



ERA-NET for Industrial Biotechnology 2

ERA-IB-2



Deliverable 7.3 :

Final monitoring report of ERA-IB-2 procedures and progress

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1. Summary

Task 7.2 aims to monitor the operational processes underlying ERA-IB-2 activities and achievements at different points in time, through the use of monitoring indicators,. These results will be compared with partners' expectations assessed in Task 7.1.

In order to accomplish this, ADEME and NCBR (Task 7.2 leaders) defined a set of indicators in the beginning of the project. These indicators were designed to evaluate the performance of ERA-IB-2 activities in general, with a strong focus on the analysis of the transnational joint calls results.

The main results of the four ERA-IB-2 joint calls are presented and discussed in this report, showing the importance of the ERA-IB-2 network in the promotion of a collaborative European research in industrial biotechnology.

The main expectations of ERA-IB-2 partners were met along the progress of the project and fortunately they will continue to be developed under the future ERA-NET Cofund on biotechnologies - CoBioTech – that will run from 2016 to 2021.

The present deliverable (D. 7.3) is the final monitoring report of ERA-IB-2 procedures and progress, led jointly by ADEME and NCBR¹, as the main output of task 7.2.

2. Introduction

Work package 7 focusses on the monitoring and evaluation of ERA-IB-2 activities with regard to their long-term, strategic impact, and on defining a strategy for network sustainability beyond the EC-funded period.

ERA-IB-2 builds on the success of the FP6 project "ERA-IB" which started in 2006. Within its five-year duration, partners from 12 different countries (17 partners and 7 observers) aimed to reduce fragmentation of national research efforts and to achieve sufficient critical mass and better use of scarce resources in the field of Industrial Biotechnology. In 2008, ERA-IB launched Europe's first jointly coordinated transnational call for project proposals in Industrial Biotechnology. The second joint call was launched in 2010.

ERA-IB-2, the successor of ERA-IB, started in 2011 and developed the network further into a pan-European approach to Industrial Biotechnology R&D funding. ERA-IB-2 involves 19 funding agencies from 15 countries, seeking to identify best cooperation practices as the basis for the implementation of the European Research Area (ERA) by reducing fragmentation, by fostering the exchange of knowledge across borders, and by pooling resources and optimising mechanisms for joint calls.

¹ Please note that some of the indicators could not be assessed while ERA-IB-2 was still ongoing.

Five joint calls were launched under ERA-IB-2, and the four completed calls (3rd to 6th ERA-IB call) led to the selection of 44 projects with a total funding volume of approximately 58 Mio €. The seventh and so far final ERA-IB call was launched in December 2015 and is currently under evaluation, with 28 submitted full proposals.

To assess the performance and procedures of ERA-IB-2 activities and joint calls, an internal tool was devised and its objectives outlined in WP7, mainly in Task 7.2. This task was created with the aim of monitoring the operational processes underlying ERA-IB-2 activities and achievements, through the use of monitoring indicators and by comparing the results of this monitoring with the expectations of the involved partner organisations, as described in the DoW:

"The aim of this task is to define a set of indicators for the evaluation of the performance of ERA-IB-2.

The indicators will take into account the aims of the project and partners' expectations assessed in task 7.1 (...) Building on the defined indicators, an action will be launched to assess the achievements and measure impact of the ongoing ERA-IB-2 activities. The aim is to apply this information for the continuous monitoring of the following ERA-IB-2 activities within the running time of the network and facilitate our joint actions beyond ERA-IB-2, bringing an added value compared to ERA-IB..."

3. Methods

The monitoring procedure was set up in three stages:

1. PARTNERS EXPECTATIONS: In a first stage, partners' expectations² regarding their participation in ERA-IB-2 activities were assessed - D.7.1.: Table of partners' expectations regarding ERA-IB-2 activities (Task 7.1. leader: FCT).

2. INDICATOR SELECTION: In a second stage, taking into account those expectations and other NETWATCH recommendations, a list of monitoring indicators³ were suggested. These indicators can be divided into 4 categories:

- Implementation of joint calls
- Outcome of joint calls
- Stakeholder events
- Networking with other initiatives

The Indicators can also be grouped in line with the ERA-IB-2 project objectives:

- Contribute to a European knowledge-based bio-economy by reducing fragmentation in IB R&D funding (joint calls);
- Build capacity for IB;
- Include industry in joint calls;
- Build up research expertise;

² D7.1 – Table of partners' expectations regarding ERA-IB-2 activities.

³ D7.2 – List of monitoring indicators for ERA-IB-2 activities.

- Include stakeholders in the dialogue identifying R&D needs;
- Networking with other initiatives in the field of IB and of the KBBE.

The final set of indicators was determined and consolidated by task leaders in a workshop of common understanding organised in the context of the 3rd Executive Board meeting (Dusseldorf, October 17th, 2012), where the time points and utility of each indicator were considered (D 7.2.: List of monitoring indicators for ERA-IB-2 activities).

3. APPLICATION: The third stage was the application of those indicators. The results are compiled and analysed in the present document (deliverable 7.3).

4. Results

Building on the defined indicators (annex II), actions were periodically launched to collect the necessary data responding to these indicators, and thereby assess the achievements and impact of the ongoing ERA-IB-2 activities.

Data was mainly obtained through:

1. Surveys assessing the joint calls (implementation and outputs)

The results from the five joint calls organised within ERA-IB-2 were analysed using the first set of indicators (Implementation of joint calls & outcome of joint calls).

2. Other activities fulfilled in the network (monitoring reports, networking and stakeholder events, etc.).

3. Final monitoring reports of the completed projects

Final evaluation reports of funded projects can also provide very important monitoring/impact data. Unfortunately, by the time of drafting this report, only the 1st and 2nd calls' reports were available. Therefore, a decision was made to capture the contributions from the achievements of the first ERA-IB edition. This shouldn't be treated as a deviation from the previous objectives, as these projects were actually monitored under the ERA-IB-2 timeframe. This final data was compared with the target value which was defined for each indicator.

4.1. Implementing joint calls

4.1.1. Indicator: Budget declared for each call by the entire ERA-IB-2 consortium:

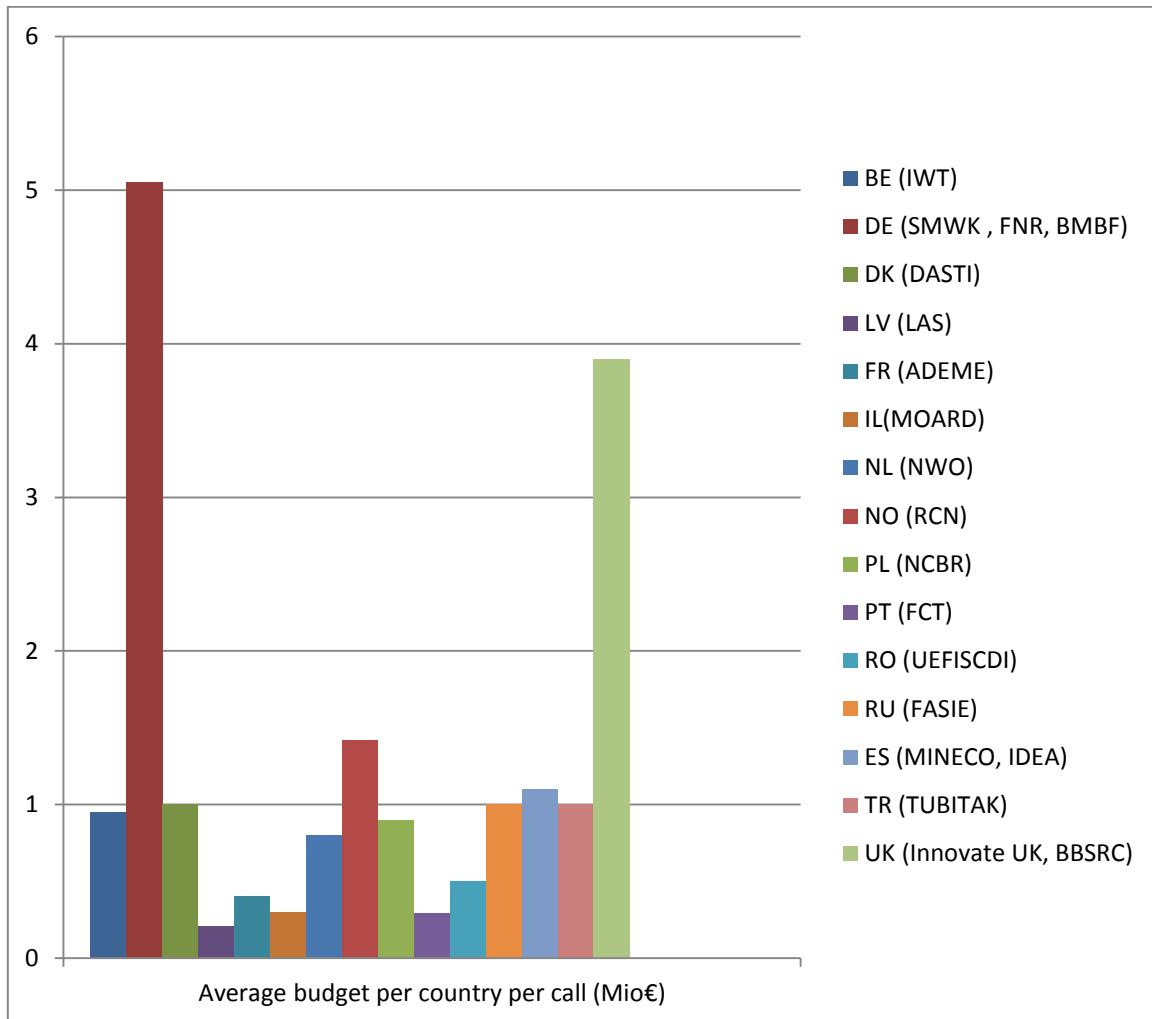
The information about the committed budget from each funding organisation was obtained from the call text of each call (3rd to 7th). This information is important because the final amount declared by each partner may change during the negotiation process and needs to be adjusted to the needs of all beneficiaries. Additionally, in each call some partners indicated a flexible budget that could vary from

e.g. 0.5 M € to 1.5 M €. If such a situation occurred, the highest possible indicative funding was considered.

The total budget available to fund projects varied between 19.2 and 25.9 M € for the 4 first calls of ERA-IB-2, (3rd to 6th) which was close to, and most often even higher than the target of **20 Mio €**. ERA-IB-2 further had the opportunity to launch a 7th call, however, the number of funding bodies participating and, as a consequence, the budget available were lower than usual (12.7 Mio€).

4.1.2. Indicator: Percentage (%) of utilisation of the total budget declared

Apart from the 3rd call, in which 87% of the budget was consumed (very close to the target value fixed at 90%), the budget utilisation for the following calls was much lower (59% to 67%). The discrepancy relates to the fact that countries/regions have different levels of budget and of scientific quality. Some countries will be oversubscribed and if they integrate high quality teams, they will quickly run out of budget and the whole consortium will be rejected. It also happens that some countries have enough budget, but they tend to integrate consortium of lower quality, with low likelihood of being selected, so the budget is not used. Solutions to ease this situation could include a requirement for establishing a limit on the maximum amount per projects, such that a country guarantees the possibility of funding at least two or three national/regional participations (or more depending on the expected scientific quality, which tends to be predictable). Fortunately the Cofund model has already proved to be effective in improving this situation.



Graph 1: Average budget available per country – 3rd to 7th Call

4.1.3. Indicator: Number of successful (funded) applications

ERA-IB-2 call / launched in	No. of granted projects
3 rd call / 2012	12
4 th call / 2013	9
5 th call / 2014	10
6 th call / 2015	13
7 th call / Dec 2015	Evaluation in May 2016

Table 1: Number of proposals funded in each Joint Call

The average number of projects granted per call is close to the fixed target value of 13, which is a very good result. In the 6th call, the target value was actually achieved (however, the final number for the 6th call still has to be confirmed because some projects are still under negotiation!)

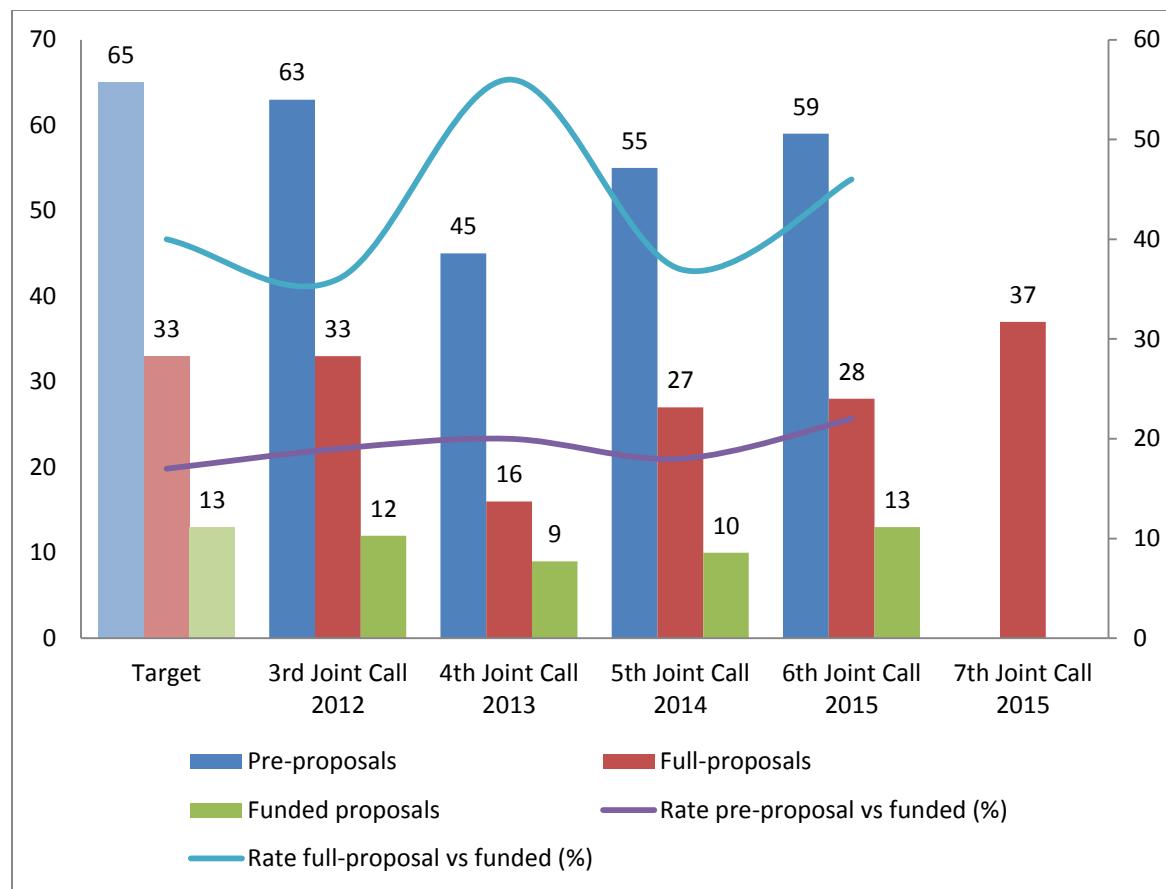
4.1.4. Indicator: Success rate: pre-proposals vs. funded projects

A number of around 60 pre-proposals were submitted under each call. This number is very close to the target value of 65 (see Graph 2). Only in the 4th call launched in 2013, we had a significant decrease in the number of submitted pre-proposals. Quite possibly this was due to the less favourable global economic scenario at that time.

In the 3rd ERA-IB-2 joint call launched in 2012, we received 63 pre-proposals and had an average oversubscription factor of 7.95. This indicates a good dissemination of the call and a high level of interest of the scientific community in the topics of this call.

Considering the number of pre-proposals selected to submit full proposals, we had the following success rates: 19% for the 3rd call, 20% for the 4th call, 18% for the 5th call and 22% for the 6th call.

The target value fixed at 15%-20% was always achieved or, in one call, even surpassed, so we can consider these as very good results.



Graph 2: Number of pre-proposals, full proposals and funded proposals per call

4.1.5. Indicator: Success rate of full proposals vs. funded projects

Number of full proposals submitted: Except in the 4th call (Joint Call 2013), in which only 16 full proposals were submitted (probably due to a poorer quality of pre-proposals), the number of full

proposals submitted was around 30 per call, and the number of funded projects was around 10 (even for the 4th Joint call!).

Full proposals vs. funded projects success rates were the following:

- 3rd Joint Call in 2012: 36%;
- 4th Joint Call in 2013: 56%;
- 5th Joint Call in 2014: 37%;
- 6th Joint Call in 2015: 46%;

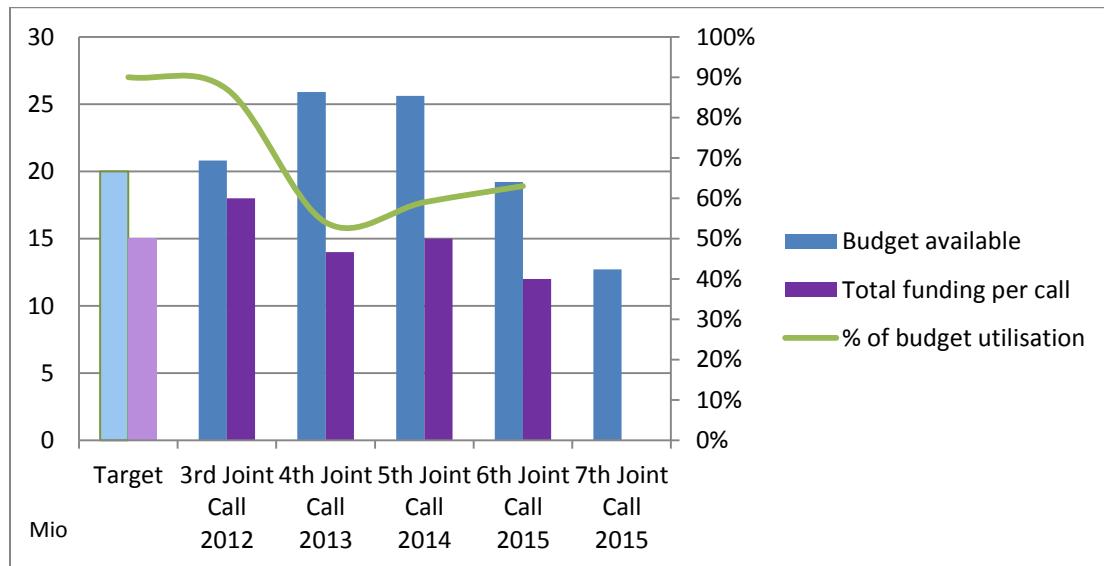
All of these rates correspond very closely to the fixed target value of 40%.

4.1.6. Indicator: Amount of total funding in ERA-IB-2

ERA-IB-2 call / launched in	No. Granted projects	Total budget (approx.)
3 rd call /2012	12	18 Mio€
4 th call/2013	9	14 Mio€
5 th call / 2014	10	15 Mio€
6 th call /2015	13	15 Mio€
7 th call / Dec 2015	Evaluation in May 2016	----

Table 2: Total budget of funded projects per call

The total budget used for the 4 calls (3rd to 6th) sums up **59 Mio€**, i.e. almost exactly the fixed target value of 60 Mio€, which represents a very good achievement. The result of the 7th Joint Call is still pending.



Graph 3: budget available and total funding per ERA-IB-2 Joint Call

The budget for financing the projects selected in the three first joint calls was about 47M €, which represents a multiplication factor of the EC contribution to ERA-IB close to 18. This strongly confirms

the importance of the ERA-IB Calls as an instrument to support the development of industrial biotechnologies research across Europe.

4.2. The outcome of Joint calls

4.2.1. Indicator: Exchange of personnel per project

One of the main objectives of ERA-IB-2 is to strengthen the cooperation between researchers in the field of IB in different countries. In the final monitoring report, coordinators are asked to state the number of exchange activities between consortium partners that took place throughout the project.

Out of the seven calls launched within ERA-IB and ERA-IB-2, only the projects funded under the first and second call (ERA-IB) have already ended and have delivered their final monitoring reports. Therefore, the data compiled in table 3 refers to the information on exchange of personnel obtained from those projects only.

Joint call	1 interchange of personnel activity per project	2 or more interchange of personnel activities per project	% of projects with exchange of personnel activities
1 st (8 projects)	0	8	100
2 nd (10 projects)	1	8	90

Table 3: Number of personnel exchange in funded projects – source: final report

The target value was very well achieved, as the expected number of “exchange of personnel” was set to a number of two, and this value was reached for all projects except one.

The outcome of the 3rd call regarding this same indicator was also expected to be included in this report. However, as most projects funded in the 3rd call were granted an extension, the final evaluation can only be conducted beyond the timeframe of ERA-IB-2. However, the analysis of mid-term reporting (from 3rd and 4th call) shows that some staff interchange has already occurred.

Project name	project end-date	deadline final report
POAP	30.11.2016	15.10.2016
PRODuCE	31.05.2016	15.05.2016
TERMOGENE	30.06.2016	15.05.2016
MySterl	30.09.2016	15.09.2016
REACTIF	31.10.2016	15.10.2016
CESBIC	31.12.2016	15.12.2016
SCILS	31.12.2016	15.12.2016
CONTIBUGS	31.12.2016	15.12.2016
Cellulect	30.09.2016	15.10.2016
HyPerIn	31.03.2017	15.03.2017

FiberFueL	30.11.2016	31.12.2016
MICROTOOLS	31.12.2016	15.12.2016

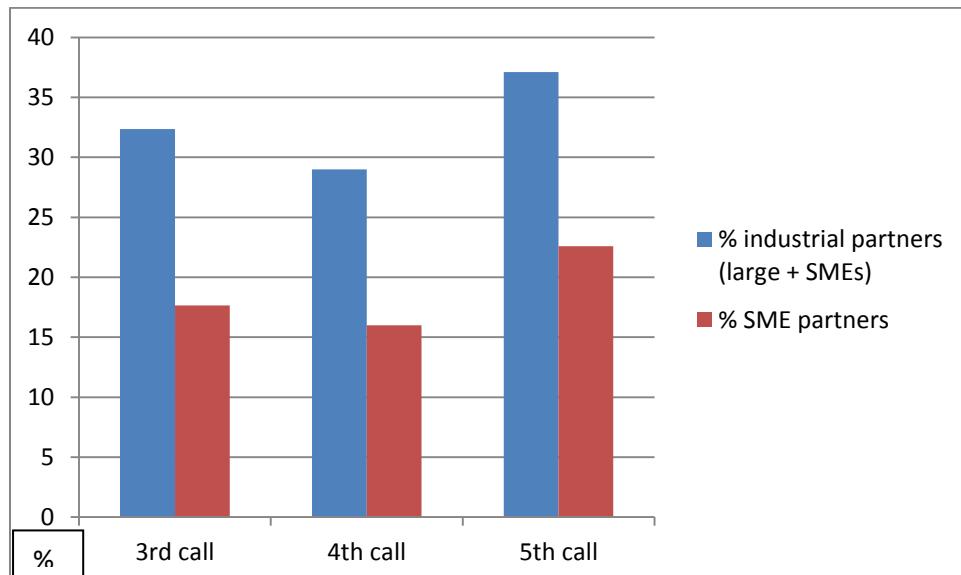
Table 4: Projects funded in 3rd call

4.2.2. Indicator: Percentage of funded projects in collaboration with industrial partners

The participation of industry in joint calls was not mandatory until the 4th call. Even so, in the 3rd call and out of the 12 projects funded, only one project did not include industry and the target value was almost reached (92%).

From the 4th call onwards, industry participation became a mandatory requirement and all the funded projects included one or more industrial partners. Consequently the number of SME participations also increased significantly.

4.2.3. Indicator: Percentage of industrial partners (and SMEs) (in funded projects) per call



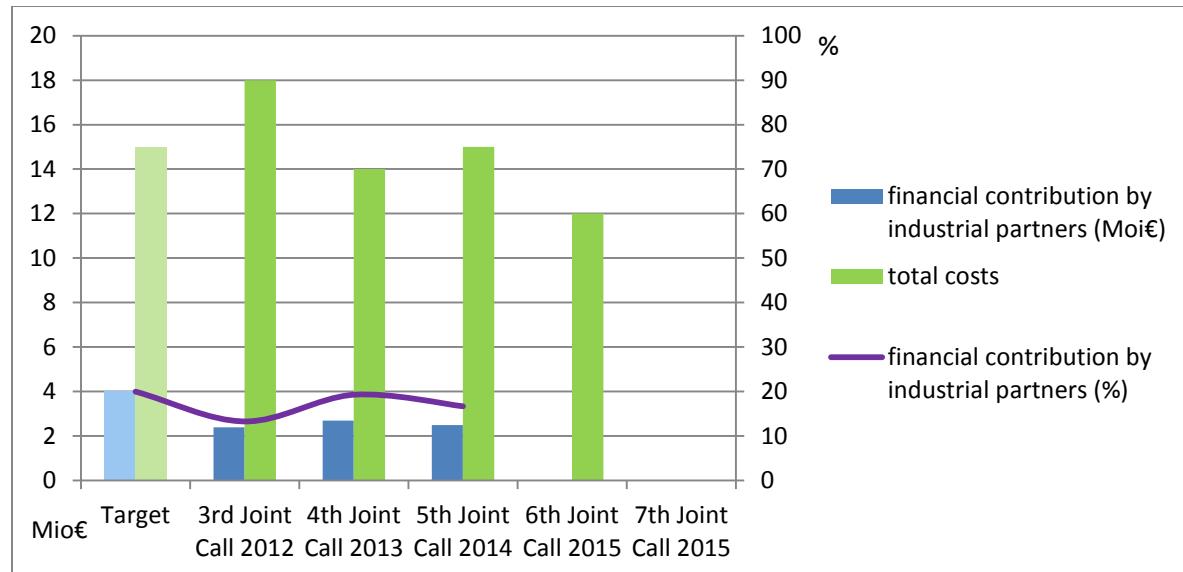
Graph 4. The % of industrial partners (large companies and SMEs) and SMEs in funded projects per call

The percentage of industrial participation⁴ in funded projects varies from 29% (4th call) to 37% (5th call). Taking into account the participation of SMEs only, the numbers are significantly lower (3rd call: 18%; 4th call: 16%; 5th call: 23%) and it can be observed that the critical moment for SMEs participation occurred in 4th call – when industrial participation became mandatory. The target value was established at quite a high level – 33% and it was achieved regarding industrial participation in general only.

⁴ The term “Industrial participation” includes large companies and SMEs.

4.2.4. Indicator: Financial contribution of industrial partners in each call

The financial contribution of industrial partners remained almost the same over the calls, as shown in Graph 5 below.



Graph 5: Financial contribution of industrial partners per call

Nevertheless, the target value of 20% was not achieved in any call: 3rd call: 12%; 4th call: 13.5% and 5th call: 12.5%.

4.2.5. Indicator: Number of patents applications per call

The final monitoring questionnaire also aimed to evaluate the commercialisation of the scientific results, measured through patent publishing and other forms of exploitation. The level of commercialisation results is difficult to judge as the effective commercialisation often occurs at a much later stage, after the end of the projects and not when the final reports are analysed. A future analysis in 2-3 years may give a better overview of the commercialisation results. The results of the first call are quite positive as three out of eight projects indicated some patent applications and two further projects indicated a patent in preparation. Three projects with patent applications constituted 37.5% of all funded projects, whereas the aim was to achieve 50%.

The results second call are quite positive as well, due to the fact that almost 50% of project partners indicated that some steps to preparing a patent have been taken. However, it has to be mentioned that the target value refers to the patent application, not to patent preparation, so in fact (and taking into account data from final reporting both 1st and 2nd call) this indicator hasn't been accomplished at all.

Joint call (No. projects)	No. Patent applications	No. Patents in preparation
1 st call (8 projects)	3	2
2 nd (10 projects)	0	4

Table 5. Number of patents (application and patent in preparation)

4.3. Stakeholder events

4.3.1. Indicator: Number of seminars with stakeholders from research and industry

The first seminar with stakeholders from academia and industry took place in Amsterdam, The Netherlands on October 18th 2011. The group discussions took place in a plenary setting. The workshop resulted in valuable input which was further discussed by EB members and became the basis for a draft description of call topics for the upcoming 3rd call.

The consortium decided to skip the 2nd stakeholder workshop, as the results from the first one were quite elaborate and could be used for the next call as well, especially because all funding organisations wanted to keep a “broad” topic for the 4th ERA-IB call. Therefore no second stakeholder workshop was organised at this point in time, and all topics in the list were used in the call text of the 4th ERA-IB call as well.

On 8 October 2013, ERA-IB-2 organised what had earlier been planned as the 3rd technical stakeholder seminar (and which was now, in reality, the second) in The Hague, Netherlands. Participants identified and discussed current priority areas in Industrial Biotechnology and suggested relevant R&D topics.

As only two stakeholder seminars had originally been targeted at, the target value for this indicator was achieved. The timing of the seminars was adjusted to consortium needs.

4.3.2. Indicator: Number of stakeholders participating in seminars

The first stakeholder seminar gathered a total of forty-four participants: 10 experts from academia, 14 experts from industry and 20 funding organisations’ representatives. All countries/regions (except Romania) were represented by one to three collaborators, which meets the target value partially (2 stakeholders per country).

The second technical stakeholder seminar brought together a total of forty-five IB stakeholders: 17 experts from industry, 8 experts from academia and 20 ERA-IB-2 partners and observers as well as representatives of related initiatives such as the ERA-Net EuroTransBio, ERA-Net MarineBiotech, and the European Technology Platform (ETP) SusChem.

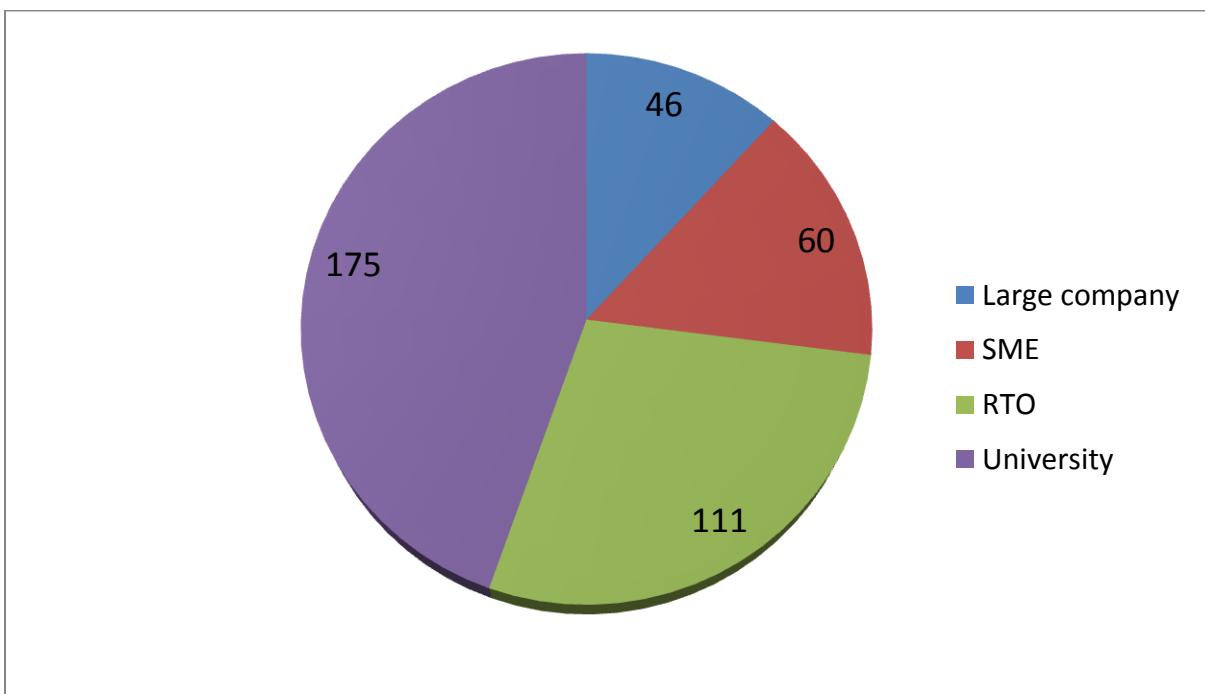
The target value of two stakeholders per country was not achieved, because not all partners were represented, but it is worth to mention that the presence of industry representatives prevailed, which resulted in valuable input for the discussions of call topics.

4.3.3. Indicator: Number of stakeholders completing surveys identifying R&D needs.

One short, online questionnaire (Survey on priorities in Industrial Biotechnology across Europe) was sent to stakeholders from academia and industry (SMEs in particular) through national channels in September 2011.

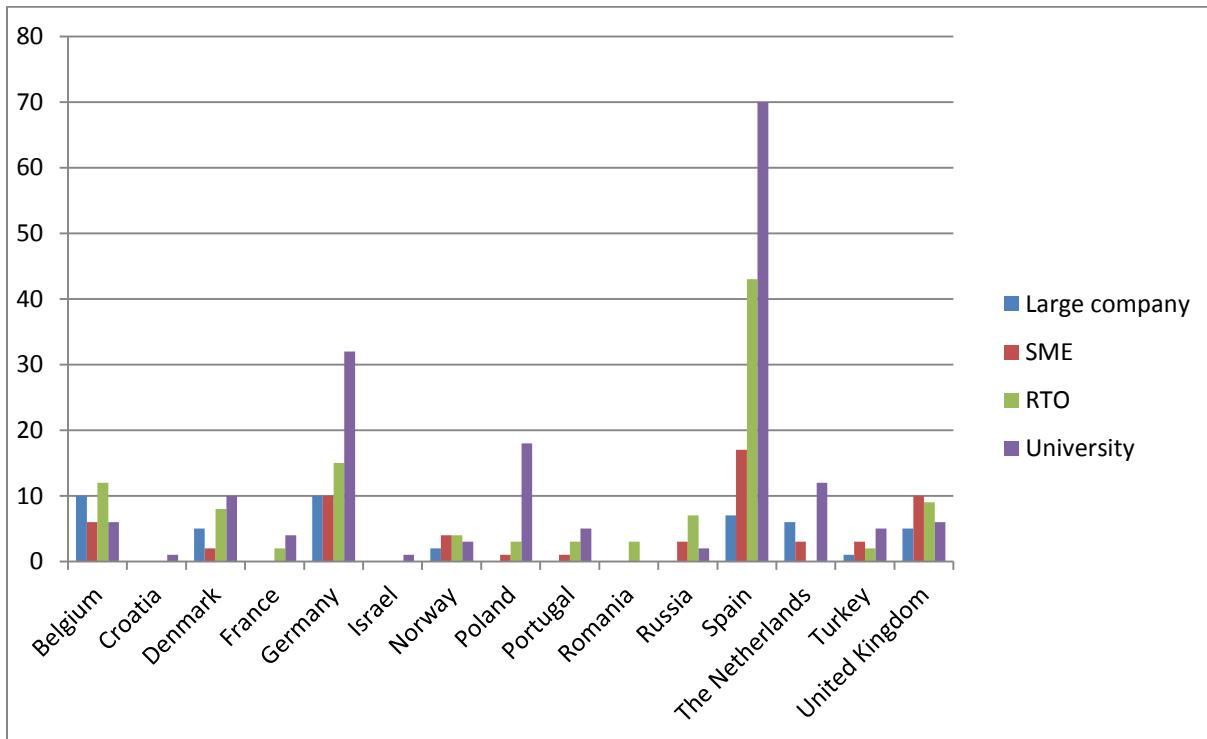
The aim of the questionnaire was to determine the priorities of IB stakeholders in each partner country, to identify the most important barriers for the participation of IB stakeholders in an international R&D project, and the measures seen as most suitable to overcome these barriers. The results were used as an input to further detailed planning of joint call topics and procedures.

The survey on priorities in Industrial Biotechnology was completed by 392 participants, which almost reaches almost the target value of 400, as established in the list of monitoring indicators.



Graph 6. Number and background of stakeholders completing the 1st survey

Universities and RTOs (Research/Technology Organisations) were best represented. Two countries stood out among the others: Spain in particular with 137 responses and Germany with 67 responses.



Graph7. Stakeholders completing surveys identifying R&D needs per country

After the 2nd stakeholder seminar, the Executive Board decided that instead of organising another stakeholder seminar, a questionnaire would be sufficient. The questionnaire, including an updated list of short call topics, was distributed to the participants of the final seminar of the 2nd ERA-IB Joint Call in Warsaw on 26.02.2014. The project coordinators of the 2nd joint call as well as participating external stakeholders were regarded as a target group of potential applicants for next calls.

Twenty participants answered the questionnaire, of which **15** were from **academia** and **5** from **industry**. According to the results of the questionnaire, the preferred call topics did not change compared to the previous call.

4.4 Networking with other initiatives

4.4.1. Indicator: Number of joint calls with other ERA-NET(s)

Within the ERA-IB-2 timeframe, **4 joint calls** were organised in collaboration with other ERA-NET(s): EuroTransBio (ETB) joined the 4th, 5th and 6th call and ERASynBio and ERA-MBT joined the 7th call. This value significantly exceeds the target value for this indicator, which had been set to one. The 4th transnational joint call was the first collaborative experience with **EuroTransBio (ETB)**, a self-sustained network of ten research programme funding and/or management organisations with a focus on industrial research by SMEs. ETB has established itself as the preferred funding instrument for small and medium sized enterprises (SMEs) collaborating in the field of modern biotechnology. The total budget available for this joint call was very high. Due to the success of this collaboration, the 5th and 6th ERA-IB-2 call were also organised in collaboration with ETB. The timing of the 7th call

did not suit ETB, but instead ERA-IB-2 collaborated with ERASynBio (Synthetic Biology) and ERA-MBT (Marine Biotechnology).

4.4.2. Indicator: Number of events organised by or together with other initiatives in which ERA-IB-2 representatives' actively participated (presentation, contribution to paper, etc.)

Members of ERA-IB-2 consortium organised and attended 12 such meetings (the meetings were held between 2012 and 2015). The target value for this indicator was fixed at 6 so it was fully achieved. The meetings gathered together representatives from: scientific community/industry and in some cases also representatives of strategic European Networks, Instruments and Partnerships (ERA-Nets, JTIs, JPIs etc.) and ERA-NET managers. Audience size varied between 20 and 100 participants and in a few cases the conference/meeting had a European or even international range.

4.4.3. Indicator: Budget of the joint call with other ERA-NET(s)

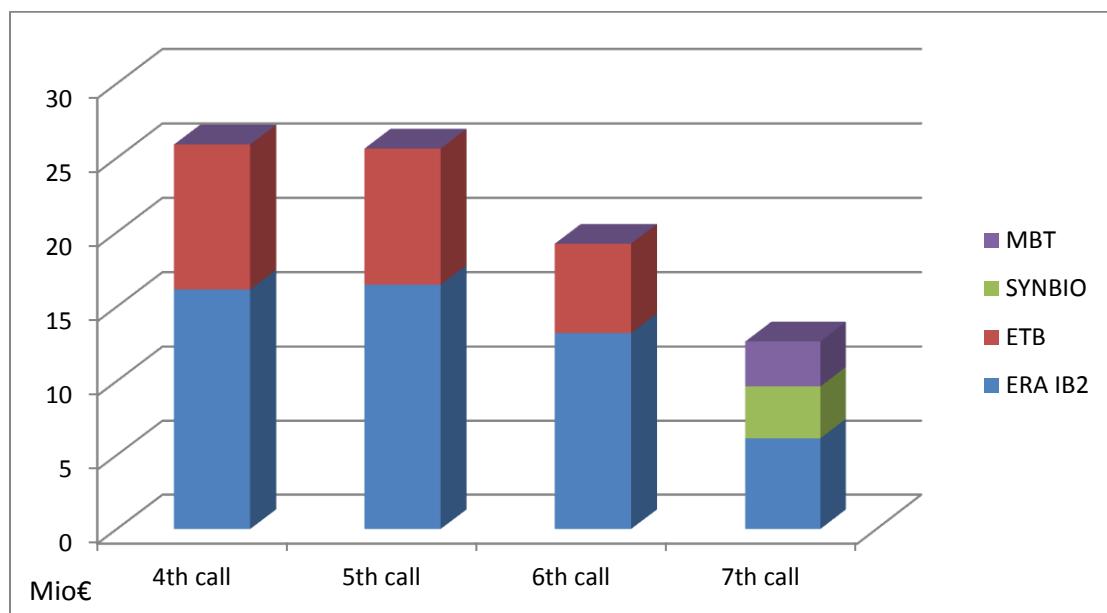
The total available budget for the 4th call (partners from ERA-IB-2 and ETB) was approximately **€26M**. The 5th and 6th gathered ~**€25M** and ~**€20M** respectively. The total budget available for 7th call was approximately **€ 13M**.

The target value was met in the 4th and 5th call, however one has to notice that the target value was set for **one call only** (ERA-IB-2 partners planned to have only one joint call with other ERA-NETs). This is the reason why which this particular indicator is treated as achieved.

4.4.4. Indicator: Share of ERA-IB-2 Partners participating in the joint call with other ERA-NET(s)

ERA-IB-2 partners established a target value for their contribution in the total budget of the collaborative joint call at around 50%. The indicator has been almost fully achieved as illustrated in the graph below. For the three calls launched in collaboration with ETB, the ERA-IB-2 budget contribution was higher than 50% (4th Joint Call: 62.36%; 5th Joint Call: 64.29%; 6th Joint Call: 68.81%). For the 7th joint call, launched in collaboration with ERA-MBT and ERASynBio, it was slightly below 50% (7th Joint Call: 48.42%)

There were some pitfalls in the methodology for assessing the ERA-IB-2 budget share due to the fact that a few partners belong to more than one project (e.g. ERA-IB-2 and ETB). If such a situation occurred, the money declared was divided equally.



Graph 8. Share of ERA-IB-2 Partners participating in the joint call with other ERA-NET(s).

5. Summary

ERA-IB-2 set some ambitious goals, laid down in the Description of Work. However, not all outcomes of ERA-IB-2 were realised at the time of this assessment – most of the final data refers only to 5 out of the 7 launched calls.

Aspects marked in green have been achieved, the yellow ones have been partly achieved, and the red ones have not been achieved – or they are highly unlikely to be analysed based on the available data.

Objective	Indicator	3 rd call	4 th call	5 th call	6 th call	7 th call	Target value	Result
Contribute to a European knowledge-based bio-economy by reducing fragmentation in IB R&D funding (joint calls)	Budget declared for each call by the entire ERA-IB-2 consortium	~21	~26	~25	~20	~13	20 mio	✓
	The % of the utilisation of the total budget declared	87	54	59	63	Tbc	90	✓
	Number of successful (funded) applications	12	9	10	13	?	13	✓
	Success rate: pre-proposals vs. funded projects	19	20	18	22	na	15%-20%	✓
	Success rate: full proposals vs. funded projects	36	56	37	46		40%	✓
	Amount of total funding in ERA-IB-2				59		60 mio	✓

Include industry in joint calls	The % of funded projects with industrial partners	92	100	100	100	?	100	✓
	The % of industrial partners – SMEs (in funded projects) per call	32/18	29/16	37/23	?	?	33	✓
	Financial contribution in each call by industrial partners	12	13,5	12,5	?	?	20%	✓

Objective	Indicator	1 st call (8 projects)	2 nd call (10 projects)	Target value	Result
Build capacity for IB	Exchange of personnel (how many events?) per project	2	1 project-1 event 8 projects- 2 events	2	✓
Build research expertise	Number of patent applications per call	37,5% (patent application), 25% (patent in preparation)	40% (patent in preparation)	50% of number of projects funded	✗

Objective	Indicator	Result	Target value	Result
Include stakeholders in the dialogue identifying R&D needs	Number of seminars with stakeholders from research and industry field	2	2	✓
	Number of stakeholders participating in seminars	1-3	2 per country	✓
	Number of stakeholders completing surveys identifying R&D needs	392	400	✓
Networking with other initiatives in the field of IB and of the KBBE	Number of joint calls with other ERA-NET(s)	4	1	✓
	Number of events organised by or together with other initiatives in which ERA-IB-2 representatives <u>actively</u> participated (presentation, contribution to paper, etc.)	12	6	✓
	Budget of the joint call with other ERA-NET(s)	13-26	25 mio	✓
	Share of ERA-IB-2 Partners participating in the joint call with other ERA-NET(s)	50%	50%	✓

6. Conclusion

The examination of ERA-IB-2 project activities regarding the results and achievements enumerated above gives a very positive impression overall. The target values, which expressed the expectations of all ERA-IB-2 partners 5 years ago, were mostly very well achieved and valuable outcomes generated.

In order to meet the expectations put forward by ERA-IB-2 Partners in the beginning of the network, mid-term and final monitoring questionnaires were designed and sent to all funded projects periodically. For many of the indicators, the five-year duration of ERA-IB-2 was not sufficient to judge if all the expectations and challenges were realised. As already mentioned above, an effective commercialisation often occurs at a later stage after the project ends, so the real data regarding patent indicator should be checked again later on. The research potential could have been assessed by the bibliometric indicators, but it would be less valuable in the context of the commercialisation of the results.

Additionally, the planned activities of the consortium such as the stakeholder surveys and seminars may be considered successfully achieved. Although not all countries were represented during the seminars, a considerable number of stakeholders from academia and industry took part in the first survey that produced a significant input in all upcoming calls.

The most expected ERA-IB-2 results related to the funded projects have been achieved. More than 44 projects have been funded involving the participation of universities, SMEs and research institutions, demonstrating that ERA-IB-2, along with other initiatives such as ETB, ERA-SynBio and ERA-MBT, may well be considered a successful trigger for reducing fragmentation in IB R&D funding in Europe.

Annex I: Description of the task and its deliverables as in DoW

Task 7.2: Monitoring of ERA-IB 2 (Task leader: NCBR/ADEME)

The aim of this task is to define a set of indicators for the evaluation of the performance of ERA-IB-2. The indicators will take into account the aims of the project and partners' expectations assessed in task 7.1. In addition, the lessons learnt from similar ERA-Nets and gathered by NETWATCH will provide further insight for the indicator selection. The final set of indicators will be defined in a workshop of common understanding, and the indicators be approved by the EB.

Building on the defined indicators, an action will be launched to assess the achievements and measure impact of the ongoing ERA-IB-2 activities. The aim is to apply this information for the continuous monitoring of the following ERA-IB-2 activities within the running time of the network and facilitate our joint actions beyond ERA-IB-2, bringing an added value compared to ERA-IB.

At a later stage in the project, the ERA-IB-2 activities and successes will be discussed and compiled in a final report. This continuous evaluation process will further strengthen the cooperation and integration among partners and facilitate the definition of the future strategic programme for industrial biotechnology research.

DELIVERABLE 7.2) List of monitoring indicators for ERA-IB-2 activities: Led jointly by NCBiR and ADEME. [month 6] – ANNEX II

DELIVERABLE 7.3) Final monitoring report of ERA-IB-2 procedures and progress: Led jointly by ADEME and NCBiR. [month 48]

Annex II: Established indicators (Deliverable 7.2)

<u>General objective:</u>	<u>Detailed objective:</u>	<u>Indicator:</u>	<u>Measure:</u>	<u>Target value</u>	
	Implementing of joint calls:				
ERA-IB-2 impact on Europe's competitiveness in IB	Contribute to a European knowledge-based bio-economy by reducing fragmentation in IB R&D funding (joint calls)	Budget declared for each call by the entire ERA-IB-2 consortium	<i>Measured after each call</i>	20 mio	
		The % of the utilisation of the total budget declared		90	
		Number of successful (funded) applications		13	
		Success rate: pre-proposals vs. funded projects		15%-20%	
		Success rate: full proposals vs. funded projects		40%	
		Amount of total funding in ERA-IB-2	<i>Measured after last call</i>	60 mio	
	The outcome of joint calls:				
	Build capacity for IB	Exchange of personnel (how many events?) per project	<i>Final monitoring of funded projects</i>	2	
		The % of funded projects with industrial partners		100	
		The % of industrial partners – SMEs (in funded projects) per call	<i>Measured after each call</i>	33	
	Include industry in joint calls	Financial contribution in each call by industrial partners		20%	
	Build up research expertise	Number of patent applications per call	<i>Final monitoring of funded projects</i>	50% of number of projects funded	
	Stakeholders:				
	Include stakeholders in the dialogue identifying R&D needs	Number of seminars with stakeholders from research and industry field	<i>Information to be gathered after each event</i>	2	
		Number of stakeholders participating in seminars		2 per country	
		Number of stakeholders completing surveys identifying R&D needs		400	
	Networking with other initiatives:				
	Networking with other	Number of joint calls with other ERA-NET(s)	<i>Final monitoring of ERA-</i>	1	

	<p>initiatives in the field of IB and of the KBBE</p> <p>Number of events organised by or together with other initiatives in which ERA-IB-2 representatives <u>actively</u> participated (presentation, contribution to paper, etc.)</p> <p>Budget of the joint call with other ERA-NET(s)</p> <p>Share of ERA-IB-2 Partners participating in the joint call with other ERA-NET(s)</p>	<p><i>IB</i></p>	<p>6</p> <p><i>25 mio</i></p> <p>50%</p>
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Annex III: Summary table of partners' expectations regarding ERA-IB-2 activities and performances

ERA-IB-2 activities and performances			
	Expectations	No. of responses (out of 17)	
B1 Strategic agenda for translational ERA-IB-2 research	Common between ERA-IB-2 partners and the EU (ERA)	6	
	Common between ERA-IB-2 partners and the EU (ERA) and other biotechnology funding agencies	7	
B2 Share of national public funds for transnational coordinated research	Increase	8	
	Maintain	9	
C1 General ERA-IB-2 Objectives			
	Contribute to a European knowledge-based bioeconomy (KBBE) by reducing fragmentation in IB R&D funding and by fostering the exchange of knowledge across borders	Very important (average score 4.05)	
	Create/maintain a strong network of programme owners and managers, to share information on national/regional IB programmes/projects as well as relevant policies	Very important (average score 3.87)	
	Increase cost-effectiveness by pooling resources and optimising mechanisms for joint calls	Very important (average score 3.86)	
C2 Partners objectives regarding funded research by ERA-IB-2			
	Formation of multidisciplinary teams in industrial biotechnology for the development of industrial applications;	Very important (average score 4.05)	
	Avoid overlap and build up research expertise;	Very important (average score 4.05)	
	Quality and impact of industrial biotechnology research	Very important (average score 4.03)	
	Involvement of industry in ERA-IB-2's joint transnational calls;	Very important (average score 3.93)	
	Attractiveness of Europe for industrial biotechnology;	Very important (average score 3.71)	
	Promote training and capacity building activities for industrial biotechnology;	Important (average score 3.46)	
C3 Motivations to participate in ERA-IB-2			
	Share information and procedures with other funding agencies	14	
	Provide national researchers with the opportunity of funding for small to medium-sized transnational research consortia	9	
C4 Work Package and task leadership			
	Share work	8	
	Share expertise	5	
	To give visibility (leading role) to your organisation/country	5	
	To support ERA-IB-2 with own experiences/strengths	5	

C5	Ambitions for the scientific community	
	Provide knowledge not available in their own country (by indirect funding of research groups with this knowledge from another country)	12
	Encourage internationalisation of research terms	17
	Support research teams that already have international collaboration	11
	Promote innovation	14
C6	ERA-IB-2 achievements for each national scientific community	
	International collaboration	Most important (average score 4.53)
	Research financing	Very important (average score 3.71)
	Start a new line of research	Important (average score 3.35)
	Infrastructures sharing	Important (average score 3.41)
	Learn new methodologies	Important (average score 3.47)
	Researchers exchange	Important (average score 3.29)
	Access expertise not available in your country	Very important (average score 4.0)
	Access to infrastructures	Very important (average score 3.65)
C7	Objectives of joint transnational calls (JTCs) versus organisations objectives	
	Your organisation will accommodate the ambitions of the majority	9
	The ERA-IB-2 consortium will tailor and accommodate your expectations	6
	Your organisation will withdraw its participation in the JTC	5
C8	Views on joint calls between ERA-IB-2 and other ERA-NETs	
	A good way to maximise the available of each organisation to fund research	10
	A good way to increase efficiency of the available resources (human and financial)	13
C9	Transnational activities in Industrial Biotechnology research beyond ERA-IB-2 lifetime	
	It can only continue with the current level of EU-funding	7
	It can continue with reduced EU-funding	7
	It can continue with more EU-funding	4
	It can continue without EU-funding (self-sustained)	4
C10	Cooperation within ERA-IB-2	No obstacles expected
		8

Note: The classification of the results of the rated answers is: Most important: average score between 4.5-5; very important: average score between 3.5-4.4; Important: average score between 2.5-3.4.