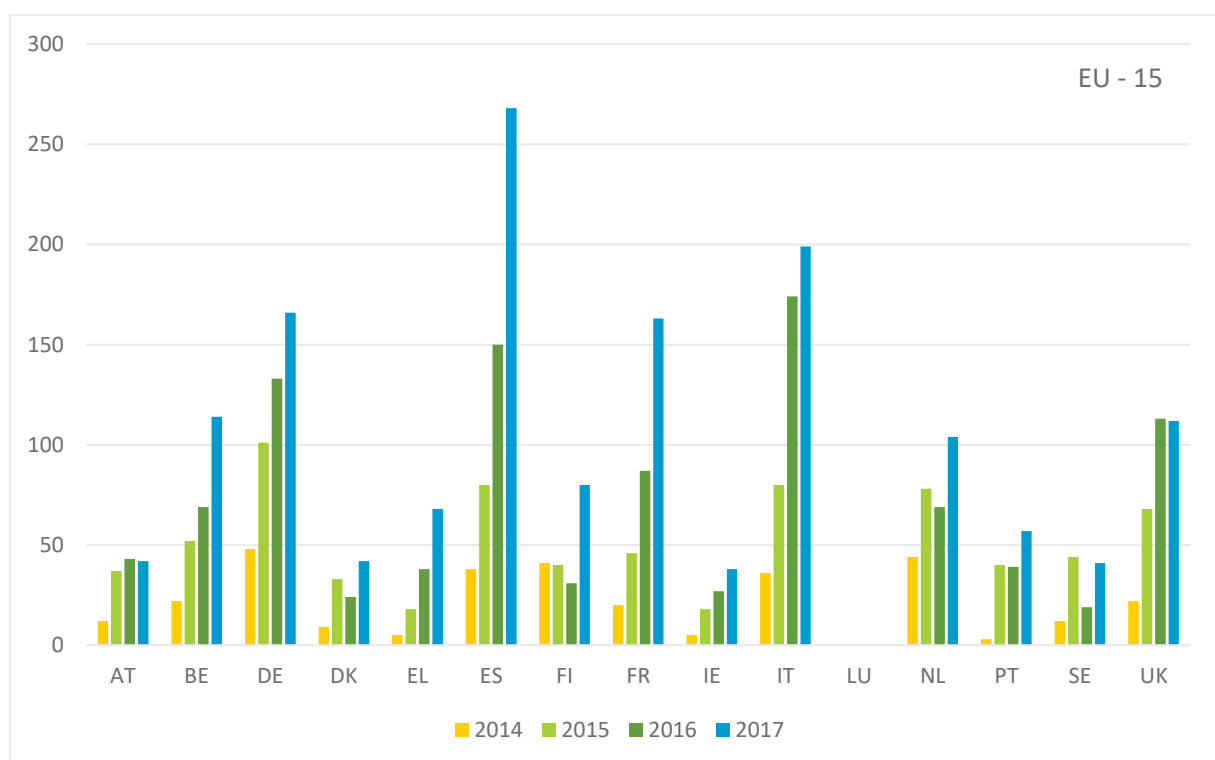


Figure 13: Distribution of applicants per country from EU-15 in Calls 2014-2017

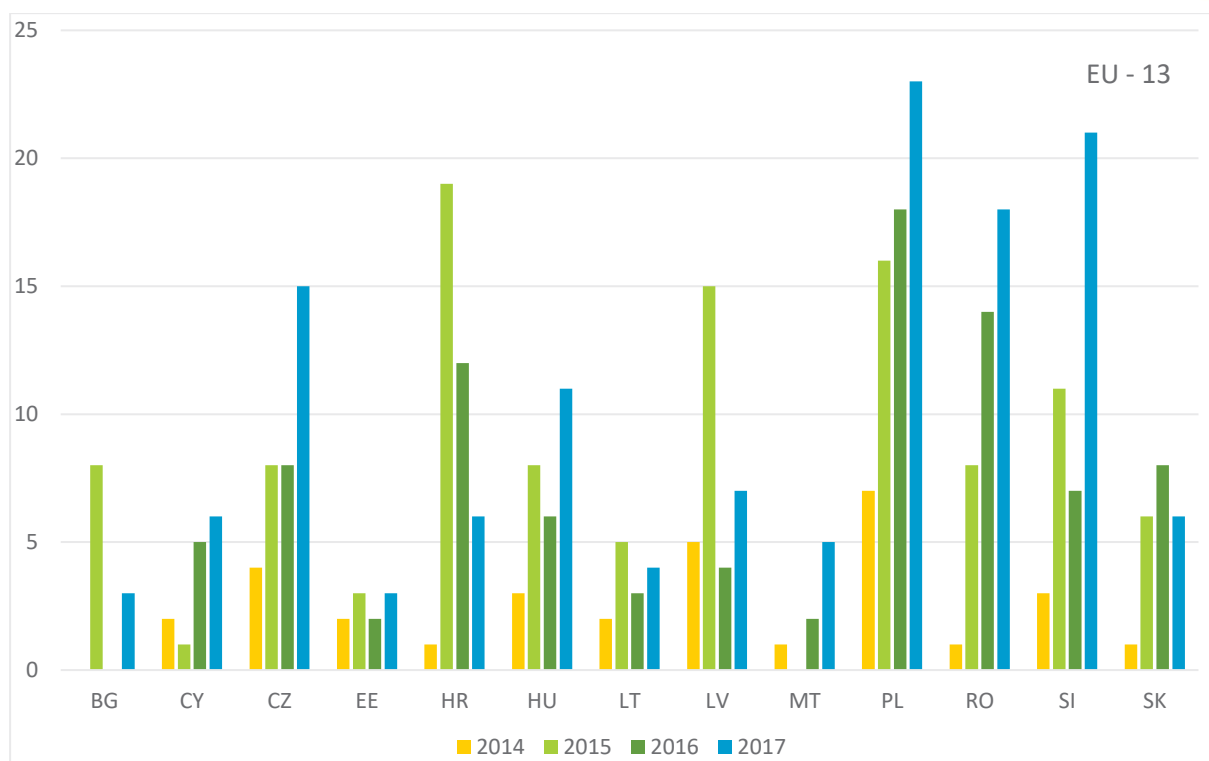


Figure 14: Distribution of applicants per country EU-13 in Calls 2014-2017

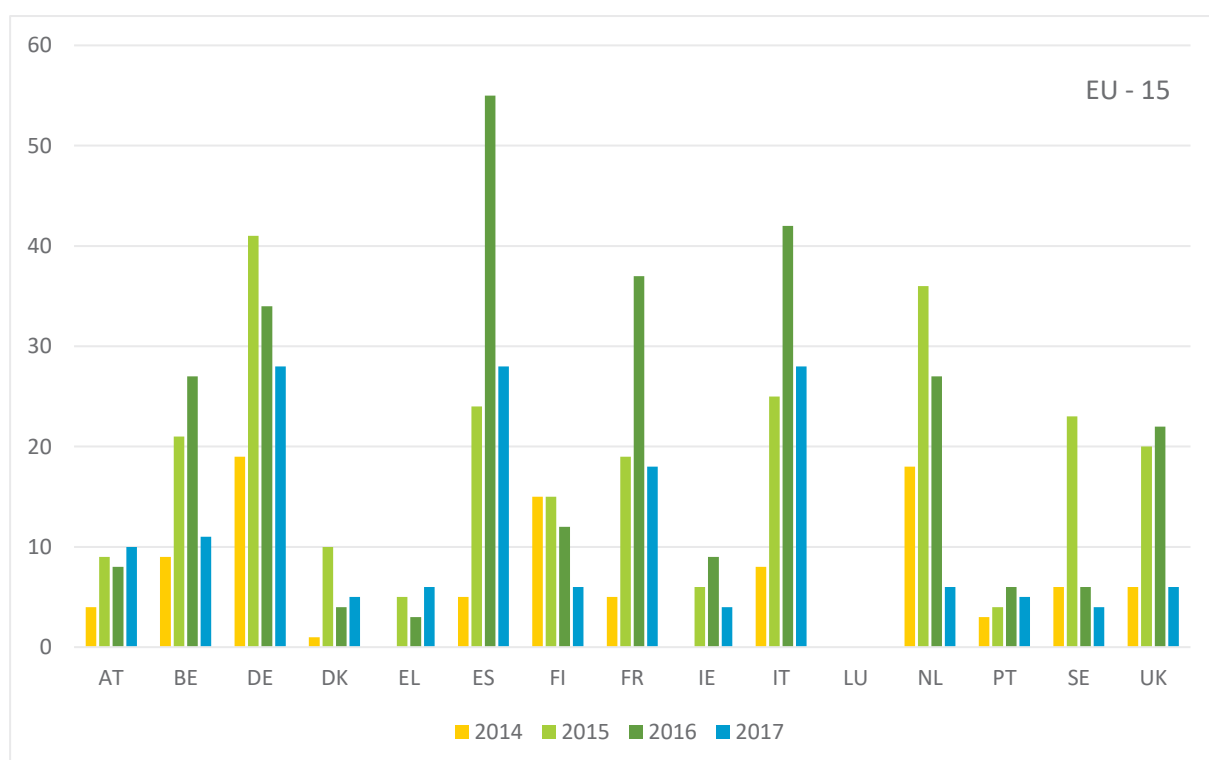


Figure 15: Distribution of beneficiaries per country from EU-15 in Calls 2014-2016 and in proposals selected for funding Call 2017

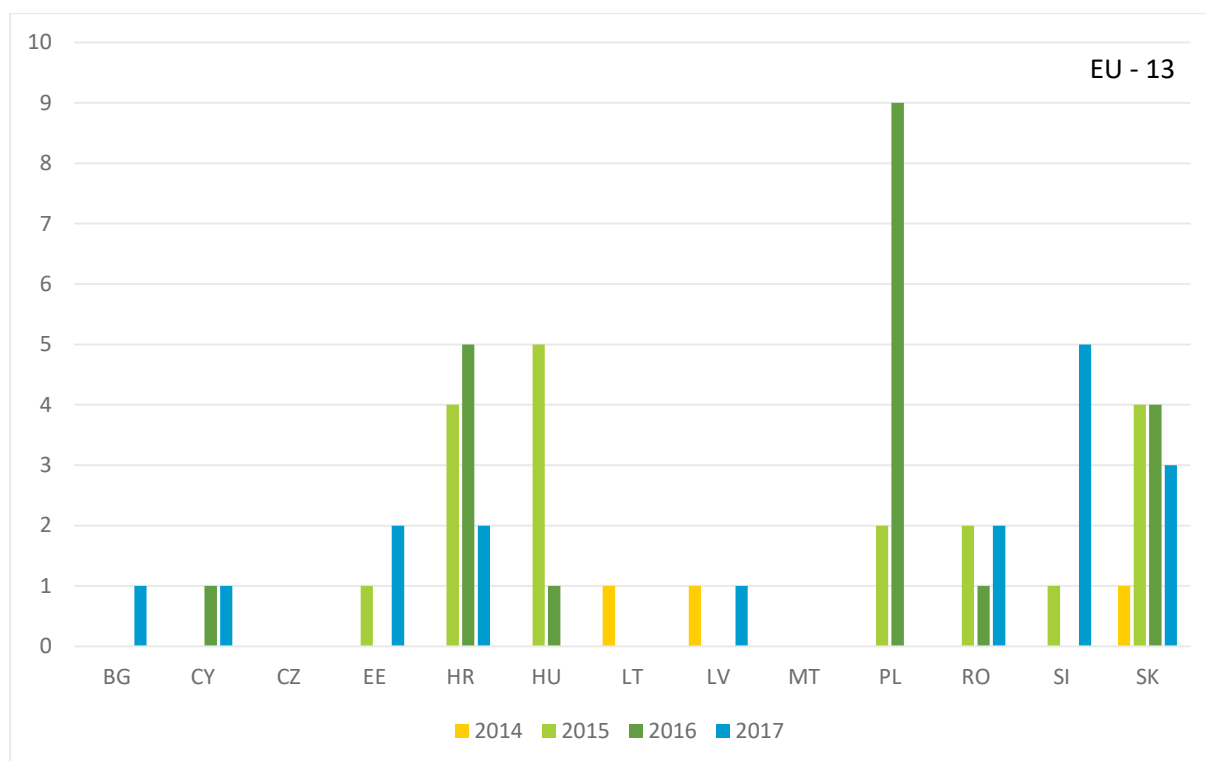


Figure 16: Distribution of beneficiaries per country from EU-13 in Calls 2014-2016 and in proposals selected for funding Call 2017

TYPE OF PARTICIPANTS IN BBI JU PROJECTS

The participation of the private sector in all BBI JU actions is a key aspect as BBI JU is an industry driven programme. Within the 65 ongoing projects from BBI JU Calls 2014, 2015 and 2016 as well as the 17 projects currently in GAP from Call 2017, 564 beneficiaries represent the private-for-profit sector, corresponding to about 69% of all BBI JU beneficiaries. The BBI JU contribution to the private-for-profit sector in those projects accounts for € 342 646 368, equivalent to 61% of the total BBI JU funding allocated (Table 4, Figure 17) representing 68.6% of participants (Figure 18).

The importance of the private sector participation is also reflected in the AWP 2018 (published in December 2017), where 6 RIA topics require the participation of BIC large industry constituent entities not receiving funding²⁴. The participation of the BIC large industry constituent entities is essential since they have in-depth knowledge of the bio-based industry sector in Europe as well as high technical capabilities; their participation would enable an essential pooling of resources and better integration along the value chain, thereby maximising the impact of the BBI JU projects.

The high participation of the private sector in the BBI JU programme is consistent with the fact that BBI JU is an industry-driven initiative. However, the beneficiaries of BBI JU projects also include an important share of research organisations, representing about 20% of the total together with higher education establishments accounting for just over 12%. These organisations play a key role in driving

²⁴ According to Commission Delegated Regulation (EU) No 623/2014

innovation and technological advancement and therefore support the successful implementation of BBI JU's projects.

Type of participants	Number of participants	Number of participants vs total participation	Received grant (in €)	Funding received vs total funding
Private-for-profit organisations	564	61.1%	342,646,368.65	68.6%
Research organisations	189	20.5%	87,583,944.88	17.5%
Higher education establishments	115	12.5%	54,478,266.92	10.9%
Others	48	5.2%	13,912,182.38	2.8%
Public body	7	08%	812,475.25	0.2%
Total	923	100%	499,433,238.08	100%

Table 4: Calls 2014-2017 number/type of participants and attribution of BBI JU funding in selected proposals.

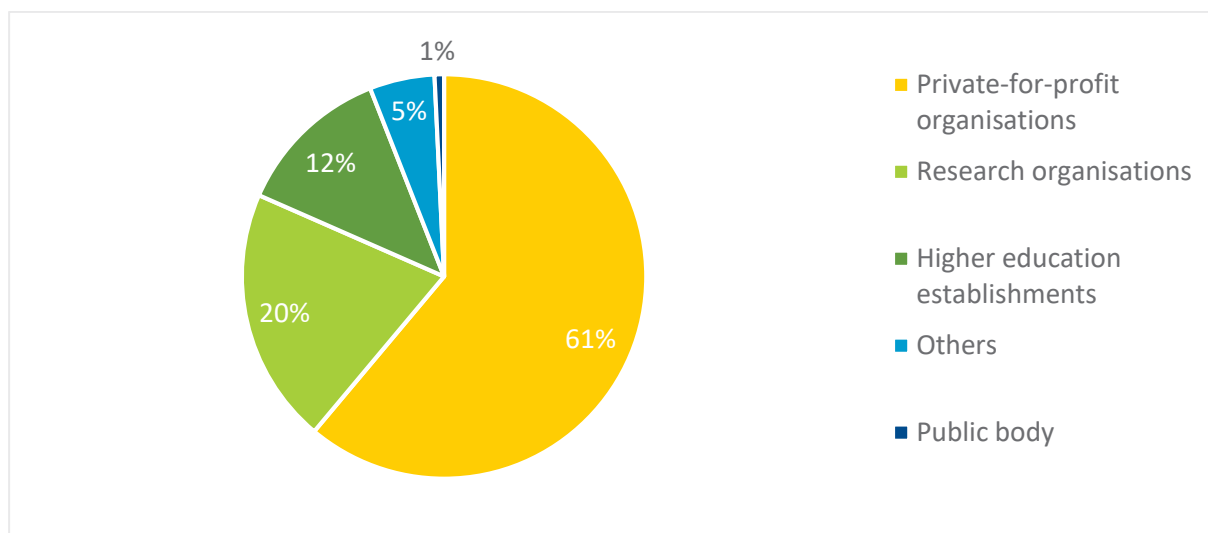


Figure 17: Calls 2014-2017 number/type of participants in selected proposals.

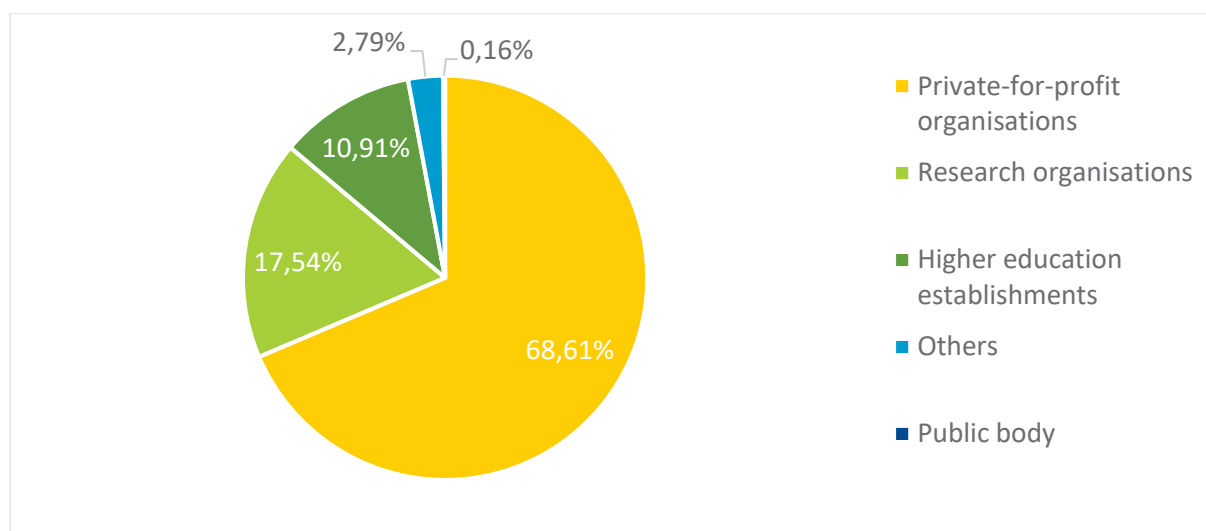


Figure 18: Calls 2014-2017 BBI JU funding/type of participants in selected proposals.

* For Call 2017 the BBI JU grant will be allocated to beneficiaries upon the finalisation of the GAP process

Similar patterns of participation are observed at the level of submission. The private-for profit organisations represent about 55% of the total participation requesting 57% of the total budget (Table 5). Nevertheless, the type of participants remains diverse with an important representation from research organisation (about 20%) and higher education establishments (about 20%) (Figure 19) representing respectively about 19% and 20% of participants (Figure 20).

Type of participants	Number of participants	Number of participants vs total participation	Requested grant (in €)	Funding requested vs total funding (%)
Private-for-profit organisations	2320	55.37%	1,256,310,285.10	56.98%
Research organisations	813	19.40%	406,611,883.71	18.44%
Higher education establishments	822	19.62%	436,492,765.88	19.80%
Others	194	4.63%	81,406,181.17	3.69%
Public body	41	0.98%	23,961,671.38	1.09%
Total	4190	100%	2,204,782,787.24	100%

Table 5: Calls 2014-2017 number/type of participants and attribution of BBI JU funding in submitted proposals.

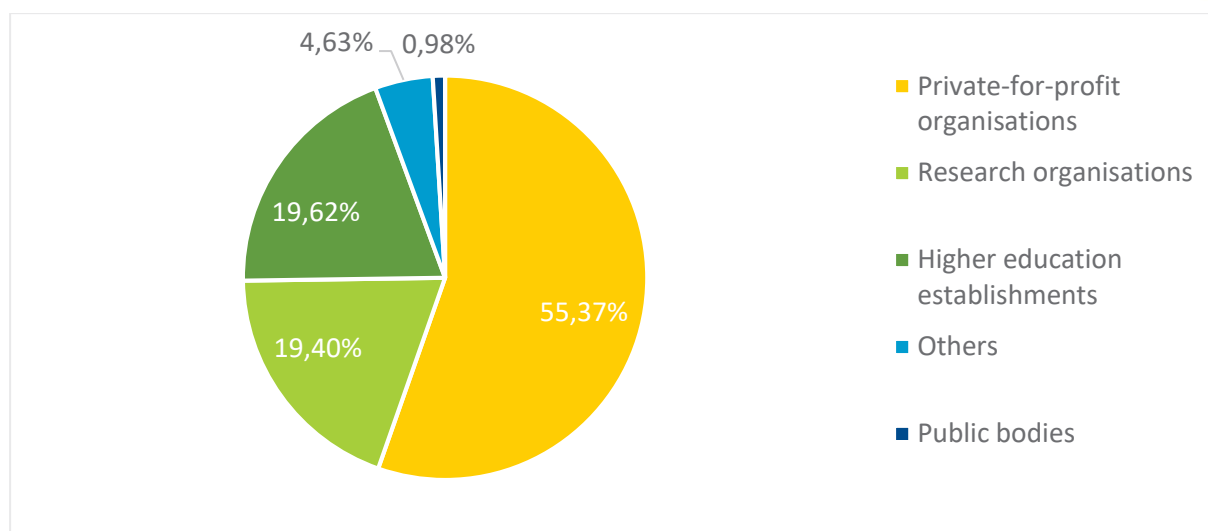


Figure 19: Calls 2014-2017 number/type of applicants.

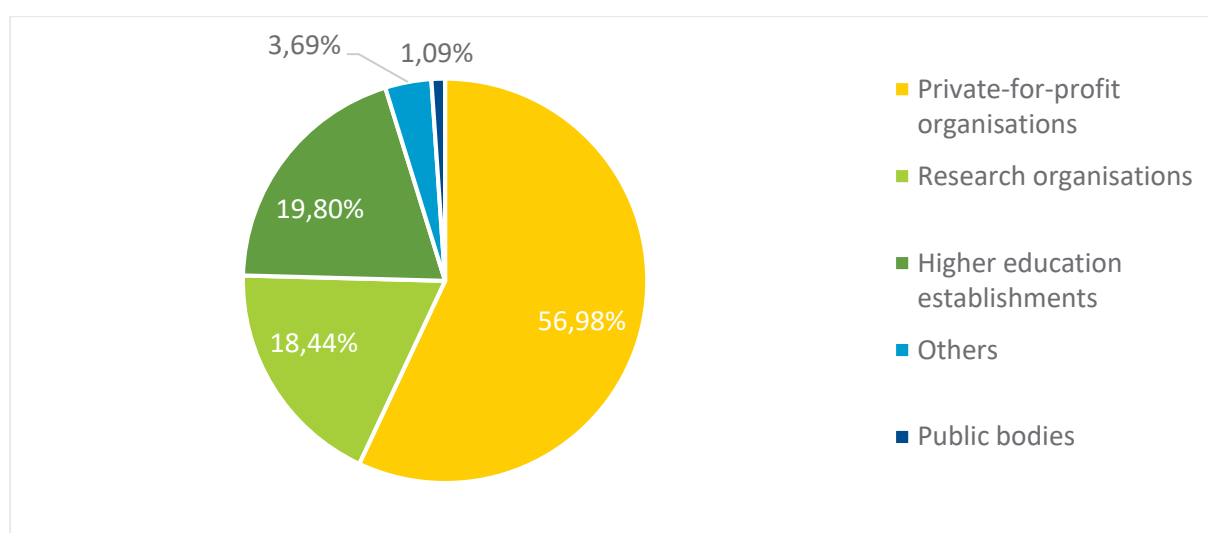


Figure 20: Calls 2014-2017 applicants requested funding/type of applicants.

SMEs PARTICIPATING IN BBI JU CALLS AND PROJECTS

SMEs are key players in the consolidation and further expansion of the European bio-based industries, being important drivers for innovation and technology development. SMEs are also essential in providing valuable support to large industrial players, often in close cooperation with RTOs, through the development of specific services, technologies or products. Bioreactor design, process optimisation, new biocatalysts for biomass processing are some examples of areas where SMEs are deeply involved and which are of great relevance for the bio-based industry.

Given the pivotal role of SMEs in this sector, the updated SIRA and the AWP 2017 set a clear target for their participation in projects, which is also in line with Horizon 2020 objectives. More specifically, the aim is that SMEs should receive at least 20% of H2020 allocated funds through the BBI JU.

The share of SME applicants (34%) (Figure 21), and the share of SME beneficiaries in retained proposals (38%) (Figure 22) demonstrate that the BBI JU programme is clearly contributing to the development

of the bio-based SMEs' landscape in Europe²⁵. This level of participation corresponds to an overall allocated funding of 27% to SMEs (Figure 23) as well as an overall success rate of 27%. Therefore, based on the current data, SME allocated funding exceeds the target mentioned in the adjusted SIRA 2017: "to receive at least 20 % of Horizon 2020 funds allocated through the BBI JU").

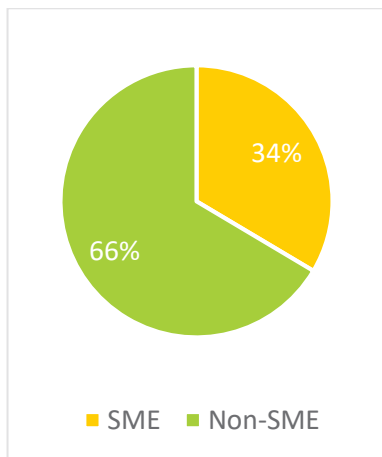


Figure 21: SME share of applicants from Calls 2014-2017

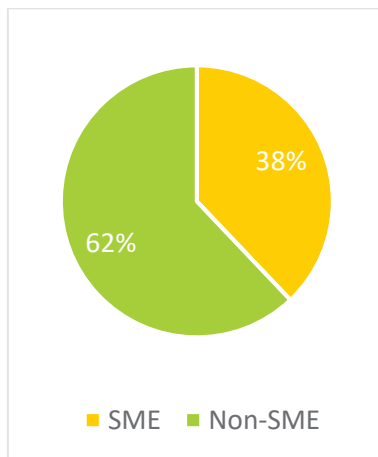


Figure 22: SME share in projects from Calls 2014 – 2017 (data from 2017 refer to retained proposals)

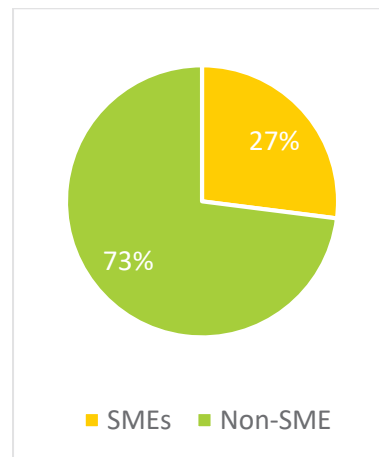


Figure 23: Share of funding of SMEs vs total in all BBI JU projects from Calls 2014 – 2017 (the data for Call 2017 refers to retained proposals)

Figure 24 shows the total SME participation in H2020 programmes in comparison with SME participation in BBI JU projects in the four calls implemented thus far. Notably, BBI JU is attracting a significantly higher participation compared to the whole Horizon 2020 programme. Figure 25 shows the level of funding to SMEs in BBI JU projects (and retained proposals invited to GAP for call 2017) in the four call implemented until now. These figures demonstrate that SMEs play a vital role in the bio-based economy and BBI JU represents a valuable instrument for innovation.

²⁵ The share of SMEs is calculated based on the applicants' self-assessment done at the submission stage.

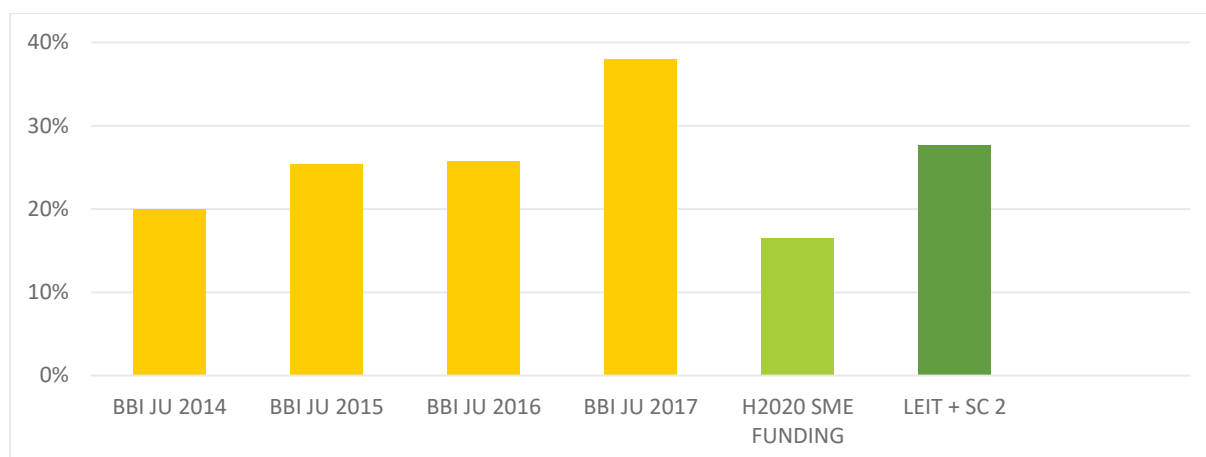


Figure 24. SME participation in BBI JU projects (Call 2014-2016) and retained proposals (Call 2017) in comparison with total H2020 total SME participation as well as SME participation in SC2 and LEIT combined²⁶

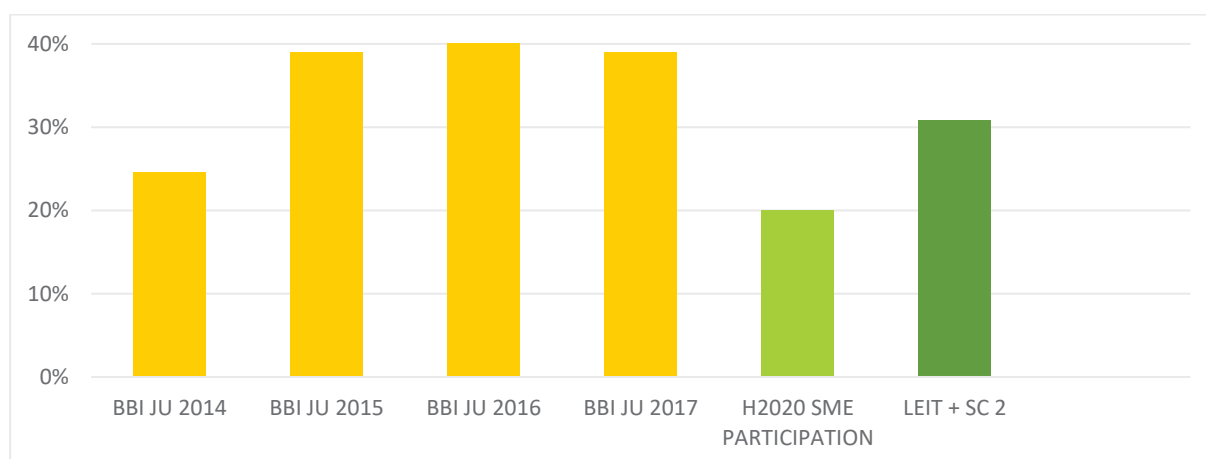


Figure 25. SME funding in BBI JU projects (Call 2014-2016) and retained proposals (Call 2017) in comparison with total H2020 total SME funding as well as SME funding in SC2 and LEIT combined²⁷

GENDER DIMENSION

In Horizon 2020, gender is a cross-cutting issue and is mainstreamed in each of the different parts of the programme, ensuring a more gender-balanced approach to research and innovation. Three objectives underpin the strategy on gender equality in Horizon 2020²⁸:

- fostering gender balance in research teams, in order to close the gaps in the participation of women versus men;

²⁶ Source for Horizon 2020 SME participation: Horizon 2020 dashboard queried on 27/02/2018.
<http://ec.europa.eu/research/participants/portal/desktop/en/projectresults/index.html>

²⁷ Source for Horizon 2020 SME funding: Horizon 2020 dashboard queried on 27/02/2018.
<http://ec.europa.eu/research/participants/portal/desktop/en/projectresults/index.html>

²⁸ <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/promoting-gender-equality-research-and-innovation>

- ensuring gender balance in decision-making, in order to reach the target of 40% of the under-represented sex in panels and groups and of 50% in advisory groups;
- integrating the gender dimension in research and innovation (R&I) content helps improve the scientific quality and societal relevance of the produced knowledge, technology and/or innovation.

Table 6 shows data on the distribution of women and men in the different groups comprising BBI JU advisory bodies, expert evaluators (Call 2017) and project coordinators from all ongoing projects. The data demonstrates that gender balance is at the expected levels with respect to all BBI JU groups, with the exception of its Governing Board, where BBI JU has no influence. Some improvement in the participation of females in the Scientific Committee and States Representatives Group may also be required.

Name of group	Total number of members	Percentage of women	Percentage of men
BBI JU Governing Board	10	10%	90%
Scientific Committee	15	60%	40%
States Representatives Group	34	59%	41%
Expert-Evaluators Call 2017	109	37%	63%
Project Coordinators	65	41%	59%

Table 6: Percentage of women/men in BBI JU advisory groups, expert groups and project coordinators

Via the ‘continuous reporting’ module of the Participant Portal, projects are asked to report on the gender of researchers and other workforce members involved in the project. Since the ‘gender’ module only needs to be completed during the periodic reporting phase, and since only 11 periodic reports were submitted in 2017, gender-related data is not yet available for all BB JU projects. Nevertheless, based on data up to 31 December 2017, 1326 female staff are involved in BBI JU projects, compared to 1682 male staff, resulting in a gender balance of 44% female – 56% male.

1.3.1.2. BBI JU project portfolio: BBI JU specific KPIs

MONITORING OF BBI JU SPECIFIC KPIs: PROCESS AND METHODOLOGY

The adjusted SIRA 2017²⁹ establishes 8 specific BBI JU KPIs and their targets for 2020 (Table 7). It also includes overall objectives for the broader socio-economic and environmental impact of the whole sector of the bio-based industries in Europe. The main changes introduced by the SIRA 2017 regarding the KPIs are the inclusion of KPI 8 on TRL gain to monitor the progress in the maturity level of the

²⁹ The definition of the KPIs can be found in the [SIRA 2017](#).

technologies developed by RIAs, and a more detailed definition of the KPIs and types of actions addressed by each KPI.

These modifications – together with the KPIs' definition, monitoring and assessment - have taken into account the recommendations from the BBI JU interim evaluation, whose implementation was discussed among BIC, BBI JU advisory bodies and project coordinators.

KPI 3 and KPI 7, respectively the number of BBI JU grant agreements and number of BBI JU flagship grant agreements, are figures reflecting the current status of the BBI JU project portfolio at the end of 2017. KPIs 1, 2, 4, 5, 6 and 8 refer to the expected results by 2020 and their results are provided by project coordinators through an annual questionnaire, as described hereafter.

KPIs numbering and definition	KPI target by 2020
KPI 1 - New cross-sector interconnections in BBI JU projects	36
KPI 2 - New bio-based value chains created with BBI JU projects	10
KPI 3 - Number of grant agreements signed between BBI JU and the project consortia	200
KPI 4 - New bio-based building blocks	5
KPI 5 - New bio-based materials	50
KPI 6 - New demonstrated 'consumer' products based on bio-based chemicals and materials in IA projects	30
KPI 7 - Number of flagship grant agreements signed between the BBI JU joint undertaking and project consortia	5
KPI 8 - Number of validated technologies that have realised a 'TRL gain' of at least one level in RIA projects	20

Table 7: BBI JU specific KPIs.

PROCESS AND METHODOLOGY FOR THE KPI REPORTED BY PROJECTS

The BBI JU specific KPIs are defined at a programme level. The progress of KPIs 1, 2, 4, 5, 6 and 8 is monitored and analysed through the reporting of the individual contributions of each BBI JU ongoing project. To this aim, a questionnaire was developed to gather annually, information on the expected results of the BBI JU KPIs and the expected socio-economic and environmental impact of BBI JU projects by 2020 or by the end of the project (the earliest date). This questionnaire has been updated in light of the revision of the SIRA, taking into account different consultations with EC, BIC and BBI JU advisory bodies and Governing Board and the recommendations arising from the BBI JU interim evaluation.

The scope of the questionnaire is to gather information on the expected results of the BBI JU KPIs and the expected socio-economic and environmental impact of BBI JU projects by 2020 or by the end of the project (the earliest date), as reported by project coordinators in 2017.

The questionnaire contains the complete KPI definitions included in the SIRA and it is accompanied by a detailed explanatory document on how to answer. It gathers data on both quantitative and qualitative aspects of BBI JU KPIs, together with their expected socio-economic and environmental impact. All ongoing project coordinators are requested to report annually, via the questionnaire, **the expected results by 2020 relating to each of BBI JU KPIs**. Their contributions are then aggregated and interpreted at a programme level.

The questionnaire was distributed to all BBI JU's 65 ongoing projects' coordinators on October 2017, and the present analysis is based on the feedback received from all 65 projects (100% response rate). These 65 projects resulted from the calls of the first three years (2014, 2015 and 2016), out of a total of 7 years (2014-2020).

It is important to note that BBI JU's ongoing projects result from the GAs signed from 2015 until 2017 and consequently they are at very different stages of their lifetime, none of them having finished yet.

In order to allow the monitoring of the progress towards 2020 targets, BBI JU requests project coordinators to report on their expected results by 2020 or by the end of the project (the earliest date) through the mentioned questionnaire, providing a trend in achieving the KPIs' 2020 targets. This questionnaire and the monitoring methodology were consulted with the BBI JU advisory bodies, BIC and the EC, who provided valuable inputs for its improvement. These results will be monitored during the whole lifetime, contributing to a deeper understanding of the development of the BBI JU project portfolio and its impact on the evolution and consolidation of the bio-based industries in Europe. The verification of these contributions at the end of the projects will enable an accurate analysis of the actual BBI JU KPI results. The BBI JU, in cooperation with BIC and EC, will keep on working on the development of a consistent methodology to monitor and verify the results as they will be reported by projects throughout their life cycle.

RESULTS AND INTERPRETATION

The results presented in this section correspond to the feedback provided by projects on their expected results by 2020 or by the end of the project (the earliest date) to KPIs 1, 2, 4, 5, 6 and 8. The actual values of KPIs 3 and 7 are directly aggregated at a programme level. The analysis of these results was discussed with BIC and the BBI JU thematic unit at the European Commission. Figure 26 shows the results of KPIs as expected by 2020 by the ongoing projects, compared to the 2020 target set by the SIRA.

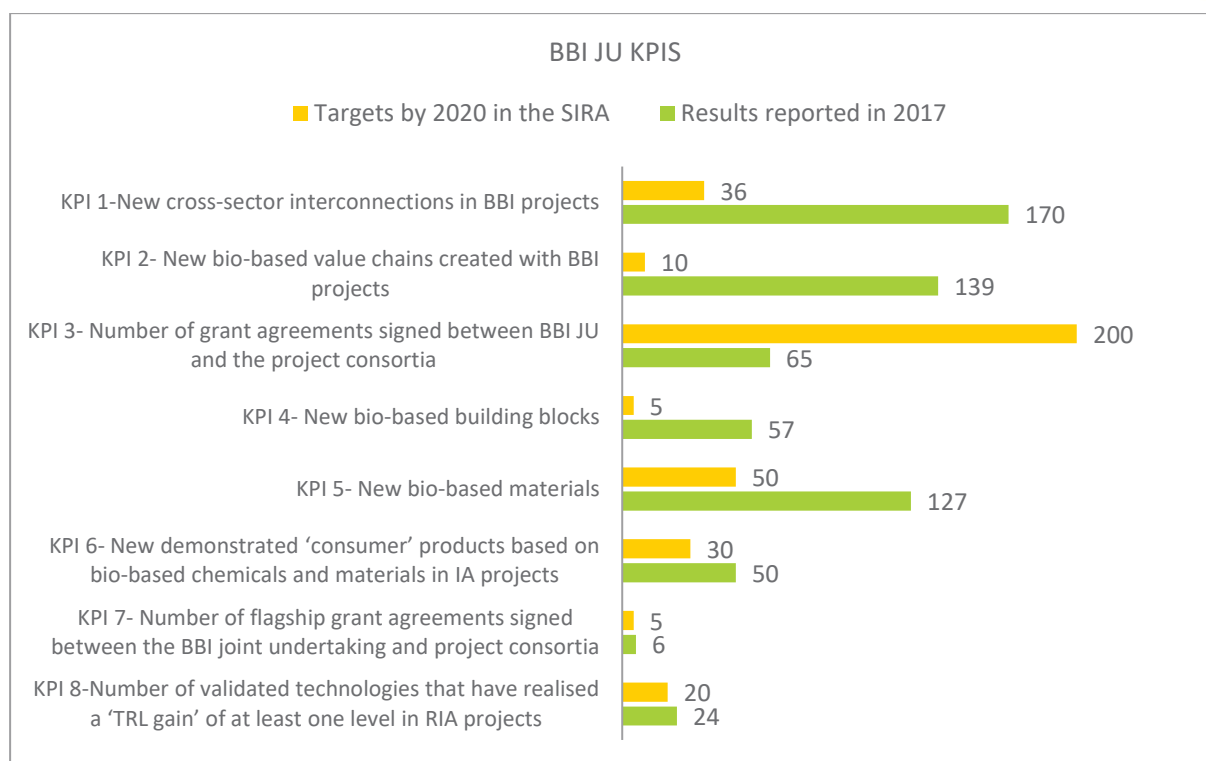


Figure 26: KPIs forecasted results by 2020: expected results reported by projects' coordinators in 2017 versus targets in the SIRA.

The outcome of the questionnaire confirms the very positive trend observed last year, demonstrating that all but one KPI is already exceeding the 2020 targets. The number of signed GAs (KPI 3) already amounts to 65 considering only the calls of the first 3 years, out of a total of 7. These results reflect the systemic change and structuring effect of the BBI JU initiative taking place in Europe, as already mentioned in the conclusions of the BBI JU Interim Evaluation: *"The main positive effects of the BBI JU in terms of the competitiveness of BBI JU technologies come via the encouragement and support of value chain-driven cooperation across sectors ("structuring effect") and via innovation-driven mobilization of key stakeholders ("the mobilizing effect")"*.

Figure 27 shows for each KPI the reported expected contributions per type of action. Considering that the BBI JU project portfolio is composed by 33 RIAs, 20 DEMOs, 6 CSA and 6 Flagships, we can observe that, while RIAs contribute significantly to the overall results, IAs display an overall stronger contribution to most of the KPIs.

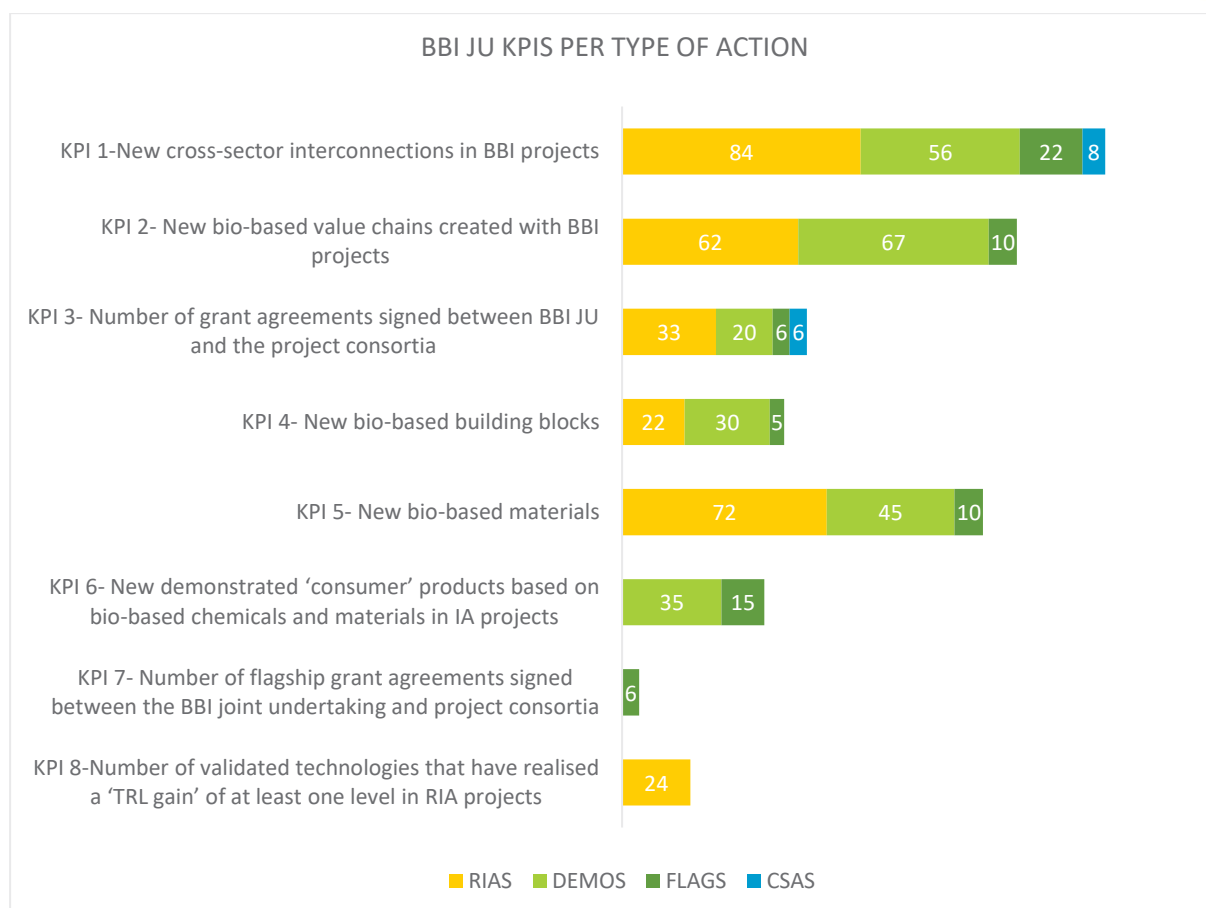


Figure 27: KPIs expected results by 2020 per type of action.

KPI 1: NEW CROSS-SECTOR INTERCONNECTIONS IN BBI JU PROJECTS

Definition: Number of new forms of cooperation in BBI JU value chains. This KPI refers to cooperation between companies and other actors from different sectors, who interconnect/cooperate to build new value chains. These interconnections are new in the sense that the actors have not previously engaged with each other in cooperation or business in a value chain (even if they have worked together in a completely different field). The new interconnection/cooperation can concern feedstock, technology, product markets, regions and business models.

Projects are requested to report the number of new cross-sector interconnections and to provide a description of each of them, as well as to indicate the new cross sector interconnections among sectors in the three segments of the value chain:

- **Primary sector and biomass origin:** Agriculture, forestry, aquatic, organic residues & gaseous side streams (CO₂), and municipal & industrial organic waste;
- **Processing and transformation:** Food & feed processing, paper and pulp, marine & aquatic, collection, separation and processing of organic waste, industrial biotechnology, engineering and equipment, chemical industry, and pre-treatment downstream processing;

- **End users:** packaging, medical, healthcare, home and personal care, pharmaceutical, food and feed, textile, additives, automotive, construction, chemicals, equipment producers & designers, adhesives, electronics and biofuels & bioenergy.

REPORTED EXPECTED RESULTS

Projects report that they expect to create **170 new cross sector interconnections by 2020 versus the target of 36 in the SIRA.**

The 170 new cross sector interconnections show the following distribution per type of action: 84 in RIAs, 56 in DEMOs, 22 in FLAGs, 8 in CSAs. The type of actions showing a higher ratio of interconnections per project are flagships (3,7 new interconnections per project), followed by DEMOs (2,8), RIAs (2,5) and CSA (1,3).

Figures 28, 29 and 30 show the number of new interconnections reported that involve involving different sectors in the three segments of the value chain: primary sector and feedstock providers, processing and transformation and end users.

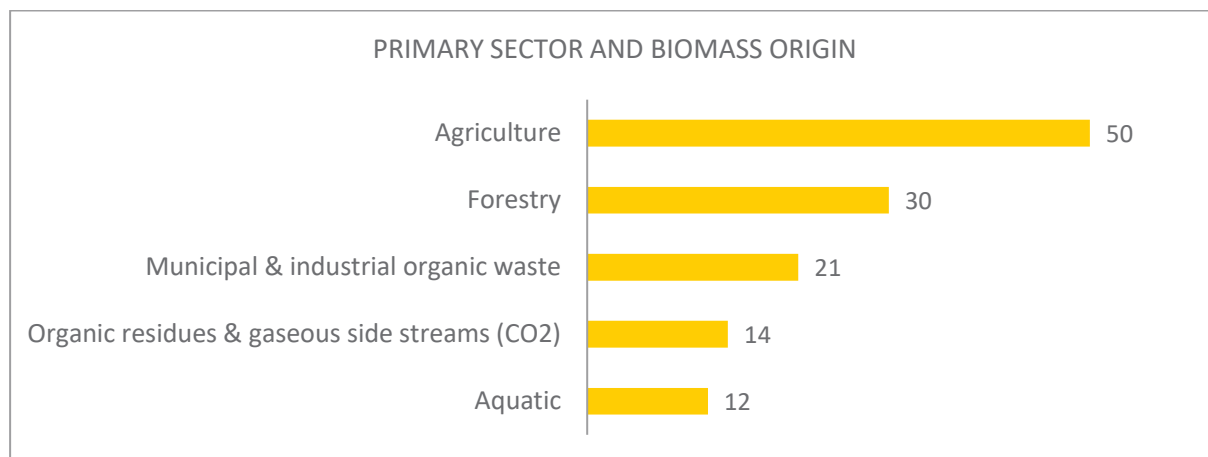


Figure 28: Number of new interconnections reported that involve sectors related to different origins of feedstock.

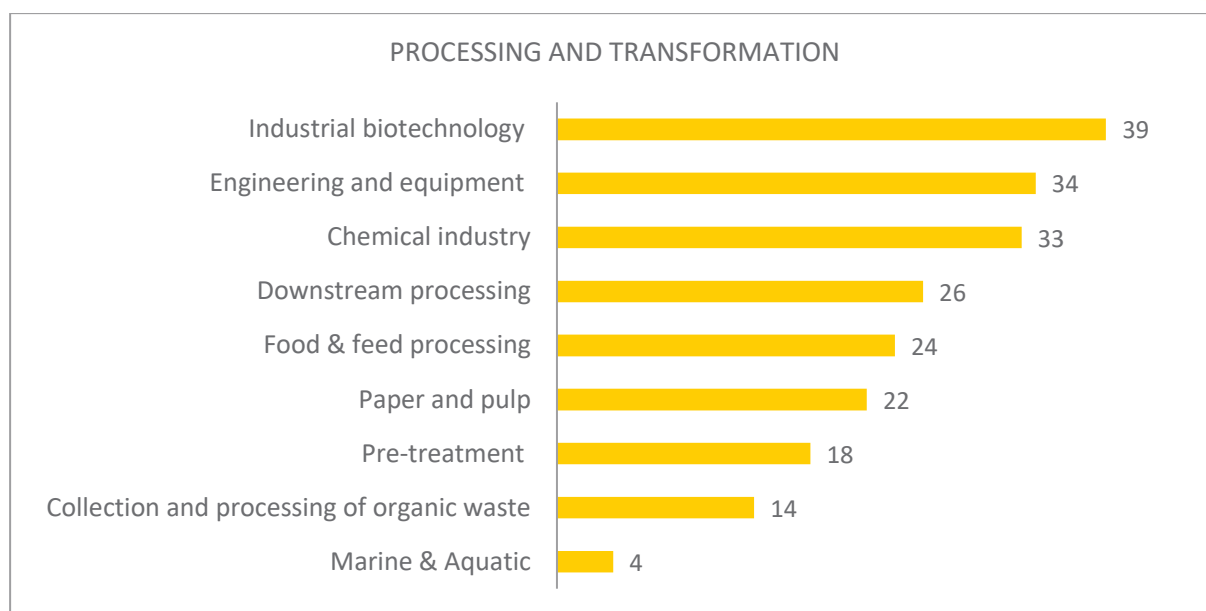


Figure 29: Number of new interconnections reported that involve different sectors related to processing and transformation.

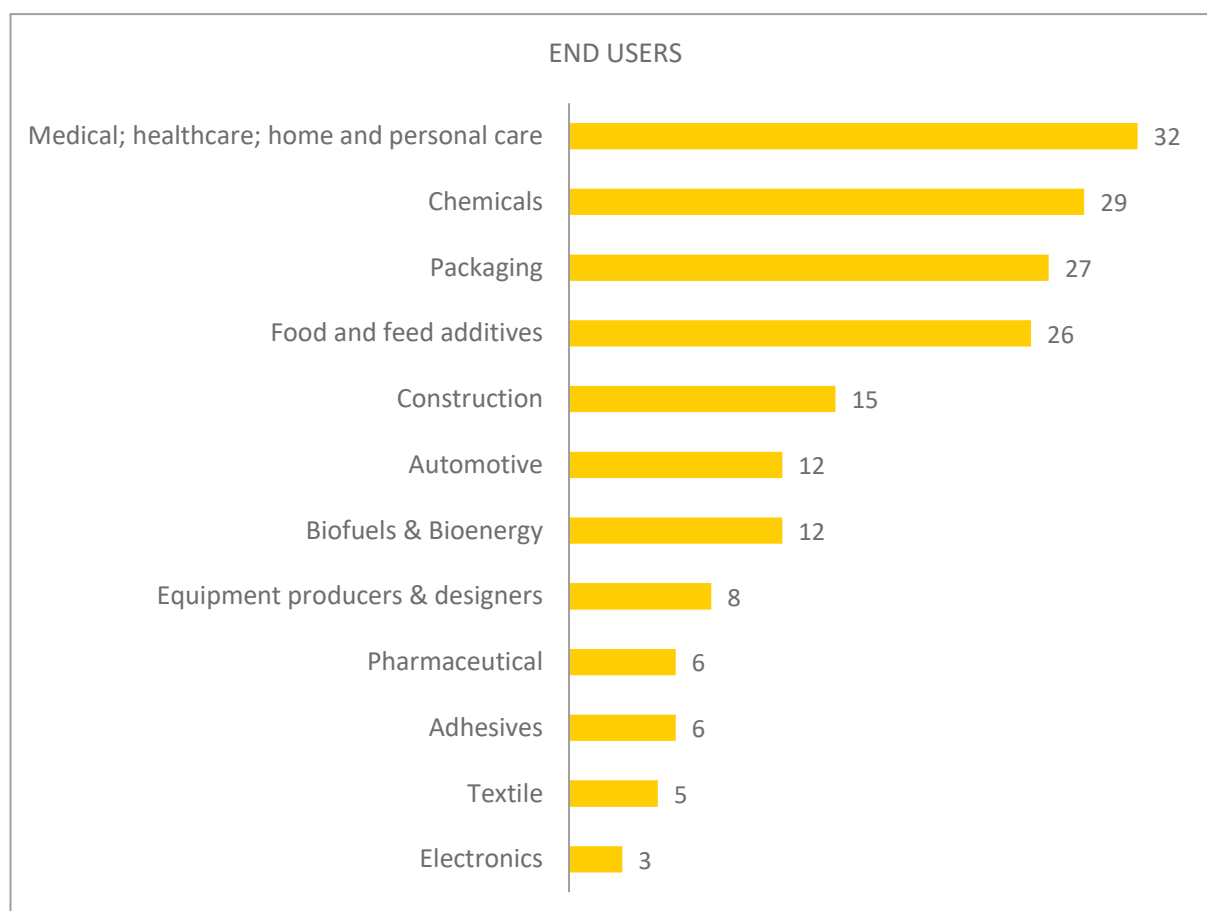


Figure 30: Number of new interconnections that involve different end users' sectors.

The reported new cross sector interconnections are very diverse: each interconnection may involve two elements (e.g. feedstock and end users), three elements (e.g. feedstock, technology and end users) or more (e.g. different feedstocks processed with various technologies to deliver one or more applications in a given end-users' sector).

Table 8 shows a matrix with the interconnections between feedstock origin and end users. The colour grading indicates the frequency of interconnections reported among sectors.

	Agriculture	Forestry	Aquatic	Organic residues & gaseous side streams (CO ₂)	Municipal & industrial organic waste
Packaging	8	7	0	3	5
Medical; healthcare; home and personal care	9	5	4	0	4
Pharmaceutical	2	1	1	0	1
Food and feed additives	9	2	4	1	3
Textile	1	1	0	1	0
Automotive	4	6	0	3	0
Construction	5	6	0	2	0
Chemicals	11	8	0	3	4
Equipment producers & designers	1	3	0	0	1
Adhesives	2	3	0	2	2
Electronics	3	0	0	0	1
Biofuels & Bioenergy	8	1	0	1	2
Other sectors (<i>indicate the sector, add new rows if applicable</i>)	4	2	0	0	0

Table 8: Matrix showing 2-D interconnections between feedstocks of different origin and end users.

The distribution of sectors involved in the new interconnections reflects the trends in the bio-based industries and is in line with the broadening of the scope of the SIRA 2017. There is a large initial involvement of forest-based and agri-based sectors, which were already included in the SIRA in its

original version, and there is an increasing presence of emerging sectors, such as the aquatic, organic waste and organic residues sectors.

The highest number of interconnections involves agriculture, forestry, chemicals, medical & health care and packaging. There is also a significant number of interconnections involving new feedstocks, such as aquatic and municipal organic waste, reflecting their increasing importance in the bio-based industries.

EXAMPLES OF NEW CROSS-SECTOR INTERCONNECTIONS

- Forestry and packaging: different DEMO projects, such as FRESH and PULPACKTION use wood cellulosic feedstock to produce packaging solutions with different properties (biodegradability, recyclability, better functionalities);
- Pulp and paper and forestry sectors interconnected with the fish feed sector: The DEMO project SYLFEED produces protein-rich ingredients (single cell proteins) from cellulosic feedstock to be used as fish feed;
- Aquatic sector interconnected with health and personal care: BIOSEA projects uses algal biomass to produce high added-value personal care products and MACROCASCADE project valorises macro algae (seaweed) biomass to obtain compounds for food, feed, cosmetics and pharmaceutical products;
- Organic residues and waste with chemicals and bio-polymers: AFTERLIFE project recovers relevant fractions of wastewater to obtain value-added bio-polymers.

KPI 1: CONCLUSION AND TRENDS

The expected results for KPI1 show a very positive trend: **the total new interconnections expected by 2020 is 170**, exceeding the target (36) established in the SIRA. Flagships show the largest average ratio of new interconnections per project (3,7)

The large amount of reported new interconnections reflects the **structuring effect** of the BBi JU, fostering interactions among sectors in a value chain where they had not collaborated before. These new cross-sector collaborations also reflect the ongoing process of **de-fragmentation** of the bio-based industries supported by a greater interaction among actors in different sectors across all segments of the value chain.

The frequency of sectors involved in the interconnection reflects the **evolution of the bio-based industries sector towards a more inclusive approach**. Forestry and agriculture, traditionally very active in this sector, account for the largest amount of interconnections. At the same time, there is an important emerging number of interconnections involving new feedstocks as aquatic, municipal solid waste and organic residues.

KPI 2: NEW BIO-BASED VALUE CHAINS CREATED WITH BBI JU PROJECTS

Definition: Number of new value chains (from raw material to product application) realised with BBI JU projects. A value chain is considered new when at least one of its segments is new: either the biomass feedstock, the processing, the end product or its application(s). A new value chain is created when its resulting (new) product or service has been tested and validated to be ready for a specified and accepted market application (IA). The new value chains are economically viable and fulfil all relevant sustainability criteria. Each of the value chains has elaborated business cases or plans for commercialisation (if not already scaled up to flagship projects - see objective 7). RIA results are delivered with the aim to facilitate or create a value chain, but by themselves do not create whole value chains.

Projects are requested to report the number of new bio-based value chains and provide a description of each of them. In addition, they indicate the origin of the feedstock for each of the new value chains: agri-based, forest-based, aquatic or Bio-based residues (incl. organic waste) and CO₂ from bio-based operations.

In addition, information is requested about the novelty in the value chain: feedstock, technologies, markets, supply chain management and replicability of the value chain in other regions.

REPORTED EXPECTED RESULTS

Projects report they expect to create by 2020 **139 new bio-based value chains versus the target of 10 in the SIRA**. These results show that the bio-based sector is experimenting a faster transformation than expected: a large number of sectors, types of feedstock and actors that were not traditionally part of the bio-based economy are not becoming fully involved in it, thereby creating a great number of new value chains and interconnections.

The 139 new bio-based value chains show the following distribution per type of action: 62 in RIAs, 67 in DEMOs, 10 in FLAGs. The highest average of expected new bio-based value chains per project correspond to DEMOs (3,35), followed by RIAs and Flagships.

Figure 31 shows the percentage of value chains indicating these feedstock origins.

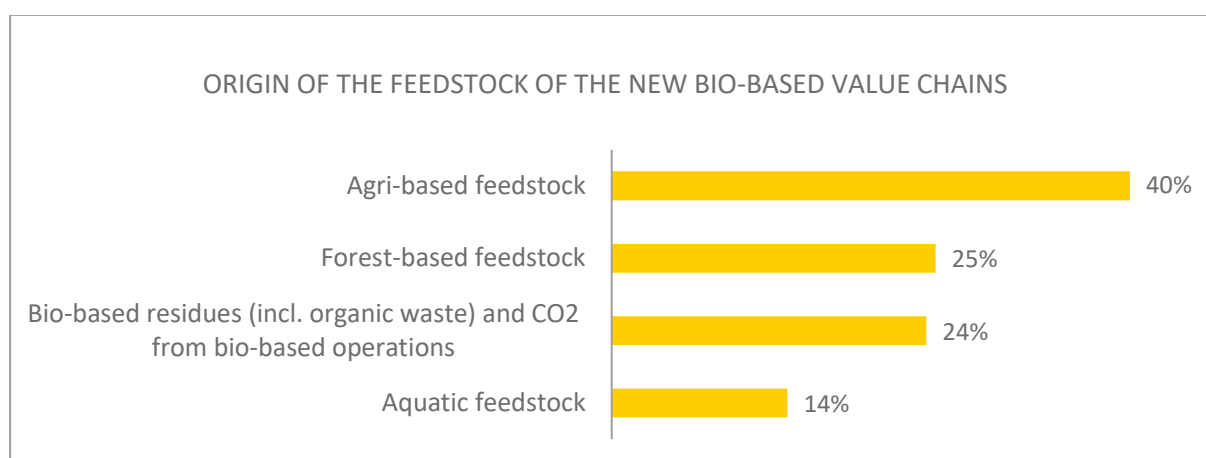


Figure 31: Percentage of the reported new value chains indicating different origin of feedstock.

The main aspects of novelty addressed by the new bio-based value chains are the following, as shown by figure 32:

- Creation of new markets or products (61% of the new value chains)
- Combining different existing technologies (52%)
- Using new sources of biomass (47%)
- Using new technologies (43%)

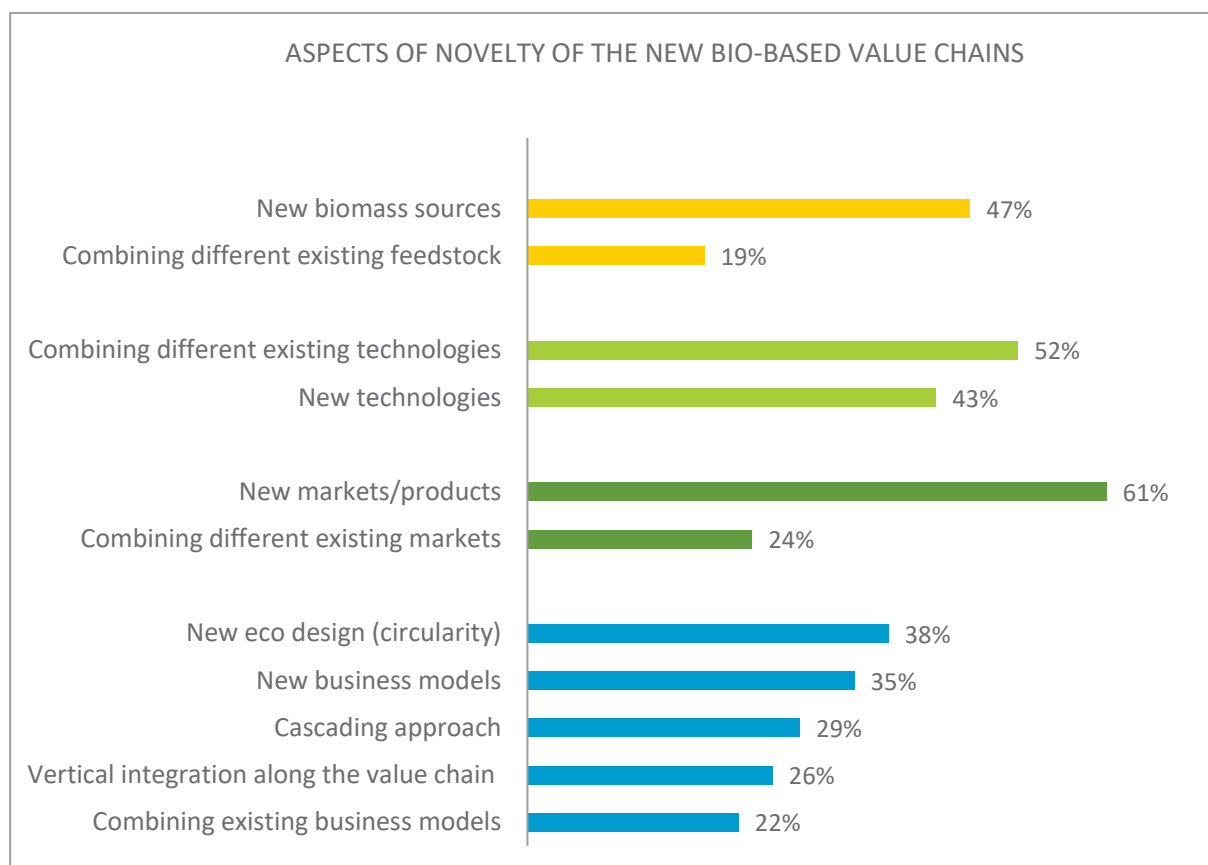


Figure 32: Percentage of new bio-based value chains reporting aspects of novelty reported in the new value chains regarding feedstock origin (yellow), technologies (light green), markets (dark green) and supply chain management (light blue).

EXAMPLES OF NEW BIO-BASED VALUE CHAINS

- Indirect conversion of side-streams from the agro-sector into valuable compounds, using insects as homogenisation step in the biorefinery (INDIRECT project);
- Production of active compounds to be used in different market sectors, such as food, feed and cosmetics (BIOSEA project). Production of new bio-based solvents from cellulosic residues (ReSolve project);
- Production of carbon fibres for the automotive sector using lignin as raw material (GreenLight project).

KPI 2: CONCLUSION AND TRENDS

The expected results for KPI 2 show a very positive trend: **139 new bio-based value chains by 2020**, notably higher than the target (10) in the SIRA. The highest ratio of expected new bio-based value chains per project correspond to DEMOs (3,35).

The rapidly increasing number of new value chains expected to be created indicates a **strong mobilization of actors in the bio-based industries** throughout all segments of the value chain: primary producers, processing and end applications and provides evidence of a **systemic change** in the sector. The most commonly reported origin of feedstock (agriculture and forest based) is followed by an increasing use of organic residues and waste and aquatic biomass, which is in line with the results in KPI 1 and with the overall evolution of the bio-based industries. Following the update of the SIRA, BBI JU 2016 and 2017 calls have supported the emergence of the value chains based on aquatic and organic residues by including several topics on for the valorisation of these feedstocks, which results into a more diverse project portfolio.

The most mentioned aspects of novelty are the creation of new products/markets (61% of the new value chains), the combination of existing technologies (52%) and the use of new biomass sources (47%).

KPI 3: NUMBER OF GRANT AGREEMENTS SIGNED BETWEEN BBI JU AND THE PROJECT CONSORTIA

Definition: Number of grant agreements signed between the BBI JU and the project consortia at the end of 2017.

This KPI is measured at a programme level.

RESULTS IN 2017

The current number of BBI JU signed grant agreement is 65 versus the 2020 target of 200 in SIRA (32.5 % of the target). The 65 BBI JU ongoing projects include 33 RIAs, 20 DEMOs, 6 Flagships and 6 CSAs. Please see section 1.2.2. *Overview of BBI JU Calls and Project Portfolio* for a more detailed description of BBI JU projects portfolio.

These 65 projects are from the 2014, 2015 and 2016 calls, three years out of a total seven years of BBI JU calls until 2020. In terms of budget, these 65 projects account for 414 million euro grants out of the total of up to 945.75 million euro planned for the whole programme, or 42 % of the total programme public funding. The calls of these three first years have already delivered 6 flagships, first of a kind pre-commercial biorefineries that receive high grants, which explains to a great extent that the percentage of the number of signed projects over the expected percentage by 2020 (32.5%) is slightly behind the percentage of expenditure (43.7%). The first flagships of BBI JU correspond to very heavy investment increasing the average € funding per project. Because of future calls the average funding per project will decrease, therefore the current number of signed GAs is in line with the planned number of signed GAs by 2020.

KPI 3: CONCLUSION AND TRENDS

The current number of BBI JU signed agreements is 65: 33 RIAs, 20 DEMOs, 6 Flagships and 6 CSAs. These projects result from the calls of 3 years out of the 7 years BBI JU calls planned until 2020. The distribution of action types progresses towards the objectives in the SIRA, however, the number of CSAs is still below the target.

The results (65 signed grant agreements), considering the budget expenditure and the high number of flagships already funded (6), show that BBI JU is progressing well towards the 2020 target of 200 projects.

KPI 4- NEW BIO-BASED BUILDING BLOCKS

Definition: New building blocks developed (TRL 3), validated (TRL 4-5) or demonstrated (TRL 6-7) with BBI JU projects.

The new bio-based building blocks are chemical building blocks that can be classified into three categories: those identical to non-renewable building blocks that have not been (successfully) made on a (pre)commercial scale yet, those that have better performance than fossil-based counterparts in comparable applications, and those that are novel, breakthrough building blocks that have no fossil-based counterparts.

The new building blocks should meet a clear (market) demand and fulfil all technical requirements, be economically viable and match all relevant sustainability criteria.

Projects are requested to report the number of new bio-based building blocks, to provide a description of each of them and to indicate to which of the latter three categories they belong. In addition, they also report on the different aspects of novelty of the new building blocks, regarding environmental, economic and product performance.

REPORTED EXPECTED RESULTS

Projects report they expect to create by 2020 **57 new bio-based building blocks versus the 2020 target of 5 in the SIRA**

The distribution of the 57 new bio-based building blocks per type of action is: 22 in RIAs, 30 in DEMOs and 5 in Flagships. DEMOs report the highest ratio of new building blocks per project (1,5), followed by Flagships (0,8) and RIAs (0,7), which shows that innovation actions contribute more substantially to this KPI.

Project coordinators indicate the nature of novelty of 56 of the expected building blocks: 20 breakthrough building blocks, 10 new building blocks that have better performance than fossil-based counterparts and 26 building blocks identical to non-renewable ones that are not yet available at a pre-commercial scale.

Figure 33 indicates the percentage of new building blocks in each of the three categories described above over the total number of reported new building blocks:

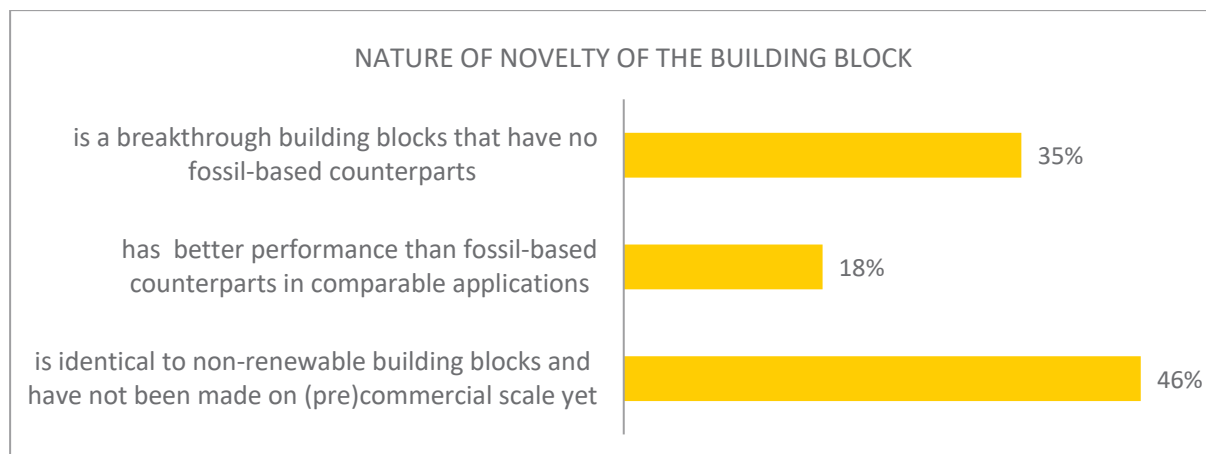


Figure 33: Percentage of new building blocks reporting different natures of novelty.

Some examples are of these different types of building blocks are:

- A breakthrough building block: Mannosylerythritol lipids (MELs), a unique building block produced from vegetable oils and sugars, that can be used for the production of bio-surfactants which further valorised in health care products and food industry.
- A building block with a higher performance than fossil-based counterparts: bio-based Hydroxymethylfurfural (HMF), enabling an improved barrier effect compared to fossil reference products.
- A building block that is identical to non-renewable building blocks and has not been made on a commercial scale: FDCA, produced from waste woody residues & other lignocellulose streams.

Figure 34 shows the main aspects of novelty addressed by the new building blocks:

- Feedstock: use of zero-fossil counterparts (42%) and reduced share of fossil-based counterparts (33%)
- Environmental aspects: Reduction in the CO₂ emission compared to fossil alternatives (60% of the building blocks), reduced energy consumption (35%) and improved land use (37%), reduction in the emission of other GHG gases (25%)
- Economic aspects: decreased input costs (39%) and increased yields (23%)
- Product performance: biodegradability (37%), health aspects (28%), safety aspects (26%), recyclability (18%)

These percentages need to be understood in the context of a portfolio composed of projects resulting from of different calls and topics with different requirements for the environmental, product and economic performance. Therefore, there are no thresholds to report contribution to any of these aspects (e.g. no minimum percentage in CO₂ emission reduction has been set to be considered significant) and the quantitative results vary from project to project. A reliable quantification of the environmental performance can only be done once the LCA for each building block has been performed.

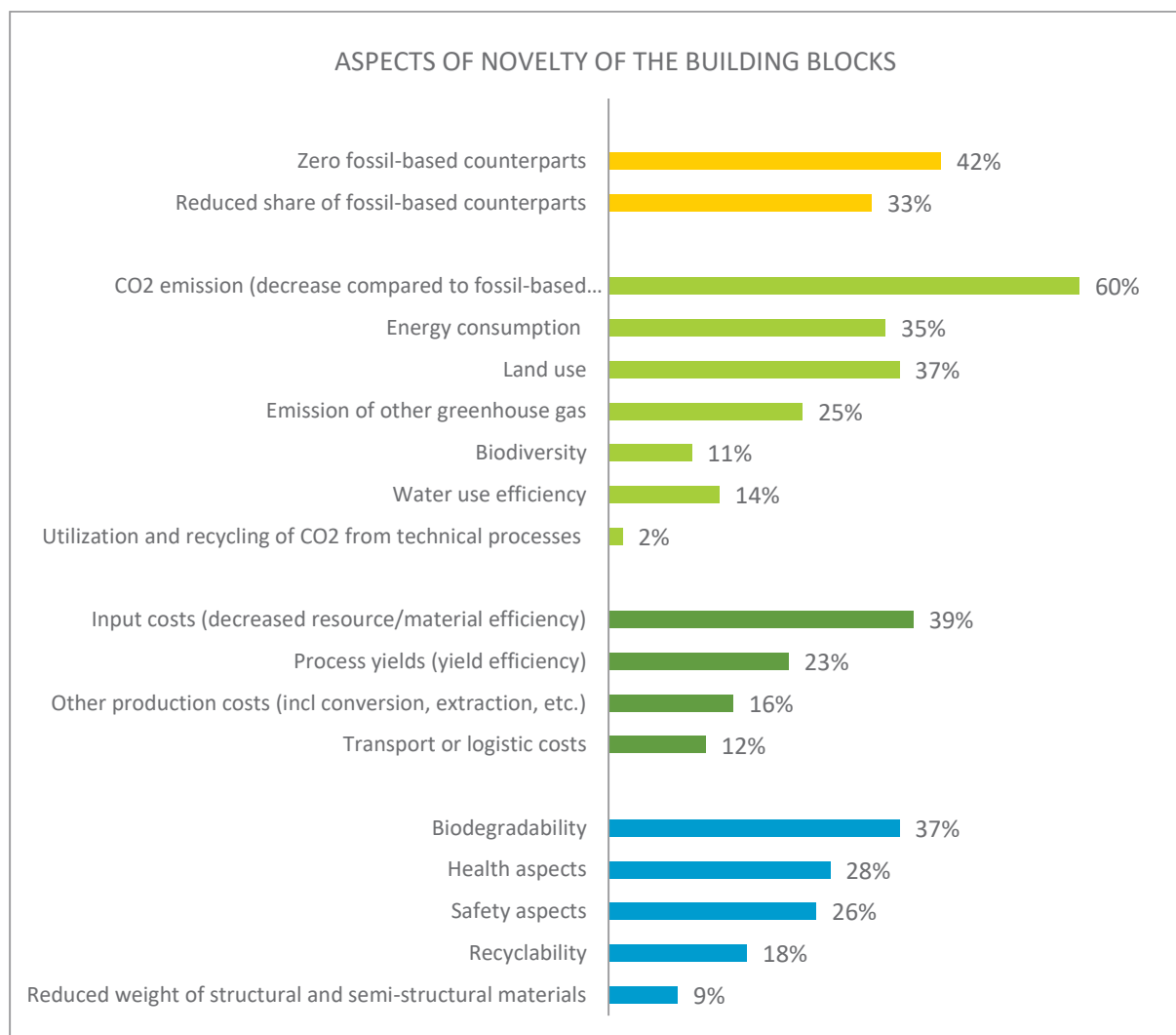


Figure 34: Percentage of building blocks addressing different aspects of novelty: feedstock (yellow), environmental (light green), economic (dark green) and product performance (light blue).

EXAMPLES OF SOME NEW BUILDING BLOCKS

- BIOrescue RIA project is developing a process which produces sugar monomers as building blocks from agro-based side streams. In further cascading steps, these monomers will be transformed into bioactive polymers to be used as nanocarriers in the healthcare industry
- FIRST2RUN flagship project produces the building blocks of azelaic acid, pelargonic and glycerol from agri-based feedstock. Further processing of these compounds transforms them to their polymers and esters, to be used bioplastics and lubricant production.
- PEFerence flagship project produces 2,5-Furandicarboxylic acid (FCDA) to upgrade PEF (polyethylene furanoate), a 100% bio-based polyester which is used to make bottles, films and fibres.

KPI 4: CONCLUSION AND TRENDS

The expected results for KPI 4 show a positive trend: **57 new bio-based building blocks by 2020**, significantly higher than the target (5) in the SIRA. The highest ratio of expected new bio-based building blocks per project correspond to DEMOs (1,5)

Among the 57 new building blocks, 20 are expected to be breakthrough bio-based materials and 10 to have better performance than the fossil alternatives.

The most mentioned aspects of novelty are: reduction in CO₂ emissions (60% of the new materials), reduced input costs (39%), better product performance regarding biodegradability (37%), improved land use (37%), decreased energy consumption (35%) or improved health aspects (28%).

KPI 5: NEW BIO-BASED MATERIALS

Definition: New bio-based materials developed (TRL3), validated (TRL 4-5) or demonstrated (TRL 6-7-8) with BBI JU projects. Examples of new bio-based materials are specialty fibres, plastics, composites and packaging solutions. The bio-based materials that replace fossil-based materials have proven to have an equal or overall better sustainability (by LCA, improved material efficiency, reduced GHG emission, biodegradability, recyclability or other improved functionalities during use or reuse). The new bio-based materials meet a clear market demand and they fulfil all technical requirements, are economically viable and match all relevant sustainability criteria.

Bio-based materials can have the following qualities: be identical to non-renewable building blocks and not (successfully) have been made on a (pre)commercial scale yet, have better performance than fossil-based counterparts in comparable applications, and be novel, breakthrough building blocks that have no fossil-based counterparts.

Projects are requested to report the number of new bio-based materials, provide a description of each of them and indicate to which of the three above-mentioned categories they belong. In addition, projects report on the different aspects of novelty present in the new building blocks.

REPORTED EXPECTED RESULTS

Projects report they expect to create by 2020 **127 new bio-based materials versus the 2020 target of 50 in the SIRA**.

The distribution of new bio-based materials per type of action is: 72 in RIAs, 45 in DEMOs and 10 in Flagships. The ratio of new bio-based materials per project is similar for RIAs (2,2), DEMOs (2,2) and Flagships (1,7).

Among the 127 new bio-based materials, project coordinators report the nature of novelty of 113 of them: 22 are expected to be breakthrough bio-based materials and 57 to have better performance than the fossil alternatives. Figure 35 indicates the percentage of new bio-based materials in each of the three categories of novelty described over the total number of new bio-based materials reported:

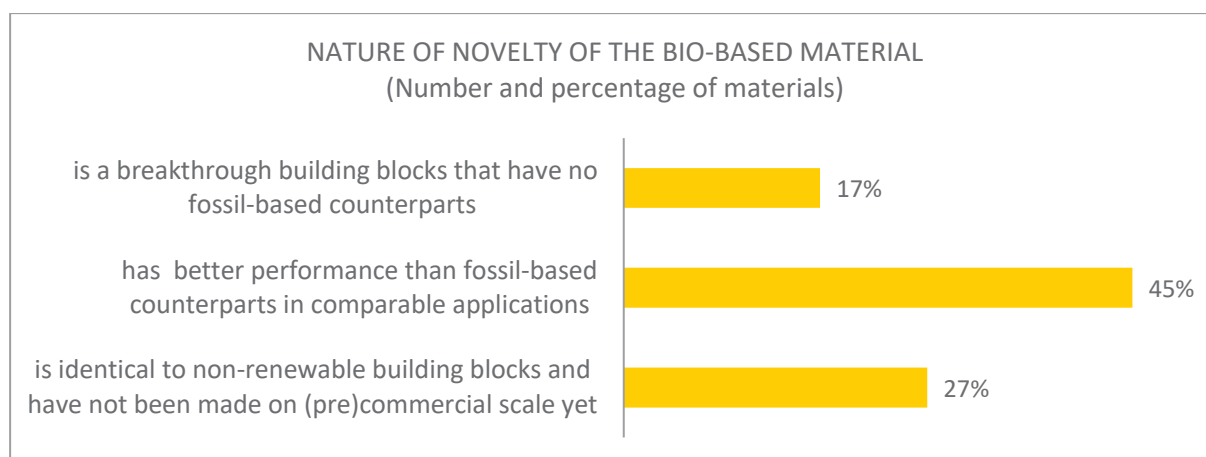


Figure 35: Percentage of new bio-based materials in each of the three categories of novelty described over the total number of new bio-based materials reported.

Some examples of these different kinds of new bio-based materials are:

- A breakthrough new bio-based material: cellulose fibres from wood pulp obtained through a completely innovative process involving ionic liquids. These fibres can be used in textile and automotive industry;
- A new bio-based material that has better performance than fossil fuel counterparts: biobased flexible packaging material from forest-based feedstock with enhanced barrier properties to contaminants that will guarantee consumer safety;
- A new bio-based material that is identical to non-renewable materials and has not been made on commercial scale: alternative materials to replace Diglycidyl ether of Vanillin and Triglycidyl ether of Phloroglucinol. These new products will be used in the production of reinforced fibres and composites which will be used in construction, automotive and aerospace industry.

Figure 36 shows the main aspects of novelty addressed by the new building blocks are:

- Feedstock: zero fossil counterparts (48% of the new bio-based materials) and reduced share of fossil counterparts (43%);
- Environmental aspects: reduction in the CO₂ emission compared to fossil alternatives (79% of the new materials), improved land use (31%) and reduced energy consumption (28%);
- Economic aspects: decrease of inputs costs (46%) and of other production costs (27%);
- Product performance: biodegradability (50%), recyclability (45%) improved health (48%) and safety aspects (43%).

As in the case of the building blocks, there are no thresholds to report contribution to any of these aspects and the quantitative requirements and results vary from project to project. A reliable quantification of the environmental performance can only be done once the LCA has been performed.

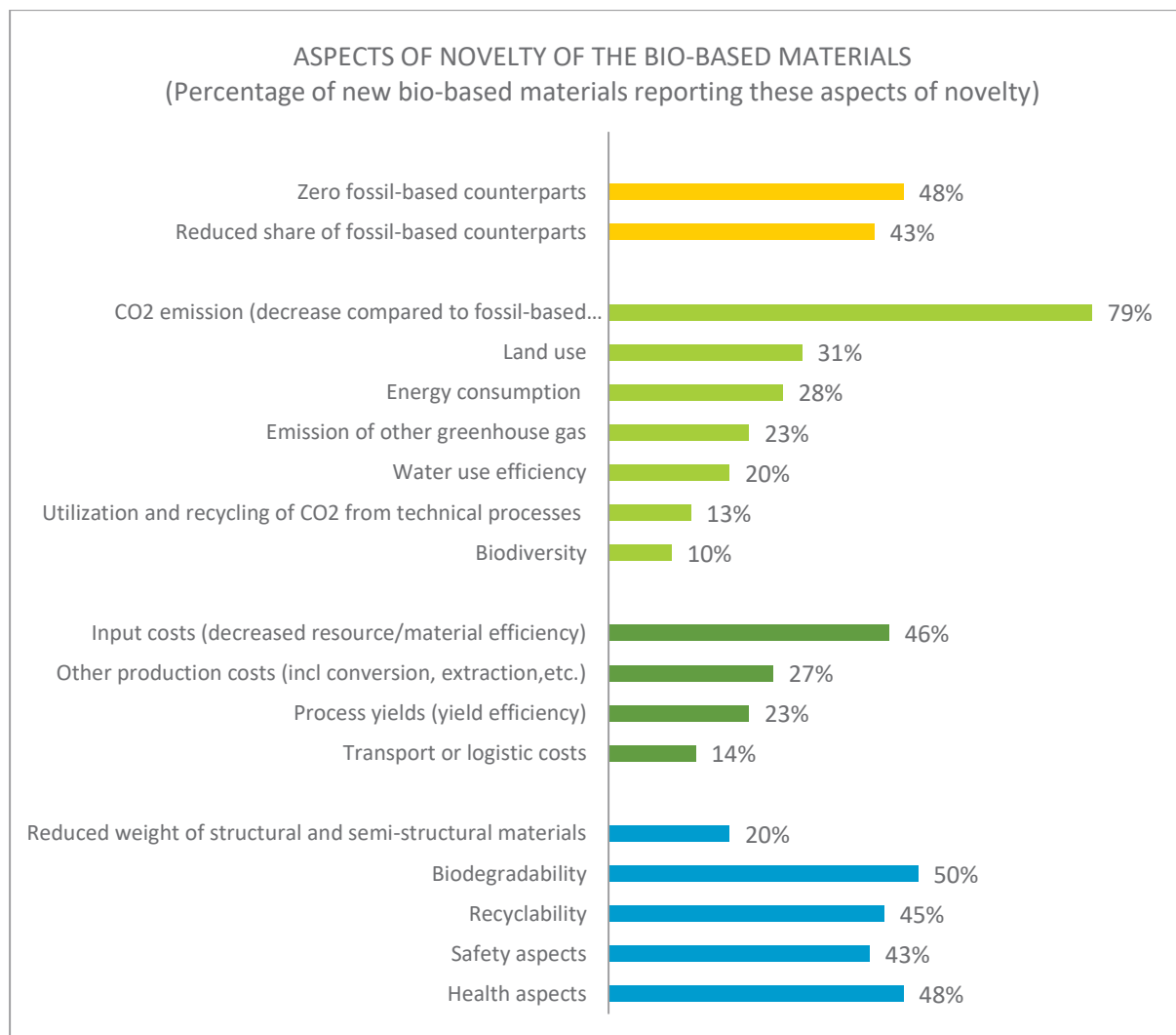


Figure 36: Percentage of bio-based materials addressing different aspects of novelty: feedstock (yellow), environmental (light green), economic (dark green) and product performance (light blue).

Examples of some new bio-based materials:

- ReSolve RIA project produces bio-based solvents from non-food carbohydrates to replace toluene and N-Methyl-2-pyrrolidone (NMP) that is used in adhesives and chemical industry;
- BIOSKOH flagship project produces ethylene to be converted to polyethylene to produce bioplastics;
- AgriMax DEMO project processes waste from crops and food-processing to deliver new bio-compounds for the chemical, bio-plastic, food, fertilisers, packaging and agriculture sectors.

KPI 5: CONCLUSION AND TRENDS

The expected results for KPI 5 show a positive trend: **127 new bio-based materials by 2020**, significantly higher than the target (50) in the SIRA. The highest ratio of expected new bio-based materials per project correspond to RIAs and DEMOs (2,2).

Among the 127 new bio-based materials, 22 are expected to be breakthrough bio-based materials and 57 to have better performance than the fossil alternatives.

The most mentioned aspects of novelty are: reduction in CO₂ emissions (79% of the new materials), better product performance regarding biodegradability (50%), recyclability (45%) and health aspects (48%) and reduced inputs costs (46%).

KPI 6: NEW BIO-BASED CONSUMER PRODUCTS

Definition: New bio-based products and applications demonstrated (TRL 6, 7 or 8) with BBI JU projects. The bio-based intermediate products (materials, building blocks, chemicals) successfully converted into 'consumer' products (such as cosmetics, food applications, vehicles, fertilisers, adhesives, etc.). The 'consumer product' will have a better overall sustainability score than its current alternative (because of the LCA, improved material efficiency, reduced GHG emissions, biodegradability, recyclability or other improved effects during use or reuse). The bio-based 'consumer products' meet a clear market demand and fulfil all technical requirements, are economically viable and match all relevant sustainability criteria. This KPI addresses only IA projects: DEMO (TRL 6-7) and Flagships (TRL 8).

Projects are requested to provide the number of new bio-based consumer products, including a description and some information on the main aspects of novelty.

REPORTED EXPECTED RESULTS

Projects report they expect to create by 2020 **50 new bio-based consumer products versus the 2020 target of 30 in the SIRA.**

Among the expected bio-based consumer products, 35 were reported in DEMOs and 15 in Flagships. Besides, RIA projects report to be setting the basis for 48 new bio-based projects reaching TRL (3-5) by 2020.

The main aspects of novelty of the new bio-based consumer products are the following, as shown in Figure 37:

- Feedstock: 85% of the new products report to be new in relation to the feedstock used: 54 % of them use a reduced share of fossil counterparts and 31% zero-fossil counterparts (31%);
- Environmental aspects: reduction in the CO₂ emission compared to fossil alternatives (58%), reduced energy consumption (42%) and improved land use (28%);
- Economic aspects: decrease of inputs costs (48%) and of other production costs (30%);

- Product performance: biodegradability (44%), recyclability (36%) improved health (38%) and safety aspects (32%).

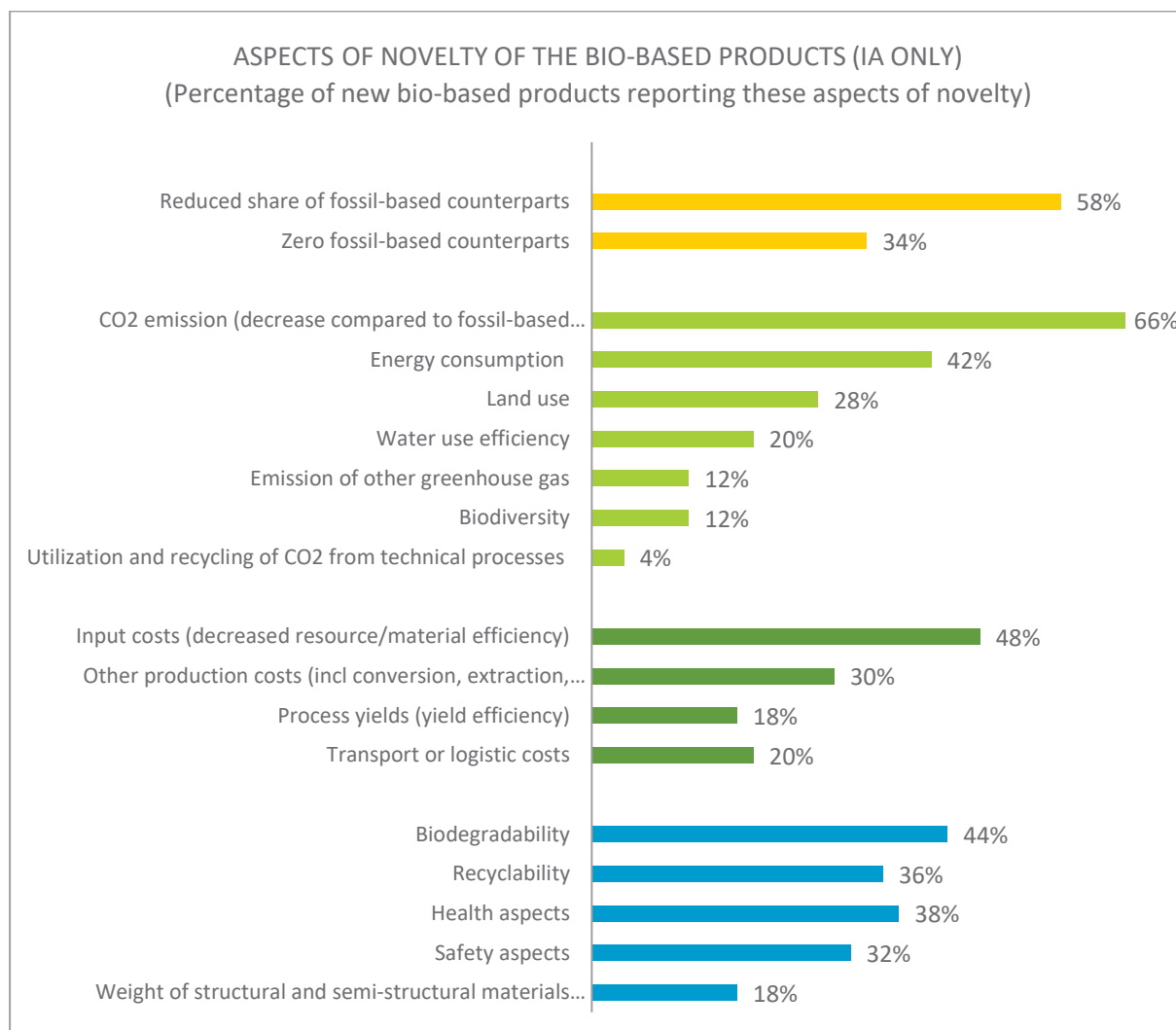


Figure 37: Percentage of new bio-based consumer products addressing different aspects of novelty: feedstock (yellow), environmental (light green), economic (dark green) and product performance (light blue).

EXAMPLES OF NEW BIO-BASED CONSUMER PRODUCTS

- EXILVA flagship project produces micro-fibrillated cellulose to be used as a product enhancer and as a replacement for fossil-based components in several consumer products such as adhesives, paintings, coatings or personal care products;
- LIGNOFLAG flagship project is producing cellulosic ethanol from the crops grown in marginal lands to be used both as advanced biofuel and as a chemical building block
- FIRST2RUN flagship project utilises underutilised crops to extract vegetable oils that can be further transformed to produce biolubricants, cosmetics and bioplastics;

- **BIOMOTIVE DEMO** project aims to demonstrate the production of innovative and advanced bio-based materials for the automotive sector with improved functionalities, such as shock, heat and fire resistance, as well as weight reduction;
- **PULPACKTION** and **FRESH DEMO** projects are developing cellulose based food-packaging applications with enhanced degradability and recyclability compared to the commonly used fossil-based alternatives.

KPI 6: CONCLUSION AND TRENDS

The expected results for KPI 5 show a positive trend: **50 new bio-based consumer products by 2020**, significantly higher than the target (30) in the SIRA. The highest ratio of expected new bio-based building blocks per project correspond to flagships (2,5) followed by DEMOs (1,75)

The new bio-based products are expected to have a clear added-value by providing improved functionalities along with positive environmental impact. The most mentioned aspects of novelty are: reduction in CO₂ emissions (58% of the consumer products), better product performance regarding biodegradability (44%), recyclability (36%) and health aspects (38%) and reduced inputs costs (48%).

Besides, RIA projects report to be setting the basis for 48 new bio-based products reaching TRL (3-5) by 2020.

KPI 7: BBI JU FLAGSHIP PROJECTS

Definition: Number of flagship projects funded by the BBI JU. The number refers to successful projects, i.e., all of those for which the grant agreements have been signed and the outcomes have materialised.

RESULTS IN 2017

There are 6 flagship projects ongoing coming from calls in years 2014 (1 flagship), 2015 (3 flagships) and 2016 (2 flagships).

BIOSKOH: Flagship for second-generation bio-refineries for Europe that uses agricultural residues biomass to produce cellulosic bio-ethanol with a yield 15 – 20% higher than current state of the art processing. The ethanol can be used as biofuel or be further transformed into different chemical building blocks like ethylene. The project will use a brownfield site, specifically an abandoned infrastructure, thus minimising capital expenditures over greenfield sites.

LIGNOFLAG: Commercial flagship plant for bio-ethanol production involving a bio-based value chain built on lignocellulosic feedstock. The project is expected to build and operate a commercial flagship to convert lignocellulosic feedstock into cellulosic bioethanol to be used as sustainable transport fuel or chemical building block.

PEference: Biorefinery flagship plant producing FDCA (furan dicarboxylic acid), a bio-based building block that can be used to make PEF (polyethylene furanoate) a 100% bio-based polyester used to make bottles, films and fibres, as well as to make a wide range of chemicals and polymers such as polyesters,

polyamides, coating resins and plasticizers. The participation of brand owners such as LEGO confirms the high potential for applications in consumer products. PEference aims to replace a significant share of fossil-based polyesters, such as polyethylene terephthalate (PET), and packaging materials like glass and metal with 100% bio-based furanics polyesters.

FIRST2RUN: The project will demonstrate the techno-economic and environmental sustainability at industrial scale of an integrated biorefinery in which low input and underutilized oil crops grown in arid and marginal lands are valorized for the extraction of vegetable oils. These oils will be further converted into bio-monomers as building blocks for high added value bioproducts, such as biolubricants, cosmetics, bioplastics and additives through the integration of chemical and biotech processes. By- products from the process will be valorised and used for the production of energy animal feed.

AgriChemWhey First-of-a kind, industrial-scale biorefinery with integrated symbiotic industrial and agricultural value chains to valorise Whey Permeate and De-lactosed Whey Permeate, dairy-processing side streams that currently lack effective, reliable disposal routes. These side streams will be transformed into several added-value products for growing global markets, including lactic acid to produce PLA (polylactic acid), minerals for human nutrition and bio-based fertilisers.

EXILVA: Integrated plant for the large-scale supply and market assessment of Microfibrillated Cellulose (MFC). By enhancing the rheological properties and replacing fossil- based compounds, the MFC has a huge potential to be used in bio-based products in a wide range of market segments, such as home and care products, adhesives, paints and coatings. The project is targeting the development of ten new (or optimised) bio-based products by 2020 and involves end users such as Unilever. The use of MFC in these products will both improve their functionalities and reduce the carbon footprint in relation to their fossil-based alternatives.

KPI 7: CONCLUSION AND TRENDS

BBI JU has already signed 6 flagship projects, surpassing the 2020 SIRA target of 5 flagships.

This confirms the mobilization of the bio-based industries in Europe and the **increasing investments in Europe**, which allow the deployment of bio-based technologies in Europe, and the market development of new bio-based products, resulting into a positive environmental and socio-economic impact

The flagships use different lignocellulosic feedstocks, such as agricultural residues in underutilized lands or biomass from the forest industry to deliver products in a wide range of sectors, such as bioplastics, lubricants, cosmetics, adhesives, paintings, packaging materials and second-generation biofuels, among others, thereby producing added-value bio-based products that have improved functionalities compared to their fossil-based alternatives.

KPI 8: TECHNOLOGY READINESS LEVEL (TRL) GAIN

Definition: Validated improved technologies that have realised a 'TRL gain' to fill gaps in value chains and enable new chemical building blocks, new materials, new 'consumer products' or new applications. This KPI is only defined for RIAs.

RIA projects have been requested to report the TRL gain in their main technology.

REPORTED EXPECTED RESULTS

RIA projects report to expect TRL gain in at least 24 technologies. The TRL gain is of one level in 1 case (TRL 4 to 5), of two levels (TRL 3 to 5) in 15 cases, and of 3 levels in 8 cases (mostly TRL 2 to 5), as shown in Figure 38.

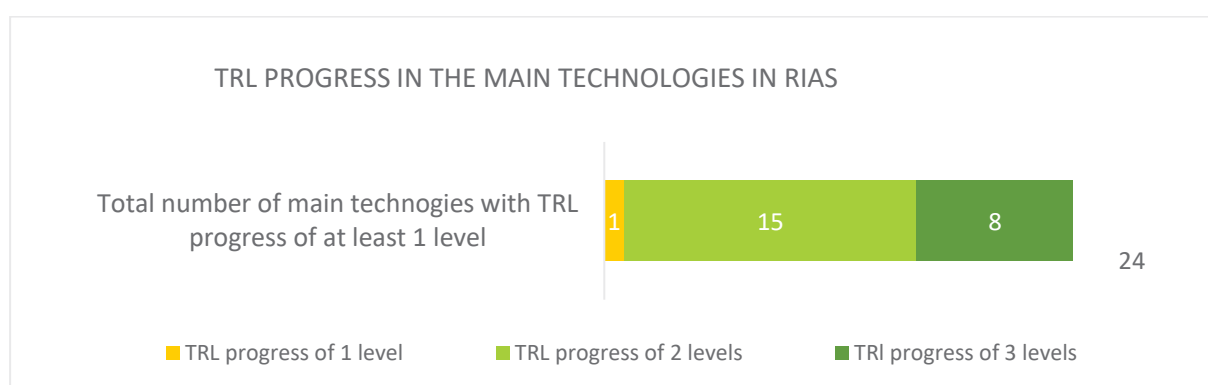


Figure 38: Number of technologies reporting a TRL gain of one, two or three levels in RIAs.

In addition, IAs projects also report to expect TRL gains in 20 technologies. The TRL gain is of one level in 4 cases, of two levels in 14 cases and of three levels in 2 cases, as shown in Figure 39.

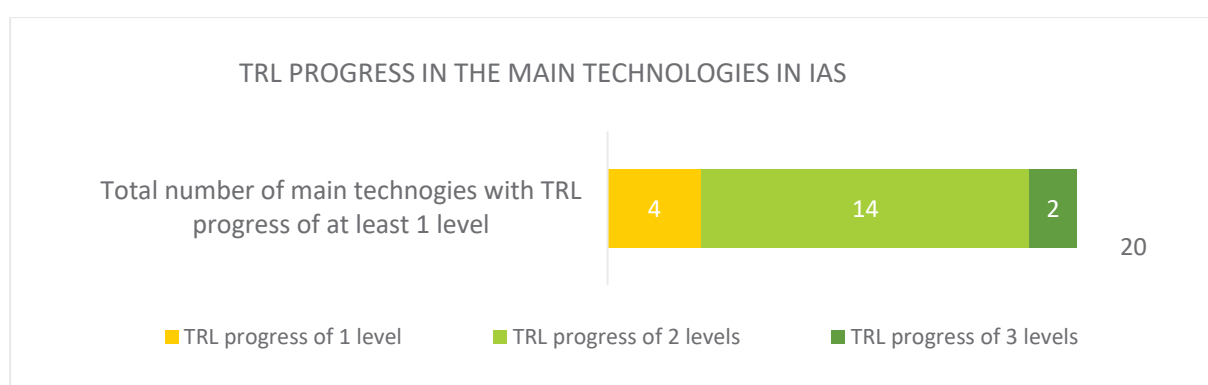


Figure 39: Number of technologies reporting a TRL gain of one, two or three levels in IAs.

EXAMPLES OF TECHNOLOGIES AND PROCESSES EXPERIENCING TRL GAINS IN RIAS

- Cultivation method and protocols for macroalgae culture (TRL 3 to 5), extraction of biomolecules of interest from algae (TRL 4 to 5);
- New process to recover nutrients from ashes to use them for fertilizers (TRL 2 to 5);
- Improvement of wood fractionation process for the production of bio-based composite products with advanced functionalities (TRL 2 to 4);
- Wastewater treatment consisting in recovering all the solids in wastewater (TRL 3 to 5).

OVERALL CONCLUSIONS

The contributions of the currently ongoing projects to the BBI JU specific KPIs, according to the expected results by 2020 as reported by projects at the end of 2017, show a very good and steady progress, and the expected results of seven KPIs have reached and exceeded the target. The number of signed GAs amounts to 65, which is on the right track considering only the calls of the first 3 years, out of a total of 7 years planned until 2020. The distribution of action types progresses towards the objectives in the SIRA, however, the number of CSAs is still below the target.

The high number of new reported cross sector interconnections, new bio-based value chains, building blocks and materials reflect the strong structuring effect and mobilization of actors in the bio-based industries in Europe catalysed by the BBI JU. It also shows the important contribution to the systemic change happening in the bio-based economy in Europe. The sectors involved in the new interconnections reflect the evolution of the bio-based industries sector towards a more inclusive approach, showing the increasing importance of the aquatic biomass and organic residues as feedstock for the new bio-based valued chains, supported by the BBI JU calls definition.

The new bio-based building blocks, materials and products are expected to have important contributions to improved product, economic and environmental performance. However, these contributions are not yet quantified and will only be validated once the LCA are finalized.

Regarding the deployment of the developed bio-based technologies the establishment of 6 BBI JU flagships, first-of-the-kind biorefineries in Europe confirms the growing interest and commitment of the bio-based industries to invest in Europe and the potential for a strong socio-economic impact.

This positive impact of the BBI JU was further confirmed by the conclusions of the BBI JU Interim Evaluation: “The main positive effects of the BBI JU in terms of competitiveness of BBI JU technologies come via encouragement and support of value chain driven cooperation across sectors (“structuring effect”) and via innovation driven mobilization of key stakeholders (“the mobilizing effect”)”.

1.3.1.3. Monitoring the contribution to the expected environmental and socio-economic impacts of projects

The annual questionnaire sent out to project coordinators contains a section dedicated to the expected contributions by 2020 of projects to various social and economic and environmental impacts.

The socio-economic impacts covered are the scientific impact, the impact on markets and industry, the creation of jobs and growth of income of the primary sector, the education and society and the regional and local impact. Projects are requested to provide a qualitative description of their contributions, as well as quantitative information, when relevant and available.

EXPECTED SCIENTIFIC IMPACT

Overall, 78% of all the projects report that they contribute to knowledge creation, 77% increase the academia-industry cooperation, 72% foster an increased cooperation across regions and countries, 62% contribute to the building of networks in the scientific community and 48% contribute to the development of the biotechnology. Figure 40 shows the number of projects per type of action reporting contributions to different aspects of scientific impact, as well as the overall percentage of projects addressing these aspects.

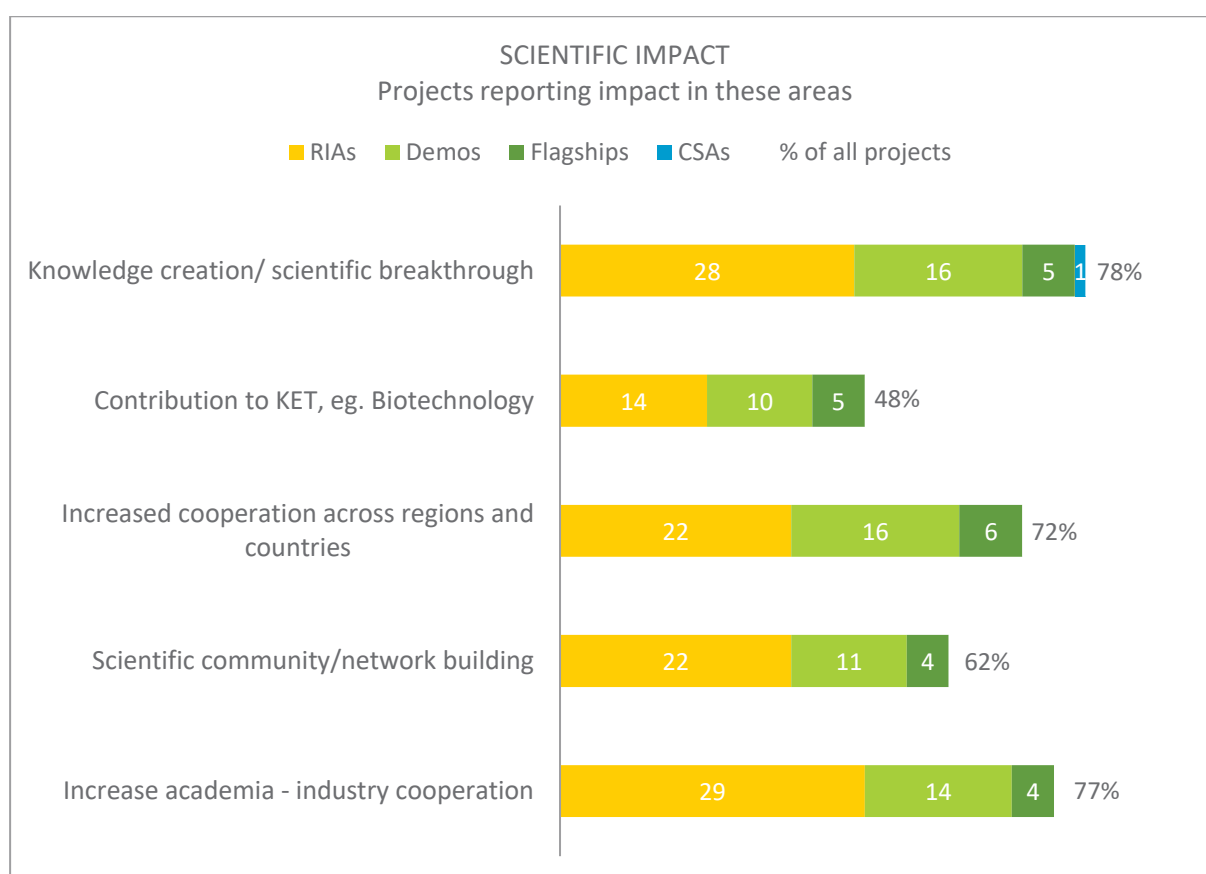


Figure 40: number of projects per type of action reporting contributions to different aspects of scientific impact, as well as the overall percentage of projects addressing these aspects.

EXAMPLE

BARBARA RIA project contributes to knowledge creation by the development of a new process for extraction and functionalization of valuable active molecules from agro-food by-products to be used to produce advanced materials and composites for the automotive sector. The project will make important contributions in the fields of industrial biotechnology, nanotechnologies and advanced manufacturing technologies.

The project has increased the cooperation and network between scientific community actors in the fields of biochemistry, advanced materials and additive manufacturing. Partners include research centres, SMEs and large industry, fostering the academia industry cooperation.

EXPECTED IMPACT IN EDUCATION AND SOCIETY

Overall, 55 % of the projects report to enhance the awareness and understanding of the bio-based economy in the society, 49% contribute to training and education and 26% consider gender balance and inclusion. Figure 41 shows the number of projects per type of action reporting an impact on education and society, as well as the overall percentage of projects addressing these aspects.

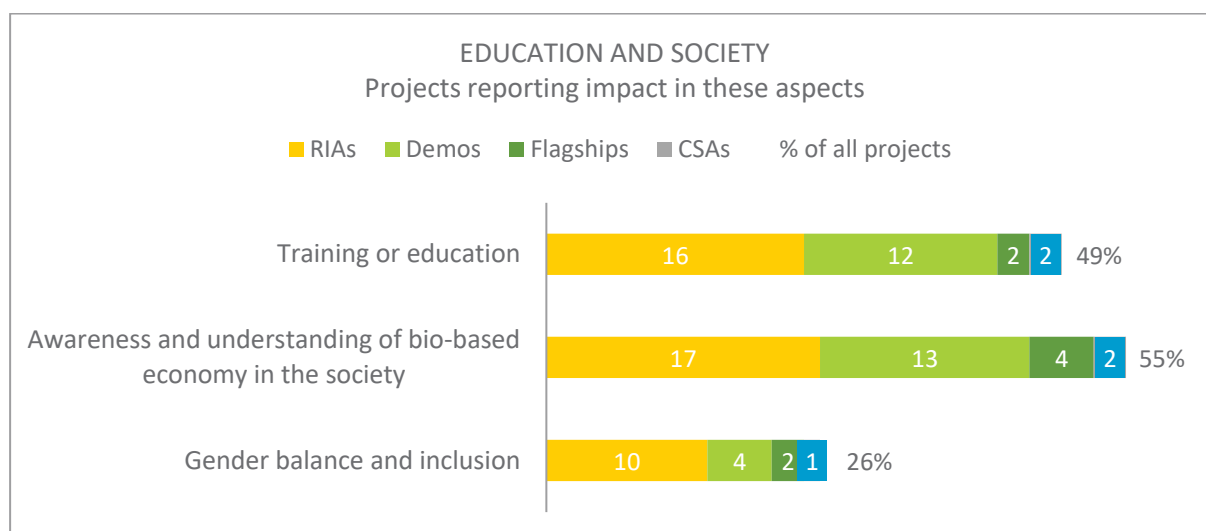


Figure 41: Number of projects per type of action reporting an impact on education and society, as well as the overall percentage of projects addressing these aspects.

EXAMPLES

BIOWAYS and BioCannDo CSA projects work in a complementary way to increase public awareness of bio-based products and applications and to support the growth of the European bioeconomy. They will create education materials, develop a method to communicate effectively with citizens on the benefits of bio-based products and engage in European networks for the communication of the bioeconomy.

Certain DEMO projects such as EMBRACED will organize courses and training sessions for undergraduate, graduate students and professionals, as well as open days and workshops for citizens.

EXPECTED IMPACT ON MARKETS AND INDUSTRY

Eighty per cent of the projects report increasing the competitiveness of European companies, 77% report contributing to reducing the dependence on imports of fossil oil and other resources, 65% foster technology transfer and 57% create new markets. Figure 42 shows the number of projects per type of action reporting impacts on markets and industry in different aspects, as well as the overall percentage of projects addressing these aspects.

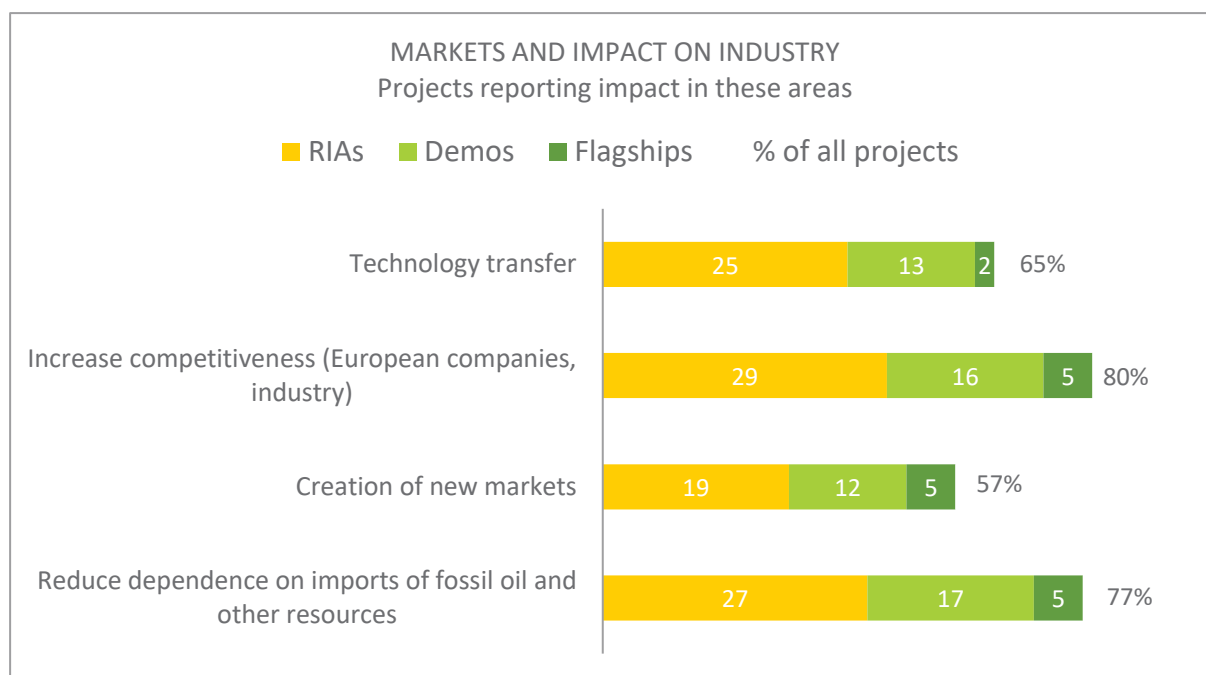


Figure 42: Number of projects per type of action reporting impacts on markets and industry in different aspects, as well as the overall percentage of projects addressing these aspects.

EXAMPLE

BioBarr RIA project will develop a new fully biodegradable food packaging with barrier performances that allow at least 10% extension of the food product shelf-life, thus overcoming the obstacles in performance that to date have limited the food applications of totally biodegradable biopolymers, and therefore contributing significantly to the increase in the competitiveness for packaging producers. New opportunities for application in the food sector will be opened for many different types of food, creating new markets. The industrial participation in the projects will facilitate the market-uptake and consolidation of these new markets, thereby reducing the imports from fossil-based plastics.

EXPECTED CREATION OF JOBS

Overall, 60% of all projects report are contributing to the creation of jobs in product development and engineering, 55% create jobs in rural regions and 11 % in coastal regions. The contribution to job creation is especially strong in Flagship and DEMO projects: considering that all 20 DEMOs and 6 flagships responded to the questionnaire, 70% of the DEMO projects and 100% of the flagships contribute to job creation in rural areas. Figure 43 shows the number of projects reporting job creation

in rural and coastal regions and in the area of product development and engineering, for different types of actions, as well as the overall percentage of projects creating jobs in these categories.

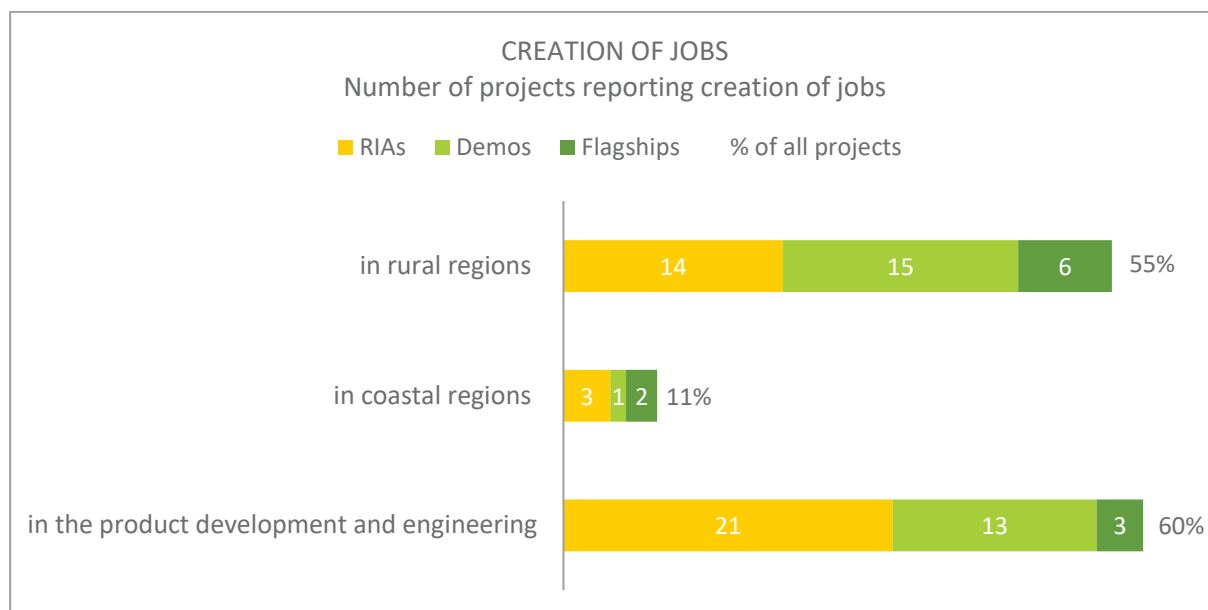


Figure 43: Number of projects reporting job creation in rural and coastal regions and in the area of product development and engineering, for different types of actions, as well as the overall percentage of projects creating jobs in these categories.

EXAMPLE

FIRST2RUN flagship project processes underutilised crops, like cardoon, grown on arid and marginal lands, which are exploited for the extraction of vegetable oils to be further converted into bio-products, such as bioplastics, cosmetics and lubricants.

The project estimates that 60 new skilled jobs will be created for every 1kton of produced bioplastics, of which 5% is in R&D, 20% in building blocks production, 15% in polymers/bioplastics production, 25% in the agricultural sector and 35% in composting.

EXPECTED GROWTH OF INCOME OF PRIMARY PRODUCERS

Overall, 29% of all projects report to contribute to the growth of income of primary producers, as shown in Figure 44. However, a quantification of this growth of income is not provided in the questionnaire. The innovation actions report a stronger impact: 55% of the DEMO and 60% of the flagships responding to the questionnaire contribute to the growth of income of primary producers.

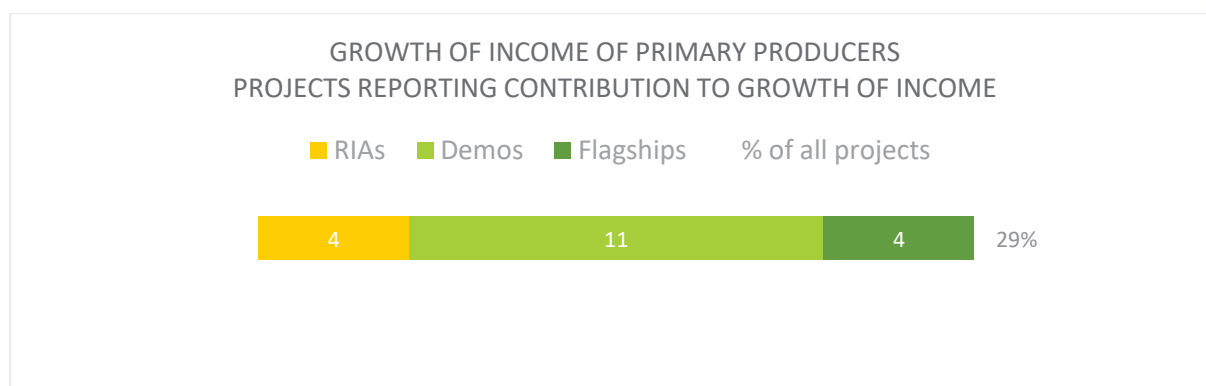


Figure 44: Number of projects reporting contribution to the growth of income of primary producers per type of action, as well as the overall percentage of projects reporting this contribution.

EXAMPLE

By using unexploited marginal land and a new crop, FIRST2RUN strongly contributes to the revitalization of the agricultural sector, by generating new income for farmers as well increasing their knowledge through the introduction of innovative systems for cultivation, harvesting, separation and storage and the adaptation of the existing ones.

Through cardoon cultivation farmers have the opportunity to develop innovative business models and spur the creation of new value chains; from cardoon it is possible to valorise all the fractions from the harvesting: seeds for oil extraction and protein feed for the livestock sector, lignocellulosic residues for sugars and/or energy production for the local area, roots for the extraction of active molecules. Then farmers are not solely biomass providers but they can become a strategic partner in the whole integrated bio-based value chain.

EXPECTED REGIONAL AND LOCAL IMPACT

Overall, 45% of the projects report having synergies with regional activities, 43% reutilize local residues, 43% involve local associations and stakeholders, 40% support the regional development by diversifying the local economy, 34% contribute to mobilizing local resources, 25% involve collaboration with the local administration, 20% valorise underexploited marginal land and 18% contribute to the reindustrialization or reconversion of the industries. Figure 45 shows the number of projects reporting different types of regional and local impact, as well as the overall percentage of projects addressing these aspects.

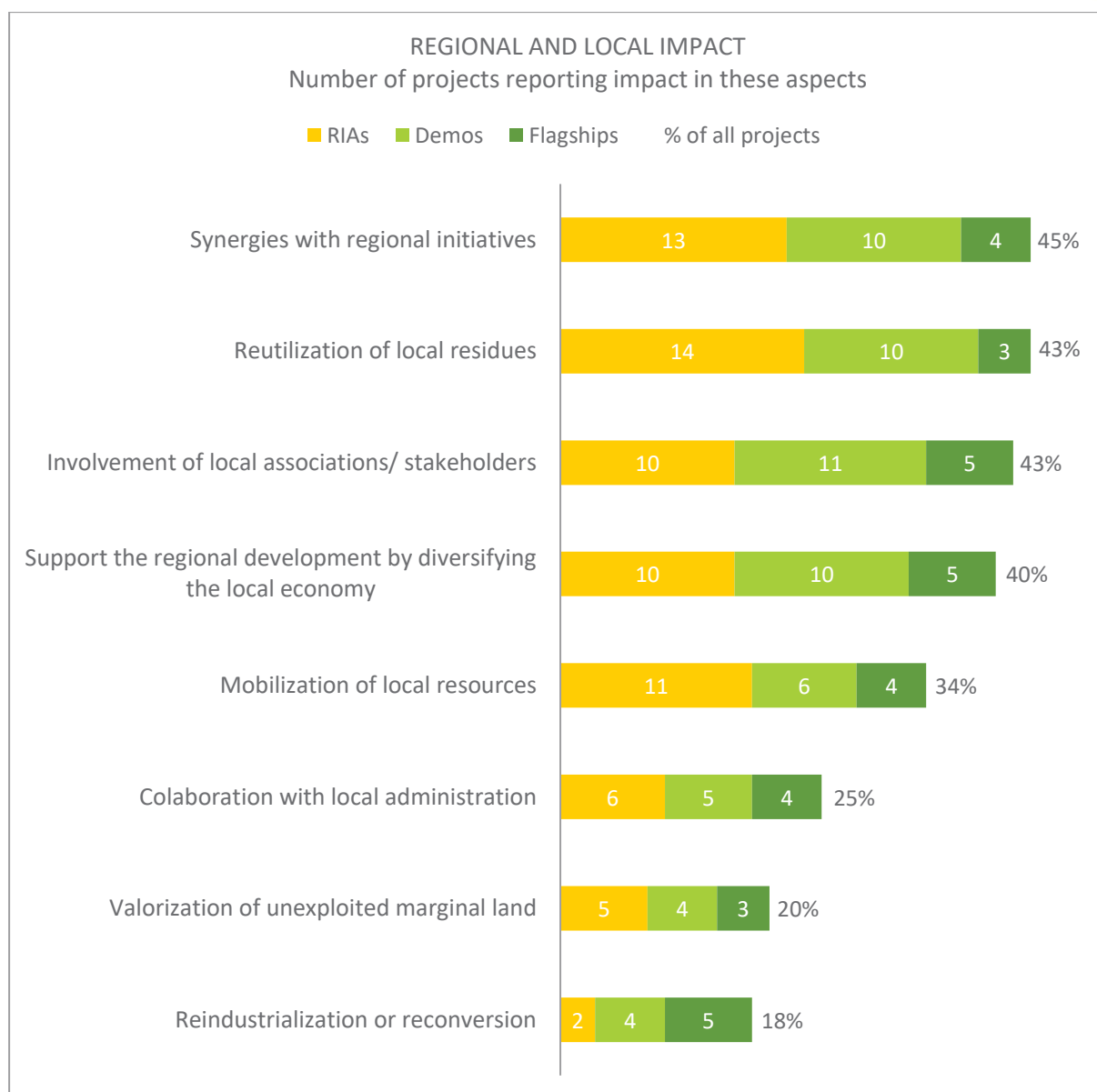


Figure 45: Number of projects reporting different types of regional and local impact, as well as the overall percentage of projects addressing these aspects.

EXAMPLE

AgriMax DEMO project used a bio-refining process on waste from crops and food processing to deliver new bio-compounds for the chemical, bio-plastic, food, fertilisers, packaging and agriculture sectors. In this way, the residues of tomato, potato, olive and cereal crops will be diverted from the current disposal and redirected to high-value applications.

Food and farming associations are included among the consortium partners, which will guarantee that their interests and concerns are well addressed and that the regional specificities are well considered in the project. In addition, the possibility to produce materials and additives starting from agricultural and food processing waste helps to diversify the local economy and support regional development.

BIOSKOH flagship project mobilises agricultural residues and biomass to produce ethanol. It will reconvert industrial abandoned facilities, using its infrastructure and railways. The project collaborates with the city hall and the regional government for creating a supportive bio-based strategy in the region; and the supply chains for biomass feedstock will actively engage local stakeholders including local authorities, farmer associations and NGOs.

EXPECTED ENVIRONMENTAL IMPACT

Projects are requested to provide a qualitative description of their contributions, as well as quantitative information, where relevant and available. All reported contributions are taken into account; no common quantitative thresholds were set (e.g. a reduction of at least 10% in carbon footprint), as the environmental targets differ for every topic and call. The quantification and verification of the actual contributions of projects to the environmental impact can only take place once the LCA or equivalent assessments have been performed.

Figure 46 shows the number of projects reporting to expect positive environmental impact, as well as the overall percentage of projects addressing these aspects.

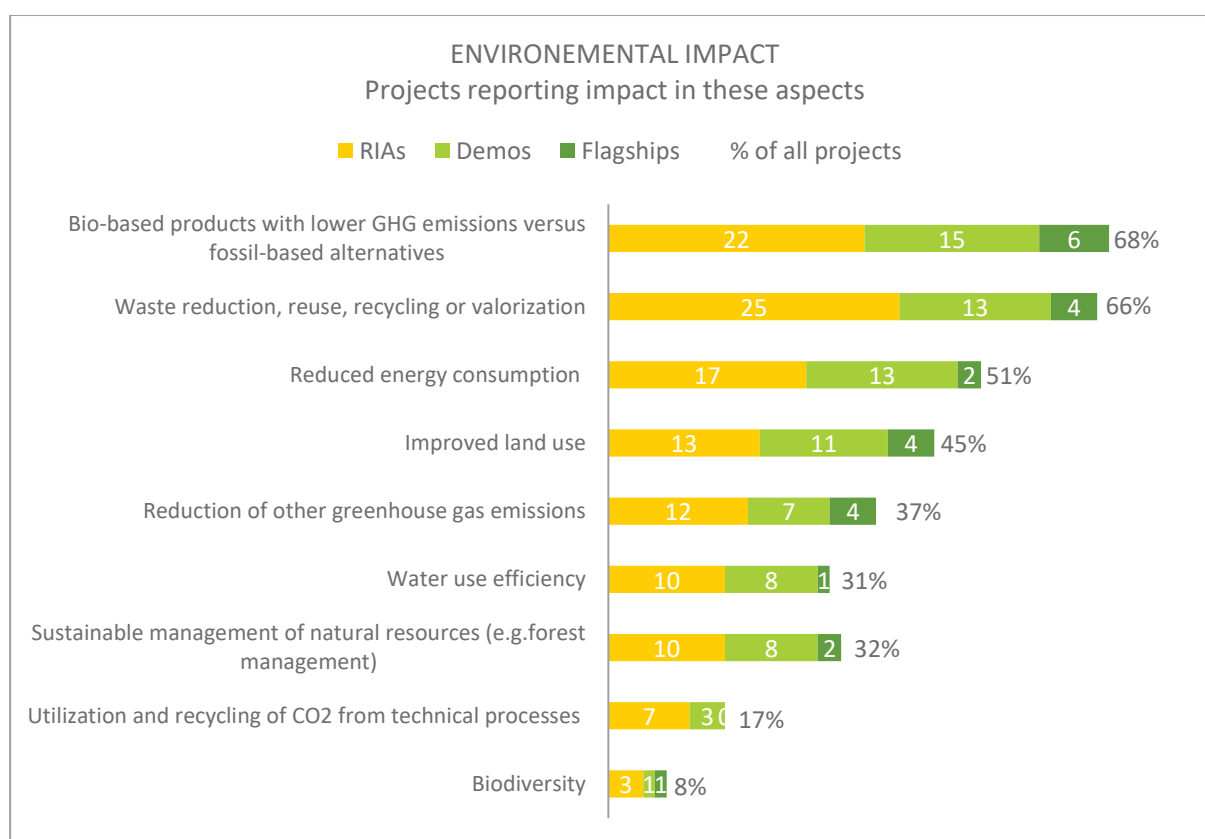


Figure 46: Number of projects reporting to expect positive environmental impact, as well as the overall percentage of projects addressing these aspects.

Overall, 68% of the projects report producing bio-based products with lower GHG emissions; 66% reuse, reduce, recycle or valorise waste; 51% have a decreased energy consumption and 45% improved land use; 31% have an increased efficiency in the use of water; 32% improve the sustainable

use of resources; 17% utilize and recycle CO₂ from technical processes and 8% have a positive impact on biodiversity.

EXAMPLE

MACROCASCADE RIA project aims at setting up a macro-algae (seaweed) biorefinery, improving the cultivation, separation, extraction processes to deliver high added-value applications in different sectors. Seaweeds contribute significantly to CO₂ capture (approx. 250.000 tons CO₂ per 1 Million tonnes w.w. seaweed), as well as to the intake of N and P (50.000 tons N & P per 1 Million tonnes w.w. seaweed). A significant reduction in energy consumption is achieved by the replacement of drying with ensiling methods and low temperature extraction. The cultivation of seaweeds maintains and may also potentially increase the biodiversity.

OTHER EXPECTED IMPACTS

Other impacts reported by the ongoing projects include improvement of health and safety aspects, to which 43% and 38% of the projects contribute, respectively, as shown by Figure 47.

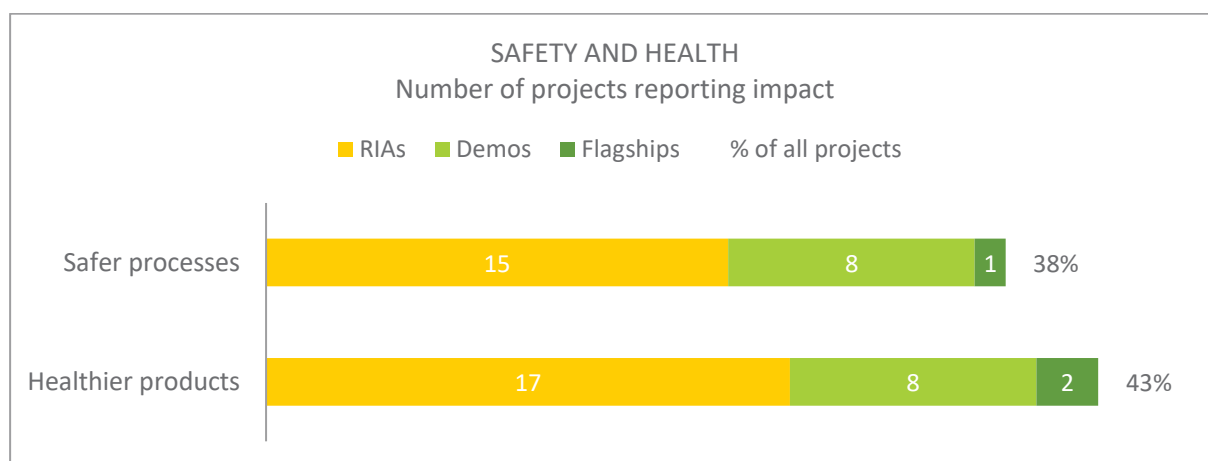


Figure 47: Number of projects reporting to have positive impact on health and safety.

EXAMPLE

ReSolve RIA project works on the replacement of two hazardous solvents - toluene and NMP (N-methyl-2-pyrrolidone) - with safer alternatives derived from non-food carbohydrates, which have a lower toxicity profile, as well as a high application performance.

These bio-based solvents will allow Europe's solvent industry to avoid the negative economic impact of the regulatory restrictions on the use of aromatic and nitrogen-containing solvents. It will also make a difference for many thousands of downstream users, while reducing the health impact on millions of European citizens that are routinely exposed to solvents as part of their job.

A significant percentage of projects report contributing to policy recommendations (28%) and to the development or improvement of standards and regulations (25%), as shown by Figure 48.

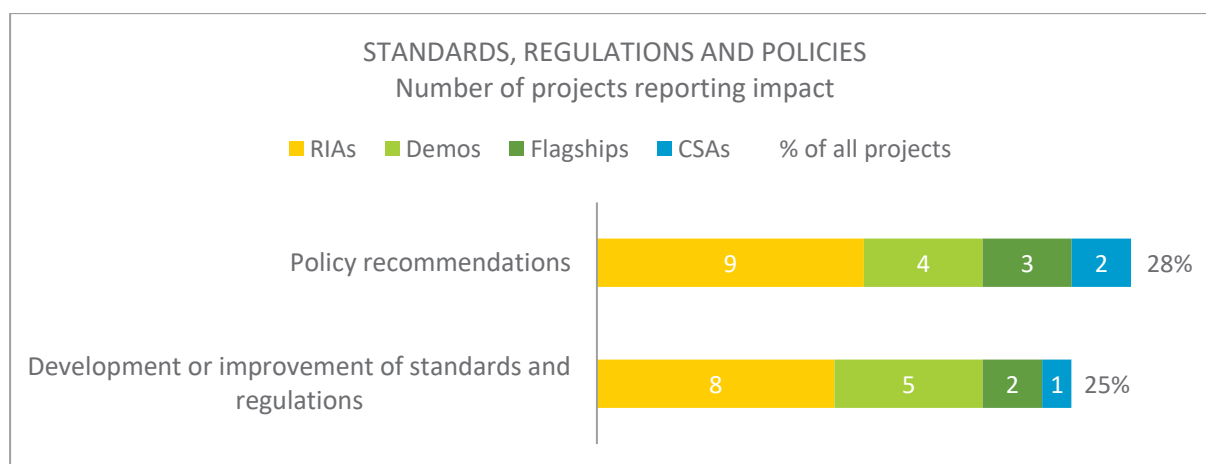


Figure 48: number of projects reporting contributing to the development of standards, regulations and policies.

EXAMPLE

STAR4BBI CSA project contributes to the establishment of a coherent, well-coordinated and favourable regulatory framework that helps develop a cutting-edge bio-based economy for Europe by supporting the adaptation of the regulatory framework and of relevant standards for selected existing value chains and the development of new value chains based on biomass from forests, from agriculture and from organic waste. The project is expected to give advice to ISO, CEN or other standardization bodies as well as indications towards regulations and to deliver some foresight and general analysis of results both at EU and regional levels.

1.3.1.4. Monitoring the leverage effect of the initiative

The leverage effect aims to measure the ability of the BBI JU in attracting additional financing from the private sector and multiplying Horizon 2020 budget resources, including additional activities. The BBI JU regulation states that for the period from 2014 until the end of the initiative in 2024, the total private contribution by BIC and/or by its constituent entities shall be at least € 2.73 billion and that the EU contribution shall be up to € 975 million. So by 2024 a minimum of 2.8 euro of private in-kind and/or financial contribution shall be leveraged for each euro of EU funding.

A more in-depth analysis of the different types of private financial contributions to the BBI JU initiative is available under section 1.7 below.

In order to measure the leverage effect, the European Commission proposed a calculation method that was applied to all Joint undertakings in the context of the mid-term evaluation of the JUs operating under H2020. This calculation method excludes the contribution to the administrative costs of the joint undertaking³⁰ and includes in kind contributions from all participants –i.e. not only from BIC members - (APIK). It provides an indication of the total leverage effect of the initiative over a given period of time. The formula is the following:

³⁰ Excluding the contribution to the administrative costs of BBI JU, the final target leverage effect amount to €2.85 instead of €2.8

(Total) leverage = Operational leverage + additional leverage:

$$\text{Operational leverage} = \frac{\sum APIK^{31} + \sum FC^{32}}{\sum EU \text{ contribution}^{33}}$$

$$\text{Additional leverage} = \frac{\sum IKAA^{34}}{\sum EU \text{ contribution}}$$

As each element of this calculation has its own financial reporting and certification processes with significant differences over the time, it is only at the end of the programme that the ratio reaches the appropriate level of reliability. Despite this consideration, the BBI JU Governing Board discussed and agreed that the calculation of the leverage effect shall be monitored on a yearly basis as soon as the different elements of the calculation reach a consistent level of reliability.

For the period up to the end of 2017, the value of the leverage effect of the BBI JU initiative is:

$$\text{Operational leverage} = (183\,206\,211 + 12\,441\,158^{35}) / 413\,761\,615 = 0.473$$

$$\text{Additional leverage} = 663\,589\,000^{36} / 413\,761\,615 = 1.604$$

$$\text{(Total) leverage by end 2017} = 0.473 + 1.604 = \mathbf{2.077}$$

This value is below the expected leverage for the same period as shown in figure 49.

³¹ Total amount of in-kind contributions committed by all participants (both BIC and non-BIC constituent entities) in grant agreements signed by the cut-off date of the data reported in the AAR.

³² Total amount of financial contributions by BIC, delivered at programme level, and/or by all the participants (both BIC and non-BIC constituent entities) that are beneficiaries not receiving funding, delivered at project level and committed by the cut-off date of the data reported in the AAR.

³³ Total amount of EU funding committed in grant agreements signed by the cut-off date of the data reported in the AAR.

³⁴ Total amount of in-kind contribution to additional activities by BIC and/or its constituent entities implemented by the cut-off date of the data reported in the AAR and duly certified later.

³⁵ This amount includes the financial contribution from all members other than the Union, both at programme and project level, taking into account the retroactive effect of the amendment to the BBI JU Council regulation (EU) 2018/121 of 23 January 2018.

³⁶ This figure includes the amount of €186 247 000 certified as provided by BIC on the 1st of June 2018, out of the €392 180 000 of planned IKAA for the year 2017 and approved by the Governing Board of BBI JU. Additional certification may be provided by BIC in 2018 and the leverage calculation will be updated consequently.

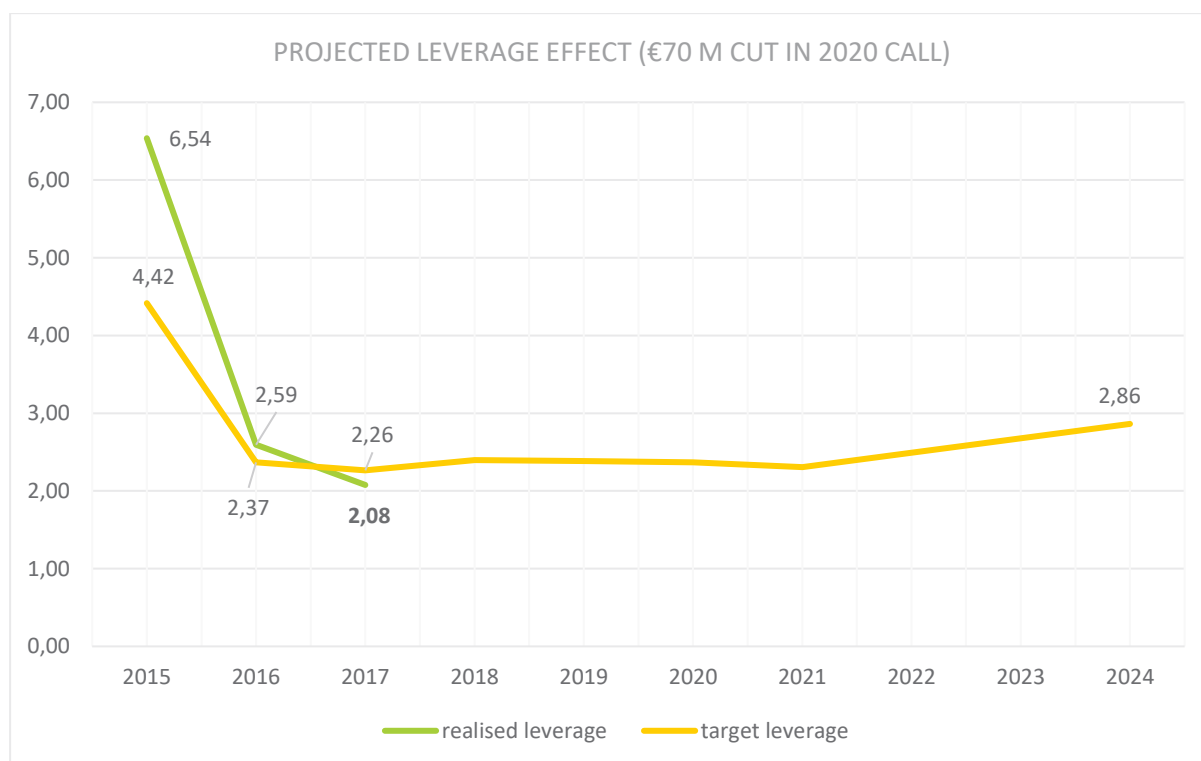


Figure 49: the evolution of the leverage effect over the first years of the initiative.

1.3.2. Evaluation: procedures and global evaluation outcome, redress, statistics

CALL 2017 EVALUATION: KEY STATISTICS AND INFORMATION ON TOPICS

The 2017 Call for Proposals covered Research and Innovation Actions (RIA), Innovation Actions (IA) – both Demonstration Actions (DEMO) and Flagships (FLAG) –, and Coordination and Support Actions (CSA). The Call contained 16 topics (2 FLAG, 5 DEMO, 7 RIA, 2 CSA). The initial indicative budget for the Call was € 81 million (the breakdown per type of action is shown in Table 9).

The Call was published in the participant portal and Official Journal on 11 April 2017 with a submission deadline of 7 September 2017. 149 proposals were submitted under this call and 3 proposals were found to be out of scope during the evaluation and were therefore declared ineligible. The evaluation of all proposals was completed in November 2017 and the resulting ranking list was adopted by the BBI JU Governing Board on 13 December 2017. All applicants were informed about the evaluation results on 15 December 2017 and on the same date, the grant agreement preparation (GAP) for the 17 retained proposals was officially launched. An amount of € 85,764,866 was committed for the retained proposals including € 4,450,657 of unused appropriations carried over from previous calls. The 2017 GAP is expected to be finalised by 7 May 2018.

Figure 50 shows the evolution of the mobilisation of the bio-based community through the calls over the years 2014, 2015, 2016 and 2017. Between 2016 and 2017, the number of topics decreased from 27 to 16. The number and the amount of proposals grew by 45% reaching 149 proposals, corresponding to an average of 9.3 proposals per topic.

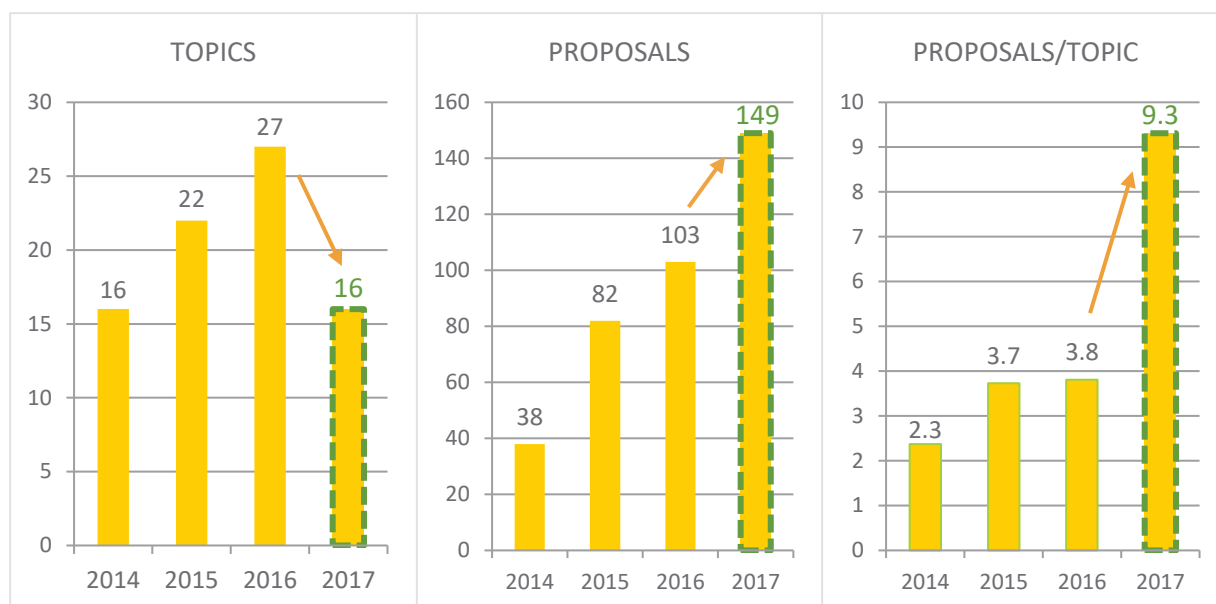


Figure 50: Overview of the evolution of submissions in BBI JU Calls (2014-2017).

In the sections below, more detailed information is provided on the submission statistics as well as on the outcome of the evaluation. In particular, the following information is included:

- number of proposals submitted per topic and success rates;
- types of participants (submissions and retained for funding);
- country distribution of applicants in proposals submitted and retained for funding;
- share of SMEs in submitted and retained proposals;
- share of SME funding in retained proposals.

EVALUATION PROCESS

The evaluation was carried out with the assistance of 109 independent experts and one independent observer, in accordance with the procedures laid down in the Guide for proposal submission and evaluation of Horizon 2020. In addition, one expert assisted the Programme Office as Quality Controller and six experts supported the moderation of central evaluation panels. Two independent experts were selected and appointed to conduct an ethical screening, uniquely for proposals above the thresholds. The ethical screening for the majority of the retained proposals was finalised during the central evaluation.

In selecting experts, the primary objective of the programme office in respect of the composition of the evaluation panels was to ensure a high level of expertise in the areas of the call, taking also into consideration an appropriate gender balance and geographical diversity, as well as the participation of experts from industry.

These considerations were reflected across the selection of 109 experts, giving a gender balance of 69 men (63%) and 40 women (37%) and a regional balance where 31 different countries were represented (67% EU15, 24% EU13, 6% associated countries, 3% other).

Hearings were organised for flagship actions for all submitted proposals. The hearings were organised to clarify the business plan and the technology maturity to help the panel establish their final assessment or improve the experts' understanding of the proposal.

All applicants were informed about the evaluation outcome on 15 December 2017, no later than five months after the proposal submission deadline (see section 1.3.1.1. Horizon 2020 KPIs and cross-cutting issues on specific details with respect to TTI). One redress was submitted for the Call 2017 in January 2018.

OUTCOME

The final available budget for Call 2017 was € 85.7 million – including some unused appropriations from previous years - which was considerably lower compared to the € 188.7 million budget allocated for Call 2016. The low budget influenced the overall success rate that was significantly reduced from 29% (Call 2016) to 11% (Call 2017). The high submission rate combined with the low budget made the call very competitive.

For Call 2017 the overall quality of the proposals was high and the competition was tough. Nevertheless, a good topic coverage was accomplished, as all published topics received at least one proposal. In total 17 proposals were retained, corresponding to a 75% overall topic coverage, with only four topics not covered by proposals retained for funding (topics D1, D3, R1 and F2). This is a considerable improvement compared to Call 2016 where 9 topics were not covered. Table 9 provides a breakdown of the proposals submitted and retained per topic as well as the success rate and budget allocated per type of action.

	Topic code	Total number proposals received	Retained Proposals	Success rate (%)	Topic Title	Indicative budget (in €)
DEMO	1	7	0	6%	BBI 2017.D1 –valorisation of liquid and solid side streams from bio-based operations into high added-value products to create new feedstock for bio-based products	2,000,000
	2	22	1		BBI 2017.D2 – integrated multi-valorisation of algae into advanced materials and high added-value additives	
	3	2	0		BBI 2017.D3 – breakthrough primary bio-based chemicals without significant fossil-based counterparts but with high marketability	
	4	14	1		BBI 2017.D4 – innovative bio-based fertilising products to increase the sustainability of fertilising practices in agriculture	
	5	17	2		BBI 2017.D5 – advanced bio-based fibres and materials for large-volume applications	

RIA	1	5	0	15%	BBI 2017.R1 – valorisation of gaseous side streams from bio-based operations into chemical building blocks	36,000,000
	2	7	1		BBI 2017.R2 – innovative technologies for the pre-treatment and separation of lignocellulosic feedstock and complex composition streams into valuable fractions while maintaining key characteristics	
	3	3	1		BBI 2017.R3 – exploiting extremophiles and extremozymes to broaden the processing conditions to convert biomass into high-value building blocks	
	4	26	5		BBI 2017.R4 – proteins and other bioactive ingredients from side streams and residues	
	5	8	1		BBI 2017.R5 – novel bio-based chemical precursors to improve the performance of mass consumption products	
	6	13	1		BBI 2017.R6 – competitive biodegradable, compostable and/or recyclable bio-based plastics for a sustainable end-of-life phase	

FLAG	7	5	1		BBI 2017.R7 – novel secondary bio-based chemicals without significant fossil-based counterparts but with high application potential	
	1	2	1	14%	BBI 2017.F1 – integrated ‘zero waste’ biorefinery utilising all fractions of the feedstock for production of chemicals and materials	21,000,000
	2	5	0		BBI 2017.F2 – large-scale production of proteins for food and feed applications from alternative, sustainable sources	
CSA	1	9	1	15%	BBI 2017.S1 – establish cooperation and partnership with brand owners and consumer representatives to improve the market access of sustainable bio-based products	2,000,000
	2	4	1		BBI 2017.S2 – identify opportunities for it to increase the efficiency of biomass supply chains for the bio-based industry	

Table 9: Call 2017 Number of proposals submitted and retained per AWP topic.

Figures 51 and 52 shows the type of participants in submitted and retained proposals. These fall under the five following categories:

- Private for Profit (PRC);
- Research Organisation (REC);
- Higher or Secondary Education (HES);
- Public Body (excluding research and education) (PUB);
- Other type of organisations (OTH)

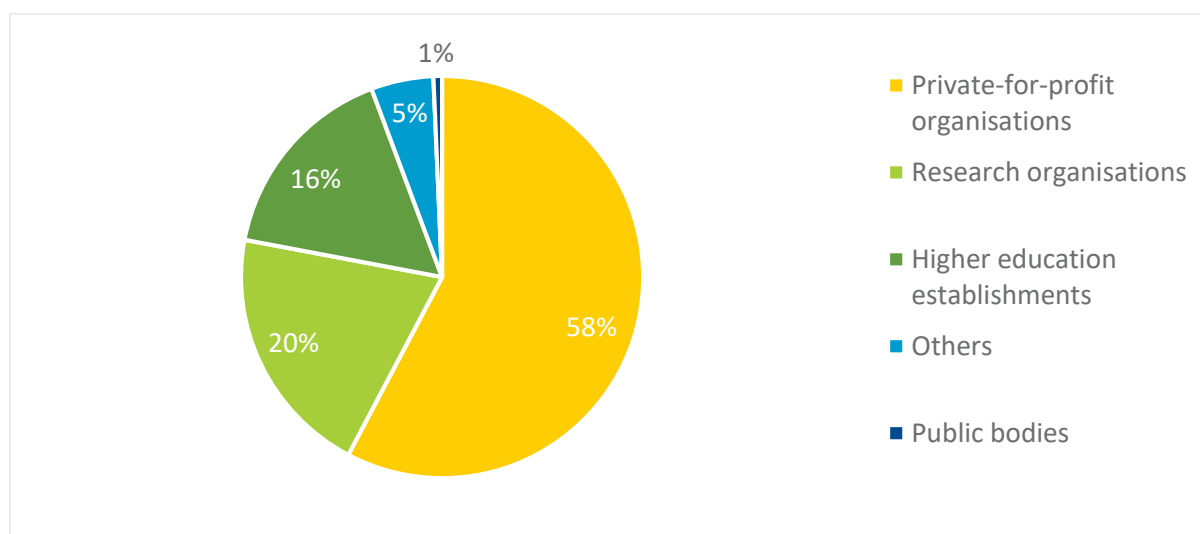


Figure 51: Type of participants in submitted proposals in Call 2017.

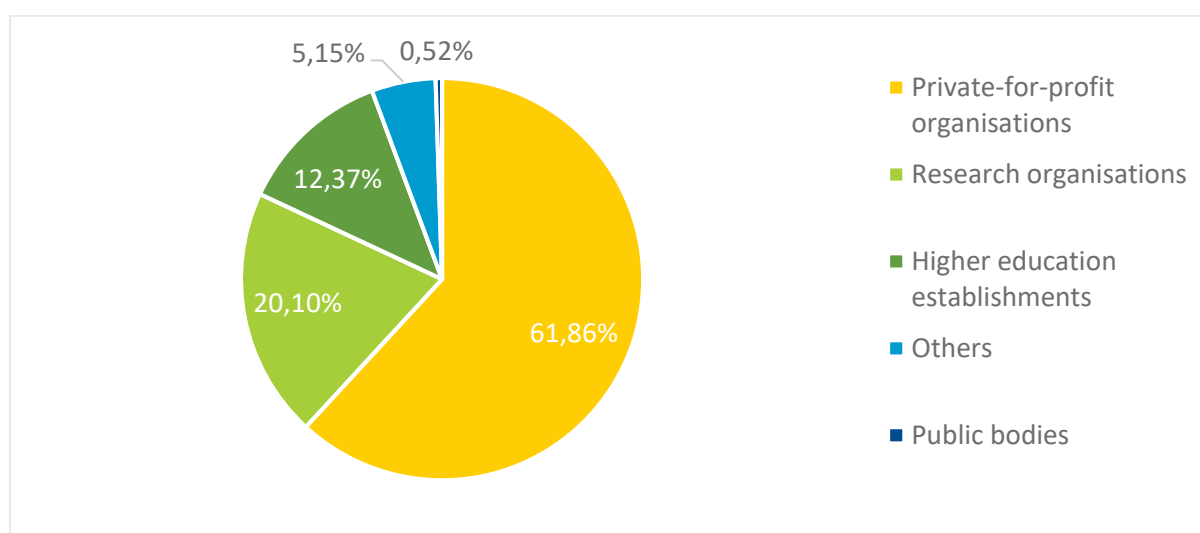


Figure 52: Type of participants in proposals retained for funding in Call 2017.

Figure 53 shows the distribution of applicants and beneficiaries per country, indicating a stronger presence from countries in the EU-15 as compared to the EU-13. Overall, the 2017 call attracted

applicants from 27 of the 28 MS. However, in terms of beneficiaries, the distribution of countries is less diverse, and the success rate for certain under-represented countries, such as Poland, Hungary, Portugal and Greece remained lower than the overall success rate for the call (11%). Nevertheless, for certain other countries, such as Spain, France and Italy, a more dynamic participation can be observed with success rates which are comparable or higher than the overall one for the call.

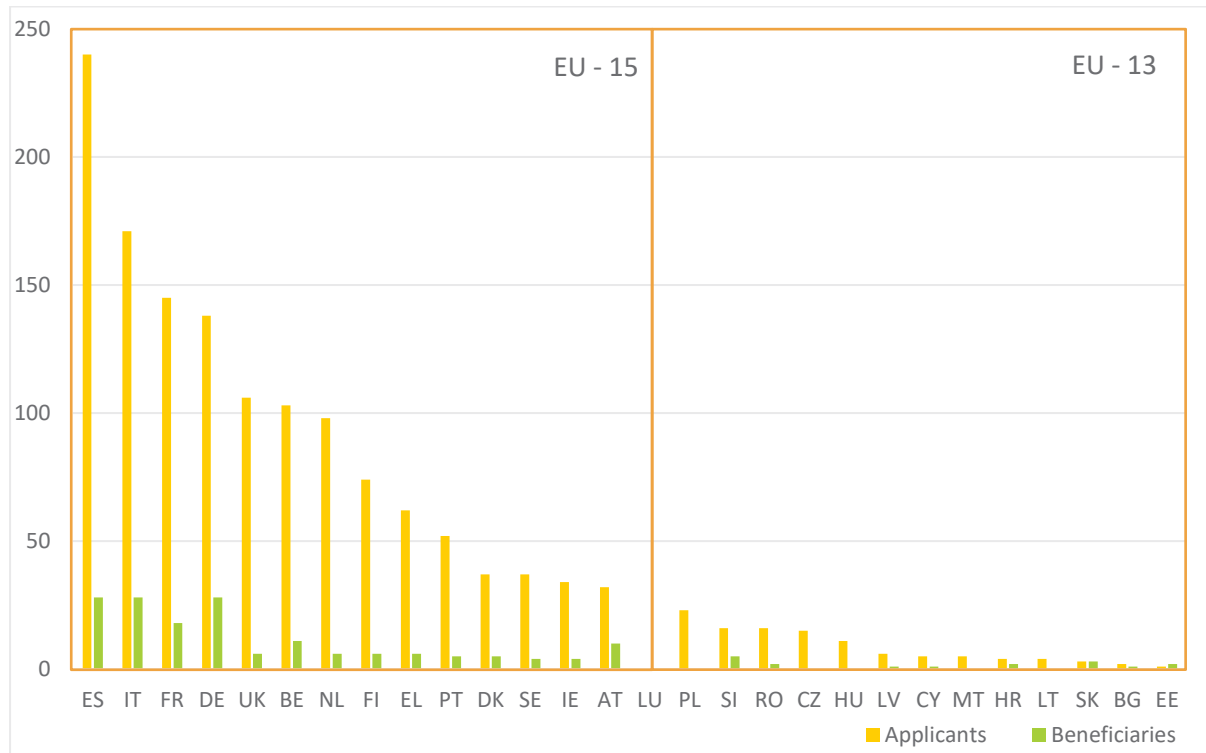


Figure 53: Distribution of applicants and beneficiaries per country from EU-15 and EU-13 in Call 2017.

Figure 54 shows the distribution of applicants and beneficiaries per country from associated countries and third countries. In Call 2017, only Norway (NO), Switzerland, (CH) and Israel (IL) are receiving funding. However, no third country is participating in retained proposals.

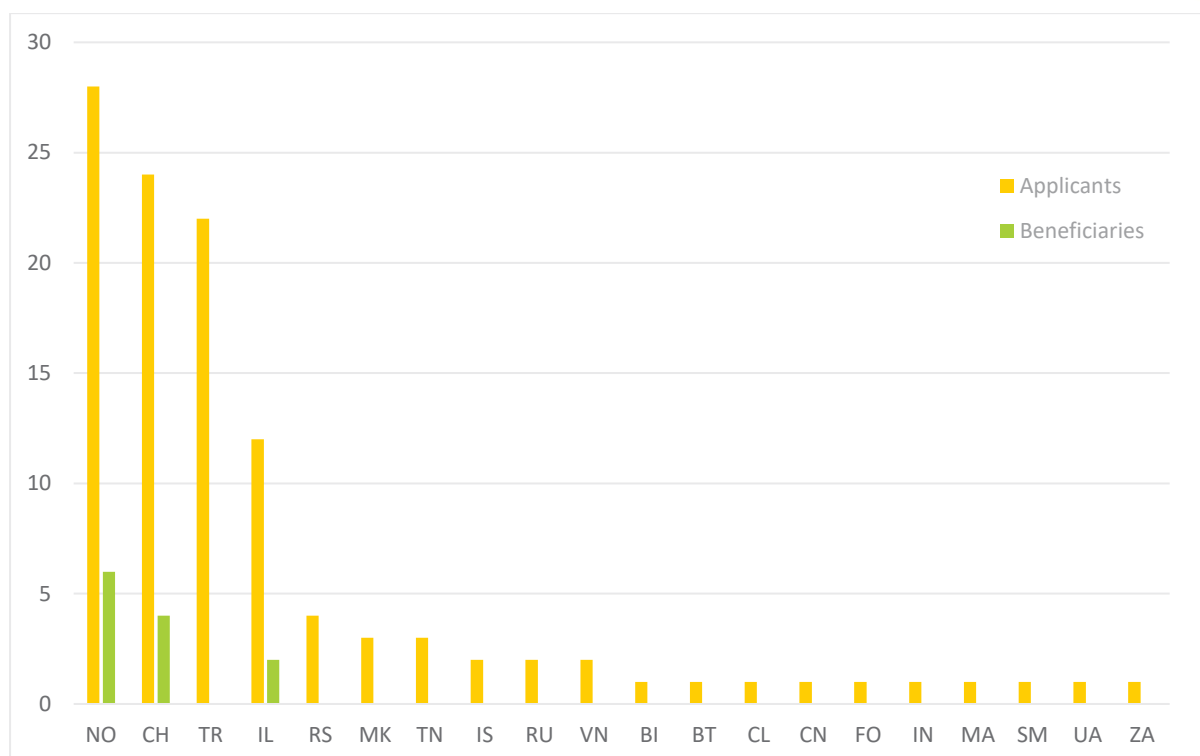


Figure 54: Distribution of applicants and beneficiaries per country from associated countries and third countries (industrialised countries and emerging economies and developing countries) in Call 2017.

With respect to SMEs, in Call 2017, 640 participants were self-declared as SMEs, out of 1.094, thus representing 37% of the total number of participants (Figure 55). In retained proposals, SMEs represented 39% of all participants, (Figure 56) corresponding to 38% of the total funding (Figure 57), which is comparable to the levels observed for Call 2016. For more details on the overall SME participation and funding allocation see section 1.3.1.1.

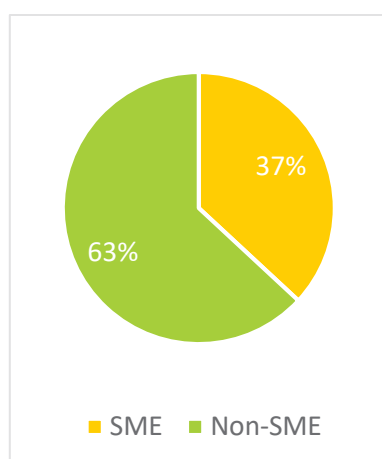


Figure 55: SMEs share in applications in Call 2017.

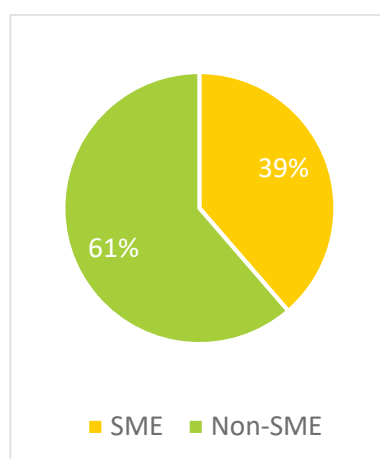


Figure 56: SMEs share in retained proposals in Call 2017.

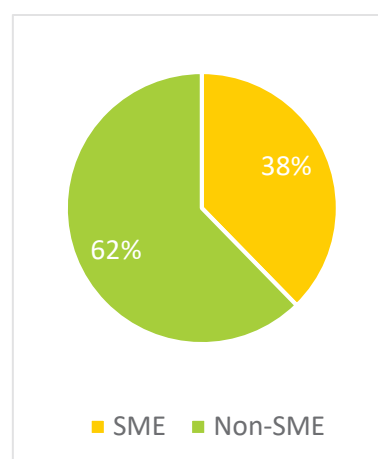


Figure 57: SMEs funding in retained proposals in Call 2017.

1.4. CALLS FOR TENDERS

No calls for tenders were planned in the AWP 2017, within the scope of Horizon 2020 forms of funding, to support the development and implementation of research and innovation agendas. Public procurements and contracts concluded for BBI JU administrative expenditure are reported under section 2.4 below.

1.5. DISSEMINATION AND INFORMATION ON PROJECTS RESULTS

With regard to dissemination activities, despite being important elements for monitoring the outcomes of BBI JU projects, only a few of the 65 ongoing projects have reported significant results. This is due to the fact that the vast majority of running projects are in the first phase of their lifetime, having not yet reached the stage in which dissemination activities become relevant.

The dissemination activities of running projects were very heterogeneous in 2017, mainly due to the status of their progress and the type of action. In fact, by the end of 2017, only projects from call 2014 had made considerable progress and disseminated some intermediate results. Projects arising from the 2015 call have not yet reached the first periodic reporting stage and projects from the 2016 call only started between May and October 2017.

Regarding the type of action, CSAs have more public deliverables than the other types of actions, as their main purpose is to support and facilitate bio-based industries in general and BBI JU projects in particular. Therefore, their dissemination potential is higher, but there are currently only 6 running CSAs out of 65 running grants.

The data made available by projects so far via the “continuous reporting” includes the following elements:

1. Number of dissemination and communication activities: amount of activities in 19 categories such as organisation of a conference; press release, flyer, etc.;
2. Estimated number of persons reached: amount of persons in 9 categories such as scientific community, industry, policy makers, etc.

Tables 10 and 11 below - part of the standard H2020 reporting via the Participant Portal - provide an overview of dissemination and communication activities of those 22 on-going BBI JU projects that had indicated such activities via the ‘continuous reporting’ module. These data are an underestimation of the actual amount of scheduled and performed dissemination & communication activities in 2017, since the ‘continuous reporting’ module only needs to be fully updated when periodic reports are submitted, and in 2017 only 11 such reports were submitted to BBI JU. According to the available information, BBI JU projects have engaged in numerous dissemination and communication activities throughout the year, in the form of conferences, publications, exhibitions etc. In addition, these activities have had a wide estimated outreach.

Type of dissemination & communication activities	Amount
Organisation of a Conference	5
Organisation of a Workshop	14
Press release	59
Non-scientific and non-peer-reviewed publication (popularised publication)	111
Exhibition	23
Flyer	24
Training	20
Social media	45
Website	86
Communication campaign (e.g. radio, TV)	14
Participation to a conference	159
Participation to a workshop	59
Participation to an event other than a conference or a workshop	51
Video/film	12
Pitch event	5
Trade Fair	19
Participation in activities organised jointly with other H2020 projects	13
Other	34

Table 10: Amount of Dissemination & Communication activities performed by projects.

Category / target group	Amount of persons reached
Scientific Community (Higher Education, Research)	124 007
Industry	231 388
Civil Society	9 141
General Public	945 855
Policy Makers	15 489
Media	15 371
Investors	6 845
Customers	104 997
Other	7 036 803

Table 11: estimated number of persons reached, in the context of all dissemination and communication activities.

PUBLICATIONS AND PATENTS FROM BBI JU PROJECTS

Data on publications and patents are gathered through the continuous reporting module of the Participant Portal. By the end of 2017 there were no patents available yet, while 28 publications were reported. It is important to note that patents only need to be fully reported during the periodic reporting phase, and in 2017 only 11 projects submitted such reports. More details are provided in Annexes 7.3 and 7.4 respectively.

BBI JU ACTIVITY IN SUPPORT TO DISSEMINATION OF PROJECTS RESULTS

BBI JU also actively supports the dissemination of project results in 3 principles: using IT tools to disseminate project results, providing information about ways to increase and professionalise dissemination, and participating in meetings and events. Each of these 3 methods is described in further detail below.

The main IT tools used by BBI JU to disseminate project info and results are:

- A dedicated webpage³⁷ where all ongoing BBI JU projects are featured. This webpage provides project-specific information, as well as a link to each project-specific URL, where additional dissemination materials can be found.

³⁷ <https://www.bbi-europe.eu/projects>

- CORDIS³⁸, the official results repository of EU-funded research and innovation projects. In 2017, CORDIS started to publish all public deliverables approved by the project officers on each project page, including those of the BBI JU projects.
- The BBI JU newsletter, which was launched in the second half of 2017, and which facilitates - among other things - the dissemination of project results.

BBI JU provides dissemination-supporting information using a webpage³⁹ dedicated to project management which includes the following information:

- Communication guidelines for projects, including texts and logos which acknowledge EU funding;
- A 'FAQ for coordinators' document which includes a specific section on dissemination, communication and exploitation.

BBI JU also has actively participated in dissemination-related meetings and events, such as:

- Meetings within the EU research family about knowledge sharing where best practices about dissemination are discussed. For example, in 2017 BBI JU took into account new insights gathered via the DiEPP⁴⁰ meetings, and implemented best dissemination practices via the IT tools and information sources described in the two previous paragraphs.
- External meetings giving BBI JU project representatives opportunities to disseminate their results and share best practices. For example, in December 2017 BBI JU organised its first Stakeholder Forum which included a project exhibition area where projects could be presented with their objectives and intermediate results. More details about this event are available under section 2.

³⁸ http://cordis.europa.eu/home_en.html

³⁹ <https://www.bbi-europe.eu/participate/project-management>

⁴⁰ DiEPP = Dissemination and Exploitation Practitioners' Platform, a community of practice supporting the exchange of information and best practices on dissemination and exploitation at the level of the EU's Research and Innovation Family.

1.6. OPERATIONAL BUDGET EXECUTION

COMMITMENT APPROPRIATIONS

In April 2017 BBI JU published a call for proposals for a total maximum indicative funding amount of € 81 000 000 and a committed amount of € 81 314 209. The total budget committed was € 85 764 865 including € 4 450 656 of unused appropriations from the calls of 2015 and 2016. The actions covered by the Call were RIAs, DEMOs, Flagships and CSAs.

17 Proposals were selected for a requested total funding of € 85 672 213 accounting for a foreseen consumption of 99.9 % of the call budget. The difference between the call amount and the total requested funding is intended to be redeployed during the 2018 financial year to supplement the 2018 call for proposal in line with the provision included in Article 6(5) of the BBI JU financial rules. Any residual unused amount, following the final requested total funding, will be de-committed in 2018 for reactivation in 2019.

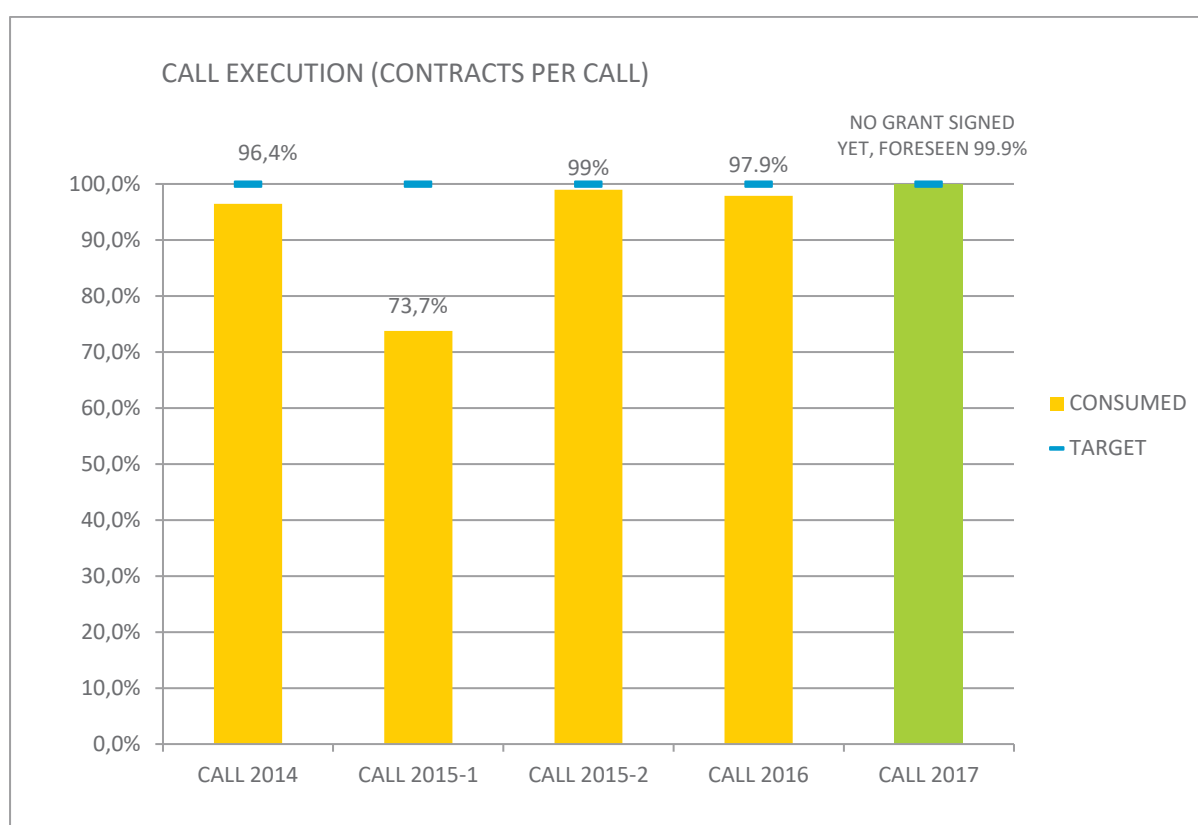


Figure 58: Call budget execution.

Regarding call 2016, 29 grants for over € 185 million of funding were all signed by May 2017 within the given deadline of 8 months from the call closure and with an average TTG of 231 days.

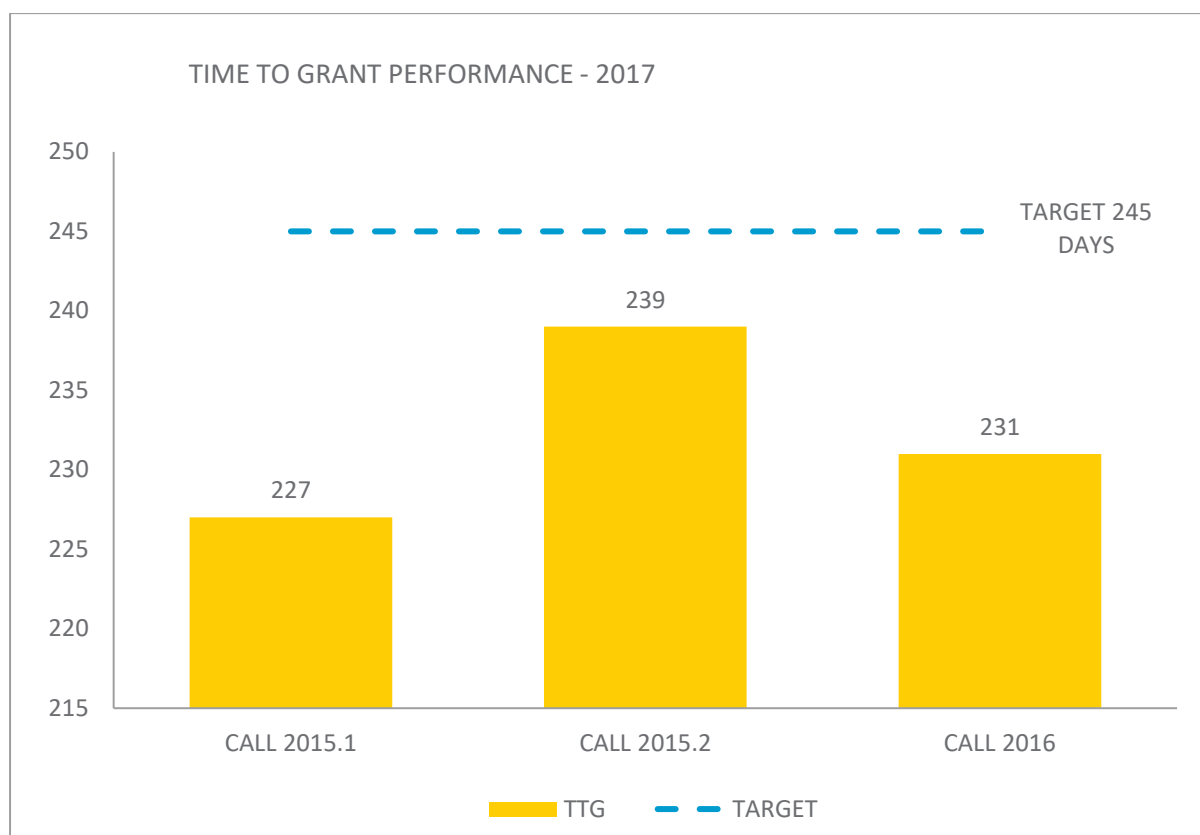


Figure 59: Time to grant performance in 2017 for Calls 2016

PAYMENT APPROPRIATIONS

Pre-financings were paid with an average time to pay of 11.6 days (against a target of 30 days), all were made on time for a total amount of € 62 487 741.

Regarding the payment of the periodic reports, BBI JU programme office dealt with 10 interim cost claims in 2017. These claims relate to projects of the BBI JU Call 2014 and were received at the beginning of the year. The management of the payment process – via the corporate IT systems - at the same time as the review process resulted in some delays, impacting the overall time to pay: the average time to pay was 84 days (against a target of 90 days) for a total of € 21 323 120 and two payments were late, both by one day.

The overall execution of payment appropriations (included in the amended budget) for the operational expenditure was or 99.4% for a total amount of € 83 810 862. The remaining € 486 657 were budgeted in 2017 for the payment of a periodic report that will only be made in early 2018; these appropriations have in fact already been reactivated in the 2018 BBI JU budget according to the provision included in Article 6(5) of the BBI JU financial rules.

1.7. IN-KIND AND FINANCIAL CONTRIBUTIONS

GLOBAL LEVEL

Under the Council Regulation establishing the BBI JU, by the end of the initiative in 2024 the total contribution by the members other than the Union or their constituent entities shall be at least € 2.73 billion, of which € 1 755 million are in-kind contributions to additional activities. The EU contribution to the BBI JU shall be up to € 975 million⁴¹.

Within the global target of the contributions of the members other than the Union to be reached by 2024, the Council Regulation also includes well defined objectives: € 1,755 million for additional activities (IKAA) and € 182.5 million for contributions to operational costs. Regarding the in-kind contribution to operational activities (IKOP), there is no defined objective in the Council Regulation, but an indicative target value of € 792.5 million⁴² can be calculated.

IN-KIND CONTRIBUTION TOWARDS OPERATIONAL COSTS (IKOP AND APIK)

IKOP represents the costs incurred by BIC or its constituent entities in the implementation of indirect actions less the contribution of the BBI JU and any other Union contribution to those costs. APIK represents the costs incurred by all participants in the implementation of indirect actions less the contribution of the BBI JU and any other Union contribution to those costs.

The IKOP report 2017 is based on the estimation of in-kind contributions made by beneficiaries participating in BBI JU's projects relating to costs incurred during the implementation of projects during the year 2017. These estimations were reported by 31 January 2018 in line with the requirements of Article 4.3 of the Council Regulation establishing the BBI JU.

On this basis, in the table below, BBI JU is able to report on the values of IKOP incurred in 2016 and 2017 and detail the information per Call.

Grants from call for proposal	Estimated IKOP incurred in 2016 as reported by BIC (in €)	Estimated IKOP incurred in 2017 as reported by BIC (in €)
2014	4,081,301	7,006,204
2015.1	3,013,000	3,702,262
2015.2	738,826	5,396,562
2016	N.A.	4,667,812
TOTAL	7,833,127	20,772,840

Table 12: Values of estimated IKOP incurred in 2016 and 2017, per call.

⁴¹ Including contribution towards administrative costs.

⁴² Including contribution towards administrative costs.

Some of BIC's constituent entities participating in BBI JU's projects could not report their IKOP by the deadline, either because their own 2017 accounts were not yet closed, or because the projects had started too close to the end of 2017.

Taking into account all participants' in kind contributions to operational activities (APIK) committed so far in running grants by all beneficiaries, the total value for the period 2014-2017 reaches € 183 206 211 as detailed below.

Call	APIK all participants (in €)
2014	28,093,229
2015.1	36,049,561
2015.2	37,390,044
2016	81,673,377
TOTAL	183,206,211

Table 13: value of APIK committed in running grants by all beneficiaries, per call

It is important to mention that – on the initiative of BIC - some of BIC's constituent entities voluntarily⁴³ provided IKOP certificates for a total value of around € 11 000 000. These certificates were prepared by external auditors according to the international audit standards and in line with the guidance provided by BBI JU. Once BBI JU validates these certificates, these contributions will be recorded in BBI JU's accounts⁴⁴ for the year 2018 in net asset.

IN-KIND CONTRIBUTION IN THE IMPLEMENTATION OF ADDITIONAL ACTIVITIES (IKAA): CERTIFICATION AND VALIDATION

IKAA constitutes the in-kind contribution incurred by the members other than the Union or their constituent entities consisting of the costs incurred by them in implementing additional activities outside the work plan of the BBI JU, contributing to the objectives of the BBI JU initiative.

In June 2017 BIC delivered the second report of certified IKAA incurred during 2016 for a total value of €185 860 000. The in-kind contributions certified are linked to those reflected in the IKAA plan over the same period and are fully certified by the independent external auditors in compliance with Article 4.4 of the Council Regulation.

⁴³ The standard certification of IKOP is performed in the context of the preparations by an external auditor of the certificates on the financial statement (CFS) that are due by the end of the projects for claims over €325 000, as part of the reporting package.

⁴⁴ In line with the instructions provided by DG BUDGET, BBI JU is recording IKOP in its accounts. When a known IKOP amount is an estimation, it is included in the accounts as a "liability". As soon as these amounts are certified, they will be transferred to "net assets" during the accounting exercise in which the certification is received.

BIC presented⁴⁵ a draft of the IKAA plan 2017, and up to €392 180 000 of additional activities are expected to have been invested by BIC's constituent entities. The plan has been analysed and approved by the GB at the beginning of 2018.

The IKAA certified to BIC for the year 2017 amounts to € 186 247 000. The certified additional investments by the end of 2017 reach a total of € 663 589 000. Here below the detailed breakdown of certified IKAA by year and its graphical evolution against target and projections:

Year	Certified IKAA (in €)
2014-2015	291,482,000
2016	185,860,000
2017	186,247,000
TOTAL	663,589,000

Table 14: values of certified IKAA by year

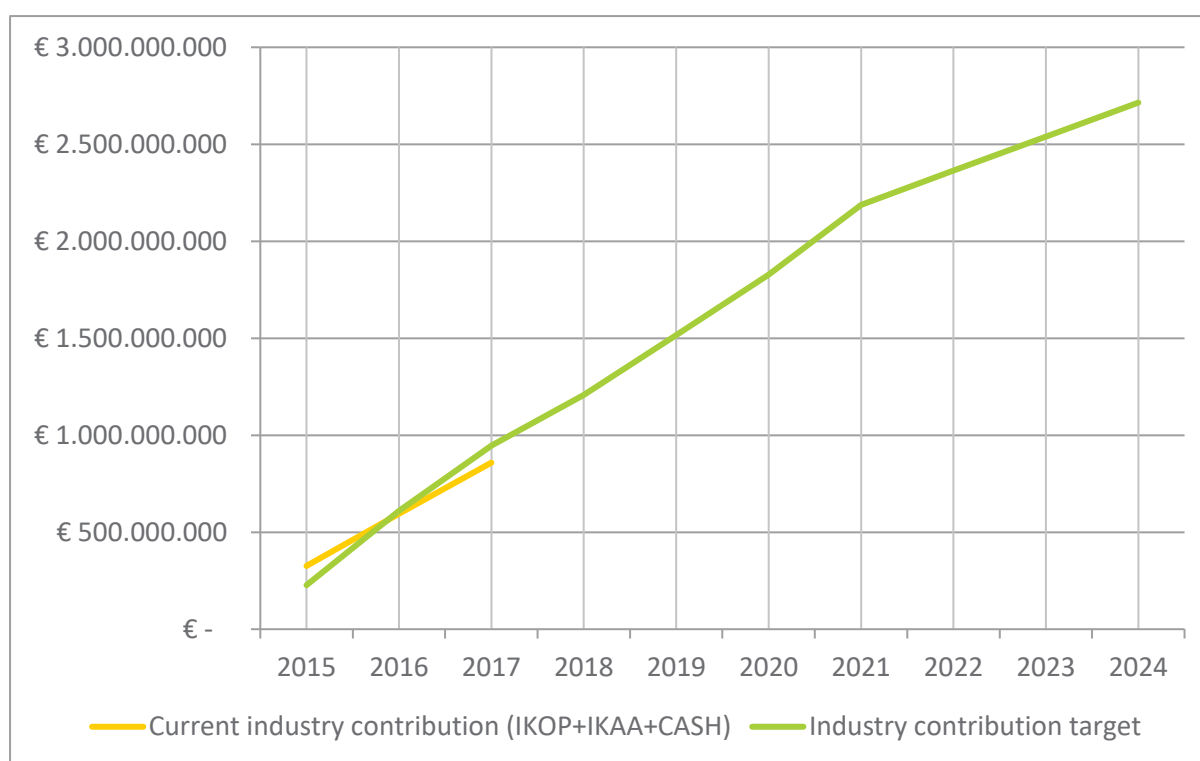


Figure 60: Value of certified IKAA (2015-2017)

⁴⁵ The IKAA methodology agreed by BIC and the EC provides that the EC performs both qualitative and quantitative desk review of the description of additional activities, before the annual plan is approved by the GB. The IKAA is then certified by independent external auditors during the following year.

IN-CASH CONTRIBUTION IN THE IMPLEMENTATION OF OPERATIONAL ACTIVITIES

The Council Regulation lays down the minimum financial contribution to be provided by the members other than the Union or their constituent entities towards operational costs. The objective at the end of the initiative is that at least € 182.5 million is contributed by BIC and its constituent entities towards this aim.

Currently this objective is far from being reached and actions have been continued by the EC, BIC and BBI JU in 2017 to improve the conditions for industry to further contribute.

Under the umbrella of the “task force” established by the BBI JU Governing Board of March 2016, the European Commission – in collaboration with BIC and BBI JU – launched an amendment of the BBI JU Regulation in order to enable BIC and its constituent entities to deliver the financial contribution not only as payments at programme level but also as financial contributions to indirect actions funded by the BBI JU.

On top of this, the task force proposed to the Governing Board a range of solutions to increase the level of financial contributions. The solution retained by the Governing Board was to include in the BBI JU calls 2018, 2019 and 2020 specific topics that should enable the projects to particularly benefit from the practical knowledge and technical capabilities of relevant industrial actors in the bio-based industry, and which have the potential to attract financial contribution at project level.

The amendment to the Council Regulation approved in early 2018 makes possible financial contributions at project level, improving the conditions necessary to reach the objective of €182.5 m. At the end of 2017, the financial contribution committed to by BIC and/or its constituent entities amounts to a total of €12 441 158 split between a direct contribution by BIC to the BBI JU operational budget (€1 250 000) and a financial contribution at project level in signed grant agreements (€11 191 158).

OVERALL INDUSTRY CONTRIBUTION TO THE BBI JU INITIATIVE

Looking at the level of the industry contribution at the end of 2017 and taking into account the fact that not all the value of IKAA planned for 2017 was certified by 1st June 2018, total investments remain overall in line with the expected values.

Progress is still expected at the level of the industry’s financial contributions at programme and at project level, but the improvement of the regulatory framework in 2018 (via the approval of amendment of the Council Regulation) ensures better conditions for industry towards the achievement of the objective by the end of the initiative.

For the calculation of the related leverage effect, please refer to section 1.3.1.4 above.

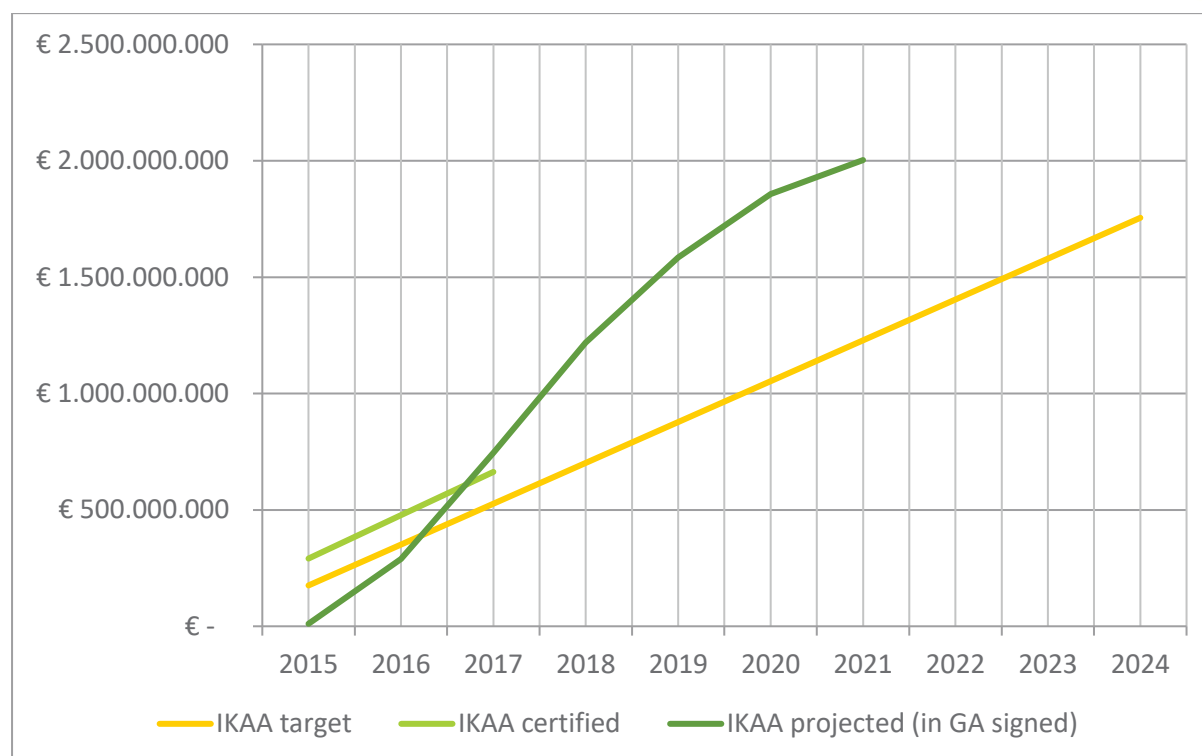


Figure 61: Total amount of contribution by industry into BBI JU running grant agreements (committed IKOP, committed cash contributions, certified IKAA).



02

SUPPORT TO OPERATIONS

2.1. COMMUNICATION ACTIVITIES

Communication and stakeholder management activities during 2017 were a continuation of those carried out in 2016. The promotion of the BBI JU programme was a priority in the design and execution of the relevant activities. Additionally, specific actions were elaborated for the outreach of well identified and prioritised stakeholders, with particular emphasis given to the EU Institutions.

Similarly to the previous year, the communication and stakeholder management strategy was executed following the roadmap already developed last year in cooperation with BIC and the EC and aiming at achieving BBI JU's long-term communication goals. This was done taking into account BBI JU's resources in order to ensure efficiency and to obtain a maximum return for the BBI JU initiative.



With that aim in mind, BBI JU got involved in the following communication channels, as presented in the coming sections:

- press and other media;
- champions, multipliers and intermediaries;
- communication events;
- website & social media;
- public relations.

2.1.1. Priority actions

The Communication and Stakeholder Management Action Plan 2017 was based, developed and executed around the following four key priorities:

1. promote the BBI JU calls for proposals and explain potential synergies with the wider EU funding environment to all potential participant groups, by using a variety of channel and media;
2. widen stakeholder engagement with the BBI JU programme by targeting priority stakeholders like SMEs, regions and currently underrepresented areas and sectors, by using outreach activities;
3. identify the programme to key influencers in order to widen the support for the BBI JU programme amongst policy makers, by using specific tailored and targeted actions;

4. improve the visibility and recognition of the value of the bio-based industries through the dissemination of programme/project activities, impacts and results to the wider stakeholder audience.

2.1.2. Outreach activities

2.1.2.1. Promoting BBI JU Call 2017: BBI JU Info Day & Brokerage event 2017

The BBI JU Info Day and Brokerage event – the fourth since BBI JU’s first call – for the promotion of the 2017 call took place in April right after the publication of the BBI JU call. Alongside the main event in Brussels, a social media campaign (Twitter and LinkedIn) was organised in order to further promote and disseminate information to interested parties. Printed supporting information material ([2017 Call brochure](#)) was made available both during the day of the event and via the BBI JU dedicated webpage. Overall, the 2017 Info Day kept the same format as the one of 2016.

In line with the trend of increasing participation recorded in 2016⁴⁶, the 2017 Info Day gathered 567 registered participants achieving a 7% increase compared to the previous year. Attendees originated from 27 EU Member States and 11 associated countries. In addition to participants physically present in the meeting room, another 388 persons watched the conference via web-streaming and 210 tuned in during the days following the event. This year, close to 20% of participants came from non-profit research organisations, 18% of participants came from SMEs and another 18% from academic and higher education institutions.

Alongside the numerous informal meetings throughout the duration of the event, BBI JU led the organisation of face-to-face meetings amongst the participants in order to facilitate and create networking opportunities. Out of over 1200 requests for meetings, 810 actually took place via BBI JU’s partnering platform, recording 210 additional meetings compared to 2016. Moreover, social media were particularly present with the BBI JU tweets gathering an impressive 11.800 impressions and more than 160 re-tweets.

The promotion of call 2017 and its relevant information was not limited to the Info day. The BBI JU Programme Office ensured a continuous flow of details about the 2017 Call to external stakeholders during *ad hoc* events. Nine dedicated national Info Days took place in EU MS and associated countries (see table 15) and effective dissemination of the information was also ensured via the SRG, the SC and the NCPs network.

⁴⁶ 2016 saw a 25% increase of participants compared to 2015

National Info Days	City, Country
20 April 2017	Rome, Italy
16 March 2017	Zagreb, Croatia
24 March 2017	Paris, France
09 May 2017	Tel Aviv, Israel
11 May 2017	Vilnius, Lithuania
17 May 2017	The Hague, the Netherlands
18 May 2017	Madrid, Spain
08 June 2017	Lisbon, Portugal
22 June 2017	(Czech & Slovak) in Bratislava, Slovakia

Table 15: Dedicated National Info Days where BBI JU staff participated in 2017.

2.1.2.2. Promoting BBI JU projects and success stories

Throughout 2017 and similarly to the previous year, a major priority for BBI JU was to showcase its projects as well as to communicate about the benefits of a sustainable and competitive bio-based industry both to interested parties and to the wider public. Towards that end, BBI JU organised and participated in a number of meetings, events and conferences. Table 16 presents a detailed list of all events at which the BBI JU programme office promoted the BBI JU initiative.

Events in 2017	Date	Place	Type of participation	Organiser
1. Bioeconomy Investment Summit 2017 and BBI JU Walking Exhibition show	14-15 December 2017	Helsinki, Finland	Exhibitor	European Forest Institute (EFI)
2. BBI JU STAKEHOLDER FORUM	06-07 December 2017	Brussels, BE	Organiser	BBI JU
3. BioTech Research & Innovation Hack 2017	05-06 December 2017	Brussels, BE	Speaker	ERA-Net Cofund ERA; CoBioTech
4. Scaling Up 2017	27-29 November 2017	Ottawa, CA	Speaker	Passmore Group
5. European Bioenergy Future 2017	21-22 November 2017	Brussels, BE	Speaker	AEBIOM (European Biomass Association)
6. V European Bioeconomy Congress	20-21 November 2017	Lodz, PL	Speaker	Lodzkie Region
7. Blue Growth research and Innovation Horizon 2020 Societal Challenge 2 Info week	15-17 November 2017	Brussels, BE	Speaker	European Commission
8. 3rd meeting of the Joint Working Group SPIRE-BBI JU	14 November 2017	Brussels, BE	Host	BBI JU

9. Ecomondo 2017	07-10 November 2017	Rimini, IT	Speaker	Italian Exhibition Group (IEG)
10. Innovation in Action - Joint Undertakings exhibition	23-26 October 2017	Strasbourg, FR	Speaker	BBI JU; Clean Sky JU; ECSEL JU; FCH JU; IMI JU,, SESAR JU; Shift2Rail
11. Algae Biorefineries for Europe	17-18 October 2017	Brussels, BE	Speaker	MIRACLES; D-FACTORY; BISIGODOS; PUFA-CHAIN
12. EFIB 2017	09-11 October 2017	Brussels, BE	Speaker	Smithers Rapra; EuropaBio; bio.be
13. "Building an effective Bioeconomy Strategy"	28 September 2017	Brussels, BE	Speaker	EBCD
14. BBI JU Walking exhibition Biotech Week, European Parliament, Brussels	27 September 2017	Brussels, BE	Speaker	BBI JU
15. Agrolink Flanders Horizon 2020 workshop & brokerage event, Belgium	15 September 2017	Melle, Belgium	Speaker	Agrolink Flanders

16. Final Conference: European Sustainable Chemicals Support Service	14 September 2017	Brussels, BE	Speaker	Consortium Cefic; PNO Consultants Research; Centre for Energy Resources and Consumption (CIRCE Foundation)
17. La Foire de Libramont	28-31 July 2017	Libramont, BE	Speaker	BE Ministry of Agriculture
18. BIO World Congress on Industrial Biotechnology, Canada	23-26 July 2017	Montréal, CA	Speaker	BIO - Biotechnology Innovation Organization
19. BBI JU Call 2017 Online Meetings	27-28 June 2017	BBI JU Partnering Platform	Organiser	BBI JU
20. RRB-13 13th International Conference on Renewable Resources and Biorefineries	07-09 June 2017	Wroclaw, Poland	Speaker	Ghent University, Wroclaw University of Environmental & Life Sciences, KNOW - Leading National Research Center Wroclaw Center for Biotechnology

21. Bio-Based Industries Opportunities in Horizon 2020 - networking and informative event in Ireland	06 June 2017	Dublin, IE	Speaker	InterTradeIreland; Department of Agriculture, Environment & Rural Affairs of Northern Ireland Department of Agriculture; Food & Marine of Ireland Marine Institute; University College Dublin
22. Bio-Based Live Europe	31 May 2017 to 01 June 2017	Amsterdam, NL	Speaker	Bio-Based World
23. Green Chemistry and White Biotechnology: the Industry of the Future	22-23 May 2017	Mons, Belgium	Speaker	GreenWin; Université de Mons; Enterprise Europe Network
24. Conference on bio-based materials	10 May 2017	Köln, DE	Speaker	Nova Institute

25. European Funding for Bio-based Industries	03 May 2017	London, UK	Speaker	Knowledge Transfer Network (KTN); the H2020 UK National Contact Points; SusChem UK and Enterprise Europe Network
26. BBI JU 2017 OPEN INFO DAY & BROKERAGE EVENT	28 April 2017	Brussels, BE	Organiser	BBI JU
27. Webinar BioLinX	06 April 2017	Webinar	Speaker	BioLinX
28. World Bio Markets The Netherlands	27-30 March 2017	Amsterdam, NL	Speaker	Green Power Conferences
29. Forum for the Future of Agriculture (FFA)	28 March 2017	Brussels, BE	Participant	ILO/Syngenta
30. Bio-based industry in Flanders	22 March 2017	Brussels, BE	Speaker	Flanders – Department of Economy, Science & Innovation
31. The Value of Wood Forum	21 March 2017	Brussels, BE	Participant	CEPS
32. Post IV European Bioeconomy Congress	9 March 2017	Riga, LT	Speaker	LT Ministry of Agriculture

33. Maritime innovation roundtable	8 March 2017	Brussels, BE	Speaker	Science/Business
34. 3rd Annual IBioIC Conference	27 January 2017	Glasgow, UK	Speaker	IBioIC
35. Visit of the 2016 BBI JU EUCYS Winner Mr. Modestas GUDAUSKAS	29 January - 3 February 2017	Brussels, BE	Host	BBI JU

Table 16: List of meetings, events and conferences where BBI JU had a specific role in 2017.

Among the events listed above, the five briefly described below could be characterised as the highlights of the year 2017.

22 MARCH 2017: MEP AWARDS

BBI JU sponsored the prize for the “Research and Innovation” category and the award was finally attributed to MEP Marinescu. All the members of the BBI JU Governing Board were invited to the ceremony and the Chair Mat Quaedvlieg attended the ceremony. The event offered an excellent opportunity to develop links with Members of the European Parliament (MEPs) and communicate directly to them the mission and vision of BBI JU. More precisely, ahead of the award ceremony the BBI JU Executive Director met with several MEPs, as well as a number of Brussels-based stakeholders and policy makers, and presented BBI JU to them.

27 SEPTEMBER & 14 DECEMBER 2017: BBI JU “WALKING EXHIBITION SHOW”

Following the success of the 2016 “Show and Tell” show in Bratislava during the Bio-economy Congress, the concept of the exhibition was revisited in 2017 in order to present the potential of everyday bio-based products in the daily life of a family.

The Walking Exhibition was organised twice during the year, once in September at the European Parliament in Brussels in the context of the Biotechnology Week (under the auspice of MEP Bogovic) and a second time following the invitation of the European Commission during the Helsinki Bioeconomy Investment Summit. In both cases, visual and printed information material was distributed to the audience that was provided with a hands-on experience of bio-based products having properties equal or even superior to their petrol-based equivalents. The narration accompanying the shows explained to the numerous attendees the benefits of those products in terms of environmental advantages, together with the significant socio-economic impact that BBI JU projects bring to the regions where they are developed.

23-26 OCTOBER 2017: “INNOVATION IN ACTION” JOINT UNDERTAKINGS’ EXHIBITION, EUROPEAN PARLIAMENT, STRASBOURG

The joint exhibition was organised by the JUs in cooperation with MEP Poche, rapporteur of the JUs 2015 Discharge, and featured an opening speech by Commissioner Moedas. Commissioner Moedas visited the BBI JU info booth ahead of his opening speech, where The Executive Director of BBI JU presented to him some of the bio-based products being exhibited in the booth and explained the support that BBI JU is providing to the projects responsible for those products. The event aimed at presenting to the MEPs the role and added value of the Joint Undertakings in supporting top quality research, while significantly leveraging private sector investment mobilisation via EU funds.

BBI JU stand was present throughout the whole week and numerous MEPs, MEPs’ assistants, Group advisors and Parliament staff received information about BBI JU’s activities and were able to see bio-based products, many of which were developed by BBI JU’s projects. The BBI JU stand attracted the highest number of MEPs’ visits among the JUs’ booths; some of them made dedicated videos about BBI JU’s activities and posted them on their social media.

Alongside the event, BBI JU’s Executive Director had bilateral meetings with MEP Ricardo Serrão Santos and MEP Paul Brannen, while during the working breakfast organised also by MEP Poche under

the theme of FP9 and the role of JUs, he had a number of exchanges with the MEPs present about BBI JU's key role in the development of EU's bio-based sector.

6-7 DECEMBER 2017: BBI JU 1ST STAKEHOLDER FORUM 2017, BRUSSELS, BELGIUM

The inaugural BBI JU Stakeholder Forum took place in Brussels on the 6th and 7th of December with the main aim of engaging directly in dialogue with BBI JU's projects and stakeholders.

On 6th of December, BBI JU welcomed its projects' representatives during a day dedicated to facilitating an exchange of ideas and providing opportunities for networking and finding potential areas of common interest and synergies. Projects were grouped by thematic area – CSAs, Aquatic biomass, Waste as feedstock, Agri-food, Forest- and lignocellulosic-based biomass –, and representatives had the opportunity to talk about their work, as well as address questions both to both EC and BBI JU officials. The conference included a session dedicated to the BBI JU CSAs and the CSAs of Horizon 2020 Societal Challenge 2, where representatives of these projects were able to explain how their cross-sectorial activities are relevant to all the BBI JU projects. Afterwards participants attended different breakout sessions, where the RIAs, IA-DEMOS and IA-FLAGS project representatives were invited to take the floor and make a pitch presentation of their activities. The first day of the Stakeholder Forum provided networking opportunities during breaks and a cocktail reception at the end of the day, co-organised with the European Investment Bank (EIB).

On the 7th of December, the BBI JU welcomed close to 600 participants who attended a full day programme with 41 speakers and expert panellists discussing the strategic importance of the bio-based economy in Europe and BBI JU's key role in implementing it. The aim of the day was gathering the bio-based industries community in order to facilitate discussion - through constructive dialogue and by encouraging cross-collaboration between actors - on the strategic direction for the BBI JU programme.

The day presented a comprehensive agenda of 41 inspiring speakers, among which Phil Hogan, Commissioner for Agriculture and Rural Development, as well as parallel sessions, networking sessions and a project exhibition area in which participants had the chance to interact with BBI JU's projects representatives and obtain first-hand information about the projects from them.

Participants represented a wide range of industries and sectors, SMEs, academic and research organisations, local and national government, EU Institutions, projects and the bio-based industries community as a whole. A report presenting the conclusions and recommendations highlighted during the event has been discussed in the GB meeting of April 2018 and during the advisory bodies' meetings of May 2018. The survey performed after the event demonstrated a very high quality feedback regarding the content and the overall organisation. The survey also mentions some suggestions to be taken into account for the next Stakeholder Forum.

2.1.3. Publications and promotional materials

The publications developed in 2017 are presented below in table 17.

The year saw the development and subsequent publication of BBI JU's [corporate brochure](#) which was widely disseminated to all EU-level policy makers and stakeholders and will remain the reference

document of the organisation for the years to come. In addition, a dedicated publication on BBI JU's projects entitled "Bio-based Industries made for European citizens" was finalised; this brochure is destined to the wider public and describes in a simple way the reality of bio-based products in our daily lives and has been the most popular amongst interested readers. BBI JU also contributed to Elsevier's New Biotechnology issue with an article about its role as a cornerstone in the EC's Bioeconomy strategy for Europe and its aim to develop a sustainable, competitive and innovative bio-based economy while providing socio-economic benefits for European citizens (published in Volume 40).

Title
BBI JU Projects brochure
BBI JU Corporate brochure
"Bio-based industries made for European citizens" brochure
BBI JU: the catalyst in speeding up the arrival of greener everyday products to our lives article
Call for proposals 2017 brochure
BBI JU: the catalyst for a sustainable bio-based economy in Europe" article
BBI JU Pilot Study on "Current situation and trends of the bio-based industries in Europe with a focus on bio-based materials"
"Bio-based Industries Joint Undertaking: The catalyst for sustainable bio-based economic growth in Europe" article
"Bio-Based Industries Joint Undertaking: Investing in the European Bioeconomy" article
"Bio-based Industries Joint Undertaking: leveraging public money for a coherent sustainable bio-based economy" article

Table 17: Articles and brochures published in 2017.

In addition to publications as promotional material, BBI JU continued the development of videos presenting on-going BBI JU projects, their goals and eventual final product (Table 18). The communication team succeeded in creating a substantial collection of bio-based products that are exhibited in the BBI JU premises and used ad hoc for external events.

Videos published in 2017	First2Run project Bioskoh project Exilva project Pulp2Value project EP Walking exhibition EUCYS 2016 BBI JU "Bioeconomy - bio-based industries prize" winner Modestas Gudauskas
Videos filmed in 2017 (to be published in 2018)	Extended version of BBI JU Corporate video (with contributions from BBI JU GB Members) Stakeholder Forum Valchem project Agrimax project Lignoflag project PEFerence project

Table 18: Videos developed and published in 2017.

MEDIA RELATIONS

A specialised communication company was contracted to cover and disseminate information about the Stakeholder Forum to Belgian and European press, while ensuring that a number of interviews with high level speakers took place. As a follow-up, the Executive Director gave 21 interviews to European and international press that generated more than 100 clippings of articles in thirteen MS (DE, NL, ES, UK, BE, FR, IT, HR, FI, AT, PT, HU, LU) but also outside the European borders: USA, Mexico, Norway, Canada, and Australia.

Following a sponsored media campaign, a series of articles (table 19) featured in international and European level magazines.

Title	Type	Link
EUObserver	Online & printed editions	BBI JU - https://bit.ly/2HsWHLs Stakeholder Forum - https://bit.ly/2q83nrN
POLITICO	Online & printed editions	BBI JU - https://bit.ly/2M9we9s (page 19)
Bio-based World News	Online Edition	BBI JU Stakeholder Forum - Industry leaders set to gather at BBI JU Stakeholder Forum 2017: 7th December, Brussels (19 th October) BBI JU - Building the partnerships to help Europe achieve its bio-based potential (16 th November) Pulp2Value - Project focus: Extracting high value products from sugar beet pulp (21 st November) Exilva - Project focus: Maximising the commercial potential of super-strong microfibrillated cellulose (18 th December)
European Files	Online & printed editions	BBI JU - https://bit.ly/2M70UrG
The Parliament Magazine	Online & printed editions	BBI JU - https://bit.ly/2hlsGGv BBI JU - https://bit.ly/2JAHEEv

Table 19: Sponsored articles in the press.

2.1.4. Website, social media and e-newsletter

BBI JU WEBSITE

The BBI JU [website](#) continued to be the key reference for BBI JU's stakeholders for the retrieval of information regarding its activities. Compared to last year the number of accesses has significantly increased, amounting to 120.179 visits in 2017 from 61.630 unique visitors, generating a total website traffic of 330.424 page views. As expected peaks to the on-line activity were noticed during days of key BBI JU events i.e. Info Day, Stakeholder Forum, etc. as well as during specific stages of the call such as the opening of the call, the Info Day in Brussels and the week before the closure of the call. In terms of the country of origin of the visitors, Belgium, Spain and Italy were the countries that scored most visits.

Right before the end of the year the BBI JU website and associated domain names were transferred under the management of DG DIGIT (Next Europa platform).

STAKEHOLDER FORUM WEBSITE

A dedicated [website](#) was created for the purpose of the Stakeholder Forum. The website included all relevant information regarding the event: from the agenda and logistics to the registration system, exhibition plan, etc. 3.088 unique visitors accessed the website 6.301 times, reaching a total 17.193 page views.

LINKED IN GROUP/CORPORATE PAGE

BBI JU Programme Office continued to post news, events and stories in the BBI JU LinkedIn profile and group, providing an open forum for discussion and dissemination. The LinkedIn profile page and group was one of the channels used to promote the 2017 call, the Stakeholder Forum and open vacancies of the Programme office.

TWITTER

During 2017 the BBI JU [Twitter](#) page reached an impressive audience, increasing its followers to 2000+ users at the end of December 2017 accounting for 800+ new followers compared to December 2016.

@BBI2020 tweeted almost 300 unique original messages in addition to several retweets, which resulted in 387.000 views of BBI JU tweets. BBI JU Twitter account followers retweeted 1.169 times @BBI2020 messages and liked them 1.517 times. These numbers represent a significant increase in the engagement with BBI JU followers.

As expected, there were peaks in BBI JU's Twitter activity around the Info Day 2017 (BBI JU posted 23 tweets on the day of the event) and around the Stakeholder Forum 2017 (BBI JU posted 40 tweets on the day of the event).

E-NEWSLETTER

In the second half of 2017, BBI JU launched its quarterly e-newsletter. This included information about BBI JU news and activities, highlights from its projects, new publications, upcoming events and articles worth having on the EU-radar.

The [first edition](#) was sent on 13th October and the [second one](#) on 21st December to an average of over 2000 recipients. The countries with the biggest opening rate were Belgium, Spain, Italy, the Netherlands, Belgium, Hungary and Spain and the U.S.

2.2. LEGAL AND FINANCIAL FRAMEWORK

BBI JU is a joint undertaking within the meaning of Article 187 of the Treaty on the Functioning of the European Union, set up by the Council Regulation (EC) No 560/2014 of 6 May 2014.

In 2017, the necessary procedure was launched by the EC to carry on the amendment of the legal framework of the financial contributions towards operational costs. These contributions are among the contributions to be fulfilled by the private partner (BIC), as established in the Council Regulation, and should amount to at least € 182.5 million. The legal conditions established in the Council Regulation did not allow the financial contributions between beneficiaries at project level to be taken into account as part of BIC's contribution. According to the legal framework, these financial contributions needed to be paid by BIC directly to BBI JU at programme level, contributing to BBI JU's open calls for proposals. BIC's constituent entities (private companies), considered this kind of contribution unviable, as doing so would have not offer them any guaranteed benefit in exchange (e.g. results of the projects and related intellectual property rights). In addition, taking into account the open and transparent nature of the BBI JU calls for proposals, financial contributions delivered at programme level could benefit other companies, even competitors, participating in projects funded by the BBI JU.

Among the solutions implemented to solve this issue – and outlined in section 1.7 above - an amendment of the Council Regulation was launched by the beginning of 2017 in order to make financial contributions possible between beneficiaries at project level.

On 24 October 2017, the European Parliament adopted its position on the amendment to Article 12 of the Statutes of the Bio-based Industries Joint Undertaking. Afterwards, the amendment was adopted by the Council on 23 January 2018, and entered into force on the 15 February 2018⁴⁷.

The amendment only contains one substantial article that will produce the following effects:

- Introduce a new possibility of delivering the financial contribution referred to in Article 12(3)(b) of the Statutes annexed to the Council Regulation, in addition to the existing one.
- Delivering financial contributions will be possible in two ways: by transferring them from BIC to the BBI JU (as before) and/or by transferring them directly from a BIC member to another project beneficiary.
- Extend the types of parties that can deliver the financial contribution referred to in Article 12(3)(b) of the Statutes annexed to the Council Regulation. In addition to the 'Member other than the Union' (i.e. BIC standing alone), its 'constituent entities' (i.e. BIC members) will also be allowed to deliver the financial contribution.
- Allow BIC members to report the financial contributions delivered by them at project level to the BBI JU.

Facilitate the commitment to the overall financial target set out in Art 12(4) of the Statutes annexed to the Council Regulation.

⁴⁷ http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=uriserv:OJ.L_2018.022.01.0001.01.ENG

2.3. BUDGETARY AND FINANCIAL MANAGEMENT

OVERVIEW

The management of BBI JU's 2017 budget has been characterised by two important elements: 1) the management of the prior year administrative surplus and 2) the initial lack of payment appropriations on the operational side.

As for 2016, the 2017 BBI JU administrative budget also included a surplus of unused budget from prior years (mainly 2016). In fact, these unused (payment and commitment) appropriations, amounting to € 2 254 6249 (in commitment) and €2 774 974 (in payment), were reactivated partly already in the originally adopted BBU JU annual work plans and also partly via an amendment to this budget.

BBI JU made considerable efforts to consume these C2 appropriations in priority in line with BBI JU's financial rules art 6(5), reaching an almost full consumption despite the fact that the amendment was approved only during the month of May (meaning the appropriations were available around mid-June).

For what concerns the accumulated surplus outstanding at the end of 2017, the BBI JU Governing Board decided in December 2017 that most of it will be reabsorbed from an amount of €2 000 000 in 2019 by reducing the contributions of both the European Commission and BIC to BBI JU's administrative budget by € 1 000 000 each. The BBI JU Governing Board will decide on the destination of any remaining surplus and appropriations will be reactivated accordingly in future years' budgets.

Concerning the operational budget, it should be mentioned that the available payment appropriations included in BBI JU's 2017 budget were too low compared to the actual needs. As the payments of periodic reports are actually a contractual obligation, the only way to deal with the deficiency in the voted budget would have been to lower the pre-financing rate compared to previous calls. This measure could have negatively impacted projects dealing with high start-up investments as well as those involving a high number of SMEs.

This issue was discussed during the BBI JU Governing Board meeting at the end of 2016 and – with the support of the European Commission – BBI JU was able to obtain, via an amendment to the 2017 annual work plan and budget, additional appropriations to top up the pre-financing payments for the projects of the 2016 call.

The pre-financing payments were performed in two phases:

1. Firstly, the ones related to projects starting before June;
2. Secondly, after processing the amendments to the BBI JU 2017 annual work plan and budget and consequently amending the various grant agreements:
 - a. the payments relating to projects with later start dates;
 - b. any top-up payments needed to the pre-financings already paid during the first phase.

The organisation of these operations was particularly delicate and required considerable planning because the availability of additional funds was not confirmed until April, almost at the end of the

grant agreement preparation phase, and the procedures to amend the 2017 annual work plan and budget and to obtain the funds proved to be lengthy.

From a general point of view, the overall budget execution for the year 2017 shows positive figures both in commitment appropriations (96.7%) and in payment appropriations (95.6%).

Statement of Revenue	Voted budget 2017		Amended budget 2017	
Heading	Commitment appropriations (in €)	Payment appropriations (in €)	Commitment appropriations (in €)	Payment appropriations (in €)
EU contribution excl. EFTA	81,174,465	69,172,903	81,174,465	81,174,465
Of which Administrative	2,285,155	2,285,155	2,285,155	2,285,155
Of which Operational	78,889,310	66,887,748	78,889,310	81,586,538
EFTA	1,980,657	1,687,819	1,980,657	1,687,819
Of which Administrative	55,758	55,758	55,758	55,758
Of which Operational ⁴⁸	1,924,899	1,632,061	1,924,899	1,632,061
Industry financial (cash) contribution	3,115,280	3,365,280	3,115,280	3,365,280
Of which administrative	2,615,280	2,615,280	2,615,280	2,615,280
Of which Operational	500,000	750,000	500,000	750,000
SUB-TOTAL REVENUES	86,270,402	74,226,002	86,292,962	88,947,352
C2 reactivation of unused appropriations from administrative expenditure	1,700,000	1,700,000	2,546,249	2,774,974
Of which from 2015	428,175	428,175	989,945	431,673
Of which from 2016	1,271,825	1,271,825	1,556,304	2,343,301
C2 reactivation of unused appropriations from operational expenditure	4,450,657	328,920	4,450,657	328,920
Of which from 2015	1,353,523	328,920	1,353,523	328,920
Of which from 2016	3,097,134		3,097,134	
SUB-TOTAL REACTIVATIONS	6,150,657	2,028,920	6,996,906	3,103,894
Other admin revenue ⁴⁹			22,560	22,560
GRAND TOTAL	92,421,059	76,254,922	93,289,868	92,051,246

Table 20 : BBI JU 2017 budget – Statement of Revenue.

⁴⁸ Received €1,944,913 (net of €396,000 retained by the EC for the REA payment of expert-evaluators of BBI JU's 2017 call)

⁴⁹ This amount was received by BBI JU in 2017 following the recovery of administrative expenditure (principally due to an overpayment of rental charges)

Statement of Expenditure (Commitment appropriations)	Amended budget 2017 (AWP)	Amended budget 2017 after transfers	Executed Budget 2017	%	Carry over to 2018 (C8)	Available for future use (N+3 rule) (C2)
Title 1 - Staff expenditure	4,448,150	4,295,425	2,205,969	51.36%	79,716	2,089,456
11 Salaries & allowances	3,946,044	3,838,139	1,995,899	52.00%	27,041	1,842,240
12 Expenditure relating to Staff recruitment	96,169	55,900	9,028	16.15%	3,298	46,872
13 Mission expenses	159,349	131,894	60,868	46.15%	2,104	71,026
14 Socio-medical infrastructure (incl. training)	223,366	252,743	129,164	51.10%	45,964	123,579
15 Receptions, events and representation	23,222	16,749	11,010	65.74%	1,310	5,739
Title 2 - Infrastructure and operating expenditure	3,054,292	3,229,577	2,206,434	68.32%	347,894	1,023,143
20 Rental of buildings and associated costs	310,220	490,609	310,252	63.24%	6,199	202,917
<i>Other revenue⁵⁰</i>		22,560				
21 Information, communication technology and data processing	259,847	238,061	167,528	70.37%	56,540	70,533
22 Movable property and associated costs	25,082	14,000	7,131	50.94%	2,248	6,869
23 Current administrative expenditure	50,661	47,000	15,510	33.00%	4,290	31,490
24 Postage / Telecommunications	13,550	10,500	4,819	45.90%	2,955	5,681

⁵⁰ Amount which was not included in the voted amended budget but became available during the year following the recovery of administrative expenditure (principally a recovery of overpaid rental charges in 2017). Of the total amount €21,955 was executed in 2017.

25 Expenditure on formal meetings	153,032	118,000	65,017	55.10%	808	52,983
26 External communication information and publishing	635,423	940,658	659,942	70.16%	236,461	280,716
27 Service contracts	187,360	122,760	68,160	55.52%	22,760	54,600
28 Experts contracts and evaluations ⁵¹	1,315,723	1,123,735	824,175	73.34%	0	299,560
29 Expert reviewers	103,394	101,694	83,900	82.50%	15,634	17,794
Title 3 - Operational expenditure	85,764,866	85,764,866	85,764,866	100.00%	336,210,809	0
30 Previous years' Calls					127,862,752	0
31 Addition to call 2015.2					339,888	0
32 Call 2016 (unused from L1 for memo only)					122,243,304	825,798
L1 Commitment for Call 2017	85,764,866	85,764,886	85,764,886	100,00%	85,764,866	
TOTAL	93,267,308	93,289,868	90,177,269	96.66%	336,638,420	3,112,599

Table 21 : BBI JU 2017 budget – Statement of Expenditure (commitment appropriations).

⁵¹ This budget line concerns the contracting and payment of expert evaluators by the REA for the calls of BBI JU. The funds are made available to REA by the EC from its administrative contributions to BBI JU. In respect of the figures shown, please note the following: the figures for both the "amended budget" and the "amended budget after transfers" include an amount of €428,175, which is on a budget line of REA since 2015 and was fully consumed in 2017. Regarding the executed budget, this represents a commitment by REA of the €428,175 as well as €396,000 of BBI JU C1 commitment appropriations made available by the EC from BBI JU's administrative budget (and committed also by BBI JU).

Statement of Expenditure (Payment appropriations)	Amended Budget 2017	Amended budget 2017 after transfers	Executed Budget 2017	%	Available for future use (N+3 rule) (C2)
Title 1 - Staff expenditure	4,458,785	4,458,785	2,178,053	52.35%	2,280,732
11 Salaries & allowances	3,986,217	4,059,967	1,983,387	51.79%	2,076,580
12 Expenditure relating to Staff recruitment	61,754	53,313	28,971	90.06%	24,342
13 Mission expenses	184,412	115,698	62,881	37.00%	52,817
14 Socio-medical infrastructure (incl. training)	216,300	219,807	92,910	67.51%	126,897
15 Receptions, events and representation	10,102	10,000	9,904	98.73%	96
Title 2 - Infrastructure and operating expenditure	3,272,382	3,294,942	2,001,706	60.75%	1,293,224
20 Rental of buildings and associated costs	348,887	550,120	304,053	68.88%	268,627
20 Other revenue ⁵²		22,560			
21 Information, communication technology and data processing	306,546	242,898	131,611	54.18%	111,281
22 Movable property and associated costs	90,863	24,073	10,884	45.21%	13,189
23 Current administrative expenditure	55,400	47,858	12,729	26.60%	35,129
24 Postage / Telecommunications	22,926	9,816	5,652	57.58%	4,164

⁵² See note 37 to the commitment appropriations table.

25 Expenditure on formal meetings	177,271	168,388	64,209	38.13%	104,179
26 External communication information and publishing	676,866	892,195	563,786	63.19%	328,409
27 Service Contracts	194,000	129,400	79,540	61.47%	49,860
28 Experts contracts and evaluations ⁵³	1,315,723	1,123,735	760,976	67.72%	362,747
29 Expert reviewers	83,900	83,900	68,266	81.37%	15,634
Title 3 - Operational expenditure	84,297,519	84,297,519	83,810,862	99.42%	486,657
30 Previous years' Calls	84,297,519	84,297,519	83,810,862	99.42%	486,657
31 Call 2017	0	0	0		
TOTAL	92,028,686	92,051,246	87,990,621	95.59%	4,060,614

Table 22 : BBI JU 2017 budget – Statement of Expenditure (payment appropriations).

⁵³ See note 38 to the commitment appropriations table. In respect of the executed budget, the 2017 consumption shown was communicated to BBI JU by REA, who made the payments on behalf of BBI JU.

ADMINISTRATIVE COSTS

The total consumption of the (amended) administrative budget was 58.6% in commitment appropriations and 53.9% in payment appropriations. Comparing the total consumption to the original budget (which excludes a reactivations of prior year unused appropriations), these figures rise to 88.6% for CAs and 84% for PAs. Details about each budget title are provided below.

Title 1: Staff related costs such as salaries, other staff costs and missions are showing only a limited execution in commitment appropriations (52%, 51% and 46% respectively) while representing a relevant amount of over € 2,2 million. This is because the largest part of the prior year surplus was accumulated in Title 1. The general execution of the original 2017 voted budget in commitment appropriations is over 76,9%, but when the large surplus reactivated from 2016 is taken into account this drops to 51,4%. Consumption of payment appropriations shows very similar figures.

Title 2: The infrastructure expenditure achieved an execution of 68.3% in commitment appropriations of the amended budget 2017. Building, communications and contracting of experts incurred high costs in 2017, amounting respectively to € 310 252, € 659 942 and € 824 175. The additional costs incurred with respect to the original budget were covered by the available budgetary surplus. The spending related to evaluators' contracting and payment was executed by the Research Executive Agency on behalf of BBI JU.⁵⁴ On the payment appropriations side, consumption for Title 2 was 60.8% of the amended budget 2017.

Total execution of Title one and Title 2 commitment appropriations accounts for 88.6% of the original 2017 administrative budget, while it decreases to 58.6% of the amended budget including prior year surplus. Concerning the payment appropriations, the overall consumption of Titles 1 and 2 compared to the original budget shows 84% consumption, while compared to the amended budget it drops to 53.9%⁵⁵.

The following graph of the voted budget over the last three years demonstrates a clear progression in consumption levels, confirming also a more accurate budgeting process.

⁵⁴ € 824 175 committed by the REA in 2017, composed of € 428 175 on its own R0 budget line from 2015, and € 396 000 transferred by the EC on behalf of BBI JU for the management and payment of the BBI JU experts-evaluators for its Call for proposals 2017.

⁵⁵ These execution figures take into account € 760 976 executed by the REA in 2017 based on the available payment appropriations of € 396 000 transferred by the EC, on BBI JU's behalf, for the management and payment of the BBI JU experts-evaluators for its Call for proposals 2017, as well as the reactivated appropriations mentioned in note 43 above.

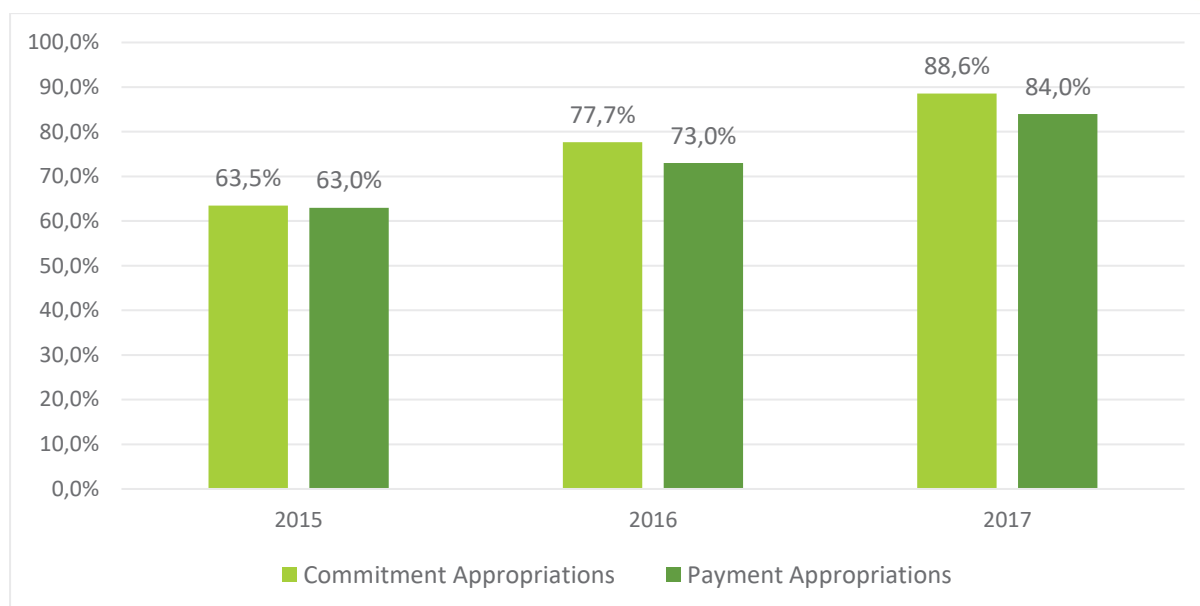


Figure 62: budgetary consumption against the voted budget (2015-2017)⁵⁶.

In terms of the time to pay on the administrative budget, the programme office executed over 600 payments of which 92% were within the time limit. An analysis of the delayed payments has been carried out and most of them are due to encoding mistakes; a corrective action will be put in place in 2018. The average time to pay on these transactions was 18.6 days, against a target of 30 days.

OPERATIONAL COSTS

Concerning the commitment appropriations of the operational budget, the programme office concluded 29 grant agreements from Call 2016 for a total grant value of € 185 070 933 resulting in a 97,9% execution of commitment appropriations envisaged for this call (€ 188.9 million).

The 2017 call was committed for €85 764 866 composed as follows: € 80 814 209 from the EU, € 4 450 656 of unused commitment appropriations from 2016, € 500 000 from BIC. The evaluation was successfully concluded by the end of 2017, resulting in a potential consumption of 99.9% if all grants amounting to a total of € 85 672 213 are signed in 2018.

In respect of payment appropriations, the programme office achieved 99.4% execution of the 2017 budget with pre-financing payments for the grants of Call 2016 together with payments of periodic reports for grants from the BBI JU Call 2014. An amount of € 486 657 remaining from the total available payment appropriations of € 84 297 519, has been reactivated in the BBI JU 2018 budget.

43 pre-financings were paid – in two phases as explained above - with an average time to pay of 11.6 days (against a target of 30 days). All of them were made on time for a total amount of € 62 487 741.

⁵⁶ excluding from the budget any reactivations of unused appropriations from previous years



Regarding the payment of the periodic reports, BBI JU programme office dealt with 10 periodic reports payments in 2017. The average time to pay was 83.9 days (against a target of 90 days) for a total of € 21 323 120 and only 2 payments were late, both by one day.

Additional information is available under section 1.6 Operational budget execution.

2.4. PROCUREMENT AND CONTRACTS

In 2017, the programme office made a considerable effort in harmonising internal procurement procedures and in exploiting as much as possible the existing framework contracts at the level of the European Commission. When these contracts were not available to BBI JU or they had expired, it was necessary to launch specific tender procedures, most of them for low-value contracts.

BBI JU also signed specific contracts under the framework contracts jointly managed with the other JUs present in the White Atrium, namely for common IT services and for the engagement of interim staff.

In addition, throughout 2017, BBI JU has used Service Level Agreements (SLAs) in force with the European Commission for purchasing supplies and services through OIB and DG HR.

The following contracts were concluded in 2017 for single amounts higher than € 15 000:

Contractor	Frame work contract Y/N	Tender procedure	Subject of the contract	Signature date	Amount (in €)
ABC Pharma	N	Negotiate procedure with three contractors	Partnering Platform	01/03/2017	50,000
Nova Institute	N	Negotiate procedure with three contractors	Study of the current situation and trend of the bio-based economy in Europe	13/03/2017	45,400
TMAB	N	Negotiate procedure with three contractors	Walking Exhibition for two events: at the European Parliament and at the Bio-economy investment summit in Helsinki	10/07/2017	124,570
GL Events	N	Negotiate procedure with three contractors	Stakeholder Forum 2017	10/10/2017	132,971
AMEX	Y	Specific Contract under framework contract	Travel and accommodation booking services for the BBI JU Stakeholder Forum 2017	20/09/2017	45,510
Start People	Y	Specific Contracts under framework contract	Interim Staff	07/06/2017 07/06/2017 17/07/2017 18/09/2017	23,815 33,891 24,000 17,131

Table 23: Contracts made in 2017 over € 15 000.

2.5. IT AND LOGISTICS

IT – ADMINISTRATIVE

The migration to the Infrastructure-as-a-Service (IaaS) hosting successfully took place during the months of July and August and is the main achievement on the IT side for 2017. In fact, the migration to the cloud ensures better business continuity, less maintenance costs and a diminished dependence on physical infrastructure. BBI JU used this opportunity not only to migrate the servers, but also to upgrade the server's software introducing new features (Online Archiving, DirectAccess, etc.). The programme office also launched and reached 95% completion of the migration of the end-user devices to Windows 10 and Office 2016.

BBI JU has been included in the VOICE II framework contract, aiming to reduce costs and at the same time obtaining a better service compared to the current provider. The specific contract was signed between the provider (British Telecom) and CleanSky2 JU on behalf of all the Joint Undertakings located in the White Atrium building. British Telecom has started preparatory works to connect BBI JU's infrastructure to its network -- physical connections are already in place, the switchover is expected in early 2018.

With respect to IT, the programme office has tackled the preliminary phase of the SYSPER project by setting up a database appliance, by successfully establishing the data link between our infrastructure and the Commission's secured network, by synchronizing data in the context of the person identification process. According to the roadmap for 2018, BBI JU is included in the first group, meaning that by June 2018 the application will be available in production. The implementation of SYSPER will provide BBI JU's programme office with a comprehensive HR management tool, in line with the Commission standards.

BBI JU has developed a "proof of concept" version of the Sharepoint-based Intranet. After the validation of this collaboration platform, BBI JU decided to continue with the project in the first quarter of 2018 by turning this prototype-like version into its final form and making it available to all staff members. The platform will allow BBI JU staff to access key documents, useful information and be updated about the latest events regarding the organisation, the Commission's policy activity and BIC initiatives.

An infrastructure to send and receive encrypted emails was also implemented in 2017. This system is based on the Public Key Infrastructure (PKI) standard and is thus fully compatible with the European Commission's SECURE (SECure EMAIL). This allows staff members to exchange sensitive information such as HR and audit matters, confidential files related to bankruptcies, etc.

The BBI JU programme office appointed its Document Management Officer (DMO), as required by the Commission for the migration to ARES, the corporate document management tool. The DMO has provided the Commission with information regarding the specificity of the JU, contributing to the finalisation of the guidelines for the migration to ARES. According to these guidelines, the DMO has drafted a Document Management Policy, a Filing Plan and a Specific Retention List. The Commission's Secretariat general – lead service in this domain - has suggested having a Kick-off meeting in January 2018 to launch the migration process. Thanks to this BBI JU programme office should be able to deploy ARES by the second quarter of 2018, reaching the Commissions standards in this domain.

In December, following an announced maintenance work on the electricity grid, BBI JU partially tested its Business Continuity procedures. The test allowed the verification of the list of contacts at the disposal of the duty officer and the communication tools used to reach BBI JU staff as well as measuring the response time of staff. A Business continuity plan among all the JUs has been finalised in order to address potential interruptions affecting the common infrastructure (especially IT and building).

IT – OPERATIONAL

The mandate of the Common Support Centre (CSC) for Horizon 2020 set up by Commission Decision SEC(2013)655 is to provide high quality services to all research Directorates-General, Executive Agencies and Joint Undertakings implementing Horizon 2020. BBI JU participated in the Business Process Governance meetings of the CSC and provided feedback to the responsible business process owners where necessary.

The BBI JU has also delegated its staff members to the Key User Groups of the relevant services to be able to closely follow and provide feedback on the new features implemented in the Horizon 2020 Grant and Expert IT management systems.

Regarding the accesses to the corporate IT tools and the BBI JU accounting system (ABAC), the role of the Local Profile Manager (LPM) for the two systems has been given to a single staff member. This ensures a better alignment of the access to COMPASS and ABAC rights and provides for a closer monitoring of the variations in such access rights. BBI JU, in collaboration with Shift2rail JU and following the recommendation of DG Budget, performed a crossed verification of the ABAC access rights; this exercise resulted in no findings for BBI JU.

LOGISTICS

BBI JU committed to making the best use of available SLAs and FWCs by using the Lyreco portal. This new feature allowed easier and faster processing of orders for office supplies, catering services and furniture.

In order to exploit fully the Horizon 2020 corporate services, BBI JU used the facilities of the Research Executive Agency (REA) for the evaluation of Call 2017. The delegation agreement between BBI JU and the European Commission foresees this possibility and additionally the REA is not charging any cost for this service.

2.6. HUMAN RESOURCES

STAFF AND RECRUITMENT

By the end of 2017, the BBI JU Programme Office comprised 20 staff members out of the 22 positions allocated to the JU for the year 2017. Due to the departure of three staff members in addition to the need to fill all vacant posts, a number of recruitments were launched:

- Communication Assistant (AST);
- Administrative Assistants (CA);
- Project Officer (TA);
- Project Officer (CA).

Consequently, the BBI JU Programme Office completed the recruitment of the four following profiles in 2017:

- One Communication Assistant (AST);
- Two Administrative Assistants (CA)⁵⁷;
- One Project Officer (TA).

In addition, two candidates for project officer (CA) were appointed at the end of 2017 and will take up their duties in the first quarter of 2018.

In order to address additional workload foreseen for the programme unit in the coming years, BBI JU submitted a request to split – ensuring budget neutrality – one TA (AST7) post included in the current Staff establishment plan into two posts: one TA with a lower grade (AST2) and one additional contract agent (FGIII). This request was agreed by the Commission (namely by DG budget and DG Human Resources) and was submitted to the approval of the Governing Board in the context of the BBI JU annual work plan and budget 2018. This change is reflected in the BBI JU staff establishment plan in section 7.2.

The two graphs below show both the gender and geographical balance within BBI JU on 31/12/2017: the programme office pays attention to ensuring the widest representation of EU countries among its staff.

⁵⁷ One recruitment took place in 2016 and the staff member took up his duties in early 2017

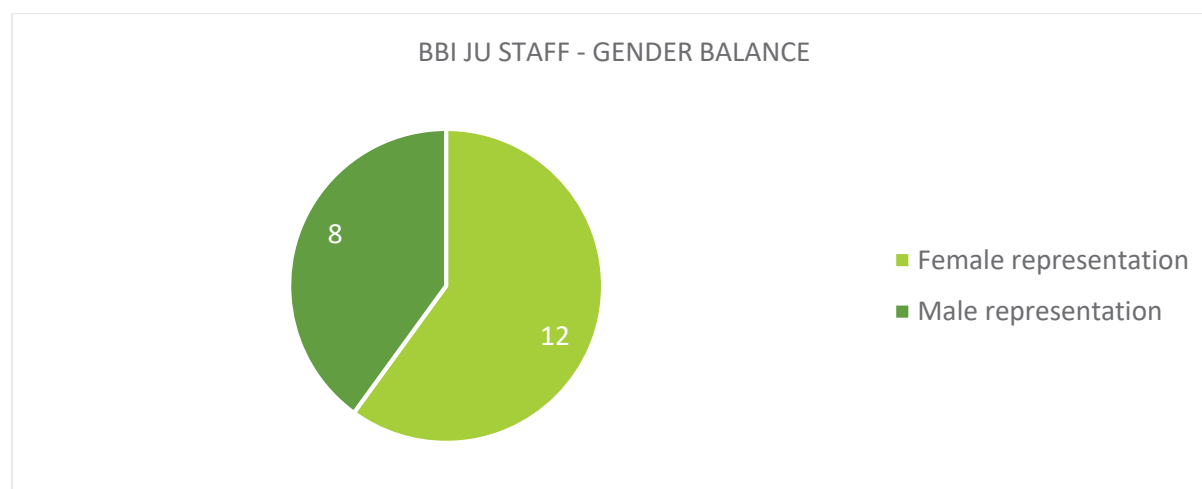


Figure 63: gender balance of the BBI JU programme team by 31/12/2017.

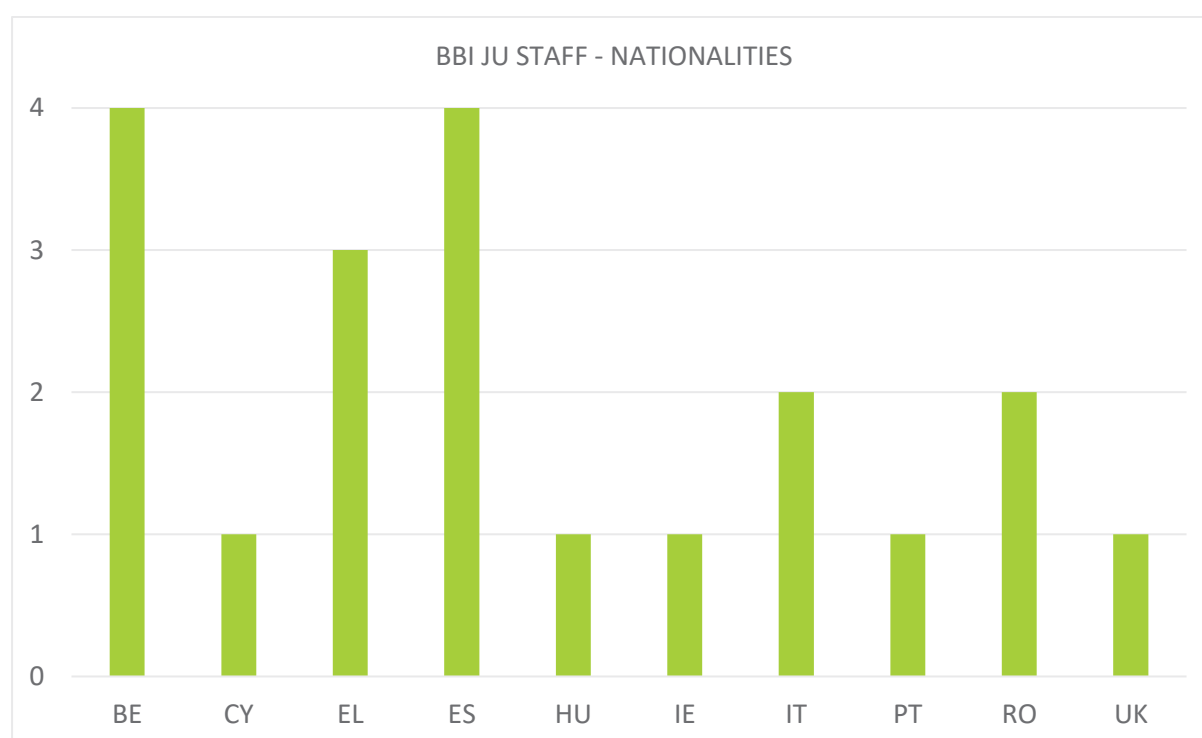


Figure 64: EU countries represented among BBI JU staff by 31/12/2017.

To cope with unforeseen departures and with the peak period of workload, BBI JU concluded – via the inter JUs framework contract - four short-term contracts for interim services to address specific needs of the Programme Unit and of the Communication team.

BBI JU also gave the opportunity to one trainee to acquire a first-hand experience in the BBI JU framework. The main objective of the programme is to provide the trainee with a high quality experience that enriches the professional profile of the laureate while providing a preliminary insight into the objectives and activities of the BBI JU. The trainee joined the Programme Unit for a period of 6 months.

LEGAL FRAMEWORK RELATED TO HUMAN RESOURCES

In 2017, the HR function continued to strengthen the legal framework of the BBI JU focusing on how implementing rules of the European Commission shall apply to BBI JU. In that respect, in 2017 the BBI JU Governing Board adopted the implementing rules listed below:

- Temporary occupation of management posts;
- Guide to missions for officials and other servants of the European Commission;
- Non-application of the Commission Decision on the maximum duration for the recourse to non-permanent staff in the Commission services;
- Annual appraisal, probationary and management trial period of the Executive Director of the Bio-based Industries Joint Undertaking;
- Framework for Learning and Development;
- Policy on protecting the dignity of the person and preventing psychological harassment and sexual harassment;
- Prevention and management of conflicts of interests.

Following the adoption by the BBI JU Governing Board of the relevant implementing rules on policy on protecting the dignity of the person and preventing psychological harassment and sexual harassment, BBI JU together with the six other Joint Undertakings launched an inter-JU call for expression of interest to select up to 7 confidential counsellors. They will be part of the JUs' network of confidential counsellors and deal with, monitor and, if possible, resolve individual cases. Staff who feel they are victims of psychological or sexual harassment can contact, in full confidentiality, a confidential counsellor of their choice from the JUs' network.

BBI JU organised its first annual appraisal and reclassification exercises resulting in the reclassification of one staff member. The first annual appraisal exercise of the Executive Director also took place in 2017.

In 2017 the HR and IT functions worked on the implementation of the European Commission HR tool "Sysper" and BBI JU will be among the first Joint Undertakings to use Sysper in 2018.

The HR function has also prepared all the HR data protection notifications to be communicated to the European Data Protection Supervisor.

LEARNING AND CAREER DEVELOPMENT

The BBI JU values the continuous development of its staff in order to ensure that staff members are competent in their roles and can cope with the demanding working environment. In 2017 the HR function developed a Learning and Development Framework in line with the importance given to the competence and career development of individuals. A Service Level Agreement in force with the European Commission provided access to a wide catalogue of training courses and ad hoc learning opportunities have been constantly communicated to staff members across the year. In addition, several in house training activities and workshops have been organised as well as teambuilding activities.

Mandatory and highly recommended trainings for key functions have also been organised; for example, the Executive Director and the two Heads of Unit attended dedicated workshops on leadership and people management.

In 2017, the HR function organised a learning satisfaction survey in order to gather feedback from staff about training activities attended during the past 2 years. The results of the survey, which will be communicated to staff during the first quarter of 2018, will help the HR function to develop the 2018 Learning and Development Framework.



03 GOVERNANCE

3.1. GOVERNING BOARD

The Governing Board has overall responsibility for the strategic orientation and the operations of the BBI JU and shall supervise the implementation of its activities, in accordance with Article 7 of the BBI JU Statutes⁵⁸.

The Governing Board includes five representatives of the BIC and five representatives of the EC with the same voting rights.

During 2017 there were several changes of positions in both the EC and BIC membership. Mr Mat Quaedvlieg was elected as Chairman in the GB meeting of 21 March 2017 with a mandate until the end of 2017. As of the last meeting in December 2017, the composition of the Governing Board was:

EC (As designated by their post according to Commission Decision 4255 (2014) of 27 June 2014)	BIC members
Jack METTHEY, Acting Deputy Director-General for "Research Programmes", DG RTD (Vice-chair)	Mat QUAEDVLIEG, Manufacturing SFPE, Vice-president strategic business project, Sappi (Chair)
John BELL, Director for "Bioeconomy", DG RTD/F	Krijn RIETVELD, Senior Vice-President Partnering for Innovation and R&D, DSM
Carlo PETTINELLI, Director for "Consumer, Environmental and Health Technologies", DG GROW/D	Christophe LUGUEL, International Affairs manager, IAR Cluster
Peter DROELL, Director for "Industrial Technologies", DG RTD/D	Claus CRONE FUGLSANG, Senior Vice-President for Research and Technology, Novozymes
Nathalie SAUZE-VANDEVYVER, Director for "Quality, Research & Innovation, Outreach, DG AGRI	Marcel WUBBOLTS, Chief Technology Officer, Corbion

Table 24: Members of the Governing Board as at 31/12/2017.

In 2017 four ordinary meetings took place as planned in the AWP 2017: 21 March, 21 June, 26 September and 13 December. The GB meeting of December took place in Helsinki in the framework of the Bio-economy investment summit⁵⁹.

The decisions taken by the GB during 2017 respected the indicative timetable set in the AWP and were the following:

- Decision adopting the amendment to AWP and Budget 2017;

⁵⁸ Annex to the Council Regulation).

⁵⁹ Due to weather conditions, some GB members were unable to fly and they participated to the GB meeting through teleconference from BBI JU premises in Brussels.

- Opinion on BBI JU Annual Accounts 2016;
- Decision on the appointment of new Scientific Committee members;
- Decision concerning the terms and conditions for internal investigations in relation to the prevention of fraud, corruption and any illegal activity detrimental to the Union's interest, and decision on the accession of BBI JU to the Interinstitutional Agreement of 25 May 1999 between the European Parliament, the Council and the Commission concerning internal investigations by the European Anti-Fraud Office
- Decision approving the Annual Activity Report 2016;
- Approval of the Additional Activities plan 2016;
- Decision approving the guidelines for reporting and certification of IKOP.
- Decision adopting the update of the Internal Control Standards;
- Decision adopting the rules on the prevention and management of conflicts of interests applicable to the bodies of the Bio-Based Industries Joint Undertaking;
- Funding of indirect actions pursuant to the 2017 Call for proposals.
- Adoption AWP and Budget 2018.
- And the following staff implementing rules: adoption procedure annual appraisal, probationary and management trial period of the Executive Director, decision adopting BBI JU policy on protecting the dignity of the person and preventing psychological and sexual harassment, adoption rules on the prevention and management of conflicts of interests of the staff members, decision laying down implementing rules on temporary occupation of management posts, decision applying by analogy EC guide for missions and authorised travel, and, adoption of the rules on the prevention and management of conflicts of interests of the staff members.

3.2. EXECUTIVE DIRECTOR

The Executive Director is the chief executive responsible for the day-to-day management of the BBI JU in accordance with the decisions of the Governing Board. Mr Philippe Mengal has been Executive Director of the Programme Office since 1 October 2015.

Each year the Executive Director presents his proposals of priorities for the coming year to the Governing Board. The priorities are translated into yearly objectives for the BBI JU programme team and then cascaded into individual objectives for all staff members according to the SMART principles (Specific, Measurable, Accepted, Realistic and Time-related).

For 2017 the priorities and objectives were presented to the BBI JU Governing Board at the meeting held on 16 September 2016. The priorities were mainly finalising the building of the organisation: the team, its tools, processes and procedures, while absorbing the increase in workload and keeping the operational efficiency attained in 2016. Two other important priorities of 2017 were to improve the profile of the project portfolio and confirm the commitment of the industry.

The 2017 objectives were organised around five priorities detailed below:

1. Finalise the building of the organisation while absorbing the increased workload;
2. Continue to build an effective and well-balanced project portfolio;
3. Confirm the industry commitment to the overall initiative;
4. Reinforce BBI JU's operational excellence;
5. Move the BBI JU image from awareness to reputation and recognition.

For 2018, the Executive Director and his management team proposed five priorities to the Governing Board meeting held on 26 September 2017 and to the BBI JU Advisory Bodies:

1. Reinforce the PPP highlighting the impact of the initiative, the EU added value, the Industry commitment and the strategic alignment of its founding members.
2. Consolidate the BBI JU projects portfolio in line with the up-dated SIRA and BBI JU Council Regulation objectives.
3. Continue running BBI JU operations ensuring the highest standards in terms of quality and efficiency.
4. Successfully implement solutions addressing the issues of IKAA and IKOP reporting and financial contribution at project level.
5. Implement the communication and stakeholder management action plan towards a wider group of stakeholders; shifting from BBI JU "recognition" to "reputation".

The Executive Director and his management team have incorporated these priorities in the AWP 2018. They will be cascaded into BBI JU Programme Office objectives and further into individual objectives for the Programme Office staff by the end of February 2018.

3.3. STATES REPRESENTATIVES GROUP

The SRG is an advisory body of the BBi JU established in accordance with the BBi JU Regulation⁶⁰. The SRG represents the interests of Member States and associated countries under Horizon 2020. Its members provide advice to the Governing Board on the programme progress and achievement of its targets. It also provides advice on the definition of the strategic orientations for the programme and the AWP. It also has an important role in reporting on national activities and programmes related to the deployment of the bio-based industrial sector at national level, in order to promote synergies and complementarities with the programme, which operates at European level.

Tables 25 and 26 show the status of the representation of Member States and associated countries linked to Horizon 2020 in the SRG as of 31/12/2017. The SRG covers a broad geographical area, in spite of the fact that currently two Member States and six associated countries have not yet nominated a representative (see Figure 65).

Member States (MS)	Nomination of a representative by MS
Austria	Yes
Belgium	Yes
Bulgaria	Yes
Croatia	Yes
Cyprus	No
Czech Republic	Yes
Denmark	Yes
Estonia	Yes
Finland	Yes
France	Yes
Germany	Yes
Greece	Yes
Hungary	Yes
Ireland	Yes
Italy	Yes
Latvia	Yes
Lithuania	Yes
Luxembourg	Yes
Malta	No

⁶⁰ For the role of the SRG see art 11 of the Statutes of the BBi JU annexed to Council Regulation.

Netherlands	Yes
Poland	Yes
Portugal	Yes
Romania	Yes
Slovakia	Yes
Slovenia	Yes
Spain	Yes
Sweden	Yes
United Kingdom	Yes

Table 25: Member States represented on SRG.

Associated countries (AC)	Nomination of a representative by the AC
Albania	Yes
Bosnia and Herzegovina	No
F.Y.R Macedonia	No
Faroe Islands	Yes
Georgia	No
Iceland	Yes
Israel	Yes
Moldova	Yes
Montenegro	No
Norway	Yes
Serbia	No
Switzerland	Yes
Tunisia	No
Turkey	Yes
Ukraine	No

Table 26: Associated Countries represented on SRG.

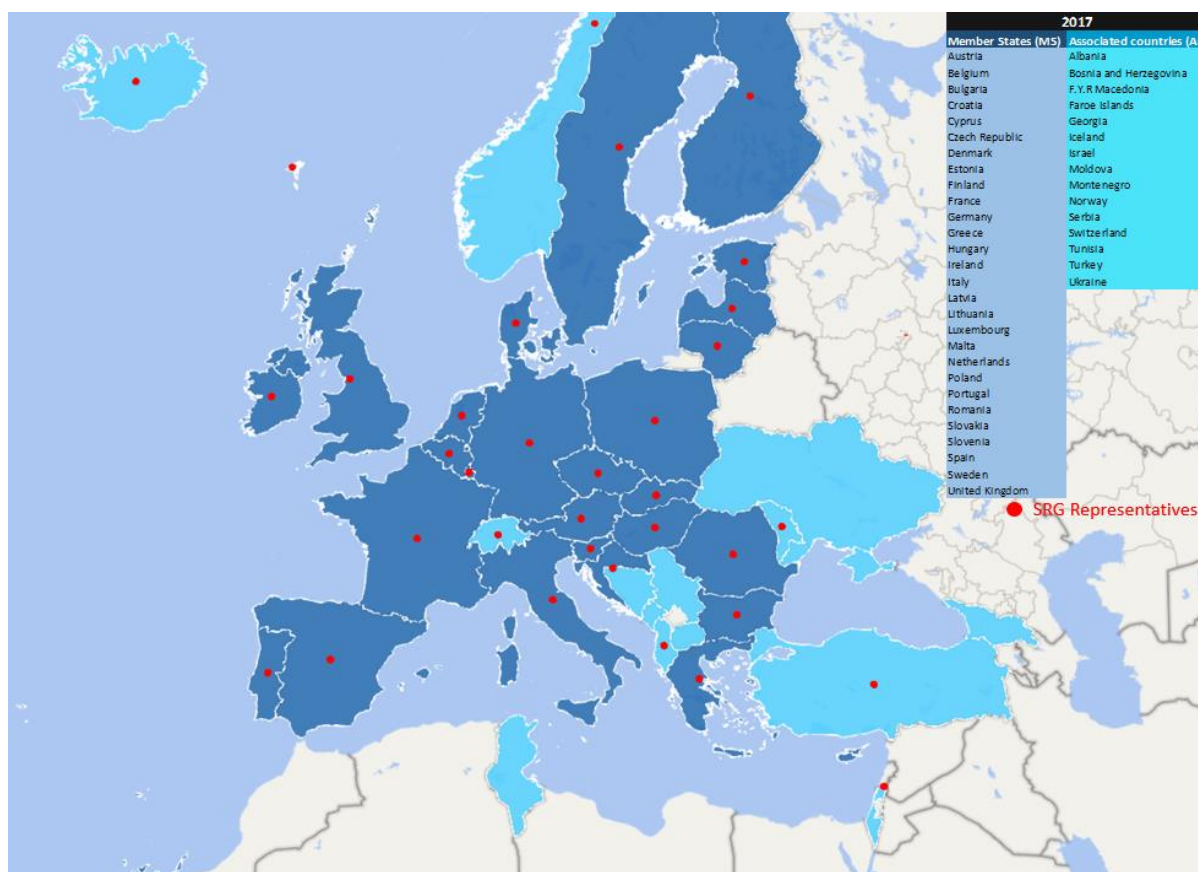


Figure 65: SRG members from EU MS (dark blue) and associated countries (light blue) as of 31/12/2017.

STATES REPRESENTATIVES GROUP MEETINGS IN 2017

During 2017, two meetings of the SRG were organised by the Programme Office, on 30 May 2017 and 18 October 2017. Both meetings were chaired by José Manuel González (Chair of the SRG and representative of Spain) and by the two Vice Chairs of the SRG (Fabio Fava, the representative of Italy and Niels Gøtke, representative of Denmark). Meetings were also attended by the Chair of the Scientific Committee, the BBI JU Executive Director, BIC, the European Commission and by BBI JU staff. The Chair of the Governing Board participated in the second meeting of the year.

During 2017 the SRG made a valuable contribution to the strategic orientation of the programme and the development of the AWP 2018. More concretely, the SRG provided recommendations on the preliminary draft of the 2018 AWP on 6 June 2017 and on the draft of the 2018 AWP on 26 October 2017. The SRG also supported other programme-related activities by issuing concrete recommendations on various issues such as the KPI questionnaire, the Study of the current situation and trend of the bio-based economy in Europe, communication and information activities to improve the information received by applicants as well as synergies and complementarities. The SRG members also suggested candidates to complete the composition of the Scientific Committee.

During 2017, SRG was very active in performing actions to support the deployment of the programme at national level. Information on national activities was shared between SRG members and with BBI

JU and its members during both meetings. So far, BBI JU had been gathering information on national activities via a questionnaire that was completed by SRG members before each meeting. During 2017, BBI JU and the SRG cooperated with JRC and other institutions to prepare a unique questionnaire to gather general information on the bioeconomy at national level once per year; a specific section has been created to gather the information about the bio-based industries. This questionnaire was launched for the first time in September 2017.

In parallel with the first SRG meeting, on 31 May 2017, the Programme Office also organised a workshop with representatives of the SRG, EC, BIC and the BBI JU. Initial views and thoughts on the future of the BBI JU under FP9 were informally discussed in this workshop. The SRG shared initial ideas to prepare a position paper to support the future of the BBI JU. Consequently, during the second SRG meeting held in October, a draft position paper on the future of the BBI JU was presented for discussion. In this paper the SRG highlighted the success of the BBI JU so far and the importance and added value of the BBI JU in the long term. Moreover, the SRG proposed ideas and improvements for the future of the BBI JU in terms of expected goals, impacts and other strategic issues (e.g. scope, synergies between academia and industry, role of Member States, etc.). The paper was finalised after the meeting and was presented by the Chair of the SRG to the BBI JU Governing Board on 13 December 2017.

The main achievements of the two SRG meetings are presented below:

6TH MEETING OF THE SRG HELD ON 30 MAY 2017:

- The SRG re-elected the Vice-Chair, Niels Gøtke (Denmark) for two additional years
- Constructive discussion on BBI JU programme progress and main achievements since the last meeting
- The SRG was informed about the outcomes of the call 2016. In addition, the SRG received participation statistics from the 2014-2016 calls and a report prepared by BBI JU with conclusions extracted from the Evaluation Summary Reports and other aspects of the evaluation of the call 2016 that might help SRG members to perform their advisory role.
- The SRG was informed about the outcome of the selection and the new composition of the BBI JU Scientific Committee
- The SRG was informed by the European Commission about the status of the amendment of the Council Regulation, the process on the review of the European Bioeconomy Strategy and the process of the mid-term review of the BBI JU.
- The SRG discussed the first draft of the 2018 AWP (core of the topics) presented by BIC. The SC Chair shared with the SRG the summary of the discussions during the SC meeting. The recommendations of the SRG were delivered in due time after the meeting according to the planning
- SRG shared with the group information on national activities to deploy and support the development of the bio-based industrial sector. In relation to activities at macro regional level, Denmark informed the meeting about the activities in the Nordic Bioeconomy and the Baltic Sea to develop the Bioeconomy. Italy presented the results of the conference organised in

Ecomondo (Nov 2016) on the situation of the Bioeconomy and the bio-based industries in the Mediterranean region.

7TH MEETING OF THE SRG HELD ON 18 OCTOBER 2017:

- The SRG received information on the progress and achievements of the BBI JU programme since the previous meeting, including information on the 2018 BBI JU objectives, on the situation of the BBI JU programme office, on the leverage effect of the initiative achieved so far (cash, IKOP, additional activities), on the status and next steps of the Study of the current situation and trend of the bio-based economy in Europe, KPI monitoring, activities on synergies.
- The SRG received information on the submission statistics of call 2017 and funded projects since the first Call.
- The SRG discussed on the draft of the 2018 AWP. The draft was presented by BIC. The SC Chair shared with the SRG the summary of the discussions during the SC meeting. The recommendations were delivered promptly by SRG after the meeting.
- The EC provided SRG members with information on BBI JU related activities: the amendment of the Council Regulation, results of the BBI JU interim evaluation, status of the review of the Bioeconomy Strategy and relevant information on the thematic investment platform for a circular bioeconomy.
- EC, BIC, BBI JU presented their points of view and activities towards the future of the BBI JU and SRG discussed the draft position paper on the future of the BBI JU.
- SRG members shared information on national activities on deployment, communication and dissemination at national level.

Minutes and documents from both meetings were distributed to the BBI JU members (BIC, EC) and all participants. A secure dedicated member area for the States Representatives Group has been used throughout 2017 to securely distribute and archive all related background documents, agendas and presentations as well as meeting minutes and recommendations.

3.4. SCIENTIFIC COMMITTEE

The Scientific Committee (SC) is the other advisory body of the BBI JU, established in accordance with the BBI JU Regulation. The SC supports the BBI JU in providing scientific advice on the areas of work undertaken by the BBI JU, such as advice on the scientific priorities to be addressed in the annual work plans, as well as commenting on the programme achievements.

The SC is currently composed of fifteen members - listed in Table 27 - who provide expertise in all scientific, technological, socio-economic and environmental subjects relevant to the bio-based industries. These fields of expertise include: technical expertise in biorefinery technologies, microbiology, chemistry, biocatalysis and enzymes, industrial biotechnology and agricultural and forest sciences; environmental, social and economic sustainability; international cooperation and regional dimension; investment and financial sector; knowledge transfer and dissemination and social sciences. In addition, the completion of the SC after the selection process has strengthened the expertise of the SC in key areas such as aquatic biomass and aquaculture, synthetic biology, waste, logistics and socio-economic impact assessment, among others.

Name	Role in SC	Position
Kevin O'Connor	Chair	Director Bioeconomy Research Centre (UCD), Ireland
Johanna Buchert	Vice-Chair	Executive Vice-President Research Natural Resources Institute, Finland
Lene Lange	Vice-Chair	Research Leader Head of Enzyme Discovery Technical University of Denmark (DTU)
Bruno Jarry	Member	Vice-President French National Academy of Technologies
Calliope Panoutsou	Member	Senior Research Fellow Imperial College London
Christian Huyghe	Member	Scientific Director Agriculture INRA-France
Dagmar Stengel	Member	Senior Lecturer / Head of Botany and Plant Science at the National University of Ireland Galway (NUI Galway)
Daniel Dijk	Member	Independent Advisor with focus on the biotech and chemicals sector
Helena Vieira	Member	Invited Associated Professor Faculty of Sciences of University of Lisbon
Lígia Rodrigues	Member	Professor / Assistant professor University of Minho, Portugal
Lígia O. Martins	Member	Assistant Professor Instituto de Tecnologia Química e Biológica – Universidade Nova de Lisboa

Mariya Marinova	Member	Ph.D., P.Eng. Adjunct Professor Department of Wood and Forest Sciences, Laval University, Quebec, Canada
Sigurjon Arason	Member	Professor / chief engineer University of Iceland / Matis ohf
Uffe Bundgaard-Jørgensen	Member	CEO InvestorNet-Gate2Growth, Ph.D
Yvonne Van der Meer	Member	Dr. ir. Associate / Professor Maastricht University

Table 27: Members of the BBI JU SC.

The SC met twice at the BBI JU premises in Brussels during 2017. The SC made important contributions to the strategic orientation of the programme, such as giving valuable advice to BIC and to the EC about the AWP 2018 at different stages of the drafting process. The SC also supported other BBI JU activities by giving specific recommendations on the KPI monitoring, business intelligence initiatives and communication activities, among others.

SCIENTIFIC COMMITTEE MEETINGS IN 2017

The SC met twice during 2017, on 16 May and 17 October. The Chair of the BBI JU Governing Board, Mat Quaedvlieg, and various members from BIC and the EC, BBI JU's Executive Director and staff also attended both meetings. Kevin O'Connor, Chair of the SC, chaired both meetings.

The objectives of these meetings were:

- to discuss and provide scientific advice to the AWP 2018 at two stages: preliminary draft (May 2017) and final draft version (October 2017). The SC provided detailed written recommendations to the BBI JU Programme Office, which were conveyed to BIC and the EC;
- to inform the SC members on the progress of the programme towards the achievement of its targets, including the results of the 2016 Calls for proposals and the ongoing portfolio of projects;
- to inform about and discuss different BBI JU activities, such as the KPI and impact monitoring, the exploration of synergies with other initiatives or the deployment of a strategy to widen the participation in the BBI JU calls, among many others;
- to exchange information on communication, dissemination and deployment activities linked to BBI JU programme activities, and to engage SC members in the promotion of BBI JU activities;
- to update the SC members on the progress and outcomes of the BBI JU and H2020 Societal Challenge 2 Interim Evaluations;
- to inform about and discuss with SC members the BBI JU-related activities undertaken by BIC and the EC, such as the review of the Bioeconomy Strategy, the preparations for the FP9 or the

establishment of complementary instruments to support the bio-based industries in Europe;
and

- to appoint new members to complete the SC and select SC Chairs and Vice-Chairs

The SC provided valuable advice to the AWP 2018 and acknowledged that the final version was of good quality and had taken into consideration the feedback given throughout the consultation process. Both general and topic-specific recommendations were presented at the SRG meetings and provided to the BBI JU Programme Office, BIC and EC. As a follow-up, BIC and EC, responsible for the definition of the AWP 2018 provided feedback to the Programme Office and the SC members on how these recommendations would be included in the final version of the AWP 2018.

SELECTION AND COMPOSITION OF THE SCIENTIFIC COMMITTEE

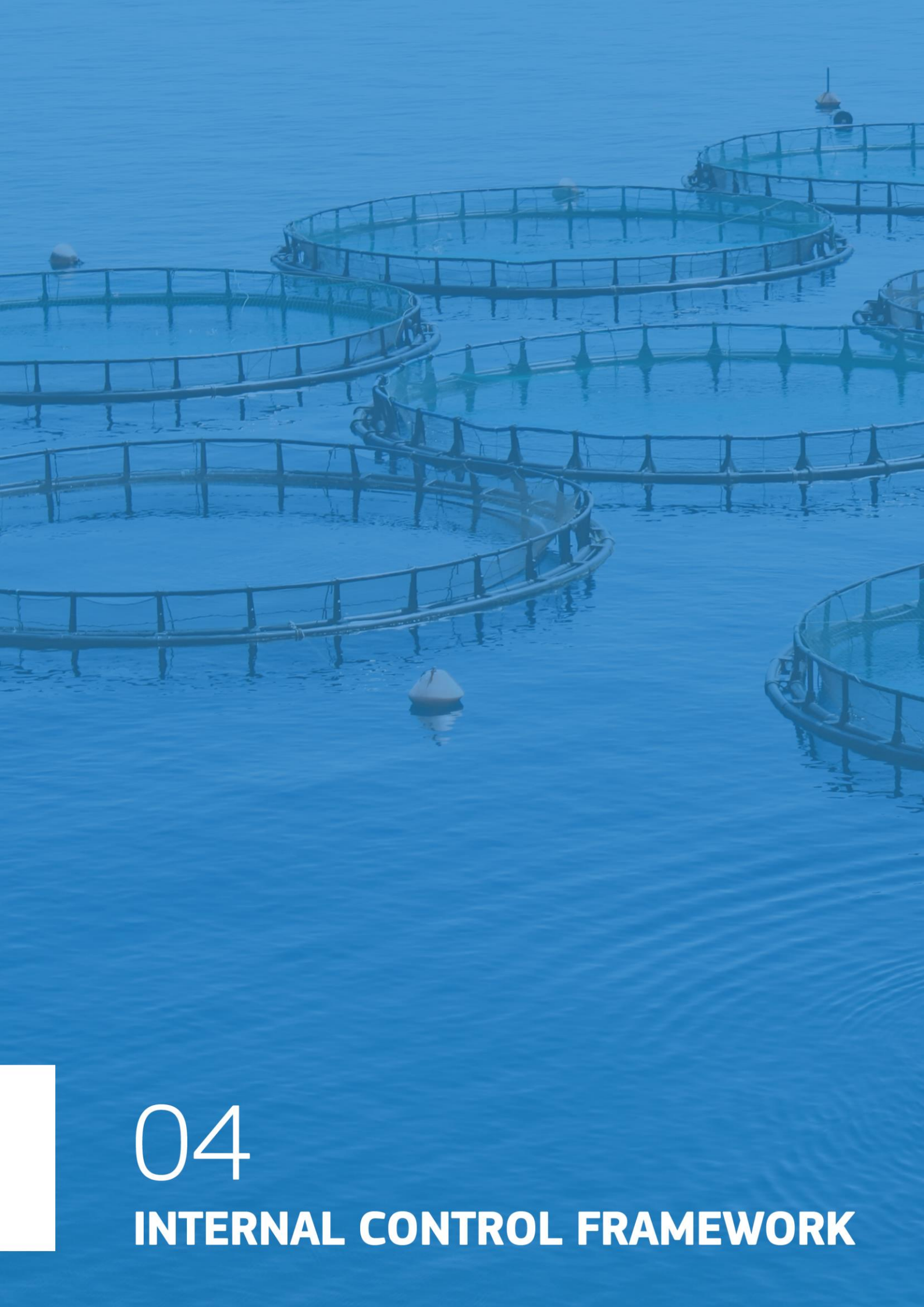
The SC may consist of fifteen members who are appointed for three years. The appointment can be renewed once for a three-year term upon confirmation by the Governing Board. The Specific Criteria and Selection Process for the Composition of the SC was adopted at the Governing Board meeting on 27 June 2014 and amended in 2016 by the Governing Board Decision 4/16.

At the beginning of 2017, the SC was composed of nine members, as some members left in autumn 2016 and in January 2017⁶¹. In addition, the mandate of the remaining nine SC members would conclude in 2017 and seven of the active members had expressed interest to continue their SC membership for another three-year term.

The call for expressions of interest for independent experts to be appointed as SC members of BBI JU was already published on 3 December 2016 in the Official Journal of the European Union (OJ), on the BBI JU and BIC websites and distributed via the relevant networks (SRG, SC, GB, and others). The selection of candidates was carried out in two stages, according to the decision of the BBI JU Governing Board on the Specific Criteria and selection process of the SC (April 2016). A pre-selection panel was composed of BBI JU staff and two independent experts appointed by the BBI JU Executive Director. The selection was performed by a working group, which included BIC and EC members. This second stage delivered a shortlist of candidates best suited for appointment as well as a reserve list, on the basis of which the Governing Board appointed the new members of the committee and established a reserve list in April 2017. Six new SC members were appointed in April and participated in the SC meeting in May 2017; another member was replaced by a candidate of the reserve list in June 2017. The recruitment of new SC members has strengthened the expertise of the SC in key areas such as aquatic biomass and aquaculture, synthetic biology, waste, logistics and planning, finance, and socio-economic impact assessment.

During the meeting on 17th October, Kevin O' Connor confirmed his willingness to continue in this role and was re-appointed Chair of the SC. Both Vice-Chairs, Ms. Calliope Panoutsou and Mr. Bruno Jarry, decided to step down from their roles, and Ms. Johanna Buchert and Ms. Lene Lange were appointed as new SC Vice-Chairs. The current composition of the SC can be consulted on the BBI JU website.

⁶¹ For a detailed description of the changes in the SC composition during 2016, please consult the [BBI JU Annual Activity Report 2016](#), section 3.4. Scientific Committee, p.111



04

INTERNAL CONTROL FRAMEWORK

BBI JU adopted its Internal Control Framework in September 2015 in order to provide reasonable assurance to the Governing Board regarding the achievement of its objectives. This framework involves all the measures taken to ensure that:

- The BBI JU meets its objectives defined in the Annual Work Plan using the adequate human and financial resources and avoiding misuse.
- The BBI JU operates fully in accordance with all legal and regulatory requirements.

The Programme Office management produces regular, reliable and easily accessible management information on financial management, use of resources and progress on the achievement of operational objectives.

- The Programme Office management takes the necessary measures to ensure the completeness and preserve the integrity of the data on which management decisions are taken and reports are issued.

All Programme Office management processes and functions meet these four objectives, meaning that the largest possible preventive, detective and corrective controls are in place.

4.1. FINANCIAL PROCEDURES

Financial procedures are established in the BBI JU Manual of Financial Procedures adopted in October 2015 and updated in 2016. A further update of this document is ongoing in order to take into account the new operations BBI JU has dealt with during 2017 (e.g. intervention of the Participants' Guarantee fund), the new COMPASS features that were implemented in 2017 (payment of experts, recoveries) and some suggestions from the European Court of Auditors about the business continuity of the Authorising Officer's function. This new version will be finalised during the first quarter of 2018.

From the beginning of 2017, The Programme Office put in place a harmonised internal procedure for tendering and signing procurement contracts. The results have been: a coherent approach in managing procurement procedures according to the different thresholds and their associated risks; internal controls which have been tailored to the value of the tenders, improved completeness of physical files and quality of documents. A further analysis was carried out in 2017 in order to take into account the lessons learned and further improve the internal procedures from the beginning of 2018. In fact further simplification is possible for low value contracts, while some specificities for the use of framework contracts and SLAs in the IT and HR domain need to be addressed.

4.2. EX-ANTE CONTROLS ON OPERATIONAL EXPENDITURE

The Programme Office, through the close collaboration between the administration and finance unit and the programme unit, has been performing ex-ante controls in line with the provision of article 18 of the BBI JU Financial Rules in order to provide assurance to the authorising officer on the correctness of all payments.

Checklists further complement guidance on ex-ante controls included in the financial rules and in the Manual of Financial procedures of BBI JU. For the operational expenditure, the processing and recording of transactions in the IT accounting system (ABAC) are mostly performed via the corporate Horizon 2020 IT tools (SYGMA/COMPASS), which assures a high degree of automation, and controls are embedded in each workflow. In addition to this, the Programme Office has established additional internal step-by-step procedures for financial verification in order to ensure coherence in controls and to facilitate the learning curve of newly recruited staff, in particular for the payment of the periodic reporting of ongoing BBI JU grants.

During 2017 the operational expenditure was implemented by means of pre-financing payments and periodic payments of ongoing grants.

Regarding the pre-financing payments, they were performed in two separate phases, due to the initial lack of payment appropriations at the beginning of the year. Pre-financing payments were initially executed for a lower amount and – when additional payment appropriations were made available to BBI JU via an amendment to the 2017 Annual Work plan and Budget and after amending the grant agreements - a second round of “top-up” pre-financing was performed.

In 2017 BBI JU programme office processed the first periodic reports and payments related to 10 projects of the 2014 call. Throughout 2017 the Programme Office has been working under the coordination of the Common Support Centre (CSC) of DG RTD on the definition of part of the H2020 Vademecum dedicated to the ex-ante controls for interim and final payments related to grants. Ex ante controls have been put in place in accordance with the abovementioned H2020 Vademecum and in line with the H2020 ex ante control strategy.

In addition to this, operational and financial staff attended the dedicated corporate trainings (grant preparation and signature, reporting and payments, project monitoring, amendments, be aware – fraud in the research family and others) and an internal workshop on financial matters was organised to brief the project officers about the possible financial issues related to the periodic reporting.

A particularly challenging task was to align the mid-term review process – organised by the deployment of external experts – with the payment process. As the COMPASS workflows not fully integrated at the time of the reporting and payment phase, the review process had to be organised outside of the corporate IT tools. This led to some delays that impacted the overall time to pay.

In order to reinforce the ex-ante controls, specific ad-hoc reviews performed by external experts have been put in place for specific cases, for example requests for amendments significantly modifying the description of the action.

Concerning the amendments to the ongoing grant agreements, in 2017 the BBI JU programme office dealt with a much higher number of requests compared to the past: 30 amendments requested by

the consortia were finalised (against the 14 of 2016) together with 17 amendments initiated by BBI JU to increase the pre-financing amount, as mentioned above. This increase is due to the increased project portfolio and is expected to further increase during the next years.

During 2017, BBI JU's programme office managed the first case of a bankruptcy of a beneficiary involved in running grants. The procedure – in line with the H2020 vademecum – was completed before the year-end, by formalising the amendment to replace the default beneficiary and injecting funds via the H2020 Participants Guarantee Fund to the consortium. This was also the occasion to draft an internal guide to help operational and financial staff to deal with these situations; the document will be finalised and approved by the first quarter of 2018.

With respect to the controls related to fraud detection and prevention, BBI JU's programme office follows the common H2020 anti-fraud strategy. Corporate trainings on anti-fraud prevention and detection are mandatory for operational and financial staff. In addition, a specific briefing has been provided to staff in relation to this matter in view of the grant preparation process, discussing examples provided by the European Commission and by executive agencies as well as good practices defined by OLAF. Regarding the prevention of double funding, BBI JU's programme office consults the European Commission and the executive agencies in order to ensure that there is no overlapping of ranked proposals arising from BBI JU call with other running grants managed by these entities. Concerning the detection and prevention of plagiarism, BBI JU is following the development by DG RTD of dedicated corporate IT tools and is exploring the possibility of joining EC framework contracts to use tailored IT applications.

4.3. EX-POST CONTROLS OF OPERATIONAL EXPENDITURE AND ERROR RATES IDENTIFIED

Ex- post controls of operational expenditure are implemented in line with the Horizon 2020 Audit Strategy. The Horizon 2020 Common Support Centre (CSC) developed this audit strategy in cooperation with all its clients (i.e. the entities that implement the Horizon 2020 budget: Services of the European Commission, Executive Agencies and Joint Undertakings).

The main objective of the Audit Strategy is to provide the individual Authorizing Officers with the necessary elements of assurance in a timely manner, thus allowing them to report on the budget expenditure for which they are responsible. Ex-post controls on operational expenditure contribute in particular to:

- assessing the legality and regularity of expenditure on a multi-annual basis;
- providing an indication of the effectiveness of the related ex-ante controls;
- providing the basis for corrective and recovery mechanisms, if necessary.

The Common Audit Service (CAS) is the part of the CSC serving all Horizon 2020 stakeholders in the implementation of the audit strategy. Its mission is to deliver a corporate approach for the audit cycle: audit selection, planning, application of rules, relations with beneficiaries and management information on the audit process.

BBi JU is effectively integrated in this control chain: it participates in the audit process definition and in the monitoring of its implementation in continuous collaboration with CAS and its clients. The main objectives of the cooperation are to align operations and exploit synergies on the common audit effort. The efficiency gains should reduce the audit costs and the administrative burden on auditees, always in line with the specific objectives for ex-post controls explained above.

In 2017, the main results are:

1. The selection and launch of the first audits on beneficiaries of BBi JU grants;
2. The delivery of the first audit results on the overall Horizon 2020 expenditure;
3. The progressive definition of working arrangements and procedures with the clients of the CAS (audits on request; handling of common sensitive audit cases; automated workflows for the implementation of the audit process and of the audit results).

SAMPLING METHODOLOGY

The Audit Strategy provides audit coverage at two layers of sampling:

1. **The corporate layer** that covers the entire Horizon 2020 expenditure;
2. **The additional layers** that cover the Horizon 2020 expenditure of entities with specific grant agreements or a separate discharge procedure, the latter being the case for BBi JU.

For the selection of the audits, representative samples are implemented in both layers and these exercises are complemented by risk-based selections. In particular:

- In the corporate layer, each two years a random Common Representative Sample (CRS) is implemented. The objective of the exercise is to provide an estimate, of the overall level of error in the Horizon 2020 expenditure, across all services involved in its management via a representative sample of cost claims across the Research and Innovation family.
- In the additional layer⁶², each year a random JU Representative Sample (JURS) is implemented. This was performed for the first time in 2017 for BBI JU expenditure. The objective of the exercise is to obtain a certain level of direct audit coverage of the part of Horizon 2020 expenditure managed by the JU via a representative sample of its cost claims.
- To complement this information, corporate and JU specific 'risk-based' audits are selected according to one or more risk criteria. These audits are intended to detect and correct as many errors as possible for instance by targeting the larger beneficiaries and identification of possibly fraudulent operators. These audits are also referred to as 'corrective' audits;

In order to ensure effective synchronisation of the two representative exercises, working arrangements and sampling procedures implemented in 2017 dealt with possible clashes between audits and optimised the audit effort when this was possible (e.g by topping up cost claims relevant to other clients of CAS on the scope of a randomly selected audit).

AUDIT COVERAGE IN 2017

In the overall Horizon 2020 layer, given the stage of the programme lifecycle, a limited number of cost claims totalling 4.1 billion euros of requested funding had been received by the services by the end of 2017. The first Common Representative Sample (CRS), a Common Risk Sample and an Additional Sample have been selected. In total, by December 2017, 625 participations had been selected for audit, covering all the services signing grants in Horizon 2020.

Also in the additional layer for BBI JU, by the end of 2017 a limited number of cost claims had been validated and paid. Their total value is of 22 million euro. The first JURS of BBI JU was implemented in July 2017. Additionally, one corporate risk based selection and one BBI JU risk based selection were implemented on the population of cost claims of BBI JU. The 11 selected cost claims have a value for 14.5 million euro, which represents an audit coverage of 65.7% of BBI JU expenditure. Five of these 11 cost claims were submitted by beneficiaries of BBI JU grants with no history of participations to the research and innovation framework, at least since FP6.

⁶² Selections done in this layer by entities with specific grant agreements follow different procedure and are reported in the AAR of the European Commission

The detailed view of the audit coverage of BBI JU expenditure is presented in the following table:

	Audit coverage		
	Values (in €)	Percentages	Number of cost claims selected for audits
Cost validated and paid by BBI JU	22,051,150	100 %	
Costs covered by risk audits	1,104,819	5%	3
Costs covered by representative audits	13,382,618	60.7%	8
Total audit coverage	14,487,437	65.7%	11

Table 28: Audit coverage in the ex-post audit exercise 2017.

INDICATORS ON THE RESULTS OF AUDITS AND ON CORRECTIVE MEASURES

Different indicators are calculated to provide a comprehensive view of legality and regularity. They can provide estimations about error rates on operational expenditure for the whole Research and Innovation family and for the part of expenditure managed by BBI JU. This approach is justified by the fact that the Horizon 2020 implementing rules are common and all implementing entities are requested to operate in the same homogeneous overall ex-ante control system⁶³.

Starting from the first audit results of 2017 on the overall Horizon 2020 expenditure, BBI JU will be progressively reporting on the following cumulative indicators:

- **Detected Error Rate:** this is the error rate derived from the results of all audits, whether audits on a representative sample of beneficiaries or audits implemented for other reasons (large beneficiaries, preventive audits, risk factors, etc). Its value can be calculated for the whole Research and Innovation family (**Overall Horizon 2020 Detected Error Rate**) or for BBI JU (**Overall BBI JU Detected Error Rate**).
- **Representative Error Rate for Horizon 2020:** this is the error rate derived solely from the results of the CRS, extrapolated to the overall population and calculated for the Framework Programme as a whole. This error rate provides an estimate of the level of error in the framework programme at the time of the audits,
- **Representative Error Rate for BBI JU:** this is the error rate derived solely from the results of the JURS, extrapolated to the overall population of cost claims paid by BBI JU. This error rate

⁶³ BBI JU reported on the implementation of ex-ante controls in section 4.2 above.

provides an estimate of the level of error in the part of Horizon 2020 expenditure managed by BBI JU at the time of the closure of the audits selected under the JURS.

Therefore, the two representative error rates do not factor in the follow-up and corrections/recoveries undertaken by the services of the Research and Innovation family after the audit, nor do they provide information on the net final financial impact of errors. The following indicator provides this information:

- **Residual Error Rate:** the residual error rate, on a multi-annual basis, is the extrapolated level of error remaining after corrections/recoveries undertaken by the services of the Research and Innovation family following the audits that have been carried out.

The calculation of the Residual Error Rate for Horizon 2020 is detailed in the AAR of the European Commission and is based on the following assumptions:

- all errors detected will be corrected;
- all non-audited expenditure subject to extension of audit findings is free from systematic material errors so that the residual error rate can be estimated to be equal to the non-systematic error rate.

BBI JU will apply the same approach in calculating the residual error rate of its own part of the Horizon 2020 expenditure (**Residual Error Rate for BBI JU**).

The residual error rate develops over time and depends on the assumptions set out above. This indicator is reliable and acceptable for the purposes for which it was intended, i.e. as a legality and regularity indicator on the progress made, through its ex-post audit strategy, in dealing with errors over a multi-annual basis. However, it remains an estimate as long as not all cost claims have been received and not all cases of extension of audit findings have been fully implemented.

RESULTS OF THE EX-POST AUDITS AND EXPECTATIONS FOR HORIZON 2020

The first Horizon 2020 audits resulting from the corporate sampling were launched in the middle of 2016 and further audits were launched in 2017.

In total, the audit of 392 participations has been finalised (385 on 2017 selection of 625 participations and 7 on the 2018 selection). This includes 110 out of 1421 selected in the first CRS.

The error rates reported by CAS as of 31/12/2017 are:

- The Overall Horizon 2020 detected error rate is 1,54 %, based on 392 participations;
- The detected error rate in the first CRS is 1.6%, based on 110 out of 142 participations selected for an audit. However, if we take into account the draft audit reports, then the expected Representative Error Rate for Horizon 2020 will be around 2,82%;
- The Residual Error Rate for Horizon 2020 is 1,44 %, expected to rise to around 2.24% when taking into account the draft audit reports.

The error rates above can only be a preliminary estimation and must be treated with prudence and with due consideration to the comments provided by the European Commission in its AAR for the assurance purposes over the overall Horizon 2020 expenditure.

The first audits on BBI JU operational expenditure were launched between October and December 2017 with a target closure by December 2018. As none of these audits provided results and no extrapolations on other Horizon 2020 audit findings were implemented on BBI JU cost claims in 2017, no error rates can be reported yet on BBI JU expenditure.

The first audit results on the overall Horizon 2020 expenditure can already provide valuable information about the effectiveness of the related ex-ante controls. BBI JU relies on the cooperation with the other clients of the CSC to identify the causes of these errors and to possibly improve the implementation of the related ex ante controls.

Results of this cooperation shall contribute to achieve the multiannual objectives about errors detected on the Horizon 2020 expenditure. The expectations provided to the Legislator in the legislative proposal for the Horizon 2020 framework programme are the same as those formulated in the legislative proposal for BBI JU. These expectations are that on an annual basis, error rates range between 2 and 5%, with the ultimate aim of achieving a residual level of error as close as possible to 2 % at the closure of the multi-annual programme⁶⁴.

The first audit results, from the CRS and other audits, suggest that, over the multiannual period, and especially considering the high level of audit coverage of Horizon 2020 expenditure that can be expected, the residual error rate will be below 2%. Additional evidence to support this conclusion will arrive in 2018. However, there are today no indications that the residual error rates identified in FP7 - below 2% - will rise in Horizon 2020.

In conclusion, BBI JU still considers that the error rate will fall below the materiality level established, so it does not consider that a reserve is needed for Horizon 2020 expenditure.

⁶⁴ Legislative Financial Statement as part of the 2011 Commission proposal for the Regulation on H2020 (COM/2011/809) of 30 November 2011, pages 98-102, as recalled in the Commission proposal for the Regulation on the Bio-Based Industries Joint Undertaking (COM/2013/496) of 10 July 2014, pages 34 -36

4.4. AUDIT OF THE EUROPEAN COURT OF AUDITORS

On 13 November 2017 the European Court of Auditors (ECA) published its report on BBI JU's annual accounts for the financial year 2016, in which the ECA issued a 'clean opinion' (with no qualifications) on the reliability of the accounts and on the legality and regularity of revenue and of payments underlying the accounts.

4.5. INTERNAL AUDIT

The Internal Audit Service (IAS) of the European Commission performs the internal audit function for the BBI JU as specified in its financial rules which were adopted by the Governing Board on 09 December 2014 as amended by the Governing Board decision of 23 December 2015. On 13 December 2017 the Governing Board ratified the new mission charter of the IAS.

As planned in the Strategic Internal Audit Plan (SIAP) 2017-2019, in November 2017 the IAS performed the audit fieldwork for the audit *“Limited review of the implementation of the Internal Control Standards (ICS) in the BBI JU”*. The preliminary report confirms the overall conclusion of the self-assessment performed by the Programme Office in 2017, as further detailed in section 4.7 below.

4.6. RISK MANAGEMENT AND CONFLICT OF INTEREST

Risk Management has been an integral part of the management processes in place at BBI JU since its outset and adds value to the organisation by efficiently and effectively supporting the achievement of objectives. The level of resources devoted to it as well as the level of documentation produced are adequate and proportionate to the criticality of the relevant activities. Across the Programme Office, the management is alerted about emerging risks. Also the Governing Board is kept informed in a timely manner about risks and responses that should be discussed and agreed at that level.

The management regularly performs risk reviews and assesses any emerging ones. In each exercise the risk identification and assessment evaluates the root causes of each risk and their potential consequences. The existing controls and the experience gained by the Programme Office in the core activities are taken in due consideration. "Lost opportunities", convergences and inter-dependencies between risks are also considered during the assessment. The risk management action plan is realistic and takes into account the material significance of the risks in order to provide proportionate responses. The management monitors and reports on possible threats as needed, and ensures an effective implementation of the agreed responses to risks.

ASSESSMENT STEPS FOR 2018 OBJECTIVES

The annual risk assessment started in September 2017 with a risk collection exercise that focused on the objectives of the AWP 2018. However, some initial assumptions needed to be verified and the assessment was performed again in January 2018 with the support of newly available information. The relevant action plans were then validated together with the identification of individual responsibilities and deadlines.

ASSESSMENT CONCLUSIONS

Compared to previous years, some threats have either been absorbed or the corresponding risk level has been reduced. This is particularly the case for risks pertaining to the core processes of Horizon 2020 grant management, notably on the robustness of evaluations and on the timely reporting, review and payment of project reports. An increased internal control awareness and experience gained by the Programme Office in these activities led to this result. This was also supported by a better definition of business processes and the progressive reliability of IT tools in use.

Some threats continue to appear on the risk management radar. The Programme Office will take action in order to reduce the likelihood of their occurrence and/or their impact should they be realised. Risk responses will be proportionate to the risk level and with due consideration of the priorities and capacity of the Programme Office.

The most significant risks currently requiring further actions in addition to existing controls are:

HR management:

- Significant-critical risks potentially affecting availability and efficient allocation of human resources.

Programme Management:

- Significant risks related to the achievement of the objective set in the Council Regulation relating to the financial contributions to operational costs by the members of BBI JU other than the Union. As reported in section 1.7, the amendment to the Council Regulation adopted in 2018 aims to improve the level of these contributions at project level in the remaining three calls for proposals currently being planned by BBI JU until 2020;
- Significant risks related to legality and regularity aspects potentially affecting ex-post controls on operational expenditure and the timely implementation and reporting of their results;

Other two sensitive topics have been assessed as effectively and efficiently addressed through the controls already implemented at BBI JU as described below:

1. Management of potential conflicts of interest:

The Implementing Rules on Conflict of Interest for all the staff and bodies of BBI JU (GB, SRG, SC and ED) were adopted by the Governing Board on 13 December 2017 following the model agreed by the European Commission.

The Programme Office has developed a comprehensive set of rules and procedures that are effectively implemented across its entire governance structure as follows:

- When joining the Programme Office team, each staff member agrees on the application of staff regulations and signs a declaration of honour on the management of conflicts of interests.
- A copy of the code of good administrative behaviour is provided to staff members. Furthermore, compulsory trainings on the management of conflict of interests and whistleblowing are included in the Learning and Development Framework of BBI JU.
- Conflict of Interest procedures for the members of the Governing Board and of the advisory boards of BBI JU are in place.
- Specific measures have been implemented for prevention and management of conflicts of interest of experts in charge of the evaluation of grant applications, and of the review of projects and tenders.

2. Data protection

The Programme Office has continued to ensure that appropriate data protection measures are in place and adequately communicated to all staff through training sessions and through continuous support and monitoring by the Local Informatics Security Officer (LISO) and by the Data Protection Officer (DPO).

BBI JU shares an ICT infrastructure with other Joint Undertakings located in the same building. In 2016 BBI JU adopted the Common IT Security Policy, which sets out the security and data protection requirements and principles to be applied by data processors on outsourced activities.

Preservation of internal information security is covered under the Security Plan of Managed Services. Preservation of data integrity, legibility and accessibility is assured in the IT infrastructure of BBI JU and relevant elements of assurance are addressed in the Business Continuity Plan and in the Disaster Recovery Plan.

Within the processing of personal data, application of Regulation (EC) No 45/2001⁶⁵ is ensured in two distinct contexts:

- Data collection in the context of the Calls for proposals under Horizon 2020; this data is collected and treated within the corporate specifications of Horizon 2020 IT tools. In November 2017 the notifications to European Data Protection Supervisor (EDPS) for prior checking (article 27-5 of the Regulation 45/2001) were made for the processes: H2020 Grants and Independent Expert Management.
- Processing of personal data in the context of public procurement, recruitment⁶⁶, spontaneous contact, etc. Such data is also processed pursuant to Regulation 45/2001 under the responsibility of the BBI JU DPO. In December 2017 BBI JU's Action Plan for the preparation of the entry into force of the new data protection regulation⁶⁷ was discussed with the management.

⁶⁵ OJ L 8, 12.01.2001

⁶⁶ Personal files are subject to a different procedure and directly communicated to the European Data Protection Services (EDPS) by the HR Manager.

⁶⁷ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

4.7. COMPLIANCE AND EFFECTIVENESS OF INTERNAL CONTROL

In line with articles 12 and 17.3 of the BBI JU Financial Rules, on 16 September 2015 the Governing Board adopted 16 Internal Control Standards (ICSs) on the basis of the equivalent standards laid down by the European Commission for its own departments. The ICS constitute the foundation of the Internal Control Framework (ICF) of an organisation.

In 2016 the Internal Audit Service (IAS) identified, in its Strategic Internal Audit Plan 2017 – 2019 for BBI JU, an inherent risk in several ICSs that required more specific definitions and tightening of requirements in order to ensure that they adequately reflected the context of BBI JU. The IAS also considered that for BBI JU moving at that time to a new Internal Control Framework based on principles - like the European Commission did in April 2017 - may add further risks and challenges for properly assessing the level of implementation of controls given the limited resources available and the relatively low level of maturity of BBI JU as a recently created organization.

Having due regard to the risks identified by the IAS and as already been planned in the AWP 2017 of BBI JU, between June and September 2017 the Programme Office performed an in depth self-assessment of its ICSs. The overall objective of the exercise was to provide the Programme Office with a snapshot of the current level of implementation of the ICSs and to explore the conditions necessary to move the Internal Control Framework of the organisation to a higher degree of maturity.

The assessment covered the range of processes and resources deployed in the organisation and the assessment criteria covered the compliance, the effectiveness and the efficiency of the implementation of the Internal Control Standards (ICS) in the organisation.

The exercise provided also the opportunity to map the legal background and the existing processes and procedures applicable to each ICS and to finalise the revision of the ICS text that was subsequently adopted by the Governing Board on 30 November 2017.

ASSESSMENT RESULTS

The first result of the exercise is a heightened internal awareness of the BBI JU Internal Control Framework. The principles of the ICF and the ICS have been presented to all members of staff and each of them actively participated to the self-assessment of the implementation of every ICS. Roles and accountabilities of each staff member have been clearly identified and communicated internally and they were eventually acknowledged by each staff member through the dedicated survey. Relevant indications from the survey have been analysed by accountable persons and ultimately by the management for proper follow-up.

The overall conclusion on the maturity of the organisation for each ICS is that BBI JU globally enjoys a good maturity level for the implementation of the 16 ICS as detailed in the table 29 below. The scores in the maturity column indeed show the following attributes of a maturity model grid as provided by

the Global Institute of Internal Auditors⁶⁸ and assessed by the accountable functions for each ICS in a scale 0 to 5:

- **Score 3 = Defined – Standardised:** controls are in place and documented, and employees have received formal communications about them. Undetected deviations from controls may occur;
- **Score 4 = Managed – Monitored:** standardized controls are in place and undergo periodic testing to evaluate their design and operation; test results are communicated to management. Limited use of automated tools may support controls.

For proper reference, level zero is usually some variation of a non-existent or ad hoc execution of controls while level five is usually considered a high maturity, sustainable, and/or optimized process. Level five may not be an organization's goal, as the cost to achieve level five may at times exceed the benefits. In other words, management's risk tolerance may be high enough to allow the process to be less exact or consistent, or it may not be strategically important enough to invest in certain processes to consistently achieve level five.

⁶⁸ IPPF – Practice Guide: Selecting, Using, and Creating Maturity Models: A Tool for Assurance and Consulting Engagements. Global Institute of Internal Auditors, July 2013

Internal Control Standards	Maturity (0 to 5)
ICS 1: Mission	4
ICS 2 Ethical and organisational values	3
ICS 3 Staff allocation and flexibility	4
ICS 4 Staff evaluation and development	4
ICS 5 Objective and performance indicators	4
ICS 6 Risk management process	3
ICS 7 Operational structure	3
ICS 8 Processes and procedures	3
ICS 9 Management supervision	4
ICS 10 Business continuity	3
ICS 11 Document management	3
ICS 12 Information and communication	3
ICS 13 Accounting and financial reporting	4
ICS 14 Evaluation activities	4
ICS 15 Assessment of internal control systems	4
ICS 16 Internal audit function	4

Table 29: Degree of maturity of Internal Control Standards implemented at BBI JU.

With reference to the assessment criteria on compliance, effectiveness and efficiency of the implementation of the ICSs in the organisation, the assessment results indicated the scope for intervention in some specific areas but they have not challenged the overall maturity of the ICSs in meeting the control objectives and requirement.

The action plan for these ICSs has been updated accordingly and with due consideration to both the urgency and importance to intervene as well as the capacity of BBI JU in terms of resources.

y of company and subdivisions

ata and prognosis of activity



05

MANAGEMENT ASSURANCE

5.1. ASSESSMENT OF THE ANNUAL ACTIVITY REPORT BY THE GOVERNING BOARD

INTRODUCTION

The Bio-based Industries Joint Undertaking (BBI JU) programme office submitted the 2017 Annual Activity Report (AAR) to its Governing Board on 28 February 2018.

On 13 December 2017, the Governing Board appointed a working group to assess the 2017 AAR, consisting of representatives of the Bio-Based Industries Consortium (BIC, the member other than the Union) and the Commission. The Governing Board had agreed to launch a written procedure for its adoption, following the working group's assessment.

In accordance with Article 15(3) of the Governing Board's rules of procedure, the working group reported to the Governing Board on 11 June 2018 by providing a draft assessment, which forms the basis for the Governing Board's current assessment.

ANALYSIS

The 2017 Annual Work Plan (AWP) was adopted by the Governing Board on 15 December 2016 and subsequently amended on 22 May 2017. The Governing Board recognises the progress made by the BBI JU towards achieving the objectives set in the 2017 AWP. It notes the following points in particular:

- The Call 2016 grant agreements were signed in 231 days on average (against a target of 245 days), which reflects the efforts made. The Union provided funding of EUR 185 070 933 in total for the 29 projects resulting from this call.
- On the reference date of 31 December 2017, the BBI JU project portfolio accounted for 65 ongoing projects, with the Union contributing EUR 413 761 616 in total. The Governing Board appreciates that the different types of feedstock are now better covered.
- Call 2017 was published on 11 April 2017 with an indicative Union budget of EUR 81 000 000 and a deadline for submitting proposals of 7 September 2017. The evaluation was carried out in the period provided for, with an excellent time-to-inform. Only 4 out of 16 topics were not covered by proposals retained for funding, which is a significant improvement over Call 2016⁶⁹.
- Including the projects from Call 2017 – which had not been signed by 31 December 2017, but had undergone selection only – the BBI JU project portfolio accounts for 82 projects, with a total Union contribution of EUR 498 923 016. Funding is allocated as follows: 32 % for seven flagship actions; 38 % for 24 demonstration actions; 29 % for 43 research and innovation actions; 2 % for eight coordination and support actions.

⁶⁹ The resulting 17 grant agreements, with a total Union contribution of EUR 85 672 213, were all signed by the planned deadline of 7 May 2018.

- BIC's and the Union's contribution to the BBI Initiative is shown in the efforts made in the first 4 years⁷⁰ to fulfil the commitments set out in the Council Regulation:
 - The **Union** committed EUR 420 137 616 (EUR 413 761 615 operational budget for calls 2014-16, plus EUR 6 376 001 administrative budget for 2014-17). This is 43 % of the planned maximum budget of EUR 975 000 000 (Article 3(1) of the Council Regulation), and thus in line with expectations.
 - Both members paid around EUR 6.38 million each in **administration costs** to the BBI JU programme office up to 2017. This is only around 22 % of the administrative budget stipulated for 10 years (EUR 58 500 000; Article 12(2) of the Statutes of the BBI JU), which shows that the BBI JU programme office has budgeted carefully in terms of administration.
 - BIC has paid EUR 1 250 000 as a **financial contribution** at programme level up to now. This is less than 1 % of the minimum target of EUR 182 500 000 provided for (Article 4(2)(a); Articles 12(3)(b) and 12(4) of the Statutes). According to this AAR, BIC's constituent entities have also committed to contributing EUR 11 191 158 to signed grant agreements from calls 2014-16 at project level). However, it is not clear from the AAR which part of this amount is due from BIC's constituent entities that are beneficiaries not receiving funding. Anyway, the amount of EUR 11 191 158 cannot be taken into account yet as the Council Regulation still applicable in 2017 does not allow for this⁷¹.
 - The AAR contains three different figures for in-kind contributions towards **operational activities**. The total committed in kind contributions of all participants towards operational activities ('committed total APIK' – all participant's in kind contribution) amount to EUR 183 206 211 (signed grants of Calls 2014 to 2016). BIC reported estimated total in kind contributions of its constituent entities towards operational activities (estimated total IKOP) of EUR 35 188 962 (estimated and reported by BIC for 2015, 2016 and 2017)^{72,73}. In addition, BIC reported certified in kind contributions from its constituent entities towards operational activities (certified IKOP) of around EUR 11 000 000⁷⁴.
 - In 2017, BIC's constituent entities contributed EUR 186 247 000⁷⁵ in kind to **additional activities**, with EUR 663 589 000 certified for 2014, 2015, 2016 and 2017. This is more than

⁷⁰ Of 7 years with operational budget commitments for calls (2014 to 2020), and of 10 years with an administrative budget (2015 to 2024).

⁷¹ It can be taken into account in the next AAR, after the entry into force of the amendment of the Council Regulation on 15 February 2018. The amount mentioned can only be taken into account in part, because part of it is to be delivered by beneficiaries receiving funding, and not only by beneficiaries not receiving funding, as required under the amended legal framework.

⁷² Beneficiaries that receive 100 % funding are normally excluded from this calculation and from reporting, except in cases of ineligible costs incurred within a project, which could also be reported and certified as IKOP.

⁷³ Estimated and reported in the IKOP reports for 2015 (EUR 6 582 995), 2016 (EUR 7 833 127) and 2017 (EUR 20 772 840). The figures for 2016 and 2017 are also shown in this AAR.

⁷⁴ It is only these EUR 11 000 000 that can be considered towards the contributory target of EUR 2 730 000 000 provided for in Article 4(1) of the Council Regulation. The remainder of the reported total IKOP will be certified at the end of the projects according to the methodology approved by the Governing Board.

⁷⁵ This amount only comprises those parts of the IKAA of 2017 that were certified before 1 June 2018.

a third of the amount expected over 11 years (Article 4(2)(b) of the Council Regulation) and therefore in line with expectations.

- BIC and its constituent entities have therefore spent a reported EUR 682 220 481 in total⁷⁶. This is 25 % of the total amount expected of at least EUR 2 730 000 000 over 11 years (Article 4(1) of the Council Regulation), and therefore more or less in line with the expectations.
- Taken together and except for the financial contribution, these are positive steps towards fulfilling the commitments, although more efforts are needed.
- In this report, the leverage formula used by the Commission for the interim evaluation of the Joint Technology Initiatives in 2017 has been applied⁷⁷. Only the signed grant agreements up to Call 2016 can be considered, as the Call 2017 grant agreements had not yet been signed by 31 December 2017. By considering the committed in kind contribution from all participants (APIK), BIC's financial contribution at programme level, and its constituent entities' committed financial contributions to beneficiaries at project level in signed grant agreements up to the end of 2017 (all figures mentioned above), the prospective operational leverage of the initiative obtained in the first 4 years of operations is 0.473. The actual additional leverage is 1.604, giving a total leverage of 2.077⁷⁸. In other words, it is reasonable to assume that every euro committed by the Union through the BBI Initiative up to the end of 2017 has leveraged an additional EUR 2.08.
- Although this factor comprises both committed (APIK, the Union contribution, BIC's financial contribution at programme and project level) and certified (IKAA) amounts, it is a positive step towards achieving important leverage of the initiative by 2024.
- The efficiency of the BBI JU is monitored by key performance indicators (KPIs) that are applied by all joint undertakings. The Governing Board notes that the KPIs on programme monitoring show that the joint undertaking is operating efficiently.
- Among the KPIs on crosscutting issues, the gender dimension, private sector participation and SME participation are very positive. This is particularly true for SME participation: among the 932 beneficiaries of the projects funded in calls 2014-16 and of the projects retained for Call 2017 funding, 350 (38 %) are small and medium-sized enterprises (SMEs). They receive 27 % of the Union contribution, with an upward trend over the years. This is higher than the overall target of 20 % for Leadership in Enabling and Industrial Technologies (LEIT) and the societal challenges in Horizon 2020.
- The KPI on the geographical distribution of participants shows the same pattern as for Horizon 2020 in general: low EU-13 participation, which is nevertheless higher in the BBI JU than in the

⁷⁶ EUR 6 381 481 (administrative) + EUR 1 250 000 (financial contribution at programme level) + EUR 11 000 000 (IKOP certified) + EUR 663 589 000 (certified IKAA).

⁷⁷ Although the Council Regulation itself does not mention a calculated leverage objective for measuring BIC's and the Union's contribution to the BBI Initiative, a summary figure may be well suited to showing how the initiative has developed in general.

⁷⁸ Strictly speaking, financial contributions to the beneficiaries at project level cannot be counted yet in 2017, as the amended Council Regulation only takes effect in 2018. The correct total leverage is therefore slightly lower, with a value of 2.05.

related parts of Horizon 2020 (Societal Challenge 2, LEIT Biotechnology). The Governing Board appreciates the efforts made by the members to widen participation still further.

- The outcomes of projects are monitored by six BBI-specific KPIs described in the Strategic Innovation and Research Agenda. Together with the expected socio-economic and environmental impacts of the projects, the results have been provided by project coordinators by means of a questionnaire, added up and then compared with the agreed objectives. The overall picture of this exercise points to a positive outcome. However, it must be emphasised that the whole exercise is built on expected results only, not on realised results, which has led to unexpectedly high results in part. A meaningful analysis of the real KPI achievements can only be made in a second step after result verification at the end of projects or in part during periodic project reviews. Whenever KPI-related data are publicly shown, this difference must be made clear (as is the case in this AAR).
- The Governing Board appreciates the efforts of the Commission to amend the Council Regulation and the Model Grant Agreement in order to allow financial contributions delivered by BIC's constituent entities to the beneficiaries at project level to be counted. Together with the new feature consisting of topics for Research and Innovation Actions with an additional eligibility criterion⁷⁹ in the 2018 AWP, this is expected to increase the delivery of financial contributions by BIC and its constituent entities.
- The Governing Board takes note of the efforts of BBI JU to increase its available payment appropriations in time for pre-financing of the newly signed grants.
- The Governing Board appreciates the BBI JU's active work on communication and outreach, which helped it gain recognition. The BBI JU programme office organised a successful info day, participated in 9 national info days and 35 further events as well as in the Joint Undertakings' Exhibition at the European Parliament. It also published several brochures, launched a regular newsletter and took part in external publications. The Governing Board congratulates the BBI JU on successfully organising its first Stakeholder Forum.
- The Governing Board notes that the target of 22 staff set in the 2017 AWP has almost been met, and that the BBI JU staff carried out activities in 2017 that were relevant to their role.
- The Governing Board acknowledges that the programme office management processes and functions meet the four objectives of its internal control framework. It also appreciates the ongoing second revision of the Manual of Financial Procedures (adopted in 2015) in light of suggestions made by the European Court of Auditors, among others, as well as the new harmonised internal procedure for tendering and signing procurement contracts. The BBI JU programme office has been performing ex-ante controls in line with Article 18 of the BBI JU Financial Rules to provide assurance to the authorising officer on the correctness of all payments – which is also linked to the project reviews and periodic payments (carried out for the first time in 2017). The first ex-post audits were carried out on operational expenditure in 2017, although no error rates can be reported yet.

⁷⁹ Pursuant to Article 9(5) of the Horizon 2020 rules for participation.

- Most of the points provided in this assessment are also reflected in the Experts Group Report on the BBI JU⁸⁰, for which a common action plan has been developed.

However, the Governing Board considers that the following aspects described in the report merit improvement:

- The Governing Board notes that the BBI JU has made further efforts to address the concerns the Commission had on the report on KPIs. Correct and sound reporting is crucial to avoid any reputational risk to the BBI JU (and by extension, the Commission and BIC), as the figures will be made public and scrutinised by various stakeholders. Whenever KPI-related data are made public, the difference between expected and realised results must be clearly communicated.
- The Governing Board also asks the BBI JU, BIC and the Commission to continue developing a consistent methodology in order to verify self-reported information (KPIs reported by coordinators) and to gradually change from expected to realised figures once projects have ended.
- The Governing Board requests that the 2018 AAR shows the value of the overall operational leverage of the initiative, which is based on the in kind contribution to operational activities by all participants (APIK) (as is the case until now). In addition, it requests that the 2018 AAR use a table to clearly show BIC's level of compliance with its contributory obligations over the years, including: (i) the IKOP by BIC's constituent entities only (and not from all industry beneficiaries), and (ii) both the payments during the past years and the commitments in signed grant agreements. BIC will provide this information by way of annual reporting performed in line with Article 4(3) of the Council Regulation⁸¹ and the Guidance for reporting and certification of the in kind contributions to the operational costs ('IKOP') of the BBI JU adopted by the BBI Governing Board in 2017.
- The Governing Board requests that an analysis of BIC's constituent entities of BIC participating in BBI projects be provided for the 2018 AAR.
- The Governing Board requests that BIC and the BBI JU programme office analyse which financial contributions to the beneficiaries at project level have been provided by BIC's constituent entities that are beneficiaries not receiving funding in those projects, so that BIC can correct its reports in time for the next AAR⁸².

⁸⁰ Interim Evaluation of the Bio-based Industries Joint Undertaking (2014-2016) operating under Horizon 2020 – Experts Group Report, June 2017.

⁸¹ The members of the BBI Joint Undertaking other than the Union shall report each year by 31 January to the Governing Board of the BBI Joint Undertaking on the value of the contributions referred to in paragraph 2 made in each of the previous financial years. The States Representatives Group shall also be informed thereof in a timely manner.

⁸² Only those amounts paid by constituent entities of BIC that are not receiving funding can be considered as receipts (Article 5(3)(3) of the BBI JU Model Grant Agreement v.5) and can therefore be counted as financial contributions.

CONCLUSION

The Governing Board believes that the technical and operational information provided in the 2017 AAR reflects the situation at the end of 2017. It believes that the 2017 AAR provides a complete and accurate report of the progress made by the BBI JU in 2017, in particular on the objectives set in the 2017 AWP as last amended on 22 March 2017. The report clearly identifies the risks associated with the BBI JU's operations, duly reports on how the resources were used, and indicates the efficiency and effectiveness of the BBI JU's internal control system.

The Governing Board also draws the BBI JU's attention to those issues that merit improvement, such as the need to consider only the IKOP paid by BIC's constituent entities in the IKOP reports. It also points to the ongoing risk of BIC failing to deliver on its financial contribution towards operational costs.

Based on the working group's report, the declaration of the authorising officer, and the information provided in this report, the Governing Board concludes that the 2017 key objectives have been achieved in compliance with the principles of legality and sound financial management.

The Governing Board, taking note of the declarations of assurance provided by the Executive Director of the BBI JU, confirms that in general, suitable internal control standards have either been put in place or have largely been implemented and require supplementary action, and that the BBI JU is properly monitoring and mitigating any risks.

5.2. ELEMENTS SUPPORTING ASSURANCE

This section reviews the assessment of the elements reported in chapters 2 and 4 and draws conclusions that enable the Executive Director to obtain a full picture of the state of play of the BBI JU, underpinning the reasonable assurance given by the Authorising Officer in his declaration of assurance of the Annual Activity Report.

The main elements supporting such assurance are based on the management assessment of results of key indicators related to the budget execution, the internal control self-assessment, the results of audits from the ECA and of the work performed by the IAS in the course of the reporting year, the first audit results on the overall Horizon 2020 expenditure, as well as the reporting from the Head of Administration and Finance, from the Head of Programme, from the Internal Control and Audit Manager and from the Accounting Officer of BBI JU.

All this information positively supports the statements of the declaration of assurance and no significant weaknesses were identified that call into question the reasonable assurance as to the use of resources for their intended purpose, in accordance with the principles of sound financial management and the fact that the implemented control procedures give the necessary guarantees on the legality and regularity of the underlying transactions.

5.3. RESERVATIONS

No reservation is made for 2017.

5.4. OVERALL CONCLUSION

In conclusion, management has reasonable assurance that, overall, suitable controls are in place and working as intended; risks are being appropriately monitored and mitigated; and necessary improvements and reinforcements are being implemented. Therefore, the Executive Director, in his capacity as Authorising Officer, has signed the declaration of assurance presented below.



06

DECLARATION OF ASSURANCE

6.1. DECLARATION OF ASSURANCE

I, the undersigned, Philippe Mengal, Executive Director of the Bio-Based Industries Joint Undertaking,

In my capacity as authorising officer

Declare that the information contained in this report gives a true and fair view⁸³.

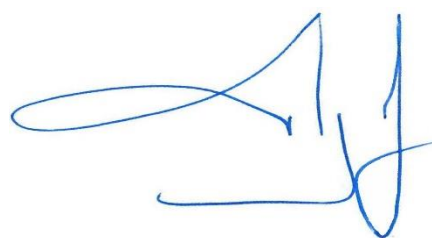
State that I have reasonable assurance that the resources assigned to the activities described in this report have been used for their intended purpose and in accordance with the principles of sound financial management, and that the control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions.

This reasonable assurance is based on my own judgement and on the information at my disposal, such as the results of the internal control self-assessment, ex-post controls on the overall Horizon 2020 expenditure, the work of the Internal Audit Service, and the lessons learnt from the reports of the Court of Auditors for years prior to the year of this declaration.

Confirm that I am not aware of anything not reported here which could harm the interests of the Joint Undertaking.

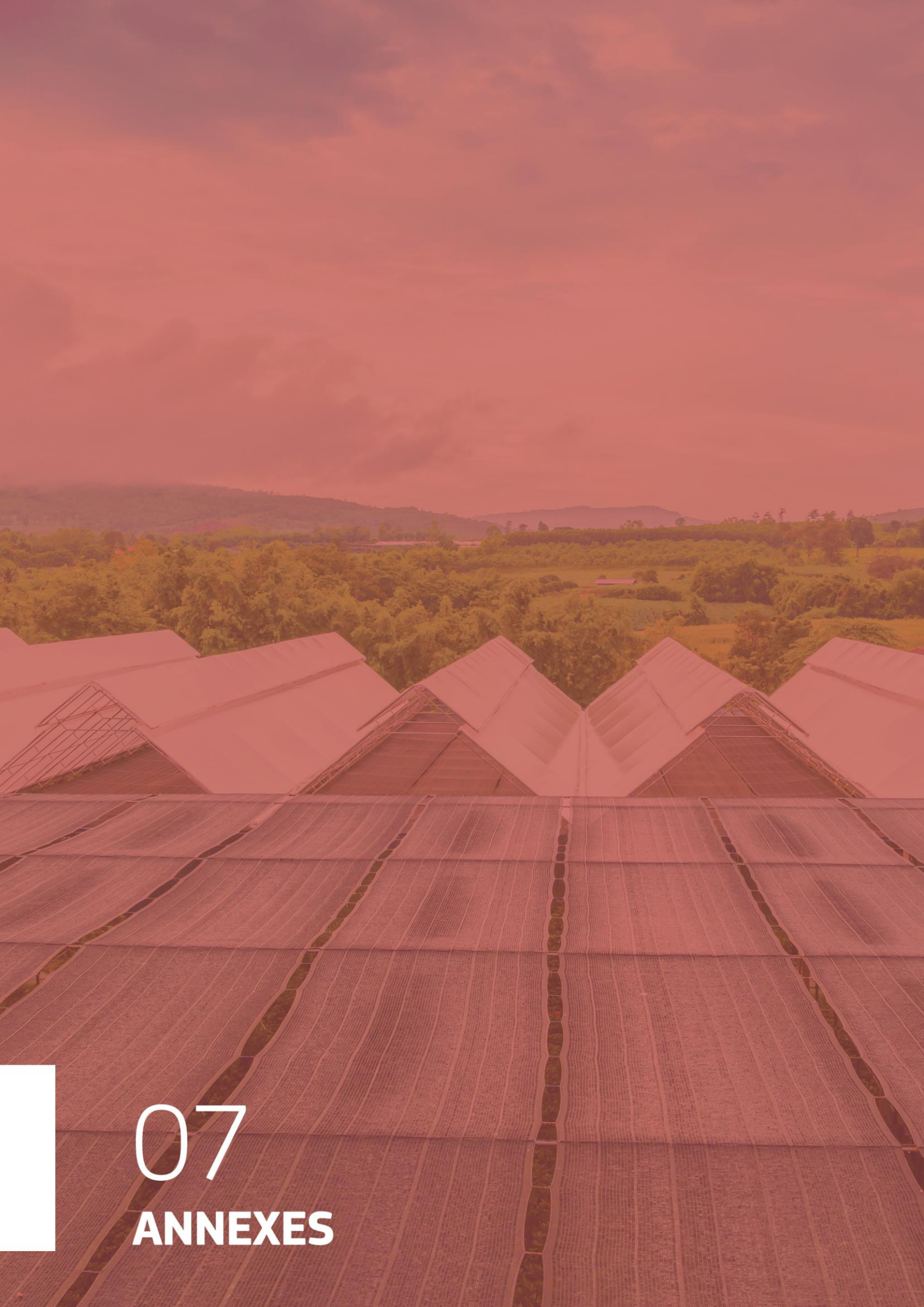
Place: Brussels

Date: 28/02/2018

A handwritten signature in blue ink, consisting of a large, stylized 'P' followed by a series of loops and a final vertical stroke.

Philippe MENGAL
Executive Director

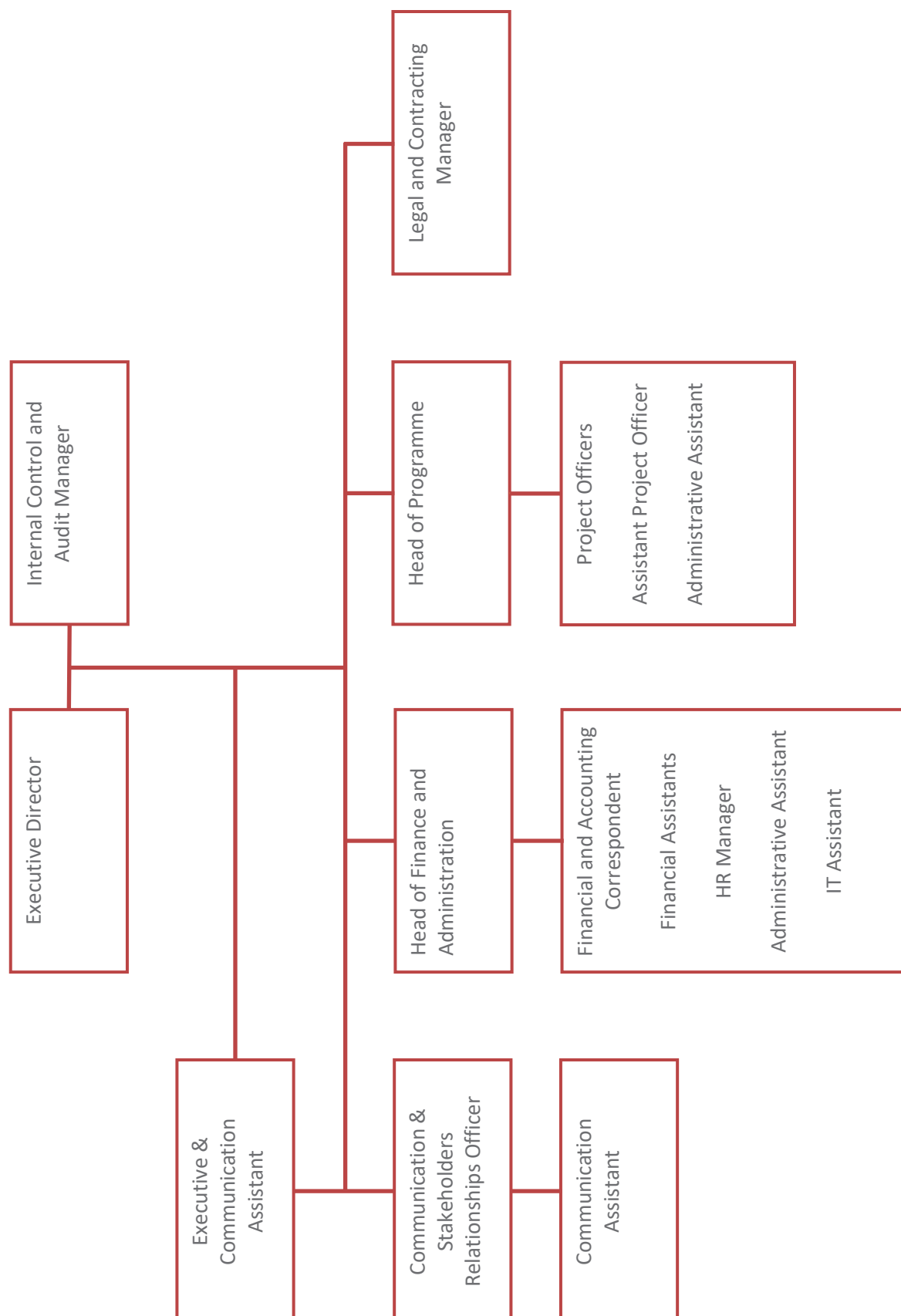
⁸³ True and fair in this context means a reliable, complete and correct view on the state of affairs in the Joint Undertaking.



07

ANNEXES

7.1. ORGANISATIONAL CHART



7.2. STAFF ESTABLISHMENT PLAN

Function group and grade	2017				2018			
	Request of the Joint Undertaking		Draft Budget Request		Request of the Joint Undertaking		Draft Budget Request	
	Permanent Posts	Temporary Posts	Permanent Posts	Temporary Posts	Permanent Posts	Temporary Posts	Permanent Posts	Temporary Posts
AD 16								
AD 15								
AD 14		1		1		1		1
AD 13		1		1		1		1
AD 12								
AD 11		2		2		2		2
AD 10		2		2		2		2
AD 9								
AD 8		2		2		2		2
AD 7		2		2		2		2
AD 6								
AD 5								
AD total		10		10		10		10
AST 11								
AST 10								
AST 9								
AST 8								
AST 7		3		3		2		2
AST 6								
AST 5								
AST 4								
AST 3								
AST 2						1		1
AST 1								

Function group and grade	2017				2018			
	Request of the Joint Undertaking		Draft Budget Request		Request of the Joint Undertaking		Draft Budget Request	
	Permanent Posts	Temporary Posts	Permanent Posts	Temporary Posts	Permanent Posts	Temporary Posts	Permanent Posts	Temporary Posts
AST total		3		3		3		3
AST/SC 6								
AST/SC 5								
AST/SC 4								
AST/SC 3								
AST/SC 2								
AST/SC 1								
AST/SC total								
TOTAL		13		13		13		13
GRAND TOTAL	13		13		13		13	

Staff resources also include five GF IV and four GF III contract agents in 2017. For 2018 an additional GFIII post has been made available by downgrading an AST7 to AST2.

7.3. PUBLICATIONS FROM PROJECTS

The table below was generated based on data provided by the 65 on-going BBI JU projects via the ‘continuous reporting’ module⁸⁴ of the Participant Portal. Since the ‘Publications’ module only needs to be completed during the periodic reporting phase, and since only 11 periodic reports were submitted in 2017, the table below is most likely an underestimation of the actual amount of publications in 2017.

Project	Title	Authors	Journal Title	Publisher
AgriMax	Processing, Valorization and Application of Bio-Waste Derived Compounds from Potato, Tomato, Olive and Cereals: A Review	Caroline Fritsch, Andreas Staebler, Anton Happel, Miguel Cubero Márquez, Ingrid Aguiló-Aguayo, Maribel Abadías, Miriam Gallur, Ilaria Cigognini, Angela Montanari, Maria López, Francisca Suárez-Estrella, Nigel Brunton, Elisa Luengo, Laura Sisti, Maura Ferri, Gianluca Belotti	Sustainability	MDPI Open Access Publishing
BIOWAYS	Bio-based products and applications potential	Evangelia Tsagaraki (Q-PLAN), Eleni Karachaliou (Q-PLAN), Iakovos Delioglani (Q-PLAN) Ephy Kouzi (Q-PLAN)		http://www.bioways.eu
BIOWAYS	Monitoring and Assessment Plan	Kristiina Laurits Ragne Kasesalu		http://www.bioways.eu
EnzOx2	Role of surface tryptophan for peroxidase oxidation of nonphenolic lignin	Verónica Sáez-Jiménez, Jorge Rencoret, Miguel Angel Rodríguez-Carvajal, Ana Gutiérrez, Francisco Javier Ruiz-Dueñas, Angel T. Martínez	Biotechnology for Biofuels	BioMed Central
EnzOx2	A peroxxygenase from Chaetomium globosum catalyzes the selective oxygenation of testosterone	Jan Kiebitz, Kai-Uwe Schmidtke, Jörg Zimmermann, Harald Kellner, Nico Jehmlich, René Ullrich, Daniel Zänder, Martin Hofrichter, Katrin Scheibner	ChemBio Chem	John Wiley & Sons Ltd.
EnzOx2	Experimental recreation of the evolution of lignin-degrading enzymes	Iván Ayuso-Fernández, Angel T. Martínez, Francisco J. Ruiz-Dueñas	Biotechnology for Biofuels	BioMed Central

⁸⁴ http://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/grant-management/reports/continuous-report_en.htm

	from the Jurassic to date			
EnzOx2	Mapping the Long-Range Electron Transfer Route in Ligninolytic Peroxidases	Sandra Acebes, Francisco J. Ruiz-Dueñas, Mario Toubes, Veronica Sáez-Jiménez, Marta Pérez-Boada, M. Fátima Lucas, Angel T. Martínez, Victor Guallar	The Journal of Physical Chemistry B	American Chemical Society
EnzOx2	High-Throughput Screening Assay for Laccase Engineering toward Lignosulfonate Valorization	David Rodríguez-Escribano, Felipe de Salas, Isabel Pardo, Susana Camarero	International Journal of Molecular Sciences	Multidisciplinary Digital Publishing Institute (MDPI)
EnzOx2	Fungal Unspecific Peroxygenases Oxidize the Majority of Organic EPA Priority Pollutants	Alexander Karich, René Ullrich, Katrin Scheibner, Martin Hofrichter	Frontiers in Microbiology	Frontiers Media
EnzOx2	Fatty Acid Chain Shortening by a Fungal Peroxygenase	Andrés Olmedo, José C. del Río, Jan Kiebitz, René Ullrich, Martin Hofrichter, Katrin Scheibner, Angel T. Martínez, Ana Gutiérrez	Chemistry - A European Journal	John Wiley & Sons Ltd.
EnzOx2	Oxidoreductases on their way to industrial biotransformations	Angel T. Martínez, Francisco J. Ruiz-Dueñas, Susana Camarero, Ana Serrano, Dolores Linde, Henrik Lund, Jesper Vind, Morten Tovborg, Owik M. Herold-Majumdar, Martin Hofrichter, Christiane Liers, René Ullrich, Katrin Scheibner, Giovanni Sannia, Alessandra Piscitelli, Cinzia Pezzella, Mehmet E. Sener, Sibel Kılıç, Willem J.H. van Berkel, Victor Guallar, Maria Fátima Lucas, Ralf Zuhse, Roland Ludwig, Frank Hollmann, Elena Fernández-Fueyo, Eric Record, Craig B. Faulds, Marta Tortajada, Ib Winckelmann, Jo-Anne Rasmussen, Mirjana Gelo-Pujic, Ana Gutiérrez, José C. del Río, Jorge Rencoret, Miguel Alcalde	Biotechnology Advances	Elsevier BV

LIPES	Forscher suchen Technologie für sanfte Fettsäurenverarbeitung	Janin Klatt-Eberle (STC-Engineering GmbH)	PROCESS Spezial	Vogel Business Media GmbH & Co. KG
PROMINENT	Cereal Side-Streams as Alternative Protein Sources	N. Sozer, E. Nordlund, D. Ercili-Cura, K. Poutanen	Cereal Foods World	American Association of Cereal Chemists, Inc.
SmartLi	Factors influencing the market diffusion of bio-based plastics: Results of four comparative scenario analyses	Miriam Lettner, Josef-Peter Schögl, Tobias Stern	Journal of Cleaner Production	Elsevier BV
SmartLi	Aqueous organic solvent fractionation as means to improve lignin homogeneity and purity	A.-S. Jämskäinen, T. Liitiä, A. Mikkelsen, T. Tamminen	Industrial Crops and Products	Elsevier BV
SmartLi	Aqueous acetone fractionation of kraft, organosolv and soda lignins	Domínguez-Robles, J., Tamminen, T., Liitiä, T., Peresin, M.S., Rodríguez, A., Jämskäinen, A.-S.	Nordic Wood Biorefinery Conference	Nordic Wood Biorefinery Conference
SmartLi	Carbohydrate-free and highly soluble softwood kraft lignin fractions by aqueous acetone evaporation fractionation - OPEN ACCESS	Anna-Stiina Jämskäinen, Pia Willberg-Keyriläinen, Tiina Liitiä, Tarja Tamminen	Nordic Pulp and Paper Research Journal	Mentor Communications AB
SmartLi	Lignin fractionation - a method to preprocess lignin for high value applications	Jämskäinen, A.-S., Liitiä, T., Tamminen, T.	The 11th Biennial Johan Gullichsen Colloquium	Puunjalosusinsinöörit - Forest Products Engineers
SmartLi	Potential deconstruction of recycled wood, structural features of isolated lignin and ways to activate it for material applications.	Schmiedl, D., Graf, J., Tübke, B., Liitiä, T., Jämskäinen, A.-S., Siikaho, M.,	5th International Conference on Green Chemistry and Technology	5th International Conference on Green Chemistry and Technology

SmartLi	Lignin as a functional component in thermoplastic products	Liitiä, T., Immonen, K., Laine, C., Ropponen, J., Willberg-Keyriläinen, P., Wikberg, H., Jääskeläinen, A.-S., Tamminen, T.	19th International Symposium on Wood, Fibre and Pulping Chemistry	19th International Symposium on Wood, Fibre and Pulping Chemistry
SmartLi	The Impact of Molecular Weight of Kraft-lignin on Adhesive Performance of Lignin Based Phenol Formaldehyde Resins	Solt, P., Jääskeläinen, A.-S., Lingenfelter, P., Konnerth, J., van Herwijnen, H. W. G.	Forest Products Journal	Forest Products Society
SmartLi	The influence of lignin properties on the performance of lignin-phenolic adhesives	Solt, P., Ghorbani, M., Konnerth, J., Liebner, F., van Herwijnen, H. W. G.	17th Austrian Chemistry Days	17th Austrian Chemistry Days
SmartLi	How does the molecular weight of kraft lignin influence the bonding strength of lignin based phenol formaldehyde resins?	Solt, P., Lingenfelter, P., Konnerth, J., van Herwijnen, H. W. G.	IPPS (International Panel Products Symposium)	IPPS (International Panel Products Symposium)
SmartLi	The Impact of Molecular Weight of Kraft-lignin on Adhesive Performance of Lignin Based Phenol Formaldehyde Resins	Solt, P., Lingenfelter, P., Konnerth, J., van Herwijnen, H. W. G.	11th International Conference of Wood Adhesives	11th International Conference of Wood Adhesives
SmartLi	Einfluss der Molmasse von Lignin auf die Bindefestigkeit von LPF-Harzen	Solt, P., Konnerth, J., van Herwijnen, H. W. G.	Holzwerkstoff Kolloquium	Holzwerkstoff Kolloquium
SmartLi	Integrated market orientation in technical R&D processes - opportunities and challenges for environmentally friendly bio-based resins	Lettner, M., Hesser, F.	8th International Conference on Life Cycle Management LCM 2017	8th International Conference on Life Cycle Management LCM 2017
SmartLi	Accompanying innovation process of lignin based products - Life Cycle assessment in line	Lettner, M., Hesser, F.	AVNIR - Conference Life Cycle in Practice	AVNIR - Conference Life Cycle in Practice

	with technology readiness level			
SmartLi	Phenol substitution by Kraft lignin in selected adhesives for plywood production - A resource efficiency assessment	Greiner, D.		BOKU

7.4. PATENT FROM PROJECTS

Based on data provided by the 65 on-going BBI JU projects via the 'continuous reporting' module of the Participant Portal, no patents were available in 2017. However, since the 'Patents' module only needs to be completed during the periodic reporting phase, and since only 11 periodic reports were submitted in 2017, this is most likely an underestimation of the actual amount of patents in 2017.

7.5. SCOREBOARD OF HORIZON 2020 COMMON KEY PERFORMANCE INDICATORS

		Key Performance Indicator	Definition/Responding to Question	Type of Data Required	Call H2020-BBI-PPP-2014	Call H2020-BBI-PPP-2015.1	Call H2020-BBI-PPP-2015.2	Call H2020-BBI-PPP-2016	Call H2020-BBI-PPP-2017 (under GAP)
INDUSTRIAL LEADERSHIP	12	SME - Share of participating SMEs introducing innovations new to the company or the market (covering the period of the project plus three years);	Based on Community Innovation Survey (?). Number and % of participating SMEs that have introduced innovations to the company or to the market;	Number of SMEs that have introduced innovations;	Cumulative figures ⁸⁵ : 47 innovations introduced by SMEs in the company 61 innovations introduced by SMEs in the market				N/A
	13	SME - Growth and job creation in participating SMEs	Turnover of company, number of employees	Turnover of company, number of employees;	Cumulative figures ⁸⁶ : Turnover: 469,712,717 euros Employees: 3.027				N/A

⁸⁵ Based on input from 65 projects from calls 2014-2016.

⁸⁶ Based on input from 48 projects out of 65. Number of SMEs (unique beneficiaries) providing data: 101 out of 217

		Key Performance Indicator	Definition/Responding to Question	Type of Data Required	Call H2020-BBI-PPP-2014	Call H2020-BBI-PPP-2015.1	Call H2020-BBI-PPP-2015.2	Call H2020-BBI-PPP-2016	Call H2020-BBI-PPP-2017 (under GAP)
SOCIETAL CHALLENGES	14	Publications in peer-reviewed high impact journals	The percentage of papers published in the top 10% impact ranked journals by subject category.	Publications from relevant funded projects (DOI: Digital Object Identifiers); Journal impact benchmark (ranking) data to be collected by commercially available bibliometric databases.	See Section 7.3				
	15	Patent applications and patents awarded in the area of the JTI	Number of patent applications by theme; Number of awarded patents by theme	Patent application number	Not available yet				

		Key Performance Indicator	Definition/Responding to Question	Type of Data Required	Call H2020-BBI-PPP-2014	Call H2020-BBI-PPP-2015.1	Call H2020-BBI-PPP-2015.2	Call H2020-BBI-PPP-2016	Call H2020-BBI-PPP-2017 (under GAP)
	16	Number of prototypes testing activities and clinical trials ⁸⁷	Number of prototypes, testing (feasibility/demo) activities, clinical trials	Reports on prototypes, and testing activities, clinical trials	18	0	4	3	N/A
	17	Number of joint public-private publications in projects	Number and share of joint public-private publications out of all relevant publications.	Properly flagged publications data (DOI) from relevant funded projects	Not available				
	18	New products, processes, and methods launched into the market	Number of projects with new innovative products, processes, and methods,	Project count and drop down list allowing to choose the type processes, products, methods,	21	4	5	6	N/A

⁸⁷ Clinical trials are IMI specific

		Key Performance Indicator	Definition/Responding to Question	Type of Data Required	Call H2020-BBI-PPP-2014	Call H2020-BBI-PPP-2015.1	Call H2020-BBI-PPP-2015.2	Call H2020-BBI-PPP-2016	Call H2020-BBI-PPP-2017 (under GAP)
EVALUATION	NA	Time to inform (TTI) <u>all applicants</u> of the outcome of the evaluation of their application from the final date for submission of completed proposals	To provide applicants with high quality and timely evaluation results and feedback after each evaluation step by implementing and monitoring a high scientific level peer reviewed process	Number and % of information letters sent to applicants within target Average TTI (calendar days) Maximum TTI (calendar days)	38 letters (100%) Average: 146 Maximum: 153	9 letters (100%) Average: 86 Maximum: 153	73 letters (100%) Average: 141 Maximum: 153	103 letters (100%) Average: 99 Maximum: 153	149 letters (100%) Average: 99 Maximum: 153
	NA	Redress after evaluations	To provide applicants with high quality and timely evaluation results and feedback after each evaluation step by implementing and monitoring a high scientific level peer reviewed process	Number of redresses requested	0	0	0	2 ⁸⁸	1 ⁸⁹

⁸⁸ The result of the evaluation review concluded that the two complaints were unfounded.

⁸⁹ The result of the evaluation review concluded that the complaint was unfounded.

		Key Performance Indicator	Definition/Responding to Question	Type of Data Required	Call H2020-BBI-PPP-2014	Call H2020-BBI-PPP-2015.1	Call H2020-BBI-PPP-2015.2	Call H2020-BBI-PPP-2016	Call H2020-BBI-PPP-2017 (under GAP)
GRANTS	NA	Time to grant (TTG) measured (average) from Call deadline to signature of grants	To minimise the duration of the granting process aiming at ensuring a prompt	Number and % of grants signed within target Average TTG in calendar days Maximum TTG in calendar days	10 Grants (100%) Average: 240.8 Maximum: 245	3 Grants (100%) Average: 227 Maximum: 245	23 Grants (100%) Average: 239 Maximum: 245	29 Grants (100%) Average: 231 Target: 245	N/A
	NA	Time to sign (TTS) grant agreements from the date of informing successful applicants (information letters)	implementation of the Grant Agreements through a simple and transparent grant preparation process	Number and % of grants signed within target Average TTG in calendar days Maximum TTG in calendar days	10 Grants (100%) Average: 94 Maximum: 126	3 Grants (100%) Average: 141 Maximum: 155	23 Grants (100%) Average: 98 Maximum: 103	23 Grants (100%) Average: 132 Maximum: 143	N/A

		Key Performance Indicator	Definition/Responding to Question	Type of Data Required	Call H2020-BBI-PPP-2014	Call H2020-BBI-PPP-2015.1	Call H2020-BBI-PPP-2015.2	Call H2020-BBI-PPP-2016	Call H2020-BBI-PPP-2017 (under GAP)
PAYMENTS	NA	Time to pay (TTP) (% made on time) -pre-financing - interim payment -final payment	To optimize the payments circuits, both operational and administrative, including payments to experts	Average number of days for Grants pre-financing, interim payments and final payments; Number of experts appointed Average number of days for administrative payments;	14.3 days for pre-financing; no interim and final payments yet; Experts:31	16 days for pre-financing no interim and final payments yet; Experts: 13	23 days for pre-financing no interim and final payments yet; Experts: 63	10.4 days for pre-financing no interim and final payments yet; Experts: 84	No pre-financing, interim and final payments Experts: 109
					Admin: 18.6 days				
HR	NA	Vacancy rate (%)		% of post filled in, composition of the JU staff ⁹⁰	N/A	N/A	N/A	N/A	N/A

⁹⁰ Additional indicators can be proposed/discussed with R.1 and/or DG HR

		Key Performance Indicator	Definition/Responding to Question	Type of Data Required	Call H2020-BBI-PPP-2014	Call H2020-BBI-PPP-2015.1	Call H2020-BBI-PPP-2015.2	Call H2020-BBI-PPP-2016	Call H2020-BBI-PPP-2017 (under GAP)
JU EFFICIENCY	NA	Budget implementation/execution: 1. % CA to total budget 2. % PA to total budget	Realistic yearly budget proposal, possibility to monitor and report on its execution, both in commitment (CA) and payments (PA), in line with sound financial management principle	% of CA and PA	CA: 96.4% PA: No payments executed in 2014	CA: 73.7% PA: 98.18 % (pre-financing of the 2014 projects)	CA: 98.97% PA: No payments executed in 2015	CA: Projects in GAP Expected execution 99.9% PA: 99.4% (pre-financing of the 2016 and 10 payment of periodic reports of call 2014)	x

		Key Performance Indicator	Definition/Responding to Question	Type of Data Required	Call H2020-BBI-PPP-2014	Call H2020-BBI-PPP-2015.1	Call H2020-BBI-PPP-2015.2	Call H2020-BBI-PPP-2016	Call H2020-BBI-PPP-2017 (under GAP)
	NA	Administrative Budget: Number and % of total of late payments	Realistic yearly budget proposal, possibility to monitor and report on its execution in line with sound financial management principle	Number of delayed payments % of delayed payments (of the total)	Not Applicable (pre-autonomy phase). All payments executed by EC/DG RTD	36 delayed payments 39.1%		51 Late Payments 8% of delayed payments	x

7.6. INDICATORS FOR MONITORING CROSS-CUTTING ISSUES

	Cross-cutting issue	Definition/Responding to Question	Type of Data Required	Call H2020-BBI-PPP-2014	Call H2020-BBI-PPP-2015.1	Call H2020-BBI-PPP-2015.2	Call H2020-BBI-PPP-2016	Call H2020-BBI-PPP-2017 (under GAP)
2	Widening the participation	2.1 Total number of participations by EU-28 Member State	Nationality of Horizon 2020 applicants & beneficiaries (number of)	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1 and Call specific figures provided in section 1.3.2
		2.2 Total amount of EU financial contribution by EU-28 Member State (EUR millions)	Nationality of Horizon 2020 beneficiaries and corresponding EU financial contribution	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1

	Cross-cutting issue	Definition/Responding to Question	Type of Data Required	Call H2020-BBI-PPP-2014	Call H2020-BBI-PPP-2015.1	Call H2020-BBI-PPP-2015.2	Call H2020-BBI-PPP-2016	Call H2020-BBI-PPP-2017 (under GAP)
NA		Total number of participations by Associated Countries	Nationality of Horizon 2020 applicants & beneficiaries (number of)	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1 2	Cumulative figures provided in section 1.3.1.1 and Call specific figures provided in section 1.3.2
NA		Total amount of EU financial contribution by Associated Country (EUR millions)	Nationality of Horizon 2020 beneficiaries and corresponding EU financial contribution	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1
3	SMEs participation	3.1 Share of EU financial contribution going to SMEs (Enabling & industrial tech and Part III of Horizon 2020)	Number of Horizon 2020 beneficiaries flagged as SME; % of EU contribution going to beneficiaries flagged as SME	25 flagged as SME (24.5%) 20% of EU contribution going to SME	9 flagged as SME (36%) 8.41% of EU contribution going to SME	110 flagged as SME (40.14%) 37.3% of EU contribution going to SME	131 flagged as SME (40.18%) 25.8% of EU contribution going to SME	75 flagged as SME (39%) 38% of EU contribution going to SME

	Cross-cutting issue	Definition/Responding to Question	Type of Data Required	Call H2020-BBI-PPP-2014	Call H2020-BBI-PPP-2015.1	Call H2020-BBI-PPP-2015.2	Call H2020-BBI-PPP-2016	Call H2020-BBI-PPP-2017 (under GAP)
6	Gender	6.1 Percentage of women participants in Horizon 2020 projects	Gender of participants in Horizon 2020 projects	Not available	Not available	Not available	Not available	Not available
		6.2 Percentage of women project coordinators in Horizon 2020	Gender of MSC fellows, ERC principle investigators and scientific coordinators in other Horizon 2020 activities	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1
		6.3 Percentage of women in EC advisory groups, expert groups, evaluation panels, individual experts, etc.	Gender of memberships in advisory groups, panels, etc.	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1	Cumulative figures provided in section 1.3.1.1
7	International cooperation	7.1 Share of third-country participants in Horizon 2020	Nationality of Horizon 2020 beneficiaries	0	0	0	0	0
		7.2 Percentage of EU financial contribution attributed to third country participants	Nationality of Horizon 2020 beneficiaries and corresponding EU financial contribution	0	0	0	0	0

	Cross-cutting issue	Definition/Responding to Question	Type of Data Required	Call H2020-BBI-PPP-2014	Call H2020-BBI-PPP-2015.1	Call H2020-BBI-PPP-2015.2	Call H2020-BBI-PPP-2016	Call H2020-BBI-PPP-2017 (under GAP)
9	Bridging from discovery to market ⁹¹	9.1 Share of projects and EU financial contribution allocated to Innovation Actions (IAs)	Number of IA proposals and projects properly flagged in the WP; follow up at grant level.	Number of proposals: 18 Number of projects: 3	Number of proposals: 9 Number of projects: 3	Number of proposals: 24 Number of projects: 9	Number of proposals: 26 Number of projects: 11	Number of proposals: 69 Number of projects: 5
		9.2 Within the innovation actions, share of EU financial contribution focussed on demonstration and first-of-a-kind activities	Topics properly flagged in the WP; follow-up at grant level	1 FLAG (34%) 2 DEMO (39.7%)	3 FLAG (100%)	9 DEMO (59.5%)	2 FLAG (25.3%) 9 DEMO (43.7%)	1 FLAG (24%) 4 DEMO (29%)
NA		Scale of impact of projects (High Technology Readiness Level)	Number of projects addressing TRL ⁹² between (4-6, 5-7)?	7 RIA TRL 3-5 2 DEMO TRL 6-7 1 FLAG TRL 8-9	3 FLAG TRL 8-9	11 RIA TRL 3-5 9 DEMO TRL 6-7	11 RIA TRL 3-5 9 DEMO TRL 6-7 2 FLAG TRL 8-9	10 RIA TRL 3-5 4 DEMO TRL 6-7 1 FLAG TRL 8-9

⁹¹ This indicator (9.2) is initially intended to monitor the Digital Agenda (its applicability could be only partial)

⁹² TRL: Technology Readiness Level

	Cross-cutting issue	Definition/Responding to Question	Type of Data Required	Call H2020-BBI-PPP-2014	Call H2020-BBI-PPP-2015.1	Call H2020-BBI-PPP-2015.2	Call H2020-BBI-PPP-2016	Call H2020-BBI-PPP-2017 (under GAP)
11	Private sector participation	11.1 Percentage of Horizon 2020 beneficiaries from the private for profit sector	Number of and % of the total Horizon 2020 beneficiaries classified by type of activity and legal status	66 beneficiaries 64%	18 beneficiaries 72%	168 beneficiaries 61%	190 BBI JU beneficiaries 58.2%	120 BBI JU beneficiaries 62%
		11.2 Share of EU financial contribution going to private for profit entities (Enabling & industrial tech and Part III of Horizon 2020)	Horizon 2020 beneficiaries classified by type of activity; corresponding EU contribution	73.6%	94.2%	58%	67.6%	61%
12	Funding for PPPs	12.1 EU financial contribution for PPP (Art 187)	EU contribution to PPP (Art 187)	€ 51,500,000	€ 100,000,000	€ 106,400,000	€ 160,400,000	€ 80,800,000
		12.2 PPPs leverage: total amount of funds leveraged through Art. 187 initiatives, including additional activities, divided by the EU contribution	Total funding made by private actors involved in PPPs - in-kind contribution already committed by private members in project selected for funding - additional activities (i.e. research expenditures/investment of industry in the sector, compared to previous year)	Figures provided in sections 1.3.1.3	Figures provided in sections 1.3.1.3	Figures provided in sections 1.3.1.3	Figures provided in sections 1.3.1.3	Figures provided in sections 1.3.1.3

	Cross-cutting issue	Definition/Responding to Question	Type of Data Required	Call H2020-BBI-PPP-2014	Call H2020-BBI-PPP-2015.1	Call H2020-BBI-PPP-2015.2	Call H2020-BBI-PPP-2016	Call H2020-BBI-PPP-2017 (under GAP)
13	Communication and dissemination	13.3 Dissemination and outreach activities other than peer-reviewed publications - [Conferences, workshops, press releases, publications, flyers, exhibitions, trainings, social media, web-sites, communication campaigns (e.g. radio, TV)]	A drop down list allows to choose the type of dissemination activity. Number of events, funding amount and number of persons reached thanks to the dissemination activities	Not available yet (some information is provided in section 1.5)	Not available yet (some information is provided in section 1.5)	Not available yet (some information is provided in section 1.5)	Not available yet (some information is provided in section 1.5)	Not available yet (some information is provided in section 1.5)
14	Participation patterns of independent experts	14.2 Proposal evaluators by country	Nationality of proposal evaluators	EU28: 15F/16M	EU28: 4F/6M	EU28: 26F/28M AC: 1F/3M Other: 0F/1M	EU28: 31F/44M AC: 1F/1M Other: 1F/2M	EU28: 38F/61M AC: 2F/4M Other: 4M
		14.3 Proposal evaluators by organisations' type of activity	Type of activity of evaluators' organisations	Not available	Not available	Not available	Not available	Not available

	Cross-cutting issue	Definition/Responding to Question	Type of Data Required	Call H2020-BBI-PPP-2014	Call H2020-BBI-PPP-2015.1	Call H2020-BBI-PPP-2015.2	Call H2020-BBI-PPP-2016	Call H2020-BBI-PPP-2017 (under GAP)
NA	Participation of RTOs and Universities	Participation of RTO ⁹³ s and Universities in PPPs (Art 187 initiatives)	Number of participations of RTOs to funded projects and % of the total Number of participations of Universities to funded projects and % of the total % of budget allocated to RTOs and to Universities	RTO: 22; 21.36% participation HES: 9; 8.74% participation RTO: 15% of the budget HES: 6.6% of the budget	RTO: 4; 16% participation HES: 2; 8% participation RTO: 2.8% of the budget HES: 2% of the budget	RTO: 55; 20.07% participation HES: 36; 13.14% participation RTO: 26.86% of the budget HES: 12.21% of the budget	RTO: 63; 19.27% participation HES: 45; 13.76% participation RTO: 15.54% of the budget HES: 14.35% of the budget	RTO: 7=3.61% HES: 4=2.06% RTO: 4.13% of budget HES: 2.58% of budget
NA	Ethics	The objective is ensuring that research projects funded are compliant with provisions on ethics efficiently	% of proposals not granted because non-compliance with ethical rules/proposals invited to grant (target 0%); time to ethics clearance (target 45 days) ⁹⁴	0	0	0	0	0
NA	Audit	Error rate	% of common representative error; % residual error	N/A	N/A	N/A	N/A	N/A

⁹³ RTO: Research and Technology Organisation

⁹⁴ Data relates to pre-granting ethics review. This time span runs in parallel to granting process.

	Cross-cutting issue	Definition/Responding to Question	Type of Data Required	Call H2020-BBI-PPP-2014	Call H2020-BBI-PPP-2015.1	Call H2020-BBI-PPP-2015.2	Call H2020-BBI-PPP-2016	Call H2020-BBI-PPP-2017 (under GAP)
NA		Implementation of ex-post audit results	Number of cases implemented; in total €million; 'of cases implemented/total cases	N/A	N/A	N/A	N/A	N/A

NOTES:

- Horizon 2020 applicants - all those who submitted Horizon 2020 proposals
- Horizon 2020 beneficiaries - all those who have signed a Horizon 2020 Grant Agreement
- Responsible Directorate - DG RTD Directorates and R&I DGs family in charge with management of Horizon 2020 activities
- Services -Executive Agencies and other external bodies in charge with Horizon 2020 activities
- Project officer - is in charge of managing Horizon 2020 projects in Responsible Directorate/Service including Executive Agencies

7.7. SCOREBOARD OF KEY PERFORMANCE INDICATORS SPECIFIC TO BBI JU

Key Performance Indicator ⁹⁵	Call H2020-BBI-PPP- 2014	Call H2020-BBI-PPP- 2015.1	Call H2020-BBI-PPP- 2015.2	Call H2020-BBI-PPP- 2016	Call H2020-BBI- PPP-2017 (under GAP)
N° of new cross-sector interconnections in BBI JU projects	170			NA	
New bio-based value chains realised	139			NA	
Number of BBI JU Grant Agreements signed	10	3	23	29	NA
Number of new bio-based building blocks	57			NA	
Number of new bio-based materials	127			NA	
Number of new bio-based 'consumer' products	50			NA	

⁹⁵ BBI JU KPIs 1, 2, 4, 5, 6 and 8 are based on the figures reported by all BBI JU ongoing projects by the end of 2017. These figures refer to the expected results of the projects by 2020 or by the end of the project (the earliest date). These results are monitored yearly and are validated at the end of the projects. For more details on the methodology and results, please see section 1.3.1.2 BBI JU projects outcome: BBI JU specific KPIs.

Key Performance Indicator ⁹⁵	Call H2020-BBI-PPP- 2014	Call H2020-BBI-PPP- 2015.1	Call H2020-BBI-PPP- 2015.2	Call H2020-BBI-PPP- 2016	Call H2020-BBI- PPP-2017 (under GAP)
Number of flagship biorefinery plants started based on BBI JU demonstration projects	1	3	0	2	NA
Number of validated technologies that have realised a TRL gain of at least one level (RIA projects)	24			NA	
PPP leverage: - in-cash contribution already committed by private members in project selected for funding	€ 2,010,000	€ 0	€ 929,158	€ 8,172,000	€ 297,000
Balance (%) of R&D, demonstration and supporting projects	Funding: DEMO: 39.7% RIA: 26.08% FLAG: 34.2%	Funding: FLAG: 73.7%	Funding: RIA: 37.7% DEMO: 59.5% CSA: 2.9%	Funding: DEMO: 43.75% RIA: 29.35% CSA: 1.5% FLAG: 35.3%	Funding: DEMO: 28.62% RIA: 44.65% CSA: 2.27% FLAG: 24.47%

7.8. FINAL ANNUAL ACCOUNTS



Annual accounts of the Bio-based Industries Joint Undertaking Financial year 2017

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CERTIFICATION OF THE ACCOUNTS

The final annual accounts of the Bio-based Industries Joint Undertaking for the year 2017 have been prepared in accordance with the Financial Regulation of the JU and the accounting rules adopted by the Commission's Accounting Officer, as are to be applied by all the institutions, agencies and joint undertakings.

I acknowledge my responsibility for the preparation and presentation of the annual accounts of the Joint Undertaking in accordance with Article 43 of the Financial Regulation of the JU.

I have obtained from the Authorising Officer, who guaranteed its reliability, all the information necessary for the production of the accounts that show the JU's assets and liabilities and the budgetary implementation.

I hereby certify that based on this information, and on such checks as I deemed necessary to sign off the accounts, I have a reasonable assurance that the accounts present a true and fair view of the financial position of the JU in all material aspects.

[signed]

Rosa ALDEA BUSQUETS

Accounting Officer

June 2018

BACKGROUND INFORMATION ON THE BBI JU

The Bio-based Industries Joint Undertaking (BBI JU) was established by the Council Regulation (EU) 560/2014⁹⁶. The BBI JU is a public-private partnership between the European Union (EU) and the Bio-based Industries Consortium (BIC) and is based in Brussels. BBI JU is funded by the members contributing either in cash or in-kind to the administrative and operational costs of the JU. It aims to bring together all relevant stakeholders and contribute to establishing Europe as a key player in research, demonstration and deployment of advanced bio based products and biofuels.

BBI JUs mission is to implement, under Horizon 2020 rules, the Strategic Innovation and Research Agenda (SIRA) developed by the industry, by organizing calls for proposals to support research, demonstration and deployment activities enabling the collaboration between stakeholders along the entire value chains covering primary production of biomass, processing industry and final use.

The objectives of BBI JU are to contribute to a more resource efficient and sustainable low-carbon economy and to increase economic growth and employment, in particular in rural areas, by developing sustainable and competitive bio-based industries in Europe. This is based on advanced biorefineries that source their biomass sustainably and in particular aims to:

- Demonstrate technologies that enable new chemical building blocks, new materials and new consumer products from European biomass, that replace the need for fossil-based inputs;
- Develop business models that integrate economic actors along the value chain from supply of biomass to biorefinery plants to consumers of bio-based materials, chemicals and fuels, including the creation of new cross-sector interconnections and supporting cross-industry clusters;
- 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.

Following Articles 38 and 43 of the BBI JU Financial Rules⁹⁷, the Governing Board of BBI JU appoints the Accounting Officer who is, among other things, responsible for preparation of the annual accounts of the joint undertaking. Following Article 40 of the BBI JU Financial Rules the annual accounts should be prepared in accordance with the accounting rules adopted by the Commission's Accounting Officer (EU Accounting Rules, EAR) that are based on the International Public Sector Accounting Standards (IPSAS). Following the decision of the BBI JU's Governing Board of 14 October 2014, the Accounting Officer of the Commission acts as the Accounting Officer of BBI JU.

⁹⁶ Council Regulation (EU) No 560/2014 of 6 May 2014 establishing the Bio-based Industries Joint Undertaking.

⁹⁷ Adopted by the decision of the BBI JU Governing Board.

FINANCIAL STATEMENTS AND EXPLANATORY NOTES

It should be noted that due to the rounding of figures into thousands of euros, some financial data in the tables below may appear not to add-up.

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BALANCE SHEET

EUR '000

	Note	31.12.2017	31.12.2016 (restated)
NON-CURRENT ASSETS			
<i>Property, plant and equipment</i>	2.1	47	52
<i>Pre-financing</i>	2.2	101 483	66 894
		101 530	66 946
CURRENT ASSETS			
<i>Pre-financing</i>	2.2	31 425	12 168
<i>Exchange receivables and non-exchange recoverables</i>	2.3	4 080	3 168
		35 506	15 335
TOTAL ASSETS		137 036	82 281
CURRENT LIABILITIES			
<i>Payables and other liabilities</i>	2.4	(35 422)	(15 540)
<i>Accrued charges</i>	2.5	(70 454)	(38 365)
		(105 876)	(53 905)
TOTAL LIABILITIES		(105 876)	(53 905)
NET ASSETS		31 160	28 376
NET ASSETS			
<i>Contribution from Members</i>	2.6	157 264	67 911
<i>Accumulated deficit</i>		(39 534)	6 873
<i>Economic result of the year</i>		(86 569)	(46 407)
NET ASSETS		31 160	28 376

STATEMENT OF FINANCIAL PERFORMANCE

EUR '000

	Note	2017	2016 (restated)
REVENUE			
Revenue from exchange transactions			
<i>Financial revenue</i>		–	2
<i>Other exchange revenue</i>	3.1	22	4
		22	6
Total revenue		22	6
EXPENSES			
<i>Operating costs</i>	3.2	(82 225)	(43 321)
<i>Staff costs</i>	3.3	(1 929)	(1 567)
<i>Finance costs</i>		–	(1)
<i>Other expenses</i>	3.4	(2 438)	(1 523)
Total expenses		(86 591)	(46 413)
ECONOMIC RESULT OF THE YEAR		(86 569)	(46 407)

CASHFLOW STATEMENT⁹⁸

EUR '000

	2017	2016 (restated)
<i>Economic result of the year</i>	(86 569)	(46 407)
Operating activities		
<i>Amortisation and depreciation</i>	14	10
<i>Cash contribution from the Members</i>	89 353	65 984
<i>(Increase)/decrease in pre-financing</i>	(53 847)	(61 348)
<i>(Increase)/decrease in exchange receivables and non-exchange recoverables</i>	(913)	(1 621)
<i>Increase/(decrease) in accounts payable and other liabilities</i>	19 882	12 036
<i>Increase/(decrease) in accrued charges</i>	32 089	31 394
Investing activities		
<i>(Increase)/decrease in intangible assets and property, plant and equipment</i>	(9)	(48)
NET CASHFLOW	-	-
<i>Net increase/(decrease) in cash and cash equivalents</i>	-	-
<i>Cash and cash equivalents at the beginning of the year</i>	-	-
<i>Cash and cash equivalents at year-end</i>	-	-

⁹⁸ Following the appointment of the Accounting Officer of the Commission as the Accounting Officer of BBI JU, the treasury of BBI JU was integrated into the Commission's treasury system. Therefore, BBI JU does not have any bank accounts of its own. All payments and receipts are processed via the Commission's treasury system and registered on intercompany accounts which are presented under the heading exchange receivables.

STATEMENT OF CHANGES IN NET ASSETS

EUR '000

	Contribution from Members	Accumulated Surplus/ (Deficit)	Economic result of the year	Net Assets
BALANCE AS AT 31.12.2015	1 927	–	6 873	8 800
<i>Allocation 2015 economic result</i>	–	6 873	(6 873)	–
<i>Cash contribution</i>	65 984	–	–	65 984
<i>Economic result of the year (restated)</i>	–	–	(46 407)	(46 407)
BALANCE AS AT 31.12.2016 (restated)	67 911	6 873	(46 407)	28 376
<i>Allocation 2016 economic result</i>	–	(46 407)	46 407	–
<i>Cash contribution</i>	89 353	–	–	89 353
<i>Economic result of the year</i>	–	–	(86 569)	(86 569)
BALANCE AS AT 31.12.2017	157 264	(39 534)	(86 569)	31 160

NOTES TO THE FINANCIAL STATEMENTS

1. SIGNIFICANT ACCOUNTING POLICIES

1.1. ACCOUNTING PRINCIPLES

The objective of financial statements is to provide information about the financial position, performance and cashflows of an entity that is useful to a wide range of users.

The overall considerations (or accounting principles) to be followed when preparing the financial statements are laid down in EU Accounting Rule 1 'Financial Statements' and are the same as those described in IPSAS 1: fair presentation, accrual basis, going concern, consistency of presentation, materiality, aggregation, offsetting and comparative information. The qualitative characteristics of financial reporting are relevance, faithful representation (reliability), understandability, timeliness, comparability and verifiability.

1.2. BASIS OF PREPARATION

1.2.1. Reporting period

Financial statements are presented annually. The accounting year begins on 1 January and ends on 31 December.

1.2.2. Currency and basis for conversion

The annual accounts are presented in thousands of euros, the euro being the EU's functional and reporting currency. Foreign currency transactions are translated into euros using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of foreign currency transactions and from the re-translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the statement of financial performance. Different conversion methods apply to property, plant and equipment and intangible assets, which retain their value in euros at the date when they were purchased.

Year-end balances of monetary assets and liabilities denominated in foreign currencies are translated into euros on the basis of the European Central Bank (ECB) exchange rates applying on 31 December.

Euro exchange rates

Currency	31.12.2017	31.12.2016	Currency	31.12.2017	31.12.2016
BGN	1.9558	1.9558	PLN	4.177	4.4103
CZK	25.5350	27.0210	RON	4.6585	4.5390
DKK	7.4449	7.4344	SEK	9.8438	9.5525
GBP	0.8872	0.8562	CHF	1.1702	1.0739
HRK	7.4400	7.5597	JPY	135.01	123.4000
HUF	310.3300	309.8300	USD	1.1993	1.0541

1.2.3. Use of estimates

In accordance with IPSAS and generally accepted accounting principles, the financial statements necessarily include amounts based on estimates and assumptions by management based on the most reliable information available. Significant estimates include, but are not limited to; accrued and deferred revenue and charges, provisions, financial risk on accounts receivables, contingent assets and liabilities, and degree of impairment of assets. Actual results could differ from those estimates.

Reasonable estimates are an essential part of the preparation of financial statements and do not undermine their reliability. An estimate may need revision if changes occur in the circumstances on which the estimate was based or as a result of new information or more experience. By its nature, the revision of an estimate does not relate to prior periods and is not the correction of an error. The effect of a change in accounting estimate shall be recognised in the surplus or deficit in the periods in which it becomes known.

1.3. BALANCE SHEET

1.3.1. Intangible assets

Acquired computer software licences are stated at historical cost less accumulated amortisation and impairment losses. The assets are amortised on a straight-line basis over their estimated useful lives. The estimated useful lives of intangible assets depend on their specific economic lifetime or legal lifetime determined by an agreement. Internally developed intangible assets are capitalised when the relevant criteria of the EU accounting rules are met. The costs capitalisable include all directly attributable costs necessary to create, produce, and prepare the asset to be capable of operating in the manner intended by management. Costs associated with research activities, non-capitalisable development costs and maintenance costs are recognised as expenses when incurred.

1.3.2. Property, plant and equipment

All property, plant and equipment are stated at historical cost less accumulated depreciation and impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition or construction of the asset. Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits or service potential associated with the item will flow to the entity and its cost can be measured reliably. Repairs and maintenance costs are charged to the statement of financial performance during the financial period in which they are incurred. Land and works of art are not depreciated as they are deemed to have an indefinite useful life. Assets under construction are not depreciated as these assets are not yet available for use. Depreciation on other assets is calculated using the straight-line method to allocate their cost less their residual values over their estimated useful lives, as follows:

Type of asset	Straight line depreciation rate
<i>Buildings</i>	4 % to 10 %
<i>Plant and equipment</i>	10 % to 25 %
<i>Furniture and vehicles</i>	10 % to 25 %
<i>Computer hardware</i>	25 % to 33 %
<i>Other</i>	10 % to 33 %

Gains or losses on disposals are determined by comparing proceeds less selling expenses with the carrying amount of the disposed asset and are included in the statement of financial performance.

Leases

Leases of tangible assets, where the entity has substantially all the risks and rewards of ownership, are classified as finance leases. Finance leases are capitalised at the inception of the lease at the lower of the fair value of the leased asset and the present value of the minimum lease payments. The interest element of the finance lease payment is charged to statement of financial performance over the period of the lease at a constant periodic rate in relation to the balance outstanding. The rental obligations, net of finance charges, are included in financial liabilities (non-current and current). The interest element of the finance cost is charged to the statement of financial performance over the lease period so as to produce a constant periodic interest rate on the remaining balance of the liability for each period. The assets held under finance leases are depreciated over the shorter of the assets' useful life and the lease term.

Leases where the lessor retains a significant portion of the risks and rewards inherent to ownership are classified as operating leases. Payments made under operating leases are charged to the statement of financial performance on a straight-line basis over the period of the lease.

1.3.3. Impairment of non-financial assets

Assets that have an indefinite useful life are not subject to amortisation/depreciation and are tested annually for impairment. Assets that are subject to amortisation/depreciation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its

recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and its value in use.

Intangible assets and property, plant and equipment residual values and useful lives are reviewed, and adjusted if appropriate, at least once per year. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount. If the reasons for impairments recognised in previous years no longer apply, the impairment losses are reversed accordingly.

1.3.4. Financial assets

The financial assets are classified in the following categories: financial assets at fair value through surplus or deficit; loans and receivables; held-to-maturity investments; and available for sale financial assets. The classification of the financial instruments is determined at initial recognition and re-evaluated at each balance sheet date.

(i) Financial assets at fair value through surplus or deficit

A financial asset is classified in this category if acquired principally for the purpose of selling in the short term or if so designated by the entity. Derivatives are also categorised in this category. Assets in this category are classified as current assets if they are expected to be realised within 12 months of the balance sheet date. During this financial year, the entity did not hold any investments in this category.

(ii) Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They arise when the entity provides money, goods or services directly to a debtor with no intention of trading the receivable. They are included in non-current assets, except for maturities within 12 months of the balance sheet date. Loans and receivables include term deposits with the original maturity above three months.

(iii) Held-to-maturity investments

Held-to-maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturities that the entity has the positive intention and ability to hold to maturity. During this financial year, the entity did not hold any investments in this category.

(iv) Available for sale financial assets

Available for sale financial assets are non-derivatives that are either designated in this category or not classified in any of the other categories. They are classified as either current or non-current assets, depending on the period of time the entity expects to hold them, which is usually the maturity date.

Initial recognition and measurement

Purchases and sales of financial assets at fair value through surplus or deficit, held-to-maturity and available for sale are recognised on trade date - the date on which the entity commits to purchase or sell the asset. Cash equivalents, loans and term deposits are recognised at settlement date. Financial instruments are initially recognised at fair value. For all financial assets not carried at fair value through surplus or deficit transaction costs are added to the fair value at initial recognition.

Financial instruments are derecognised when the rights to receive cashflows from the investments have expired or the entity has transferred substantially all risks and rewards of ownership to another party.

Subsequent measurement

Financial assets at fair value through surplus or deficit are subsequently carried at fair value with gains and losses arising changes in the fair value being included in the statement of financial performance in the period in which they arise.

Loans and receivables and held-to maturity investments are carried at amortised cost using the effective interest method.

Available for sale financial assets are subsequently carried at fair value. Gains and losses arising from changes in the fair value are recognised in the fair value reserve. Interest on available for sale financial assets calculated using the effective interest method is recognised in the statement of financial performance.

The entity assesses at each balance sheet date whether there is objective evidence that a financial asset is impaired and whether an impairment loss should be recorded in the statement of financial performance.

1.3.5. Pre-financing amounts

Pre-financing is a payment intended to provide the beneficiary with a cash advance, i.e. a float. It may be split into a number of payments over a period defined in the particular contract, decision, agreement or basic legal act. The float or advance is either used for the purpose for which it was provided during the period defined in the agreement or it is repaid. If the beneficiary does not incur eligible expenditure, he has the obligation to return the pre-financing advance to the entity. The amount of the pre-financing may be reduced (wholly or partially) by the acceptance of eligible costs (which are recognised as expenses).

Pre-financing is, on subsequent balance sheet dates, measured at the amount initially recognised on the balance sheet less eligible expenses (including estimated amounts where necessary) incurred during the period.

1.3.6. Receivables and recoverables

As the EU accounting rules require a separate presentation of exchange and non-exchange transactions, for the purpose of drawing up the accounts, receivables are defined as stemming from exchange transactions and recoverables are defined as stemming from non-exchange transactions (when the entity receives value from another entity without directly giving approximately equal value in exchange).

Receivables from exchange transactions meet the definition of financial instruments and are thus classified as loans and receivables and measured accordingly (see **1.3.4** above).

Recoverables from non-exchange transactions are carried at original amount (adjusted for interests and penalties) less write-down for impairment. A write-down for impairment is established when there is objective evidence that the entity will not be able to collect all amounts due according to the original terms of the recoverables. The amount of the write-down is the difference between the asset's carrying amount and the recoverable amount. The amount of the write-down is recognised in the statement of financial performance.

1.3.7. Cash and cash equivalents

Cash and cash equivalents are financial instruments and include cash at hand, deposits held at call or at short notice with banks, and other short-term highly liquid investments with original maturities of three months or less.

1.3.8. Provisions

Provisions are recognised when the entity has a present legal or constructive obligation towards third parties as a result of past events, it is more likely than not that an outflow of resources will be required to settle the obligation, and the amount can be reliably estimated. Provisions are not recognised for future operating losses. The amount of the provision is the best estimate of the expenditure expected to be required to settle the present obligation at the reporting date. Where the provision involves a large number of items, the obligation is estimated by weighting all possible outcomes by their associated probabilities ('expected value' method).

1.3.9. Payables

Included under accounts payable are amounts related to both exchange transactions such as the purchase of goods and services and to non-exchange transactions e.g. to cost claims from beneficiaries, grants or other EU funding.

Where grants or other funding are provided to the beneficiaries, the cost claims are recorded as payables for the requested amount when the cost claim is received. Upon verification and acceptance of the eligible costs, the payables are valued at the accepted and eligible amount.

Payables arising from the purchase of goods and services are recognised at invoice reception for the original amount and corresponding expenses are entered in the accounts when the supplies or services are delivered and accepted by the entity.

1.3.10. Accrued and deferred revenue and charges

Transactions and events are recognised in the financial statements in the period to which they relate. At year-end, if an invoice is not yet issued but the service has been rendered, the supplies have been delivered by the entity or a contractual agreement exists (e.g. by reference to a contract), an accrued revenue will be recognised in the financial statements. In addition, at year-end, if an invoice is issued but the services have not yet been rendered or the goods supplied have not yet been delivered, the revenue will be deferred and recognised in the subsequent accounting period.

Expenses are also accounted for in the period to which they relate. At the end of the accounting period, accrued expenses are recognised based on an estimated amount of the transfer obligation of the period. The calculation of accrued expenses is done in accordance with detailed operational and practical guidelines issued by the Accounting Officer which aim at ensuring that the financial statements provide a faithful representation of the economic and other phenomena they purport to represent. By analogy, if a payment has been made in advance for services or goods that have not yet been received, the expense will be deferred and recognised in the subsequent accounting period.

1.4. STATEMENT OF FINANCIAL PERFORMANCE

1.4.1. Revenue

Revenue comprises gross inflows of economic benefits or service potential received and receivable by the entity, which represents an increase in net assets, other than increases relating to contributions from owners.

Depending on the nature of the underlying transactions in the statement of financial performance there is a distinction between:

(i) Revenue from non-exchange transactions

Examples of revenue from non-exchange transactions are taxes and transfers whereby the transferor provides resources to the recipient entity without the recipient entity providing approximately equal value directly in exchange.

Transfers are inflows of future economic benefits or service potential from non-exchange transactions, other than taxes. The entity shall recognise an asset in respect of transfers when the entity controls the resources as a result of a past event (the transfer) and expects to receive future economic benefits or service potential from those resources, and when the fair value can be reliably measured. An inflow of resources from a non-exchange transaction recognised as an asset (i.e. cash) is also recognised as revenue, except to the extent that the entity has a present obligation in respect of that transfer (condition), which needs to be satisfied before the revenue can be recognised. Until the condition is met the revenue is deferred and recognised as a liability (pre-financing received).

(ii) Revenue from exchange transactions

Revenue from the sale of goods and services is recognised when the significant risk and rewards of ownership of the goods are transferred to the purchaser. Revenue associated with a transaction involving

the provision of services is recognised by reference to the stage of completion of the transaction at the reporting date.

1.4.2. Expenses

Expenses are decreases in economic benefits or service potential during the reporting period in the form of outflows or consumption of assets or incurrence of liabilities that result in decreases in net assets/equity. They include both the expenses from exchange transactions and expenses from non-exchange transactions.

Expenses from exchange transactions arising from the purchase of goods and services are recognised when the supplies are delivered and accepted by the entity. They are valued at original invoice amount. Furthermore, at the balance sheet date expenses related to the service delivered during the period for which an invoice has not yet been received or accepted are recognised in the statement of financial performance.

Expenses from non-exchange transactions account for the majority of the entity's operating expenses. They relate to transfers to beneficiaries and can be of three types: entitlements, transfers under agreement and discretionary grants, contributions and donations. Transfers are recognised as expenses in the period during which the events giving rise to the transfer occurred, as long as the nature of the transfer is allowed by regulation or an agreement has been signed authorising the transfer; any eligibility criteria have been met by the beneficiary; and a reasonable estimate of the amount can be made.

When a request for payment or cost claim is received and meets the recognition criteria, it is recognised as an expense for the eligible amount. At year-end, incurred eligible expenses due to the beneficiaries but not yet reported are estimated and recorded as accrued expense.

1.5. CONTINGENT ASSETS AND LIABILITIES

1.5.1. Contingent assets

A contingent asset is a possible asset that arises from past events and of which the existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity. A contingent asset is disclosed when an inflow of economic benefits or service potential is probable.

1.5.2. Contingent liabilities

A contingent liability is a possible obligation that arises from past events and of which the existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity; or a present obligation that arises from past events but is not recognised because: it is not probable that an outflow of resources embodying economic benefits or service potential will be required to settle the obligation or, in the rare circumstances where the amount of the obligation cannot be measured with sufficient reliability.

1.6. CONTRIBUTIONS FROM MEMBERS

The contributions from the Members of the joint undertaking (JU) form the funding of the JU and are treated as contributions from owners. In this context an owner does not mean an owner in the sense of owning shares of the JU (no shares are issued) but rather in terms of political interest and governance of the JU by exercising the voting rights linked to these contributions.

1.6.1. Financial contributions

Financial contributions are contributions of the Members made in cash in order to provide the funding of the operational or administrative needs of the JU. The financial contributions are recognised in the net assets in the period in which the right to receive the payment was established.

1.6.2. In-kind contributions

Members other than the EU (i.e. 'Private Members') can also contribute resources other than cash, e.g. laboratory equipment, specialised staff, etc. These in-kind contributions consist of the costs incurred by Private Members in implementing indirect actions.

The Regulation distinguishes between two types of in-kind contributions: (1) In-kind contributions to operational activities (IKOP) and (2) in-kind contributions to additional activities (IKAA).

The IKOP represents in-kind contributions made to the JU linked to its work plan and co-financed by the EU. The IKOP are recognised in the net assets of the JU in the period when the conditions for Members' contributions stipulated by the Regulation were met.

The expenses related to the IKOP incurred in the financial year are recognised in the statement of financial performance. At year-end, incurred IKOP not yet reported are estimated and recorded as other liabilities ('Contributions of Members to be validated').

The IKAA relate to contributions linked to implementing additional activities outside the work plan of the JU that contribute to the objectives of the JU. Because the outflow of resources related to those activities is outside of control of the JU, the contributions are not recognised in the financial statements of the JU.

2. NOTES TO THE BALANCE SHEET

ASSETS

2.1. PROPERTY, PLANT AND EQUIPMENT

	Furniture and vehicles	Computer hardware	Other	'000 EUR TOTAL
Gross carrying amount at 31.12.2016	28	33	4	65
Additions	5	2	2	9
Gross carrying amount at 31.12.2017	33	35	6	74
Accumulated depreciation at 31.12.2016	(2)	(10)	(1)	(13)
Depreciation charge for the year	(3)	(9)	(1)	(14)
Accumulated depreciation at 31.12.2017	(5)	(18)	(3)	(26)
NET CARRYING AMOUNT AT 31.12.2017	28	17	3	47
NET CARRYING AMOUNT AT 31.12.2016	26	23	2	52

2.2. PRE-FINANCING

	31.12.2017	31.12.2016
Non-current pre-financing	101 483	66 894
Current pre-financing	31 425	12 168
Total	132 909	79 062

For all pre-financing amounts open at 31 December 2017 a case-by-case assessment was performed and all the pre-financing that was considered unlikely to be cleared in the course of 2018 was classified as non-current pre-financing.

In 2017, a total pre-financing amount of kEUR 62 206 was paid for the projects arising from the Call 2016. The pre-financing paid in 2016 was kEUR 62 and related to grants from the BBI Calls 2014 and 2015.

The estimation of the clearing of pre-financing (related to the estimated operating expenses for on-going projects) is actually aligned to the way in which pre-financing is cleared for expenses incurred during the year. Out of the total outstanding pre-financings of kEUR 141 265, an amount of kEUR 8 356 was cleared against eligible costs (following cost claims received in 2017, as well as project costs accrued to 31 December 2017). The remaining portion of estimated expenses is recorded in accrued charges (see note 2.5).

In accordance with the Horizon 2020 rules pre-financing is only cleared when the payments to the beneficiary reach 90 % of the grant agreement amount. In the first years of the project life there is thus open pre-financing that will be only cleared at a later stage. This explains the increase in the pre-financing as compared to 2016 as well as the overall high balance of the open pre-financing. This trend is also expected to continue in 2018.

2.3. EXCHANGE RECEIVABLES & NON-EXCHANGE RECOVERABLES

The amounts included under this heading are fully composed of current receivables from exchange transactions.

EUR '000

	31.12.2017	31.12.2016
<i>Central treasury liaison accounts</i>	3 982	2 655
<i>Customers</i>	90	500
<i>Deferred charges relating to exchange transactions</i>	11	10
<i>Others</i>	(2)	2
Total	4 080	3 168

The main element concerns the treasury liaison/intercompany accounts with the Commission that represent a virtual bank account of BBI JU. Following the appointment of the Accounting Officer of the Commission as the Accounting Officer of BBI JU, the treasury of BBI JU was integrated into the Commission's treasury system. Because of this, BBI JU does not have any bank accounts of its own. All payments and receipts are processed via the Commission's treasury system and registered on intercompany accounts which are presented under this heading.

The result of the incoming and outgoing payments represents the cash balance of kEUR 3 982 (2016: kEUR 2 655).

The sub-heading customers is composed of receivables related to the Research Executive Agency costs incurred in 2016 and 2017, on behalf of BBI JU, for expert evaluations related to the BBI JU's calls for proposals.

LIABILITIES

2.4. PAYABLES AND OTHER LIABILITIES

EUR '000

	31.12.2017	31.12.2016 (restated)
<i>Contribution in-kind to be validated</i>	25 959	15 047
<i>Current payables</i>	9 463	493
Total	35 422	15 540

Included under the sub-heading 'contribution in-kind to be validated' are the in-kind contributions from Members relating to on-going projects without a validated cost statement at 31 December 2017. The amount of in-kind contribution was estimated on a case-by-case basis using the best available information on the projects at 31 December 2017. The significant increase relates to new projects launched or ongoing in the course of 2017 for which the IKOP declarations have not been certified by an auditor and validated by the BBI Executive Director and the amounts related to 2017 had thus to be estimated during the closure (cut-off) exercise.

The sub-heading payables is composed of liabilities to public bodies (kEUR 870) and to suppliers (kEUR 8 591).

The contributions in-kind to be validated reported in the 2016 financial statements were calculated based on the assumption that all in-kind contributions to the projects will be at a later stage certified and reported as net assets of BBI. However following an in-depth review in 2018 of BBI's founding Council Regulation, it was confirmed that only in-kind contributions of Members can constitute contributions to net assets. This change in the interpretation of the basic act resulted in an adjustment of the cut-off methodology for the calculation of in-kind contributions to be validated. Following the EU accounting rules, and internationally accepted accounting practice, the 2016 contributions in-kind to be validated were therefore re-calculated using the new methodology and the financial statements have been restated so as to present comparable

figures for contributions in-kind to be validated and operating expenses (see note **3.2**), as they would have appeared had this new methodology already been applied in 2016. The impact of the restatement amounts to a decrease of contributions in-kind to be validated and operating expenses of kEUR 5 419. The estimated contributions from the non-members have been disclosed as services in-kind (see note **4.2**).

2.5. ACCRUED CHARGES

EUR '000

	31.12.2017	31.12.2016
<i>Accrued charges</i>	70 454	38 365

Accrued charges are the amounts estimated by the Authorising Officer of costs incurred for services and goods delivered in year 2017 but not yet invoiced or processed by the end of the year. They are largely composed of estimated operating expenses of kEUR 70 020 for on-going projects without a validated cost statement where the 2017 expense was estimated on a case-by-case basis using the best available information about the projects at 31 December 2017. The portion of the estimated accrued charges which relates to pre-financing paid has been recorded as a reduction of the pre-financing amounts in line with the H2020 rules (see note **2.2**). The significant increase of operating accrued charges relates to all projects launched or ongoing in 2017 and the end of 2016 for which no cost claims were validated by 31 December 2017 and the entire amount of the 2017 operating expenses had to be estimated during the closure (cut-off) exercise.

Also included under this heading are accrued administrative expenses of kEUR 397 relating mainly to communication and publication expenses (kEUR 203), other external services (kEUR 62), IT costs covering the operational phase of IT projects (kEUR 55) and training costs (kEUR 43). The accrued staff expenses for untaken leave is kEUR 38.

NET ASSETS

2.6. CONTRIBUTIONS FROM MEMBERS

In line with the Horizon 2020 rules only certified in-kind contributions from the Members validated by the Executive Director of BBI JU are considered in-kind contributions to the net assets. Estimated in-kind contributions, i.e. contributions for which no certifications has been received and/or this certification has not been validated by the Executive Director are reported under other liabilities (see note **2.4**).

Programming period	2017			2016		
	Cash	In-kind	Total	Cash	In-kind	Total
<i>H2020</i>	157 264	–	157 264	67 911	–	67 911
Total	157 264	–	157 264	67 911	–	67 911

EUR '000

2.6.1. Research and Innovation funding programme for 2014-2020 (Horizon 2020)

Member	Commission		Industry Grouping		Total	
	Cash	In-kind	Cash	In-kind	Cash	In-kind
<i>Running costs contributions at 31.12.2016</i>	2 784	–	3 006	–	5 791	–
<i>Current year contributions</i>	2 555	–	2 829	–	5 384	–
Running costs contributions at 31.12.2017	5 339	–	5 836	–	11 175	–
<i>Operating costs contributions at 31.12.2016</i>	62 120	–	–	–	62 120	–
<i>Current year contributions</i>	83 219	–	750	–	83 969	–
Operating costs contributions at 31.12.2017	145 338	–	750	–	146 088	–
<i>TOTAL contributions at 31.12.2016</i>	64 904	–	3 006	–	67 911	–
TOTAL contributions at 31.12.2017	150 678	–	6 586	–	157 264	–
<i>% of total contributions (by type)</i>	95.81%		4.19%		100.00%	
<i>Total contribution in %</i>	95.81%		4.19%		100.00%	
<i>Voting rights %</i>	50.00%		50.00%		100.00%	

EUR '000

3. NOTES TO THE STATEMENT OF FINANCIAL PERFORMANCE

REVENUE

3.1. OTHER EXCHANGE REVENUE

The balance included under this heading was due to the recovery of an overpayment of rental charges for the White Atrium building for the period 01 January 2016 to 12 July 2016.

EXPENSES

3.2. OPERATING COSTS

Included under this heading are operating expenses related to projects that were carried out in 2017. A part of the operating costs relating to on-going or ended projects without any validated cost claims (or equivalent) available at 31 December, was estimated using the best information available at the time of the preparation of the annual accounts. The estimation is based on the case-by-case assessment of completion which ensures that only costs that reflect the services or work performed by 31 December are included in the operating costs of the year. Depending on the availability of information at the time of the preparation of the annual accounts, the estimates are based on reports of services or work performed (e.g. Report of the member of the Joint Undertaking other than the EU on the in-kind contributions in the meaning of Article 4(3) and 4(4) of Regulation (EU) No 560/2014) or costs incurred to date as a proportion of the estimated total costs of the projects ('pro-rata temporis'). It should be noted that in line with the accounting rules the portion of the estimated cost also includes a revision of accounting estimates made in the previous periods.

The break-down of the operating costs between operating costs incurred on the basis of validated cost claims (or equivalent) and estimated (to be validated) operating costs is given in the table below:

EUR '000

	2017	2016 (restated)
<i>Operating cost: estimated EU contributions</i>	49 261	31 778
<i>Operating cost: validated EU contributions</i>	22 052	-
<i>Operating costs: estimated in kind contributions</i>	10 912	11 543
Total	82 225	43 321

The increase in the estimated in kind contributions and EU contributions can be explained by all projects started or ongoing in 2017 or at the end of 2016 for which no cost claims (or equivalent) had yet been validated and the entire underlying 2017 expense had thus to be estimated during the closure (cut-off) exercise. In 2016 there were no cost claims validated in relation to the on-going projects. The entire amount of operating costs was estimated using the best available information about the projects at 31 December 2016.

Following the adjustment of the cut-off methodology for contributions in-kind to be validated, the 2016 operating expenses have been recalculated and the financial statements have been restated so as to present comparable figures for contributions in-kind to be validated and operating expenses as they would have appeared had this new methodology already been applied in 2016. The impact of the restatement amounted to a decrease of contributions in-kind to be validated and operating expenses of kEUR 5 419. For details please refer to note 2.4.

3.3. STAFF COSTS

Included under this heading are expenses for salaries, other employment-related allowances and benefits. The calculations related to staff costs are, based on the service level agreement, entrusted to the Office for Administration and Payment of Individual Entitlements (also known as the Paymaster's Office-PMO).

The staff members of the BBI JU are covered by the Pension Scheme of European Officials. The administration of pensions is entrusted to the Commission which also accounts for the underlying pension expenses and liabilities.

A defined benefit plan is a pension plan that generally defines an amount of benefit an employee will receive on retirement, usually dependent on one or more factors such as age and years of service. Both BBI JU staff and the Commission contribute to the pension scheme in the function of the basic salary of the staff. The contribution percentage is revised yearly to reflect the changes in the staff regulation. The cost to the Commission is not reflected in the BBI JU's accounts.

Future benefits payable to the BBI JU staff under the Pension Scheme of European Officials are accounted for in the accounts of the Commission since it is the Commission who will pay these pensions. No provisions for such pensions are made in these accounts.

3.4. OTHER EXPENSES

EUR '000

	2017	2016
<i>Experts expenses</i>	823	508
<i>Communications & publications</i>	661	292
<i>External non IT services</i>	334	182
<i>Operating lease expenses</i>	282	254
<i>External IT services</i>	136	62
<i>Property, plant and equipment related expenses</i>	43	22
<i>Other</i>	158	202
Total	2 438	1 523

The increase of kEUR 315 expenses related to experts fees is due to the large amount of proposals received for the 2017 Call. The substantial increase in communications and publications expenses is explained by organisation of two major events: the Stakeholder Forum and the Walking Exhibition and also by the migration of the BBI website, the creation of the corporate brochure, the sponsorship of events and the design of the new BBI logo. Due to the increasing workload in the JU, the external non-IT increase relates mainly to outside contractors supplying interim staff. The increase in external IT services is explained by IT costs specific to 2017 such as the Sysper HR tool and the IAAS migration.

Operating lease expenses relate to the BBI JU office in the 'White Atrium' building. Amounts committed to be paid during the remaining term of this lease contract include rent and related charges and are as follows:

'000 EUR

Future amounts to be paid				
	< 1 year	1- 5 years	> 5 years	Total
<i>Buildings</i>	278	1 167	619	2 064

4. OTHER SIGNIFICANT DISCLOSURES

4.1. OUTSTANDING COMMITMENTS NOT YET EXPENSED

EUR '000

	31.12.2017	31.12.2016
<i>Outstanding commitments not yet expensed</i>	255 772	296 587

The amount of outstanding commitments not yet expensed comprises the budgetary RAL ('Reste à Liquider') less related amounts that have been included as expenses in the 2017 statement of financial performance. The budgetary RAL is an amount representing the open commitments for which payments and/or de-commitments have not yet been made. This is the normal consequence of the existence of multi-annual programmes.

4.2. SERVICES IN-KIND

The BBI founding Council Regulation defines the members of BBI JU as on the one side the European Union (represented by the European Commission) and on the other the Members other than the Union (represented by the Bio-based Industries Consortium and its constituent entities). While running open calls for proposals, only contributions of Members other than the Union are to be considered as in-kind contributions in projects (IKOP). No IKOP related to cost claims or declarations from the non-members of BBI JU has been accounted for as at 31 December 2017. The total IKOP declared in grant agreements of the ongoing projects of Members other than the Union amounts to kEUR 112 967. For information the equivalent amount declared for non-members is kEUR 71 422 of which around kEUR 16 000 relates to the period up to 31 December 2017. At the end of 2016 the estimated IKOP from non-members was around kEUR 5 400.

4.3. RELATED PARTIES

The related parties of the BBI JU are the venturers and key management personnel of these entities. Transactions between these entities take place as part of the normal operations of BBI JU and as this is the case, no specific disclosure requirements are necessary for these transactions in accordance with the EU accounting rules.

4.4. KEY MANAGEMENT ENTITLMENTS

The highest ranking civil servant of BBI JU is the Executive Director, who executes the role of Authorising Officer.

	31.12.2017	31.12.2016
<i>Executive Director</i>	AD 14	AD 14

The Executive Director is remunerated in accordance with the Staff Regulations of the European Union that is published on the Europa website and is the official document describing the rights and the obligations of all officials of the EU. The Executive Director has not received any loans from BBI JU.

5. FINANCIAL RISK MANAGEMENT

5.1. TYPES OF RISK

Market risk is the risk that the fair value or future cashflows of a financial instrument will fluctuate, because of variations in market prices. Market risk embodies not only the potential for loss, but also the potential for gain. It comprises *currency risk*, *interest rate risk* and *other price risk* (the BBI JU has no significant other price risk).

- (1) *Currency risk* is the risk that the BBI JU operations or its investments' value will be affected by changes in exchange rates. This risk arises from the change in price of one currency against another.
- (2) *Interest rate risk* is the possibility of a reduction in the value of a security, especially a bond, resulting from an increase in interest rates. In general, higher interest rates will lead to lower prices of fixed rate bonds, and vice versa. BBI JU does not have any securities thus it is not exposed to the interest rate risk.

Credit risk is the risk of loss due to a debtor's/borrower's non-payment of a loan or other line of credit (either the principal or interest or both) or other failure to meet a contractual obligation. The default events include a delay in repayments, restructuring of borrower repayments and bankruptcy.

Liquidity risk is the risk that arises from the difficulty in selling an asset; for example, the risk that a given security or asset cannot be traded quickly enough in the market to prevent a loss or meet an obligation.

5.2. CURRENCY RISKS

Exposure of the BBI JU to currency risk at year end

At 31 December 2017 the ending balances of financial assets and financial liabilities did not include any material amounts quoted in different currencies than euro. At the year-end BBI JU thus does not have any exposure to currency risks.

5.3. CREDIT RISK

Financial assets that are neither past due nor impaired

At 31 December 2017 financial assets comprise exchange receivables that are neither past due nor impaired.

Financial assets by risk category

The exchange receivables entirely relate to entities without external credit rating that have never defaulted in the past.

5.4. LIQUIDITY RISK

Maturity analysis of financial liabilities by remaining contractual maturity

At 31 December 2017 the financial liabilities amounted to kEUR 105 876. They are composed of current payables (kEUR 9 463), in-kind contributions to be validated (kEUR 25 959) and accrued charges (kEUR 70 454). All the financial liabilities have expected remaining maturity of less than 1 year.

REPORTS ON THE IMPLEMENTATION OF THE BUDGET

It should be noted that due to the rounding of figures into thousands of euros, some financial data in the tables below may appear not to add-up.

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1. BUDGETARY PRINCIPLES, STRUCTURE AND IMPLEMENTATION

1.1. BUDGETARY PRINCIPLES

The establishment and implementation of the budget of BBI JU is governed by the following basic principles set out in the Chapter 2 of the Financial Rules of BBI JU:

Principles of unity and budget accuracy

This principle means that no revenue shall be collected and no expenditure effected unless booked to a line in the budget of BBI JU. No expenditure may be committed or authorised in excess of the appropriations authorised by the budget. An appropriation may be entered in the budget only if it is for an item of expenditure considered necessary.

Principle of annuality

The appropriations entered in the budget shall be authorised for a financial year which shall run from 1 January to 31 December. As specified in its Financial Rules, BBI JU is subject to an exception to the annuality principle, specific only to the joint undertakings (the “N+3” rule), whereby any unused appropriations may be entered in the estimate of revenue and expenditure of up to the following three financial years. These appropriations must be used first.

Principle of equilibrium

Revenue and payment appropriations shall be in balance.

Principle of unit of account

The budget shall be drawn up and implemented in euro and the accounts shall be presented in euro.

Principle of universality

Total revenue shall cover total payment appropriations and all revenue and expenditure shall be entered in full without any adjustment against each other.

Principle of specification

Appropriations shall be earmarked for specific purposes at least by title and chapter.

Principle of sound financial management

Appropriations shall be used in accordance with the principle of sound financial management, namely in accordance with the principles of economy, efficiency and effectiveness.

Principle of transparency

The budget shall be established and implemented and the accounts presented in accordance with the principle of transparency. The budget and any amending budgets shall be published on the internet site of the BBI JU within four weeks of their adoption and shall be transmitted to the Commission and the Court of Auditors.

1.2. STRUCTURE AND PRESENTATION OF THE BUDGET

Since 1 January 2015, no distinction is made between non-dissociated and dissociated appropriations. All appropriations follow the dissociated logic.

Following the provisions of the Financial rules of BBI JU, the budget accounts shall consist of a statement of revenue and a statement of expenditure. The budget is distributed in the following titles:

Title 1 budget lines relate to staff expenditure such as salaries and allowances for personnel working with BBI JU. It also includes recruitment expenses, staff missions, expenses for the socio-medical infrastructure and representation costs.

Title 2 budget lines relate to all infrastructure, equipment and miscellaneous administrative expenditure.

Title 3 budget lines provide for the implementation of the activities and tasks assigned to BBI JU in accordance with its establishing Council Regulation (EC) No 560/2014.

1.3. HIGHLIGHTS OF THE BUDGETARY IMPLEMENTATION

The overall budget implementation for the year 2017 shows positive figures both in commitment appropriations (96.7 %) and in payment appropriations (95.6 %).

The management of BBI JU's 2017 budget was characterised by two important elements: i) the consumption of the prior year administrative surplus and ii) an initial lack of payment appropriations on the operational side.

As was the case for 2016, the 2017 BBI JU administrative budget included a surplus of unused budget from prior years (mainly 2016). These unused (payment and commitment) appropriations, amounting to almost EUR 3 000 000, were reactivated via an amendment to the BBI JU 2017 annual work plan and budget in June 2017. Despite the late availability of these carried-over appropriations, they were consumed in priority in line with BBI's financial rules art. 6(5), and reached almost 100 % consumption by year end.

Regarding the accumulated surplus outstanding at the end of 2017, the BBI JU Governing Board decided in December 2017 that most of it (around EUR 2 million) will be reabsorbed in 2019 by reducing the contributions of both the Commission and industry members (BIC) to BBI JU's administrative budget by EUR 1 000 000 each. The BBI JU Governing Board will decide on the treatment of any remaining surplus and appropriations will be reactivated accordingly in future years' budgets.

Concerning the operational budget, it should be mentioned that the available payment appropriations included in BBI JU's 2017 budget were too low compared to the actual needs. As the payments of periodic reports are a contractual obligation, the only way to deal with the deficiency in the voted budget would have been to lower the pre-financing rate compared to previous calls. This measure could have negatively impacted projects dealing with high start-up investments as well as those involving a high number of SMEs.

This issue was discussed during the BBI JU Governing Board meeting at the end of 2016 and – with the support of the Commission – BBI JU was able to obtain, via an amendment to the 2017 annual work plan and budget, additional appropriations to top up the pre-financing payments for the projects of the 2016 call. Although the subsequent payment of the pre-financings was a complicated exercise involving careful planning as well as amendments to the grant agreements, it was carried out successfully, increasing the pre-financing rate from 25 % to around 34 % on average.

Administrative costs

The total consumption of the (amended) administrative budget was 58.6 % in commitment appropriations and 53.9 % in payment appropriations. Comparing the total consumption to the original budget, these figures rise to 88.6 % and 83.9 % respectively.

Title 1: Staff related costs such as salaries, other staff costs and missions are showing only a limited implementation in commitment appropriations (52 %, 51 % and 46 % respectively) while representing a relevant amount of over EUR 2.2 million. This is because the largest part of the prior year surplus was accumulated in Title 1. The general implementation of the original 2017 voted budget in commitment

appropriations is over 76.9 %, but when the large surplus reactivated from 2016 is taken into account this drops to 51.4 %. Consumption of payment appropriations shows similar figures.

Title 2: The infrastructure budget shows an implementation of 68.3 % in commitment appropriations. Building, communications and contracting of experts incurred high costs in 2017, amounting respectively to EUR 310 252, EUR 659 942 and EUR 824 175. The additional costs incurred with respect to the original budget were covered by the available budgetary surplus. The spending related to evaluators' contracting and payment was executed by the Research Executive Agency on behalf of BBI JU. On the payment appropriations side, consumption for Title 2 was 60.8 %.

Total implementation of the commitment appropriations of the original 2017 budget accounts for just over 100 % (this is because a certain amount of the prior year reactivated surplus was consumed in line with increased needs in the communications and evaluations posts).

Operational costs

Concerning the commitment appropriations of the operational budget, the programme office concluded 29 grant agreements from Call 2016 resulting in a 97.9 % implementation of commitment appropriations envisaged for this call (EUR 188.9 million).

The 2017 call was committed for EUR 85 764 866 including EUR 80 814 209 of voted commitment appropriations, EUR 4 450 656 of unused commitment appropriations from 2016 and EUR 500 000 from industry (BIC). The evaluation was successfully concluded by the end of 2017, resulting in a potential consumption of 99.9 % if all grants amounting to a total of EUR 85 672 213 are signed in 2018.

In respect of the payment appropriations, the programme office achieved 99.4 % implementation of the 2017 budget with pre-financing payments for the grants of Call 2016 together with payments of periodic reports for grants from the BBI Call 2014. An amount of EUR 486 658 remaining from the total payment appropriations of EUR 84 297 519, has been reactivated in the BBI JU 2018 budget.

During the course of 2017, 43 pre-financings were paid for a total amount of EUR 62 487 741 and 10 periodic reports payments were made for a total of EUR 21 323 120.

Expert evaluator costs

The above highlights take into account the treatment of the BBI budget managed by the REA for the expert-evaluators of BBI JU's calls (i.e. the consumption by REA is treated as being BBI consumption). The table below shows the total implementation including the expert evaluators costs managed by REA for Call 2017:

COMMITMENT APPROPRIATIONS

	Budget appropriations				Additional appropriations					EUR '000
Title	Initial budget adopted	Amending budget	Transfers	Final adopted budget	Carry-overs	Assigned revenue appropriations	Total	Total appropriations available (1)	Commitments made (2)	%
	1	2	3	4=1+2+3	5	6	7=5+6	8	9	10=9/8
1	2 868	0	0	2 868	1 427	0	1 427	4 295	2 206	51 %
2	2 088	0	0	2 088	691	22	713	3 229	2 206	68 %
3	81 314	0	0	81 314	4 451	0	4 451	85 765	85 765	100 %
Total	86 270	0	0	86 270	6 569	22	6 591	93 290	90 177	97 %

(1) Commitment appropriations made available in Title 2 (chapter 28) include an unused amount of of 428 KEURO, on an R0 budget of the REA Executive Agency (REA) since 2015, and reactivated in BBIJU's budget (via budgetary amendment) in 2017. This amount was consumed by the REA for the payment of the expert-evaluators of BBIJU's 2017 call for proposals. Also included is the assigned revenue (column 6) of 22 KEURO (chapter 20), arising from the recovery of overpaid rental charges in 2016.

(2) Commitment consumption for Title 2 includes the amounts of 428 KEURO and 22 KEURO mentioned in Note (1) above.

PAYMENT APPROPRIATIONS

	Budget appropriations				Additional appropriations					EUR '000
Title	Initial budget adopted	Amending budget	Transfers	Final adopted budget	Carry-overs	Assigned revenue appropriations	Total	Total appropriations available (3)	Payments made (4)	%
	1	2	3	4=1+2+3	5	6	7=5+6	8	9	10=9/8
1	2 868	0	0	2 868	1 591	0	1 591	4 459	2 178	49 %
2	2 088	0	0	2 088	756	22	778	3 294	2 002	61 %
3	69 270	14 699	0	83 969	329	0	329	84 297	83 811	99 %
Total	74 226	14 699	0	88 925	2 676	22	2 698	92 051	87 991	96 %

(3) Payment appropriations made available in Title 2 (chapter 28) include an unused amount of of 428 KEURO, on an R0 budget of the REA Executive Agency (REA) since 2015, and reactivated in BBIJU's budget (via budgetary amendment) in 2017. This amount (in addition to 333 KEURO of BBIJU's voted budget for 2017) was consumed by the REA for the payment of the expert-evaluators of BBIJU's 2017 call for proposals. Also included is the assigned revenue (column 6) of 22 KEURO (chapter 20), arising from the recovery of overpaid rental charges in 2016.

(4) Payment consumption for Title 2 includes the amounts of 761 KEURO (428 + 333) and 22 KEURO mentioned in Note (3) above.

2. RESULT OF THE IMPLEMENTATION OF THE BUDGET

		EUR '000	
	Title	2017	2016
Revenue		88 551	65 487
of which:			
JU Revenues	A-1	88 551	65 487
Expenditure		(87 230)	(64 377)
of which:			
Staff expenditure	A-1	(2 178)	(1 748)
Admin expenditure	A-2	(1 241)	(837)
Operational expenditure	B0-3	(83 811)	(61 792)
Exchange rate differences		0	-
Budget result of the year		1 322	1 110

3. RECONCILIATION OF ECONOMIC RESULT WITH BUDGET RESULT

EUR '000

	2017	2016 (restated)
ECONOMIC RESULT OF THE YEAR	(86 569)	(46 407)
Adjustment for accrual items (items not in the budgetary result but included in the economic result)		
<i>Adjustments for accrual cut-off (net)</i>	60 350	43 841
<i>Unpaid invoices at year end but booked in expenses</i>	9	18
<i>Depreciation of intangible and tangible assets</i>	14	10
<i>Other individually immaterial</i>	(1)	2
Adjustment for budgetary items (item included in the budgetary result but not in the economic result)		
<i>Members' cash contributions collected in the year</i>	88 925	65 487
<i>Asset acquisitions (less unpaid amounts)</i>	(9)	(51)
<i>New pre-financing paid in the year and remaining open as at 31 December</i>	(61 760)	(61 791)
<i>Payments made from non-budget lines</i>	(2)	-
<i>Other individually immaterial</i>	-	1
<i>Adjustment for expert evaluator transactions managed directly by REA</i>	365	-
BUDGET RESULT OF THE YEAR	1 322	1 110

4. IMPLEMENTATION OF BUDGET REVENUE

4.1. Implementation of budget revenue – Title A-1

EUR '000

		Income appropriations		Entitlements established			Revenue				Outstanding
		Initial budget	Final budget	Current year	Carried	Total	Current year	Carried	Total	%	
		1	2	3	4	5=3+4	6	7	8=6+7	9=8/2	
A-1001	European Commission (incl. EFTA) contribution to administrative	2 341	2 341	1 945	–	1 945	1 945	–	1 945	83%	–
A-1002	European Commission (incl. EFTA) contribution to operational	68 520	83 219	83 219	–	83 219	83 219	–	83 219	100%	–
A-1003	Bio-based Industries consortium contribution to administrative	2 615	2 615	2 615	–	2 615	2 615	–	2 615	100%	–
A-1004	Bio-based Industries consortium contribution to operational	750	750	750	–	750	750	–	750	100%	–
A-1005	JU revenues	–	–	23	–	23	23	–	23	0%	–
Total chapter A-10		74 226	88 925	88 551	–	88 551	88 551	–	88 551	100%	–
Total Title A-1		74 226	88 925	88 551	–	88 551	88 551	–	88 551	100%	–

4.2. Implementation of budget revenue – Title A-2

EUR '000

		Income appropriations		Entitlements established			Revenue				Outstanding
		Initial budget	Final budget	Current year	Carried	Total	Current year	Carried	Total	%	
		1	2	3	4	5=3+4	6	7	8=6+7	9=8/2	
A-2003	C2 reactivation of appropriations for administrative(2015)	–	3	–	–	–	–	–	–	0%	–
A-2004	C2 reactivation of appropriations for operational (2015)	329	329	–	–	–	–	–	–	0%	–
A-2005	C2 reactivation of appropriations for administrative(2016)	1 700	2 771	–	–	–	–	–	–	0%	–
Total chapter A-20		2 029	3 104	–	–	–	–	–	–	0%	–
Total Title A-2		2 029	3 104	–	–	–	–	–	–	0%	–
GRAND TOTAL		76 255	92 029	88 551	–	88 551	88 551	–	88 551	96%	–

5. IMPLEMENTATION OF BUDGET EXPENDITURE

5.1. Breakdown & changes in commitment appropriations

5.1.1. Breakdown & changes in commitment appropriations – Title A-1

EUR '000

	Initial adopted budget	Budget appropriations of the year		Final budget adopted	Additional appropriations		Total	Total approp. available
	1	Amending budgets 2	Transfers 3	4=1+2+3	Carryover 5	Assigned revenue 6	7=5+6	8=4+7
A-1100 Staff costs	2 544	–	(157)	2 387	1 200	–	1 200	3 587
A-1110 Trainees and interim staff	–	–	157	157	94	–	94	251
Total chapter A-11	2 544	–	–	2 544	1 294	–	1 294	3 838
A-1200 Sundry recruitment expenses	51	–	–	51	5	–	5	56
Total chapter A-12	51	–	–	51	5	–	5	56
A-1300 Mission expenses, duty travel expenses and other ancillary expenditure	95	–	–	95	37	–	37	132
Total chapter A-13	95	–	–	95	37	–	37	132
A-1400 Medical service	9	–	–	9	6	–	6	15
A-1401 Mobility costs and other social expenses for staff	88	–	–	88	44	–	44	132
A-1402 Training	71	–	–	71	35	–	35	106
Total chapter A-14	168	–	–	168	85	–	85	253
A-1500 Entertainment and representation expenses	10	–	–	10	7	–	7	17
Total chapter A-15	10	–	–	10	7	–	7	17
Total Title A-1	2 868	–	–	2 868	1 427	–	1 427	4 295

5.1.2. Breakdown & changes in commitment appropriations – Title A-2

EUR '000

		Initial adopted budget	Budget appropriations of the year		Final budget adopted	Additional appropriations		Total	Total approp. available
		1	Amending budgets	Transfers	4=1+2+3	Carryover	Assigned revenue	7=5+6	8=4+7
		1	2	3	4=1+2+3	5	6	7=5+6	8=4+7
A-2000	Rentals	307	–	–	307	169	22	191	498
A-2010	Charges and works	–	–	15	15	–	–	–	15
Total chapter A-20		307	–	15	322	169	22	191	513
A-2100	IT equipment & software purchase/development costs	45	–	–	45	5	–	5	50
A-2101	Other IT costs	178	–	–	178	10	–	10	188
Total chapter A-21		223	–	–	223	15	–	15	238
A-2200	Movable property and associated office equipment purchase costs	14	–	–	14	–	–	–	14
Total chapter A-22		14	–	–	14	–	–	–	14
A-2300	Stationery and office supplies	25	–	–	25	5	–	5	30
A-2303	Other current administrative expenditure	17	–	–	17	–	–	–	17
Total chapter A-23		42	–	–	42	5	–	5	47
A-2400	Telecommunications and postal charges	9	–	–	9	2	–	2	11
Total chapter A-24		9	–	–	9	2	–	2	11
A-2500	Expenditure on formal meetings	116	–	(10)	106	12	–	12	118
Total chapter A-25		116	–	(10)	106	12	–	12	118
A-2600	Events and campaigns	205	–	(21)	184	355	–	355	539
A-2601	Materials (publications and promotional items)	100	–	–	100	65	–	65	165
A-2602	Communications tools (website, partnering platform, newsletter, apps)	120	–	10	130	–	–	–	130
A-2603	Public relations	100	–	6	106	–	–	–	106
Total chapter A-26		525	–	(5)	520	421	–	421	941
A-2700	Studies, consultancy and other services	100	–	–	100	23	–	23	123
Total chapter A-27		100	–	–	100	23	–	23	123
A-2800	Evaluators' contract and meetings	668	–	–	668	27	–	27	696
Total chapter A-28		668	–	–	668	27	–	27	696
A-2900	Expert reviewers	84	–	–	84	18	–	18	102
Total chapter A-29		84	–	–	84	18	–	18	102
Total Title A-2		2 088	–	–	2 088	691	22	713	2 801

5.1.3. Breakdown & changes in commitment appropriations – Title B0-3

EUR '000

		Initial adopted budget	Budget appropriations of the year		Final budget adopted	Additional appropriations		Total	Total approp. available
		1	Amending budgets	Transfers	4=1+2+3	Carryover	Assigned revenue	7=5+6	8=4+7
		1	2	3	4=1+2+3	5	6	7=5+6	8=4+7
B3-300	Call 2017	81 314	–	–	81 314	4 451	–	4 451	85 765
Total chapter B3-3		81 314	–	–	81 314	4 451	–	4 451	85 765
Total Title B0-3		81 314	–	–	81 314	4 451	–	4 451	85 765
GRAND TOTAL		86 270	–	–	86 270	6 569	22	6 591	92 861

5.2. Breakdown & changes in payment appropriations

5.2.1. Breakdown & changes in payment appropriations – Title A-1

EUR '000

		Initial adopted budget	Budget appropriations of the year			Final budget adopted	Additional appropriations		
		1	Amending budgets	Transfers		4=1+2+3	Carryover	Assigned revenue	Total
			2	3			5	6	7=5+6
									8=4+7
A-1100	Staff costs	2 544	–	(157)		2 387	1 500	–	1 500
A-1110	Trainees and interim staff	–	–	157		157	16	–	16
A-1120	Other services rendered	–	–	–		–	–	–	–
Total chapter A-11		2 544	–	–		2 544	1 516	–	1 516
A-1200	Sundry recruitment expenses	51	–	–		51	2	–	2
A-1201	Installation resettlement and daily subsistence allowances and removal and travel expenses	–	–	–		–	–	–	–
Total chapter A-12		51	–	–		51	2	–	2
A-1300	Mission expenses, duty travel expenses and other ancillary expenditure	95	–	–		95	21	–	21
Total chapter A-13		95	–	–		95	21	–	21
A-1400	Medical service	9	–	–		9	4	–	4
A-1401	Mobility costs and other social expenses for staff	88	–	–		88	37	–	37
A-1402	Training	71	–	–		71	11	–	11
Total chapter A-14		168	–	–		168	52	–	52
A-1500	Entertainment and representation expenses	10	–	–		10	–	–	–
Total chapter A-15		10	–	–		10	–	–	–
Title A-1		2 868	–	–		2 868	1 591	–	1 591
									4 459

5.2.2. Breakdown & changes in payment appropriations – Title A-2

EUR '000

		Initial adopted budget	Budget appropriations of the year		Final budget adopted	Additional appropriations		Total	Total approp. available
		1	Amending budgets	Transfers	4=1+2+3	Carryover	Assigned revenue	7=5+6	8=4+7
			2	3		5	6		
A-2000	Rentals	307	–	–	307	234	22	256	563
A-2010	Charges and works	–	–	–	–	9	–	9	9
Total chapter A-20		307	–	–	307	243	22	265	572
A-2100	IT equipment & software purchase/development costs	45	–	–	45	–	–	–	45
A-2101	Other IT costs	178	–	–	178	20	–	20	198
Total chapter A-21		223	–	–	223	20	–	20	243
A-2200	Movable property and associated office equipment purchase costs	14	–	–	14	10	–	10	24
Total chapter A-22		14	–	–	14	10	–	10	24
A-2300	Stationery and office supplies	25	–	–	25	3	–	3	28
A-2303	Other current administrative expenditure	17	–	–	17	3	–	3	20
Total chapter A-23		42	–	–	42	6	–	6	48
A-2400	Telecommunications and postal charges	9	–	–	9	1	–	1	10
Total chapter A-24		9	–	–	9	1	–	1	10
A-2500	Expenditure on formal meetings	116	–	–	116	53	–	53	168
Total chapter A-25		116	–	–	116	53	–	53	168
A-2600	Events and campaigns	205	–	–	205	211	–	211	416
A-2601	Materials (publications and promotional items)	100	–	–	100	146	–	146	246
A-2602	Communications tools (website, partnering platform, newsletter, apps)	120	–	–	120	10	–	10	130
A-2603	Public relations	100	–	–	100	–	–	–	100
Total chapter A-26		525	–	–	525	367	–	367	892
A-2700	Studies, consultancy and other services	100	–	–	100	29	–	29	129
Total chapter A-27		100	–	–	100	29	–	29	129
A-2800	Evaluators' contract and meetings	668	–	–	668	27	–	27	696
Total chapter A-28		668	–	–	668	27	–	27	696
A-2900	Expert reviewers	84	–	–	84	–	–	–	84
Total chapter A-29		84	–	–	84	–	–	–	84
Title A-2		2 088	–	–	2 088	756	22	778	2 866

5.2.3. Breakdown & changes in payment appropriations – Title B0-3

EUR '000

	Initial adopted budget	Budget appropriations of the year Amending budgets	Transfers	Final budget adopted	Carryover	Additional appropriations Assigned revenue	Total	Total approp. available
	1	2	3	4=1+2+3	5	6	7=5+6	8=4+7
<i>B3-000 Previous years' calls</i>	69 270	–	(47 947)	21 323	–	–	–	21 323
Total chapter B3-0	69 270	–	(47 947)	21 323	–	–	–	21 323
<i>B3-100 Addition to call 2015.2</i>	–	–	–	–	–	–	–	–
Total chapter B3-1	–	–	–	–	–	–	–	–
<i>B3-200 Call 2016</i>	–	–	62 645	62 645	329	–	329	62 974
Total chapter B3-2	–	–	62 645	62 645	329	–	329	62 974
<i>B3-300 Call 2017</i>	–	14 699	(14 699)	–	–	–	–	–
Total chapter B3-3	–	14 699	(14 699)	–	–	–	–	–
Title B0-3	69 270	14 699	(0)	83 969	329	–	329	84 298
GRAND TOTAL	74 226	14 699	–	88 925	2 676	22	2 698	91 622

5.3. IMPLEMENTATION OF COMMITMENT APPROPRIATIONS BY TITLE

5.3.1. Implementation of commitment appropriations – Title A-1

EUR '000

	Commitments made				Total	%	Appropriations carried over to 2018			Appropriations lapsing			Total
	Total approp. availab.	from final adopt. budget	from carry-overs	from assign. revenue			Assign. revenue	By decision	Total	from final adopt. budget	from carry-overs	from assign. revenue	
	1	2	3	4	5=2+3+4	6=5/1	7	8	9=7+8	10	11	12	13=10+11+12
A-1100 Staff costs	3 587	649	1 200	–	1 849	52%	–	–	–	1 739	–	–	1 739
A-1110 Trainees and interim staff	251	58	89	–	147	59%	–	–	–	99	5	–	104
Total chapter A-11	3 838	707	1 289	–	1 996	52%	–	–	–	1 837	5	–	1 842
A-1200 Sundry recruitment expenses	56	5	4	–	9	16%	–	–	–	46	1	–	47
Total chapter A-12	56	5	4	–	9	16%	–	–	–	46	1	–	47
A-1300 Mission expenses, duty travel expenses and other ancillary expenditure	132	24	37	–	61	46%	–	–	–	71	–	–	71
Total chapter A-13	132	24	37	–	61	46%	–	–	–	71	–	–	71
A-1400 Medical service	15	–	4	–	4	26%	–	–	–	9	2	–	11
A-1401 Mobility costs and other social expenses for staff	132	17	42	–	59	45%	–	–	–	71	1	–	73
A-1402 Training	106	31	35	–	66	63%	–	–	–	40	–	–	40
Total chapter A-14	253	48	81	–	129	51%	–	–	–	120	3	–	124
A-1500 Entertainment and representation expenses	17	4	7	–	11	66%	–	–	–	6	0	–	6
Total chapter A-15	17	4	7	–	11	66%	–	–	–	6	0	–	6
Total Title A-1	4 295	788	1 418	–	2 206	51%	–	–	–	2 080	9	–	2 089

5.3.2. Implementation of commitment appropriations – Title A-2

EUR '000

		Commitments made						Appropriations carried over to 2018			Appropriations lapsing			
		Total approp. availab.	from final adopt. budget	from carry-overs	from assign. revenue	Total	%	Assign. revenue	By decision	Total	from final adopt. budget	from carry-overs	from assign. revenue	Total
		1	2	3	4	5=2+3+4	6=5/1	7	8	9=7+8	10	11	12	13=10+11+12
A-2000	Rentals	498	140	133	22	295	59%	–	–	–	167	36	–	202
A-2010	Charges and works	15	15	–	–	15	100%	–	–	–	–	–	–	–
Total chapter A-20		513	155	133	22	310	61%	–	–	–	167	36	–	202
A-2100	IT equipment & software purchase/development costs	50	3	3	–	6	13%	–	–	–	42	2	–	44
A-2101	Other IT costs	188	151	10	–	161	86%	–	–	–	27	–	–	27
Total chapter A-21		238	154	13	–	168	70%	–	–	–	69	2	–	71
A-2200	Movable property and associated office equipment purchase costs	14	7	–	–	7	51%	–	–	–	7	–	–	7
Total chapter A-22		14	7	–	–	7	51%	–	–	–	7	–	–	7
A-2300	Stationery and office supplies	30	7	5	–	12	40%	–	–	–	18	–	–	18
A-2303	Other current administrative expenditure	17	3	–	–	3	20%	–	–	–	14	–	–	14
Total chapter A-23		47	11	5	–	16	33%	–	–	–	31	–	–	31
A-2400	Telecommunications and postal charges	11	3	1	–	5	46%	–	–	–	6	0	–	6
Total chapter A-24		11	3	1	–	5	46%	–	–	–	6	0	–	6
A-2500	Expenditure on formal meetings	118	53	12	–	65	55%	–	–	–	53	–	–	53
Total chapter A-25		118	53	12	–	65	55%	–	–	–	53	–	–	53
A-2600	Events and campaigns	539	70	349	–	420	78%	–	–	–	114	6	–	120
A-2601	Materials (publications and promotional items)	165	17	65	–	83	50%	–	–	–	83	–	–	83
A-2602	Communications tools (website, partnering platform, newsletter, apps)	130	85	–	–	85	65%	–	–	–	45	–	–	45
A-2603	Public relations	106	73	–	–	73	69%	–	–	–	33	–	–	33
Total chapter A-26		941	245	415	–	660	70%	–	–	–	275	6	–	281
A-2700	Studies, consultancy and other services	123	45	23	–	68	56%	–	–	–	55	–	–	55
Total chapter A-27		123	45	23	–	68	56%	–	–	–	55	–	–	55
A-2800	Evaluators' contract and meetings	696	396	–	–	396	57%	–	–	–	272	27	–	300
Total chapter A-28		696	396	–	–	396	57%	–	–	–	272	27	–	300
A-2900	Expert reviewers	102	84	–	–	84	83%	–	–	–	–	18	–	18
Total chapter A-29		102	84	–	–	84	83%	–	–	–	–	18	–	18
Total Title A-2		2 801	1 154	603	22	1 778	63%	–	–	–	934	88	–	1 023

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⁹⁹ Commitments made on Title 2 (kEUR 1 778) does not include commitments made by REA executive agency in the framework of Expert contracts for an amount of kEUR 428.

5.3.3. Implementation of commitment appropriations – Title B0-3

EUR '000

	Total approp. availab.	from final adopt. budget	Commitments made		Total	%	Appropriations carried over to 2018			Appropriations lapsing			Total
			from carry- overs	from assign. revenue			Assign. revenue	By decision	Total	from final adopt. budget	from carry- overs	from assign. revenue	
	1	2	3	4	5=2+3+4	6=5/1	7	8	9=7+8	10	11	12	13=10+11 +12
B3-300 Call 2017	85 765	81 314	4 451	–	85 765	100%	–	–	–	–	–	–	–
Total chapter B3-3	85 765	81 314	4 451	–	85 765	100%	–	–	–	–	–	–	–
Total Title B0-3	85 765	81 314	4 451	–	85 765	100%	–	–	–	–	–	–	–
GRAND TOTAL	92 861	83 256	6 471	22	89 749	97%	–	–	–	3 014	98	–	3 112

5.4. IMPLEMENTATION OF PAYMENT APPROPRIATIONS BY TITLE

5.4.1. Implementation of payment appropriations – Title A-1

EUR '000

		Total approp. availab.	from final adopt. budget	Payments made from carry- overs	from assign. revenue	Total	%	Autom. carry-overs	By decision	Assigned rev.	Total	from final adopt. budget	Appropriations lapsing from carry- overs	from assign. rev.	Total
		1	2	3	4	5=2+3+4	6 = 5/1	7	8	9	10=7+8+9	11	12	13	14=11+12 +13
A-1100	Staff costs	3 887	358	1 500	–	1 858	48%		–	–	–	2 029	–	–	2 029
A-1110	Trainees and interim staff	173	109	16	–	125	72%		–	–	–	48	–	–	48
Total chapter A-11		4 060	468	1 516	–	1 983	49%		–	–	–	2 077	–	–	2 077
A-1200	Sundry recruitment expenses	53	27	2	–	29	54%		–	–	–	24	–	–	24
Total chapter A-12		53	27	2	–	29	54%		–	–	–	24	–	–	24
A-1300	Mission expenses, duty travel expenses and other ancillary expenditure	116	43	20	–	63	54%		–	–	–	52	1	–	53
Total chapter A-13		116	43	20	–	63	54%		–	–	–	52	1	–	53
A-1400	Medical service	13	–	4	–	4	31%		–	–	–	9	–	–	9
A-1401	Mobility costs and other social expenses for staff	125	23	37	–	60	48%		–	–	–	65	–	–	65
A-1402	Training	82	18	11	–	29	36%		–	–	–	53	–	–	53
Total chapter A-14		220	41	52	–	93	42%		–	–	–	127	–	–	127
A-1500	Entertainment and representation expenses	10	10	–	–	10	99%		–	–	–	0	–	–	0
Total chapter A-15		10	10	–	–	10	99%		–	–	–	0	–	–	0
Total Title A-1		4 459	588	1 590	–	2 178	49%		–	–	–	2 280	1	–	2 281

5.4.2. Implementation of payment appropriations – Title A-2

		Payments made						Appropriations carried over to 2018				Appropriations lapsing			Total
		Total approp. availab.	from final adopt. budget	from carry-overs	from assign. revenue	Total	%	Autom. carry-overs	By decision	Assigned rev.	Total	from final adopt. budget	from carry-overs	from assig. rev.	Total
		1	2	3	4	5=2+3+4	6 = 5/1	7	8	9	10=7+8+9	11	12	13	14=11+12+13
A-2000	Rentals	563	39	234	22	295	52%		-	-	-	268	-	-	268
A-2010	Charges and works	9	-	9	-	9	100%		-	-	-	-	-	-	-
Total chapter A-20		572	39	243	22	304	53%		-	-	-	268	-	-	268
A-2100	IT equipment & software purchase/development costs	45	13	-	-	13	28%		-	-	-	33	-	-	33
A-2101	Other IT costs	198	99	20	-	119	60%		-	-	-	79	-	-	79
Total chapter A-21		243	112	20	-	132	54%		-	-	-	111	-	-	111
A-2200	Movable property and associated office equipment purchase costs	24	1	10	-	11	45%		-	-	-	13	-	-	13
Total chapter A-22		24	1	10	-	11	45%		-	-	-	13	-	-	13
A-2300	Stationery and office supplies	28	7	3	-	10	34%		-	-	-	18	-	-	18
A-2303	Other current administrative expenditure	20	0	3	-	3	16%		-	-	-	17	-	-	17
Total chapter A-23		48	7	6	-	13	27%		-	-	-	35	-	-	35
A-2400	Telecommunications and postal charges	10	5	1	-	6	58%		-	-	-	4	-	-	4
Total chapter A-24		10	5	1	-	6	58%		-	-	-	4	-	-	4
A-2500	Expenditure on formal meetings	168	12	53	-	64	38%		-	-	-	104	-	-	104
Total chapter A-25		168	12	53	-	64	38%		-	-	-	104	-	-	104
A-2600	Events and campaigns	416	79	211	-	290	70%		-	-	-	126	1	-	127
A-2601	Materials (publications and promotional items)	246	27	146	-	173	70%		-	-	-	73	-	-	73
A-2602	Communications tools (website, partnering platform, newsletter, apps)	130	33	10	-	43	33%		-	-	-	87	-	-	87
A-2603	Public relations	100	58	-	-	58	58%		-	-	-	42	-	-	42
Total chapter A-26		892	197	366	-	564	63%		-	-	-	328	1	-	328
A-2700	Studies, consultancy and other services	129	50	29	-	80	61%		-	-	-	50	-	-	50
Total chapter A-27		129	50	29	-	80	61%		-	-	-	50	-	-	50
A-2800	Evaluators' contract and meetings	696	-	-	-	-	0%		-	-	-	668	27	-	696
Total chapter A-28		696	-	-	-	-	0%		-	-	-	668	27	-	696
A-2900	Expert reviewers	84	68	-	-	68	81%		-	-	-	16	-	-	16
Total chapter A-29		84	68	-	-	68	81%		-	-	-	16	-	-	16
Total Title A-2		2 866	491	728	22	1 241	43%		-	-	-	1 597	28	-	1 625

5.4.3. Implementation of payment appropriations – Title B0-3

EUR '000

		Total approp. availab.	from final adopt. budget	Payments made		Total	%	Appropriations carried over to 2018			Total	from final adopt. budget	Appropriations lapsing		Total
		1	2	from carry-overs	from assign. revenue	5=2+3+4	6 = 5/1	Autom. carry-overs	By decision	Assigned rev.	10=7+8+9	11	from carry-overs	from assign. rev.	14=11+12+13
B3-000	Previous years' calls	21 323	21 323	–	–	21 323	100%		–	–	–	–	–	–	–
Total chapter B3-0		21 323	21 323	–	–	21 323	100%		–	–	–	–	–	–	–
B3-200	Call 2016	62 974	62 159	329	–	62 488	99%		–	–	–	487	–	–	487
Total chapter B3-2		62 974	62 159	329	–	62 488	99%		–	–	–	487	–	–	487
Total Title B0-3		84 298	83 482	329	–	83 811	99%		–	–	–	487	–	–	487
GRAND TOTAL		91 622	84 561	2 647	22	87 230	95%		–	–	–	4 364	29	–	4 393

¹⁰⁰ Payments made on Title 2 (kEUR 1 241) does not include payments made by REA executive agency in the framework of Expert contracts for an amount of kEUR 761.

6. COMMITMENTS OUTSTANDING

6.1. Commitments outstanding – Title A-1

EUR '000

	Commitments outstanding at the end of prev. year				Commitments of the year				Total commitments
	Comm. carried forward from prev. year	Decommit. Revaluation Cancellations	Payments	Total	Comm. made during the year	Payment	Cancellation of comm. which cannot be carried forward	Commit. outstanding at year-end	outstanding at year-end
	1	2	3	4=1+2-3	5	6	7	8=5-6-7	9=4+8
A-1100 Staff costs	15	–	15	–	1 849	1 844	–	5	5
A-1110 Trainees and interim staff	–	–	–	–	147	125	–	22	22
Total chapter A-11	15	–	15	–	1 996	1 969	–	27	27
A-1200 Sundry recruitment expenses	28	(5)	23	–	9	6	–	3	3
Total chapter A-12	28	(5)	23	–	9	6	–	3	3
A-1300 Mission expenses, duty travel expenses and other ancillary expenditure	4	–	4	–	61	59	–	2	2
Total chapter A-13	4	–	4	–	61	59	–	2	2
A-1400 Medical service	5	(1)	4	–	4	–	–	4	4
A-1401 Mobility costs and other social expenses for staff	2	(1)	1	–	59	59	–	–	–
A-1402 Training	35	(30)	5	–	66	24	–	42	42
Total chapter A-14	42	(32)	10	–	129	83	–	46	46
A-1500 Entertainment and representation expenses	0	–	0	–	11	10	–	1	1
Total chapter A-15	0	–	0	–	11	10	–	1	1
Total Title A-1	89	(37)	52	–	2 206	2 126	–	80	80

6.2. Commitments outstanding – Title A-2

		Commitments outstanding at the end of prev. year				Commitments of the year				EUR '000
		Comm. carried forward from prev. year	Decommit. Revaluation Cancellations	Payments	Total	Comm. made during the year	Payment	Cancellation of comm. which cannot be carried forward	Commit. outstanding at year-end	Total commitments outstanding at year-end
		1	2	3	4=1+2-3	5	6	7	8=5-6-7	9=4+8
A-2000	Rentals	-	-	-	-	295	295	-	-	-
A-2010	Charges and works	-	-	-	-	15	9	-	6	6
Total chapter A-20		-	-	-	-	310	304	-	6	6
A-2100	IT equipment & software purchase/development costs	33	(23)	10	-	6	3	-	4	4
A-2101	Other IT costs	13	(2)	11	-	161	108	-	53	53
Total chapter A-21		46	(25)	21	-	168	111	-	57	57
A-2200	Movable property and associated office equipment purchase costs	6	-	6	-	7	5	-	2	2
Total chapter A-22		6	-	6	-	7	5	-	2	2
A-2300	Stationery and office supplies	1	-	1	-	12	8	-	4	4
A-2303	Other current administrative expenditure	1	(1)	0	-	3	3	-	1	1
Total chapter A-23		2	(1)	2	-	16	11	-	4	4
A-2400	Telecommunications and postal charges	7	(3)	4	-	5	2	-	3	3
Total chapter A-24		7	(3)	4	-	5	2	-	3	3
A-2500	Expenditure on formal meetings	-	-	-	-	65	64	-	1	1
Total chapter A-25		-	-	-	-	65	64	-	1	1
A-2600	Events and campaigns	51	(7)	43	-	420	246	-	173	173
A-2601	Materials (publications and promotional items)	94	(2)	92	-	83	81	-	2	2
A-2602	Communications tools (website, partnering platform, newsletter, apps)	5	(0)	4	-	85	39	-	46	46
A-2603	Public relations	-	-	-	-	73	58	-	15	15
Total chapter A-26		149	(9)	140	-	660	423	-	236	236
A-2700	Studies, consultancy and other services	34	-	34	-	68	45	-	23	23
Total chapter A-27		34	-	34	-	68	45	-	23	23
A-2800	Evaluators' contract and meetings	-	-	-	-	396	-	-	396	396
Total chapter A-28		-	-	-	-	396	-	-	396	396
A-2900	Expert reviewers	-	-	-	-	84	68	-	16	16
Total chapter A-29		-	-	-	-	84	68	-	16	16
Total Title A-2		244	(38)	206	-	1 778	1 034	-	744	744

6.3. Commitments outstanding – Title B0-3

EUR '000									
	Commitments outstanding at the end of prev. year				Comm. made during the year	Commitments of the year			Total commitments
	Comm. carried forward from prev. year	Decommit. Revaluation Cancellations	Payments	Total		Payment	Cancellation of comm. which cannot be carried forward	Commit. outstanding at year-end	outstanding at year-end
	1	2	3	4=1+2-3	5	6	7	8=5-6-7	9=4+8
<i>B3-000 Previous years' calls</i>	149 186	–	21 323	127 863	–	–	–	–	127 863
Total chapter B3-0	149 186	–	21 323	127 863	–	–	–	–	127 863
<i>B3-100 Addition to call 2015.2</i>	340	–	–	340	–	–	–	–	340
Total chapter B3-1	340	–	–	340	–	–	–	–	340
<i>B3-200 Call 2016</i>	185 557	(826)	62 488	122 243	–	–	–	–	122 243
Total chapter B3-2	185 557	(826)	62 488	122 243	–	–	–	–	122 243
<i>B3-300 Call 2017</i>	–	–	–	–	85 765	–	–	85 765	85 765
Total chapter B3-3	–	–	–	–	85 765	–	–	85 765	85 765
Total Title B0-3	335 083	(826)	83 811	250 446	85 765	–	–	85 765	336 211
GRAND TOTAL	335 416	(901)	84 069	250 446	89 749	3 161	–	86 588	337 034

7. GLOSSARY

ABAC

This is the name given to the Commission's accounting system, which since 2005 has been enriched by accrual accounting rules. Apart from the cash-based budget accounts, the Commission produces accrual-based accounts which recognise revenue when earned, rather than when collected. Expenses are recognised when incurred rather than when paid. This contrasts with cash basis budgetary accounting that recognises transactions and other events only when cash is received or paid.

Accounting

The act of recording and reporting financial transactions, including the creation of the transaction, its recognition, processing, and summarisation in the financial statements.

Administrative appropriations

Administrative appropriations cover the running costs of the Institutions and entities (staff, buildings, office equipment).

Adjustment

Amending budget or transfer of funds from one budget item to another

Adopted budget

Draft budget becomes the adopted budget as soon as it is approved by the Budgetary Authority.

Agencies

EU bodies having a distinct legal personality, and to whom budget implementing powers may be delegated under strict conditions. They are subject to a distinct discharge from the discharge authority.

Amending budget

Decision adopted during the budget year to amend (increase, decrease, transfer) aspects of the adopted budget of that year.

Annuality

The budgetary principle according to which expenditure and revenue is programmed and authorised for one year, starting on 1 January and ending on 31 December.

Appropriations

Budget funding. The budget forecasts both commitments (legal pledges to provide finance, provided that certain conditions are fulfilled) and payments (cash or bank transfers to the beneficiaries). Appropriations for commitments and payments often differ — differentiated appropriations — because multiannual programmes and projects are usually fully committed in the year they are decided and are paid over the years as the implementation of the programme and project progresses. Non-differentiated appropriations apply to administrative expenditure, for agricultural market support and direct payments and commitment appropriations equal payment appropriations.

Assigned revenue External/Internal

Dedicated revenue received to finance specific items of expenditure. The main sources of external assigned revenue are financial contributions from third countries to programmes financed by the Union. The main sources of internal assigned revenue are revenue from third parties in respect of goods, services or work supplied at their request; revenue arising from the repayment of amounts wrongly paid and revenue from the sale of publications and films, including those on an electronic medium. The complete list of items constituting assigned revenue is given in the Financial Regulation Art.21.2.

Authorising Officer (AO)

The AO is responsible in each institution for authorising revenue and expenditure operations in accordance with the principles of sound financial management and for ensuring that the requirements of legality and regularity are complied with.

Budget

Annual financial plan, drawn up according to budgetary principles, that provides forecasts and authorises, for each financial year, an estimate of future costs and revenue and expenditures and their detailed description and justification, the latter included in budgetary remarks.

Budget implementation

Consumption of the budget through expenditure and revenue operations.

Budget item / Budget line / Budget position

As far as the budget structure is concerned, revenue and expenditure are shown in the budget in accordance with a binding nomenclature which reflects the nature and purpose of each item, as imposed by the budgetary authority. The individual headings (title, chapter, article or item) provide a formal description of the nomenclature.

Budget result

The difference between income received and amounts paid, including adjustments for carry-overs, cancellations and exchange rate differences. The resulting amount will have to be reimbursed to the funding authority as provided in the Financial Regulation for Agencies.

Budgetary authority

Institutions with decisional powers on budgetary matters: the European Parliament and the Council.

Budgetary commitment

A budgetary commitment is a reservation of appropriations to cover for subsequent expenses.

Cancellation of appropriations

Unused appropriations that may no longer be used.

Carryover of appropriations

Exception to the principle of annuality in so far as appropriations that could not be used in a given budget year may, under strict conditions, be exceptionally carried over for use during the following year.

Commitment appropriations

Commitment appropriations cover the total cost of legal obligations (contracts, grant agreements/decisions) that could be signed in the current financial year. Art. 7 FR: Commitment appropriations cover the total cost in the current financial year of legal obligations (contracts, grant agreements/decisions) entered into for operations extending over more than one year.

De-commitment

Cancellation of a reservation of appropriations.

Differentiated appropriations

Differentiated appropriations are used to finance multiannual operations; they cover, for the current financial year, the total cost of the legal obligations entered into for operations whose implementation extends over more than one financial year. Art. 7 FR: Differentiated appropriations are entered for multiannual operations. They consist of commitment appropriations and payment appropriations.

Earmarked revenue

Revenue earmarked for a specific purpose, such as income from foundations, subsidies, gifts and bequests, including the earmarked revenue specific to each institution. (Cf. Assigned revenue)

Economic result

Impact on the balance sheet of expenditure and revenue based on accrual accounting rules.

Entitlements established

Entitlements are recovery orders that the European Union must establish for collecting income.

Exchange rate difference

The difference resulting from currency exchange rates applied to the transactions concerning countries outside the euro area, or from the revaluation of assets and liabilities in foreign currency at the closure.

Expenditure

Term used to describe spending the budget from all types of funds sources.

Financial regulation (FR)

Adopted through the ordinary legislative procedure after consulting the European Court of Auditors, this regulation lays down the rules for the establishment and implementation of the general budget of the European Union. (OJ L 298, 26.10.2012)

Funds Source

Type of appropriations (e.g.: C1, C2, etc.)

Grants

Direct financial contributions, by way of donation, from the budget in order to finance either an action intended to help achieve an objective part of an EU policy or the functioning of a body which pursues an aim of general European interest or has an objective forming part of an EU policy.

Implementation

Cf. Budget implementation

Income

Cf. Revenue

Joint Undertakings (JUs)

A legal EU-body established under the TFEU. The term can be used to describe any collaborative structure proposed for the "efficient execution of Union research, technological development and demonstration programmes".

Lapsing appropriations

Unused appropriations to be cancelled at the end of the financial year. Lapsing means the cancellation of all or part of the authorisation to make expenditures and/or incur liabilities which is represented by an appropriation.

Only for Joint Undertakings, as specified in their Financial Rules, any unused appropriations may be entered in the estimate of revenue and expenditure of up to the following three financial years (the so-called "N+3" rule). Hence, lapsing appropriations for JUs could be reactivated until financial year "N+3".

Legal base (basic act)

The legal base or basis is, as a general rule, a law based on an article in the Treaty giving competence to the Community for a specific policy area and setting out the conditions for fulfilling that competence including budget implementation. Certain Treaty articles authorise the Commission to undertake certain actions, which imply spending, without there being a further legal act.

Legal commitment

A legal commitment establishes a legal obligation towards third parties.

Non-differentiated appropriations

Non-differentiated appropriations are for operations of an annual nature. (Art. 9 FR). In the EU-Budget non-differentiated appropriations apply to administrative expenditure, for agricultural market support and direct payments

Operational appropriations

Operational appropriations finance the different policies, mainly in the form of grants or procurement.

Outstanding commitment

Legal commitments having not fully given rise to liquidation by payments. Cf. RAL.

Outturn

Cf. Budget result

Payment

A payment is a cash disbursement to honour legal obligations.

Payment appropriations

Payment appropriations cover expenditure due in the current year, arising from legal commitments entered in the current year and/or earlier years (Art. 7 FR).

RAL

Sum of outstanding commitments. Outstanding commitments (or RAL, from the French 'reste à liquider') are defined as the amount of appropriations committed that have not yet been paid. They stem directly from the existence of multiannual programmes and the dissociation between commitment and payment appropriations. (Cf. Outstanding commitments)

Recovery

The recovery order is the procedure by which the Authorising officer (AO) registers an entitlement by the Commission in order to retrieve the amount which is due. The entitlement is the right that the Commission has to claim the sum which is due by a debtor, usually a beneficiary.

Revenue

Term used to describe income from all sources financing the budget.

Rules of application

Detailed rules for the implementation of the financial regulation. They are set out in a Commission regulation adopted after consulting all institutions and cannot alter the financial regulation upon which they depend.

Surplus

Positive difference between revenue and expenditure (see Budget result) which has to be returned to the funding authority as provided in the Financial Regulation.

Transfer

Transfers between budget lines imply the relocation of appropriations from one budget line to another, in the course of the financial year, and thereby they constitute an exception to the budgetary principle of specification. They are, however, expressly authorised by the Treaty on the Functioning of the European Union under the conditions laid down in the Financial Regulation. The FR identifies different types of transfers depending on whether they are between or within budget titles, chapters, articles or headings and require different levels of authorization.

7.9. MATERIALITY CRITERIA

No results on BBI JU operational expenditure yet. For the materiality criteria in the overall Horizon 2020 expenditure, refer to the Annual Activity Report of the European Commission.

7.10.RESULTS OF TECHNICAL REVIEW

Not applicable.

7.11. LIST OF ACRONYMS

AAR	Annual Activity Report
AWP	Annual Work Plan
APIK	All participants' in kind contribution to operational activities
B2B	Business to Business
BBI JU	Bio-Based Industries Joint Undertaking
BIC	Bio-based Industries Consortium
CAS	Common Audit Service
cPPP	Contractual Public-Private Partnership
CSA	Coordination and Support Action
CSC	Common Support Centre
DEMOS-IA	Innovation Action for demonstrators
DG AGRI	Directorate-General Agriculture & Rural Development
DG GROW	Directorate-General Internal Markets, Industry, Entrepreneurship and SMEs
DG RTD	Directorate-General Research and Innovation
DPO	Data Protection Officer
EC	European Commission
ECA	European Court of Auditors
EESC	European Economic and Social Committee
EFTA	European Free Trade Association
FR	Financial Regulation of the European Union
EFIB	European Forum for Industrial Biotechnology and the Bioeconomy
GAP	Grant Agreement preparation
GB	Governing Board of the BBI JU
IAS	Internal Audit Service
IAs	Innovation Actions
ICF	Internal Control Framework
ICS	Internal Control Standard
ICT	Information and communication technology
IFIB	Italian Forum on Industrial Biotechnology and Bioeconomy
IKAA	in-kind contributions to additional activities
IKOP	In-kind contributions to operational activities

JU	Joint Undertaking
KPIs	Key Performances Indicators
LISO	Local Informatics Security Officer
NCPs	National Contact Points for Horizon 2020
PA	Payments
PPP	Public-Private Partnership
REA	Research Executive Agency
RfP	Rules for Participation in Horizon 2020
RIA	Research and Innovation Actions
R&D	Research and Development
RTO	Research and Technology Organisation
SC	Scientific Committee of the BBi JU
SIRA	Strategic Innovation and Research Agenda
SOP	Standard Operating Procedures
SLA	Services Legal Agreement
SMART	Specific, Measurable, Accepted, Realistic and Time-related
SMEs	Small and Medium-Size Enterprises
SRG	States Representatives Group of the BBi JU
SPIRE	Sustainable Process Industry through Resource and Energy Efficiency
TTG	Time to Grant
TTI	Time to Inform
TTP	Time to Pay



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