

# FINAL REPORT



## INNO INDIGO

**Innovation-driven Initiative for the Development and  
Integration of Indian and European Research**

**Grant Agreement number: FP7-609515**

**Project acronym: INNO INDIGO**

**Project title: Innovation driven Initiative for the Development and Integration of  
Indian and European Research**

**Funding Scheme: CSA**

**Period covered:                      from                      01/11/2013    to                      30/04/2017**

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# 1. Final publishable summary report

## 1.1 Executive Summary

The INNO INDIGO project was a horizontal ERA-Net with India (2013-2017) whose main goal was the implementation of EU-India multilateral calls for proposals involving funding agencies at national and sub-national level. INNO INDIGO was the successor project of New INDIGO (2009-2013) under which four Joint Calls for Proposals had already been implemented.

INNO INDIGO continued this work and successfully implemented the following four Joint Calls for Proposals under its INNO INDIGO Partnership Programme (IPP) in thematic areas of common interest for European and Indian funding agencies and ministries:

- IPP1 - "Clean Water and Health" (2014)
- IPP2 - "Diagnostics and interventions in chronic non-communicable diseases" (2015)
- IPP3 - S&T Call "Biobased Energy" (2016)
  - Innovation Call: "Bioeconomy" (2016)

Overall, 111 proposals were submitted under these calls. 25 research and innovation projects involving 70 research partners were funded with a total budget of approx. 11,7 mio. Euros.

With the selected thematic areas for the Joint Calls for Proposals, INNO INDIGO was one of the main instruments for the implementation of the EU-India Strategic Research and Innovation Agenda (SRIA) in the fields of Energy, Water and Health.

INNO INDIGO had a stronger focus on innovation than its predecessor project and successfully translated the results of its analytical work on clusters, SMEs and regions/State Governments into a reshaping of the IPP funding mechanism. This resulted in two separate calls under IPP3 one for S&T and one for innovation. Specific concepts of innovation such as frugal innovation for affordable products were subject of workshops and analytical papers and ultimately integrated into the IPP. Further innovation activities were implemented under the INNO INDIGO Valorization Programme which trained projects previously funded under the New INDIGO Partnership Programme (NPP) and the first calls of the IPP to get their research closer to the market.

By establishing the Platform for Funders (PfF) which met on a regular basis, the network of funders was put on an institutionalized basis and strategies for the continuation of regular Joint Calls for Proposals after the lifetime of INNO INDIGO were developed and discussed. The PfF was able to attract a large number of new funding agencies interested to join the Joint Calls for Proposals under the IPP.

In addition to these core activities INNO INDIGO also aimed to put activities between India and Europe in other important areas on a more systematic basis: In a Joint EU-India PhD Workshop, former PhD students, coordinators and programme owners of bilateral Joint PhD programmes discussed barriers and best practices to draft a list of recommendations for the set-up of new bilateral EU-India PhD programmes. The participation of young researchers in projects funded under IPP calls was promoted and the INDIGO Young Scientist Competition which took place during the annual EU-India STI Cooperation Days were additional activities

to promote an involvement of researchers in EU-India cooperation at an early stage of their career.

Another dimension for the creation of funding opportunities for Indian and European research was INNO INDIGO's work on the opening of Thematic ERA Nets or Joint Programming Initiatives (JPIs) for participation from India.

With its various activities INNO INDIGO contributed greatly to the provision and further development of instruments for the implementation of Indo-European research and raising the understanding of the Science, Technology and Innovation (STI) landscapes in the respective other region.

## 1.2 Project objectives for the period

Main objectives	Derived Project objectives	Corresponding Work packages
To strengthen the innovation dimension of IPP Calls through analysing the Indian and European innovation landscapes and through analysing different concepts of innovation.	Pave the way for involvement of SMEs and industries in joint calls	<b>WP 1 Assessment</b>
	Consider existing clusters of excellence in EU-India STI cooperation	
	Consider regions as important and strong funding partners in EU-India STI cooperation	
	Consider balanced combination of all relevant aspects of innovation for INNO INDIGO: 1) Business driven Innovation for boosting competitiveness, 2) Social innovation covering societal challenges and needs, 3) Inclusive innovation targeting the Indian social challenges and needs and opening new ways of collaboration	
	Ensure a smooth transfer of all results of the information gathering in WP1 to WP2 in order to set up new generation calls	
	Support projects funded under the NPP/IIP scheme in scaling up their research results towards commercialization	
To continue the regular launch of Joint Calls for Proposals and further develop the IPP	Implementing and coordinating a platform for funders	<b>WP 2 Funding</b>
	run new series of calls	
	Monitoring and Evaluation of projects funded under the NPP and IPP	
	Design transparent call mechanisms and develop a strategic agenda for joint calls	

To support the establishment of EU-ASEAN networks in Science and Innovation	Facilitate the participation of funding agencies from India in thematic initiatives such as Thematic ERA Nets or Joint Programming Initiatives (JPIs)	<b>WP 3 Strategy</b>
	Support joint activities between young researchers from India and Europe	
	Paving the way for sustainability of INDIGO Partnership Programme (IPP)	
	Communication	
To manage the project and ensure the execution of the work plan	Development and implementation of the <b>project management</b>	<b>WP 4 Coordination</b>

### **1.3 Description of main activities and results**

Overview on work packages

- WP 1 Assessment
- WP 2 Funding
- WP 3 Strategy

The work package reports are all structured along the following main points:

- A) Introduction/Overview
- B) Activities and results/ lessons learned

## **WP1: Assessment**

### **A. Introduction/Overview**

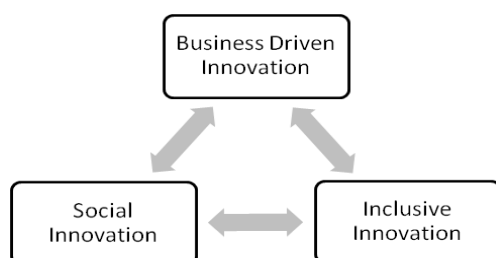
Realising that innovation is on one hand the engine for growth, employment and competitiveness and on the other hand a driving force for tackling global challenges it was the central aspect of the analytical work conducted under INNO INDIGO to better tailor the calls under the INNO INDIGO Partnership Programmes (IPP) to the needs of innovation stakeholders. The manifold activities included surveys, workshops, masterclasses or pitching sessions involving industries, clusters of excellence and regions as important funding partners with strong link to the regional industry on both sides (Europe and India) but also experts on frugal innovation or other types of innovation.

The central objectives of the work conducted under this WP was to understand the innovation landscapes in Europe and India and to draw a clear picture of the differing realities and to identify obstacles and beneficial factors for industry participation in joint research calls. Intellectual Property Rights (IPR), definition of SMEs, appropriate funding schemes or also the definition of clusters and their set-up were subject of many questions that had to be answered to be able to better tailor the IPP to the needs of innovation actors from both India and Europe.

Europe and India harbour a diverse landscape of big companies developing technological innovation high up or steadily moving up the value chain whereas European and Indian SMEs often lack a substantial R&D department. To change this is a major political will within the Indian decade of innovation as well it is one of the key goals of Horizon 2020. In addition India and Europe start to use innovation to meet social needs in areas like health, energy, food, transport etc.

A definition of innovation which only means the inclusion of industries in research would be a too simplistic view. Therefore, various concepts of innovation were identified at the beginning of the project and the INNO INDIGO innovation triangle which covered business-driven innovation, social innovation and inclusive innovation was created. All the concepts are interconnected or even overlap at times.

### **INNO INDIGO Innovation Triangle (IIIT)**



During the course of the work other concepts of innovation in particular Frugal Innovation or Jugaad Innovation which had already a high prominence in India but which gained more and more importance also for Europe shifted to the centre of attention of the analytical work. The results of WP1 were compiled in the INNO INDIGO Innovation Roadmap which contained the

recommendations for the reshaping of the INNO INDIGO Partnership Programme (IPP). These were used to better tailor the calls to the needs of the respective innovation actors.

Another important goal of the consortium was the support of the valorization of results from projects funded under the New INDIGO Partnership Programme (NPP) and the first calls of the IPP to bring them closer to the market.

- **WP leaders: GAIA and GITA**
- **Tasks, task leaders and partners:**
  - **Task 1.1: Pave the way for innovation cooperation (APRE / GITA)**  
Participants: APRE, GITA, EBN, GAIA, CSIR, TÜBITAK, ZSI, DLR, ZSI GmbH
  - +
  - **Task 1.2: Internationalization of cluster (EBN / GITA)**  
Participants: EBN, DBT, APRE, GAIA, GITA, ZSI, ZSI GmbH
  - +
  - **Task 1.3: Europe and India of regions (GAIA /GITA)**  
Participants: GAIA, DBT, APRE, CSIR, DLR
  - **Task 1.4: Support to projects funded under the NPP/IPP scheme to scale up their results towards commercialization**  
Participants: GAIA, GITA, EBN, DBT, APRE, CSIR, DLR, ZSI GmbH

## **B. Main activities and results/ lessons learned**

**Task 1.1: Pave the way for innovation cooperation (APRE / GITA)**  
**+ Task 1.2: Internationalization of cluster (EBN / GITA)**  
**+ Task 1.3: Europe and India of regions (GAIA /GITA)**

Since the analytical work conducted on clusters, regions, and industries/SMEs had a considerable overlap, the tasks were dealt with in a joint, holistic approach. Therefore, the results in this section are presented for all three tasks.

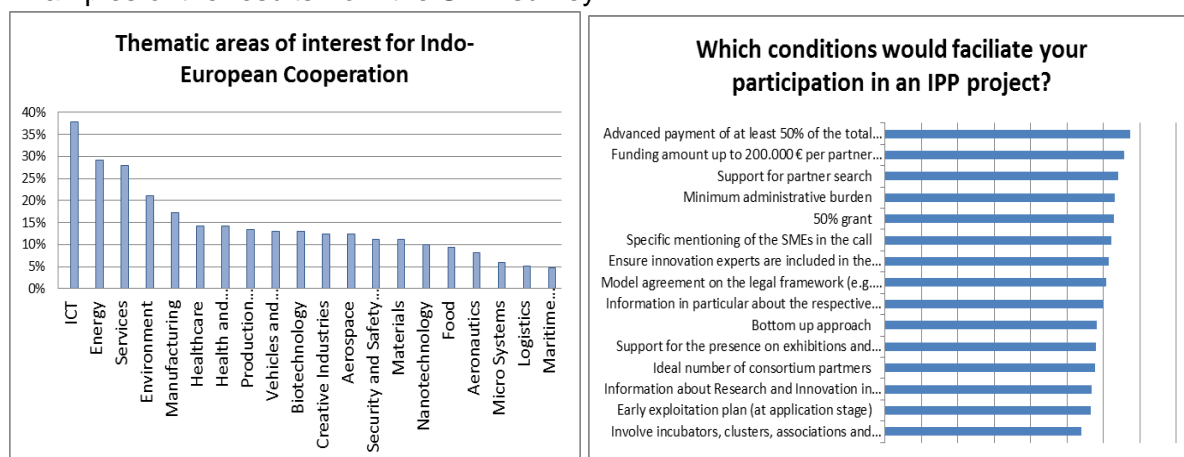
In the very beginning the focus of the analytical work was on understanding the innovation landscapes in India and Europe to be able to clearly depict differences and similarities in a comparative next step. In desk research our consortium members from India and Europe collected valuable information and compiled these into overviews of Europe and India focusing on policies, support measures, financing, SMEs/Industries, clusters and regions.

To get first hand input on the requirements of SMEs, Indian SMEs, Industrial Grouping Associations and Chambers of Commerce for participation as applicants in joint calls for proposals a questionnaire with 19 questions was send to 50.000 organisations in Europe and India. To gain a better picture qualitative interviews were added. Furthermore, a session for businesses was held during the EU-India STI Cooperation Days in 2014 in Chennai and

validated in workshops. Six SMEs, four from Europe and two from India, selected among the ones who replied to the questionnaire, were invited to discuss the conclusions with the audience.

The main observation was that there is a very high interest on both sides to cooperate with the respective other region but that there are some hurdles which make it difficult to realize this intention. What became clear was that for SMEs it takes more time to find the suitable partner in Europe or India and also to build a functioning and trustful partnership. It is often the case that SMEs are more careful to participate in EU-India research projects since they make an investment from their own financial resources due to the fact that funding for them is limited to approx. 50 % in most countries. Support tools such as the financing of trips to meet potential partners or also matchmaking tools were considered as an important help to facilitate this process. Since this requires more time, the time from call publication (or preannouncement) to the deadline has to be longer. At the same time, a funding decision is expected quickly since research relevant for the market is in competition and projects would have to start quickly.

Examples of the results from the SME survey:



Source: INNO INDIGO Innovation Roadmap

The cluster-related analysis work focused on two tasks in the beginning:

- Mapping and assessment of European and Indian clusters according to their thematic specialization
- Analysis of European and Indian policies and practices supporting cluster internationalization

For this analysis, special attention was given to the thematic areas which were already decided or discussed for the EU-India Strategic Innovation and Research Agenda (SRIA) namely Health, Energy, Water, Biotechnology and ICT. This approach was selected since INNO INDIGO could be considered as an instrument for the implementation of the SRIA.

Based on these finding and also the replies to the survey which was not only directed at SMEs but in an adapted version also to clusters, two cluster workshops were organised by INNO INDIGO:

- One at the CII Knowledgexpo in Greater Noida, Delhi-NCR, India (November 21, 2014) and

- one in Bilbao, Spain (January 29, 2015).

Not only cluster representatives joined the workshops but also government bodies such as funding agencies or ministries, initiatives such as the EUREKA Secretariat, industry bodies such as CII, development banks, business networks etc.

The first workshop was open to the public and the panellists focused on the various aspects of strengthening the ecosystem for the development and internationalization of clusters and promoting innovation among SMEs such as

- 'Smart Ecosystems', that may include incubators, accelerators, clusters, entrepreneurship centers and innovation centers,
- long-term, strategically significant public-private partnerships, thematic networks and cluster to cluster collaborations,
- innovation complexes, R&D zones, research-industry-start-ups collaborations,
- the importance of risk capital for start-ups and innovative fast growing companies,
- the role of industry bodies & centres of excellence in capacity building, facilitating suitable technology interventions in clusters, match-making & promoting cluster to cluster collaborations, and
- conducive business environment towards commercialization of inventions.

The discussions during the workshop highlighted the need to promote regional approaches including Technology Hybridization, Smart Specialization and Excellence towards the integration of clusters in the global value chain. The role of clusters in the INNO INDIGO Partnership Programme (IPP) and how the clusters could benefit from this programme was particularly highlighted at the workshop.



1<sup>st</sup> INNO INDIGO Cluster Workshop at CII Knowledgeexpo

While the first workshop focused rather on general aspects of the role of clusters in their innovation ecosystem, the second one in Bilbao made a further step towards concrete questions about EU-India cluster2cluster cooperation and the role of the INNO INDIGO Partnership Programme (IPP) to support these.

A main finding which was already discovered in the mapping exercise and confirmed in the workshops was that for cluster2cluster cooperation similar management structures which can be matched are required in India and Europe. Yet, a large number of Indian clusters don't have a management structure in the European sense. One role of management structures of

clusters is the further development of the cluster as a whole by developing strategic goals and suitable activities (trainings etc.) to achieve these. This counts also for the internationalization strategy of clusters which many European but not Indian clusters have.

#### Definition of Clusters in Europe and India

European Union	India
<p>Clusters are groups of specialised enterprises – often SMEs – and other related supporting actors that cooperate closely together in a particular location. In working together SMEs can be more innovative, create more jobs and register more international trademarks and patents than they would alone.</p> <p>Clusters operate together in regional markets. 38% of European jobs are based in such regional strongholds and SME participation in clusters leads to more innovation and growth.</p> <p>There are about 2000 statistical clusters in Europe, of which 150 are considered to be world-class in terms of employment, size, focus and specialization.</p>	<p>A cluster is a sector targeted geographical concentration of micro and/ or small &amp; medium enterprises (MSMEs/MSMEs), service providers and institutions faced with common opportunities and threats. In other words, a cluster of MSMEs is a concentration of economic enterprises, producing a typical product/service or a complementary range of products/services within a geographical area. The location of such enterprises can span over a few villages, a town or a city and its surrounding areas.</p> <p>Thus a cluster of MSMEs, hereafter referred to as “cluster”, is identified by the ‘product/service’ that the micro and small enterprises produce and the ‘place’ where the enterprises are located. Foundation for MSME Clusters assists institutions in undertaking cluster based local area development, effectively and inclusively in developing and transition economies.</p>

Source: INNO INDIGO Innovation Roadmap

Looking at the composition of clusters one could observe that both European and Indian clusters are including small, medium and micro size enterprises. While European clusters include Universities and R&D institutes which are scarcely represented in Indian clusters Indian clusters present a higher number of Financial Institutions (FIs) than European ones.

Public Administration is almost not represented in the Indian cluster panorama, and looking at the involvement of policy makers and governmental organizations, Indian clusters present lower percentages compared to European clusters.

Overall, it became clear that an involvement of cluster in the IPP calls for proposals was difficult since the structures to be matched are not the same. Since the IPP does not primarily aim to support capacity building activities, the role of clusters in the IPP calls would be limited to a point of entry to disseminate information about calls to their cluster members.

INNO INDIGO’s analytical work on regions clearly showed that the general assumption of strong links with local innovation stakeholders is true for India and Europe and that there is an interest to participate in multilateral research projects via calls for proposals under the IPP. For Europe, a couple of regions had participated in the calls for proposals or the

Platform for Funders meetings. One main question which arose was the usage of funding from the European Commission for the implementation of the Smart Specialization strategies for the participation in IPP calls. Some regions stated that this is possible as long as the calls are in line with the goals and activities of the Smart Specialization Strategy.

The analytical work on state governments in India showed that many of them have funding programmes to promote innovation related activities. INNO INDIGO identified the most promising partners for the IPP and did a tour to three South Indian state governments namely Tamil Nadu, Kerala and Andhra Pradesh which showed a high interest to join IPP calls after the lifetime of the project.

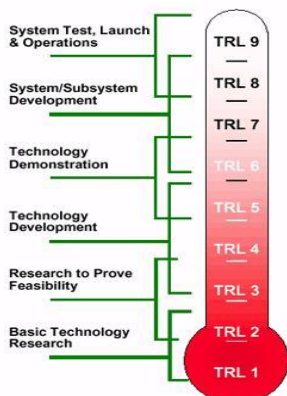
The outcomes of the three different tasks were compiled in the INNO INDIGO Innovation Roadmap. The results were then validated by a wide group of 40 innovation stakeholders such as funders, clusters, SMEs and government officials in the INNO INDIGO Innovation workshop in December 2015 in Delhi. The main results were the following:

1. INNO INDIGO funding scheme should include two parallel calls with one focusing on innovation and one on basic research.
2. Multiplier channels like clusters, national agencies coupled with social media would be ideal channels for call dissemination
3. Calls should be pre-announced to allow sufficient time for consortium formation and proposal development
4. INNO INDIGO consortium partners should better facilitate partner search. Suitable tools could be partnering events and a partner database.
5. Broader support and guidance should be provided during pre-project & during project implementation stage, e.g. regarding IPR and project consortium agreement.



INNO INDIGO Innovation Workshop in Delhi, 2015

## Task 1.4: Support to projects funded under the NPP/IPP scheme to scale up their results towards commercialization (GAIA)



The monitoring report of the projects funded under the New INDIGO and INNO INDIGO Partnership Programme showed that a number of projects have developed promising results which have commercialisation potential (TRL 6 to 9). In order to make full use of these results, INNO INDIGO has developed a valorization programme to support the Indian and European partners with training activities and a light mentoring scheme. The specific goal of this action was to empower R&I partners and provide them with relevant tools and expertise to develop their roadmaps for the market uptake of projects results.

The programme built on 3 main pillars complementing each other, adding different layers of information through different sources and means:

1. Online training/ MOOC (Massive Open Online Course)
2. Mentoring scheme/ webinar series
3. Valorization workshop

### Online Training/MOOC:

INNO INDIGO's partners developed a MOOC presenting 4 key fundamental phases of the scaling up process:

- Create a Vision
- Assess Scalability
- Fill Information Gaps
- Prepare a Scaling Up Plan

This MOOC enables the users to develop a roadmap for the actual scaling up of research results. The MOOC is available online for the general public, and is accessible to all (<http://training.gaia.es>).

The aim is to develop a scaling up plan. General descriptions of the methodology and some practical tools are offered in order to help the project in the process of scaling up results/models or projects. Trainees can apply these theoretical aspects and practical tools in their own projects.

### **2) Mentoring Scheme, the webinar series**

To enrich and complete the MOOC sessions, INDIGO partners ran a set of webinars addressing different aspects affecting the scaling up of project results. Between 21st of February and 24th of March 2017, a series of 6 webinars complemented the aspects presented in the MOOC. Each of the 60min webinars featured a relevant aspect of the

scaling up process. The recordings of each webinar and experts' presentations are available online (<https://indigoprojects.eu/cooperation-platforms/indigo-valorization-programme>).

Webinar	Topic	Date	Speakers
Webinar #0	INNO INDIGO Valorization Programme	21/02/2017	Begona Benito, GAIA
			Sona Pradeep, GITA
Webinar #1	How to increase projects' TRL ?	01/03/2017	Frank Holtmann , DLR
			Premnath Venugopalan (Head of NCL Innovations, at CSIR-National Chemical Laboratory
Webinar #2	Social, Frugal and Inclusive innovation	06/03/2017	Kaisa Granqvist, PhD Candidate at Aalto University
			Prashant Jha (Fellowship Director of the Biodesign Programme
			Klaus Schuch, ZSI
Webinar #3	Technology transfer	16/03/2017	Alexander Born, DLR
			Raj Hirwani, Adviser and former Head CSIR Unit for Research and Development of Information Products
Webinar #4	IPR in Europe and India	20/03/2017	Onur Emul, European IPR Helpdesk
			Raghav Saha (CII - Confederation of India Industry)
Webinar #5	Communication strategy for research projects reaching out to a broader public	24/03/2017	Rhonda Smith, Minerva

All webinars were followed by a follow up email to all registered attendees, providing them with a short summary of the session, the experts' presentations in PDF, the link to the recording and a reminder to the next sessions. All details were also made available on INDIGO website within a few days.

### 3) Valorization Workshop

The valorization workshop closed the set of online training and mentoring activities. The valorization workshop constituted the final milestone of this process, when the participants' roadmaps were reviewed/validated with peers and experts.

The workshop consisted of:

- Pitching session, where the selected projects presented their results and scaling up plans to a set of experts;
- Feedback from experts and peers; and
- Two training sessions.(business model canvas training, internationalization of research and technology development training)

## **WP2: Funding**

### **A. Introduction/Overview**

At the core of the INNO INDIGO project was the INNO INDIGO Partnership Programme (IPP) under which annual joint calls for proposals were implemented (in total 4). The calls under the IPP in the fields of water, health, energy and bioeconomy match the priorities outlines in the EU-India Strategic Research and Innovation Agenda (SRIA) which made the IPP a main implementation instrument. The Platform for Funders (PfF) was successfully set up at the beginning of the project to put the previously loose structure of funders gathering for each call to a more institutionalized level and to attract new members who could join the annual meetings to get an impression of the IPP and EU-India cooperation in general.

By introducing a mode with two separate calls one for S&T (rather basic research) and one for innovation (applied) under IPP3 the results of the analytical of work package 1 were used to enhance the orientation towards research closer to the market. The project monitoring aimed to highlight the results of the projects and to clearly depict strength and potential weaknesses of the projects funded under the NPP and the IPP to offer an evaluation to the funding agencies. A number of activities involving the funded projects such as their participation at the EU-India STI Cooperation Days guaranteed an exchange of experiences between the projects, the dissemination of results to an interested audience and the sharing of experiences with programme owners and policy makers.

- **WP leaders: CNRS and GITA**
- **Tasks, task leaders and partners:**

#### **Task 2.1: Implementing and coordinating a platform for funders (DLR)**

Participants: GITA, DBT, AKA, CNRS, FCT, FWF, NWO, TÜBITAK, ZSI GmbH, ETAG

- **Task 2.2: Secretariat: run new series of calls (CNRS)**

Participants: CNRS, ETAG

- **Task 2.3: Monitoring and Evaluation (ZSI GmbH/DBT)**

Participants: CSIR, AKA, FCT, FWF, GITA, NWO, TÜBITAK, ETAG

- **Task 2.4: Design transparent call mechanisms and develop a strategic agenda for joint calls (FCT/DBT)**

Participants: GITA, CNRS, FWF, NWO, ZSI GmbH, ETAG

### **B. Main activities and results/ lessons learned**

#### **Task 2.1: Implementing and coordinating a platform for funders**

Quickly after the start of INNO INDIGO the Platform for Funders (PfF) was set up. One central aim of the platform is to optimize the outreach of INNO INDIGO and facilitate the networking of funding organizations in Europe and India. The PfF offered opportunities for

interested funding organizations to participate in all steps taken towards the implementation and management of the upcoming EU-India transnational calls for proposals and to discuss chances to enhance the EU-India STI cooperation.

Yet, the PfF was not limited to the planning of IPP calls but rather offered an update on general developments in Indo-European cooperation in Science, Technology and Innovation (STI) in particular developments in the EU-India policy dialogue or also bilateral India-EU activities between India and the EU MS/AC.

The PfF's main tasks were:

1. Discussion, preparation and management of joint calls.
2. Enhancing relevance especially in terms of the outreach to countries / regions / funding organisations not yet involved in European-Indian STI collaboration
3. Offer a platform for the initiatives discussed within the GSO framework
4. Including new elements: enhance the exchange of information especially with regards to the involvement of innovation players in order to move towards market oriented research
5. Paving the way for sustainable trans-national funding programmes without EC funding

In total, four physical PfF meetings were organised over the lifetime of INNO INDIGO:

**1. 3-4 September 2014: Berlin/Germany (25 participants/ 13 funding agencies)**

Topics: Update on EU-India multilateral and bilateral activities; India-EU/MS Group of Senior Officials; opportunities for regions / regional stakeholders to participate as funders in INNO INDIGO calls; IPP 2

**2. 9-10 June 2015: Helsinki/Finland (25 participants/ 15 funding agencies)**

Topics: Update on EU-India multilateral and bilateral activities; Which type of innovation for Europe-India collaboration? How can Europe-India collaboration foster research, innovation and business cooperation to find solutions to growing societal and global challenges?; IPP3

**3. 7-8 June 2016: Vienna/Austria (29 participants/ 16 funding agencies)**

Topics: Update on EU-India multilateral and bilateral activities; Continuation of multilateral calls for proposals and the PfF after INNO INDIGO's lifetime, involvement of regional funding agencies from India and Europe, IPP 3

#### **4. 27-28 March 2017: Tallinn/Estonia (24 participants/ 14 funding agencies)**

Topics: Update on EU-India multilateral and bilateral activities; Continuation of multilateral calls for proposals and the PfF after INNO INDIGO's lifetime; discussion of a call after INNO INDIGO's lifetime

In general the trend showed a grown interest in the meetings over time and a high number of different funding parties were attracted to participate.

#### **Task 2.2: Secretariat: run new series of calls**

During the lifetime of INNO INDIGO, four multilateral Indo-European Joint Calls for Proposals were implemented:

- **IPP1** (2014): "Clean Water and Health"

##### **Subthematic Areas:**

1. Development and applications of membrane technology in water purification/sanitation
2. Membrane bioreactor applications at domestic and industrial wastewater management
3. Reuse of municipal/industrial wastewater

Participation by five funding agencies: DBT, FCT, ETAG, F.R.S.-FNRS, BMBF, (VIAA), (French Embassy Delhi)

Proposals received: **25**

Proposals funded: **5**

No. project partners: **20**

Allocated funding: **2,93 million €**

- **IPP2** (2015): "Diagnostics and interventions in chronic non-communicable diseases"

##### **Sub-thematic Areas**

1. Development of tools and technologies for the diagnostics of chronic non-communicable diseases
2. Research and innovation within interventions for chronic non-communicable diseases
3. Mechanisms in chronic non-communicable diseases

Participation by seven funding agencies: DST, FCT, ETAG, F.R.S.-FNRS, BMBF, RCN, BPIfrance

Proposals received: **47**

Proposals funded: **6**

No. project partners: **22**

Allocated funding: **3,2 million €**

+

- **IPP3 (2016):**
  - Science&Technology Call: “Biobased Energy”

#### **Sub-thematic Areas**

1. Biofuels
2. From waste to energy

Participation by seven funding agencies: DST, DBT, ETAG, F.R.S.-FNRS, BMBF, AKA, VIAA

Proposals received: **31**

Proposals funded: **6**

No. project partners: **21**

Allocated funding: **4,1 million €**

- Innovation Call: “Bioeconomy”

#### **Sub-thematic Areas**

- **None**

Participation by six funding agencies: DST, DBT, RCN, AIF, CDTI, BPIfrance

Proposals received: **8**

Proposals funded: **2**

No. project partners: **7**

Allocated funding: **1,46 million€ (1,7 million budget)**

#### **IPP 1-3 Overview**

Participation by ten European funding agencies and two from India

Proposals received: **111**

Proposals funded: **25**

No. project partners: **70**

Allocated funding: **11,7 million €**

SMEs funded: **4**

Some of the main achievements of the IPP were the following:

- Successfull continuation of Indo-European Joint Calls which was started under New INDIGO;
- Implementation mechanism for the Strategic Research and Innovation Agenda (SRIA);
- Support of Indo-European research projects in the first phase of H2020 when there was no co-funding from Indian agencies;
- The IPP has become a jointly-owned, proven and trusted instrument;
- The IPP has been further developed to better serve researchers and funding agencies focused on innovation;
- The IPP has made a contribution to strengthening the external dimension of the European Research Area (ERA);
- The IPP is a suitable instrument for regions or smaller member states which have no activities with India;
- The evaluation of the projects funded under New INDIGO has shown their positive impact.

## Task 2.3: Monitoring and Evaluation

Nowadays, there is an increasing pressure on decision-makers and funders to justify their activities within the organisation and towards tax payers. To learn more about the results of the NPP and IPP projects, INNO INDIGO performed monitoring and evaluation activities. Two evaluation reports were drafted which were based the numbers from the IPP calls and surveys amongst the projects. The evaluation focused on 1) the call implementation itself (e.g. how many applications? How many successful? etc.) and 2) the projects funded under the IPP. The survey design consisted of indicators such as number of publications and patents, number of travel, follow up projects of the network to be able to quantify the success with regard to scientific and commercial results and sustainability of the networks. Overall the reports showed very good results of the projects. What became clear is that many continue their work with a little break in which the partners have to apply for new funding at alternative sources.

Furthermore, a major task was the presentation of the projects to the public. On an annual basis the projects were asked to update information on their projects on the website to show their progress. INNO INDIGO made sure that there was a uniform presentation of the projects and suitable artwork was added for an appealing design.



The screenshot shows a project page for 'FUELANDPLASTIC' on the INNO INDIGO website. The page features a header with a share button and a project start/end date. The main content area includes a subtitle, call, project start/end dates, and a detailed description of the project's goals and objectives. The project is titled 'FUELANDPLASTIC' and aims to introduce the manufacturing of biofuels and bioplastics materials. The subtitle is 'Conversion of Lignocellulosic Wastes into Biofuels and Bioplastics'. The call is 'IPP3 Inno: Bioeconomy'. The project start date is '1. Jul. 2017' and the project end date is '1. Mar. 2019'. The description states that the project aims to introduce the manufacturing of biofuels and bioplastics materials, an innovative and sustainable production for advanced biofuel and bioplastic, into the bioeconomy sector. Fossil based fuels and plastic are still today by far the most commonly used liquid fuel and plastic globally and the manufacturing of today's biofuels and bioplastics are progressing slowly due to many reasons including costs and process issues. Addressing serious cost issues, such as yields and process optimization, and creating sustainable jobs by new sectors, improved yields and optimized processes are manufacturing advanced drop-in biofuels and bioplastics at a cost competitive level versus fossil based alternatives. The outcome of this project has important and farreaching implications towards ensuring a clean environment. Two different manufacturing routes will be evaluated and compared, one based on enzymes and microorganisms and the other based on chemicals/catalytics, however the same feedstocks will be used. Bioprocess PLA, PHA and Biobutanol. One of the objectives here is to demonstrate, in a preproductive process, the viability of lactic acid fermentation from hay, a cellulosic waste, by cellulosedegrading microorganisms specifically isolated from biodegraded cellulosic waste material. The final goal is the subsequent conversion of lactic acid to PLA, the biodegradable plastic. The other specific objectives are to:

1. Increase the value of hay or such cellulosic waste by its use in lactic acid production.
2. Increase technical viability of the preindustrial process of lactic acid production from the available cellulosic wastes.
3. Scaleup of the polymerization of lactic acid to PLA.

### Project presentation on INNO INDIGO Website

In addition, the projects which were newly selected for funding were invited to the annual EU-India STI Cooperation Days to present their research. Since the audience were not all scientific experts it was decided to make use of an innovative presentation method named

Petcha Kutcha to force the scientists to not get lost in technical details which a non-expert audience cannot understand.

#### **Task 2.4: Design transparent call mechanisms and develop a strategic agenda for joint calls**

In order to ensure the transparency and foreseeability of the IPP calls it was planned to develop a strategic agenda covering the next four years of call preparation and implementation. At the start of INNO INDIGO a first agenda was developed which did not include fixed topics. Rather, it proposed a mixed mode of taking the topics of the EU-India SRIA as a guideline for the discussion amongst the funding agencies. This approach turned out to be ideal since new funders could be taken on board of new calls with a say in the selection of the topics without having to start entirely open topic discussions again.

## **WP 3: Strategy**

### **A. Introduction/Overview**

Work package 3 focused on the analysis of alternative forms of Indo-European cooperation apart from the IPP namely the opening of thematic initiatives such as Joint Programming Initiatives (JPIs) and ERA Nets for India. Another central goal was to pave the way for the sustainability to INNO INDIGO-like calls after the runtime of the project. The results of INNO INDIGO were disseminated under the communication activities which also fell under this work package.

- **WP leaders: FCT and CSIR**
- **Tasks, task leaders and partners:**
  - **Task 3.1 Paving the way for new forms of European Indian STI cooperation (NWO /DBT)**  
Participants: AKA, FWF, GITA, ZSI GmbH
  - **Task 3.2 Connecting scientists – focus on young researchers (CSIR/ AKA)**  
Participants: CNRS, NWO
  - **Task 3.3 Paving the way for sustainability of INDIGO scheme (IPP) (FCT /GITA)**  
Participants: DLR, FWF, NWO, TÜBITAK
  - **Task 3.4 Communication (ZSI GmbH/GITA)**  
Participants: DLR, FCT

### **B. Main activities and results**

- **Task 3.1 Paving the way for new forms of European Indian STI cooperation**

The IPP constitutes an important instrument for Indo-European research cooperation. Yet, under this task INNO INDIGO also aimed to support the opening of thematic initiatives for participation of Indian funding agencies to broaden the scope of collaborative activities.

First a desk research mapping exercise which identified and assessed the different on-going initiatives to strengthen the European Research Area (ERA) such as ERA-NETs, Joint Programming Initiatives (JPIs), and other initiatives like Coordination and Support Actions (CSAs) was carried out. After the initial step, all the initiatives were divided according to the GSO thematic areas on science and innovation: water, energy and health. Other thematic areas were also considered based upon two additional originally envisaged thematic areas namely bioeconomy and information and communication technologies (ICT).

Based on the mapping exercise, coordinators of European initiatives were identified in order to be interviewed by INNO INDIGO partners (which are participating in almost all the initiatives and instruments). The interviews were implemented by phone, with three direct questions:

- a. When will the initiative launch the upcoming calls (calendar) for transnational proposals?
- b. Is the initiative open for the participation of third countries?
- c. Is the initiative open for Indian funding agencies?

For some initiatives INNO INDIGO partners have already communicated that there might be an interest by India to join. INNO INDIGO's sister project INDIGO Policy took over the next steps by organizing meetings between the thematic initiatives and DST/DBT.

### ▪ **Task 3.2 Connecting scientists – focus on young researchers**

Young scientists, and especially PhD students are important actors in research, and this is all the more important in an international context. When doing their PhD degree or part of it in a foreign country, young researchers develop strong links with this country which usually last for the rest of their research career. There is already a high number of Indian young researchers coming to Europe for their PhD degree. The other way around the number is considerably lower and there is still much room for improvement.

However, the efforts are usually done at an individual level. Joint PhD programmes can be a perfect way of improving this connection between Europe and India in a more systemic way. Yet, the number of Joint PhD programmes remains at a very low level.

By analysing the existing Joint PhD programmes INNO INDIGO tried to set out a number of recommendations that could help setting up a larger number of Joint Indo-European PhD programmes. For this purpose, a Joint PhD workshop was organised.

Around 20 participants jointly developed draft recommendations at the two-days workshop on “Connecting young researchers: Best practices of EU-India PhD programmes” in Lisbon/ Portugal from 20th - 21st of March 2017.

The intense two-day workshop offered the possibility to reflect on challenges, hurdles, benefits and advantages of joint EU-India PhD programmes. Current and former PhD candidates, programme owners and programme coordinators from the EU and India drafted a list of recommendations that can support the set-up of future Indo-European PhD programmes. In the first session, examples of Indo-European PhD programmes were presented, showing the range of more structured or more open PhD programmes available. In the next session, the benefits and advantages of such PhD programmes were discussed. The following questions guided the discussions:

- What are the advantages of Indo-European PhD programmes (in comparison to other non-bilateral programmes and bilateral programmes with other countries)?
- How can the networking between European and Indian Higher Education Institutions to setup joint PhD programmes be stimulated?
- What sources of funding can be used for joint PhD programmes and how can funding agencies be persuaded to provide more funding for such programmes?

On the second day, during session three, barriers and challenges for joint EU-India PhD programmes were discussed in small groups. Participants shared their experience on the main problems or negative experiences as well as key factors to overcome those hurdles.

The questions asked followed the SWOT-methodology which can be used to develop strategies. In a joint effort, the strengths, weaknesses objectives and threats were translated into a set of recommendations which were then again discussed in the plenum.

## **24 recommendations were developed**

### **Policy level**

1. Visa for the overall duration of the PhD
2. Common set of rules for shipment/ exchange of samples and equipment, simplify customs barriers for research and innovation
3. Ensure common standards and recognition on PhD degree

### **Orientation level – Personal**

4. To provide to the potential PhD students a training programme prior to the enrolment and to implement site visits before moving to the other country
5. To implement a forum/blog fed by students with practical information and how to survive in the city and lab
6. To have a field supervisor/coordinator
7. The international office of the host university should have a temporary tutor (person assigned) to each PhD student (guiding angel)
8. A guide to support female students visiting India (real risks, unreal stereotypes and how to deal with them) should be provided

### **Orientation level - Funding experience**

9. Very clear definitions on administrative, financial, ethical procedures for all the stakeholders since the start
10. PhD grants should be flexible in terms of research topics
11. PhD grants should be funded for 3 +2 years and evaluated each 1,5 years
12. Ethical checks and preparation of common standards procedures in advance
13. In PhD programmes the insurance should cover health and research procedures

### **Orientation level - Institutional experiences**

14. Define clearly the Institutional Contact Point from each institution
15. All the PhD procedures (standards documents) must be clear to all the institutions involved before the negotiation phase
16. PhD supervisors in each institution should be defined prior to the launch of the PhD programme

### **Institutional level**

17. To ensure Standard Operating Procedures and harmonization of process at institutional level that can lead to accountability from both sides
18. To consider if PhD should be granted through a three to four years fellowship or work contract (a work contract can facilitate the access to healthcare etc.)
19. To assure monitoring and evaluation PhD programmes and students at early stage
20. To provide level-up courses if necessary
21. To implement a feasibility study (e.g. Shipment of samples)
22. To analyse framework conditions and plan research according to different regulations (animal testing)

23. To prepare guidelines for issues such as insurance, taxes etc.
24. To have an honest exchange about requirements (e.g. housing) and problems (e.g. funding)



“For me, it was important to hear of the hurdles and challenges of the point of view of the PhD candidates. In your daily work, you usually do not have access to this kind of expertise.” (*Programme manager*)

“When sharing your experience with the people in charge of such programmes, I think I can give valuable input thus making the live of future PhD students easier.” (PhD alumni)

### ▪ **Task 3.3 Paving the way for sustainability of INDIGO scheme (IPP)**

Towards the end of the INNO INDIGO project the Strategy for cooperation beyond the lifetime of the ERA-Net was finalised. The document is the result of a long consultation process with the funding agencies and the EC about the continuation of INNO INDIGO-like calls after the lifetime of the project. The central question that would have to be solved is the financing of the management of the call. In the surveys and the Platform for Funders meetings the funding agencies highlighted the need for support from the EC to further continue the calls with a central management. In parallel, the coordinator discussed with the Indian and European funding agencies about the possibility to jointly finance the management of the calls. Different scenarios such as financial contributions and in-kind contributions were discussed.

In the final meeting of INNO INDIGO the participating funding agencies showed a general interest to continue with IPP-like calls with a sharing of costs for the joint call secretariat and certain in-kind contributions.

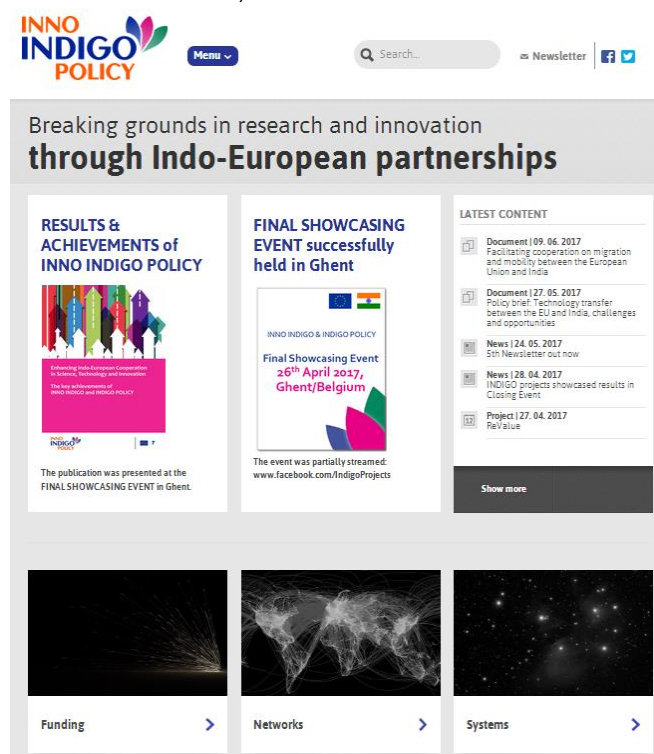
### ▪ **Task 3.4 Communication (ZSI GmbH/GITA)**

Participants: DLR, FCT

#### Website

At the beginning of INNO INDIGO a joint website [www.indigoprojects.eu](http://www.indigoprojects.eu) was set up with INDIGO Policy as the key point of information for an interested audience. The main purpose was disseminating information about future activities, inform about past activities and to also share other relevant information and opportunities of Indo-European STI Cooperation. One of the key functions of the website for INNO INDIGO was its central role in publishing Joint

Calls for Proposals and disseminating information about the projects funded under the IPP. In 2016 the website showed around 30,000 visits.



*Website homepage as of June 2017*

### Newsletter

Our regular communication activities included the newsletter “INDIGO News”. This newsletter was received by a minimum of 1,800 subscribers through internal and external channels such as the mailing lists, the social networks of INNO INDIGO& INDIGO POLICY partner organisations and selected channels from the Indian and European sources. In total, five newsletters were published. The newsletters were a collective effort between INNO INDIGO and INDIGO Policy. The main purpose was to spread the activities and results of the two projects but also other relevant information about Indo-European STI cooperation to an interested audience.

The newsletters can be downloaded here: <https://indigoprojects.eu/news-events/indigo-publications>

# Namaste and welcome!

Dear INDIGO News readers,

This is the 5<sup>th</sup> and final edition of our newsletter since the FP7-funded projects INNO INDIGO and INDIGO POLICY terminated at the end of April. In this newsletter we cover many activities and efforts made during the final period of the INDIGO projects.

INDIGO POLICY published five policy briefs and reports on a wide range of topics: Qualitative outcomes assessment study, technology transfer between EU and India, migration and mobility between India and Europe, innovation issues for EU-India cooperation and a report with best practices and conclusions on India strategic priorities for water related research & innovation.

INNO INDIGO's Valorization Programme - which included a series of webinars and a valorization workshop in Bilbao - was successfully implemented. The projects of the INNO INDIGO Partnership Programme 3 (IP3) S&T Call on "Bioenergy" held a kick-off conference in Helsinki and under the IP3 Innovation Call on "Bioeconomy" the project selection was finished. The final meeting of the Focal Points Network under INDIGO POLICY was held. 16 participants took part in the workshop on "How can establishments of international relations offices at Indian institutions increase India-EU collaboration?" In Delhi, in April, in an Indo-European Joint PhD Workshop in Lisbon, the INNO INDIGO consortium gathered alumni, current PhD students and programme coordinators of such programmes to conduct a SWOT analysis to assess the state of Indo-European research



proposals which would have to be implemented by a self-sustained network of funders. The sustainability of the funding scheme was also the focal topic at the last INNO INDIGO Platform for Funders meeting in Tallinn/Estonia from 27<sup>th</sup>-28<sup>th</sup> of March 2017. We hope the regular update on our project activities and other relevant news from Indo-European cooperation in Science, Technology and Innovation offered you valuable information and an interesting reading. We believe that the partnership between India and Europe is of mutual benefit to both and that a lot has been achieved already. Still, there is a lot of untapped potential that can be and will be explored in the future. We are glad that we were able to make a contribution to further developing this valuable partnership and are looking forward to seeing the partnership evolve in the future.

## INDIGO family grows to 52 funded projects: Successful Kick-off held in Helsinki/Finland

The six funded projects under the IP3 S&T call on "Bioenergy" were successfully kicked off.

Project members of all of the six funded projects under the INNO INDIGO Partnership Programme Call (Science and Technology) "Bioenergy" gathered at the Island of Suomenlinna in Helsinki. The full-day kick-off was held on 10<sup>th</sup> of April 2017 and attracted 35 participants. After the introduction by the host Tuomas Katajamaa (Academy of Finland), the event was started by several presentations:

- Carmen Heidenwolf (Centre for Social Innovation, INNO INDIGO): "Best practices in project monitoring and reporting - tips from the INDIGO Projects family"
- Sini Vuorio (Tees, HCP Energy): "Horizon funding opportunities in Energy"
- Segoña Sento (GAIA, INNO INDIGO): "Valorization of research results"

These inputs were followed by a presentation by Aino-Majja Lakanen (TUT) sharing her experiences from her view INDIGO Project "Bio-e-MAT". Experiences from other projects in the same call were also briefly presented.

After lunch all six projects gave presentations about the objectives and aims of their research. This was followed by a guided tour around the island. The event ended with an informal post-discussion session, that also aimed at networking the participants. Most of the projects also utilized the given chance to organise individual kick-off meetings during their stay in Finland.



## INDIGO News

### Social Media

In addition, the main communication platform, social media presence was established on a wide range of channels such as Facebook, Twitter and Youtube. Considerable gains in reach were made through facebook (VIP URL [www.facebook.com/INDIGOPROJECTS](https://www.facebook.com/INDIGOPROJECTS)) and Twitter (VIP URL [www.twitter.com/Indigo\\_EU](https://www.twitter.com/Indigo_EU) and @ Indigo\_EU). On Facebook we count 3,400 fans and on Twitter we count 420 followers as well as about 750 tweets. The rapidly – increasing follower base was made possible by successful social media campaigns tied to INNO INDIGO Calls announcements and the annual EU-India STI Cooperation Days as well as the Young Scientist competition video series, promoting young talents in the field of STI.

Cross media storytelling: Twitter @Indigo\_EU



Cross media story telling by INNO INDIGO

### Final Publication

The final publication was jointly produced by INNO INDIGO and INDIGO POLICY between December 2016 and April 2017 and was presented at the final showcasing event in Ghent on 26<sup>th</sup> of April 2017. The final publication sums up the main achievements of the two projects to make sure that the results are available in an appealing format even after the lifetime of the project. The final publication was part of the "Collection", a box in which the policy briefs produced by the project INDIGO POLICY. The final publication can be downloaded here:

<https://indigoprojects.eu/news-events/indigo-publications> as well as all policy briefs produced by INDIGO POLICY.



Cover of final publication (left) and “The Box”(right)

## 2. Report on societal implications

Replies to the following questions will assist the Commission to obtain statistics and indicators on societal and socio-economic issues addressed by projects. The questions are arranged in a number of key themes. As well as producing certain statistics, the replies will also help identify those projects that have shown a real engagement with wider societal issues, and thereby identify interesting approaches to these issues and best practices. The replies for individual projects will not be made public.

### **A General Information** *(completed automatically when Grant Agreement number is entered).*

Grant Agreement Number:

609515

Title of Project:

Innovation driven Initiative for the Development and Integration of Indian and European Research

Name and Title of Coordinator:

Mr. Dr. Martin Goller

### **B Ethics**

#### **1. Did your project undergo an Ethics Review (and/or Screening)?**

- If Yes: have you described the progress of compliance with the relevant Ethics Review/Screening Requirements in the frame of the periodic/final project reports?

**No**

Special Reminder: the progress of compliance with the Ethics Review/Screening Requirements should be described in the Period/Final Project Reports under the Section 3.2.2 'Work Progress and Achievements'

#### **2. Please indicate whether your project involved any of the following issues (tick box) :**

**No**

##### **RESEARCH ON HUMANS**

- |   |    |
|---|----|
| • Did the project involve children?                         | No |
| • Did the project involve patients?                         | No |
| • Did the project involve persons not able to give consent? | No |
| • Did the project involve adult healthy volunteers?         | No |
| • Did the project involve Human genetic material?           | No |
| • Did the project involve Human biological samples?         | No |
| • Did the project involve Human data collection?            | No |

##### **RESEARCH ON HUMAN EMBRYO/FOETUS**

- |   |    |
|---|----|
| • Did the project involve Human Embryos?  | No |
| • Did the project involve Human Foetal Tissue / Cells?  | No |
| • Did the project involve Human Embryonic Stem Cells (hESCs)?                                 | No |
| • Did the project on human Embryonic Stem Cells involve cells in culture?                     | No |
| • Did the project on human Embryonic Stem Cells involve the derivation of cells from Embryos? | No |

##### **PRIVACY**

- |   |    |
|---|----|
| • Did the project involve processing of genetic information or personal data (eg. health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)? | No |
|---|----|

• Did the project involve tracking the location or observation of people?	No
<b>RESEARCH ON ANIMALS</b>	
• Did the project involve research on animals?	No
• Were those animals transgenic small laboratory animals?	No
• Were those animals transgenic farm animals?	No
• Were those animals cloned farm animals?	No
• Were those animals non-human primates?	No
<b>RESEARCH INVOLVING DEVELOPING COUNTRIES</b>	
• Did the project involve the use of local resources (genetic, animal, plant etc)?	No
• Was the project of benefit to local community (capacity building, access to healthcare, education etc)?	No
<b>DUAL USE</b>	
• Research having direct military use	No
• Research having the potential for terrorist abuse	No
<b>C Workforce Statistics</b>	
<b>3. Workforce statistics for the project: Please indicate in the table below the number of people who worked on the project (on a headcount basis).</b>	
<b>Type of Position</b>	<b>Number of Women      Number of Men</b>
Scientific Coordinator	0      2
Work package leaders	7      5
Experienced researchers (i.e. PhD holders)	1      2
PhD Students	1      0
Other	9      2
<b>4. How many additional researchers (in companies and universities) were recruited specifically for this project?</b>	<b>0</b>
Of which, indicate the number of men:	0

## D Gender Aspects

5. Did you carry out specific Gender Equality Actions under the project? ☐ Yes  
☒ No

6. Which of the following actions did you carry out and how effective were they?

		Not at all effective			Very effective
<input type="checkbox"/>	Design and implement an equal opportunity policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Set targets to achieve a gender balance in the workforce	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Organise conferences and workshops on gender	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Actions to improve work-life balance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	Other:				

7. Was there a gender dimension associated with the research content – i.e. wherever people were the focus of the research as, for example, consumers, users, patients or in trials, was the issue of gender considered and addressed?

☐ Yes- please specify

☒ No

## E Synergies with Science Education

8. Did your project involve working with students and/or school pupils (e.g. open days, participation in science festivals and events, prizes/competitions or joint projects)?

☒ Yes- please specify

INNO INDIGO Young Scientist Competition at EU-India STI Cooperation Days

☐ No

9. Did the project generate any science education material (e.g. kits, websites, explanatory booklets, DVDs)?

☐ Yes- please specify

☒ No

## F Interdisciplinarity

10. Which disciplines (see list below) are involved in your project?

- ☐ Main discipline<sup>1</sup>: Biological sciences, basic medicine, clinical medicine, health sciences, Other engineering sciences
- ☐ Associated discipline<sup>1</sup>:

☐ Associated discipline<sup>1</sup>:

## G Engaging with Civil society and policy makers

11a Did your project engage with societal actors beyond the research community? (if 'No', go to Question 14)

☒ Yes  
☐ No

11b If yes, did you engage with citizens (citizens' panels / juries) or organised civil society (NGOs, patients' groups etc.)?

☒ No

<sup>1</sup> Insert number from list below (Frascati Manual).

<input type="radio"/> Yes- in determining what research should be performed <input type="radio"/> Yes - in implementing the research <input type="radio"/> Yes, in communicating /disseminating / using the results of the project					
<b>11c In doing so, did your project involve actors whose role is mainly to organise the dialogue with citizens and organised civil society (e.g. professional mediator; communication company, science museums)?</b>				<input type="radio"/> X	Yes No
<b>12. Did you engage with government / public bodies or policy makers (including international organisations)</b>					
<input type="radio"/> No <input checked="" type="radio"/> Yes- in framing the research agenda <input checked="" type="radio"/> Yes - in implementing the research agenda <input checked="" type="radio"/> Yes, in communicating /disseminating / using the results of the project					
<b>13a Will the project generate outputs (expertise or scientific advice) which could be used by policy makers?</b>					
<input checked="" type="radio"/> Yes – as a <b>primary</b> objective (please indicate areas below- multiple answers possible) <input type="radio"/> Yes – as a <b>secondary</b> objective (please indicate areas below - multiple answer possible) <input type="radio"/> No					
<b>13b If Yes, in which fields?</b>					
Agriculture Audiovisual and Media Budget Competition Consumers Culture Customs Development Economic and Monetary Affairs Education, Training, Youth Employment and Social Affairs		Energy Enlargement Enterprise Environment External Relations External Trade Fisheries and Maritime Affairs Food Safety Foreign and Security Policy Fraud Humanitarian aid		Human rights Information Society Institutional affairs Internal Market Justice, freedom and security Public Health Regional Policy <u><b>Research and Innovation</b></u> Space Taxation Transport	

<b>13c If Yes, at which level?</b> <input checked="" type="checkbox"/> Local / regional levels <input checked="" type="checkbox"/> National level <input checked="" type="checkbox"/> European level <input type="checkbox"/> International level		
<b>H Use and dissemination</b>		
<b>14. How many Articles were published/ accepted for publication in peer-reviewed journals?</b>		<b>0 (in preparation)</b>
<b>To how many of these is open access<sup>2</sup> provided?</b>		
<b>How many of these are published in open access journals?</b>		
<b>How many of these are published in open repositories?</b>		
<b>To how many of these is open access not provided?</b>		
<b>Please check all applicable reasons for not providing open access:</b>		
<input type="checkbox"/> publisher's licensing agreement would not permit publishing in a repository <input type="checkbox"/> no suitable repository available <input type="checkbox"/> no suitable open access journal available <input type="checkbox"/> no funds available to publish in an open access journal <input type="checkbox"/> lack of time and resources <input type="checkbox"/> lack of information on open access <input type="checkbox"/> other <sup>3</sup> : .....		
<b>15. How many new patent applications ('priority filings') have been made?</b> ( <i>"Technologically unique": multiple applications for the same invention in different jurisdictions should be counted as just one application of grant</i> ).		<b>0</b>
<b>16. Indicate how many of the following Intellectual Property Rights were applied for (give number in each box).</b>	Trademark	<b>0</b>
	Registered design	<b>0</b>
	Other	<b>0</b>
<b>17. How many spin-off companies were created / are planned as a direct result of the project?</b>		<b>0</b>
<i>Indicate the approximate number of additional jobs in these companies:</i>		
<b>18. Please indicate whether your project has a potential impact on employment, in comparison with the situation before your project:</b>		
<input type="checkbox"/> Increase in employment, or <input type="checkbox"/> Safeguard employment, or <input type="checkbox"/> Decrease in employment, <input checked="" type="checkbox"/> Difficult to estimate / not possible to quantify	<input type="checkbox"/> In small & medium-sized enterprises <input type="checkbox"/> In large companies <input type="checkbox"/> None of the above / not relevant to the project	

<sup>2</sup> Open Access is defined as free of charge access for anyone via Internet.

<sup>3</sup> For instance: classification for security project.

<b>19. For your project partnership please estimate the employment effect resulting directly from your participation in Full Time Equivalent (FTE = one person working fulltime for a year) jobs:</b>		Indicate figure:
Difficult to estimate / not possible to quantify		X
<b>I Media and Communication to the general public</b>		
<b>20. As part of the project, were any of the beneficiaries professionals in communication or media relations?</b> <input checked="" type="radio"/> Yes <input type="radio"/> No		
<b>21. As part of the project, have any beneficiaries received professional media / communication training / advice to improve communication with the general public?</b> <input type="radio"/> Yes <input checked="" type="radio"/> No		
<b>22 Which of the following have been used to communicate information about your project to the general public, or have resulted from your project?</b>		
<input type="checkbox"/> Press Release <input type="checkbox"/> Media briefing <input type="checkbox"/> TV coverage / report <input type="checkbox"/> Radio coverage / report <input checked="" type="checkbox"/> Brochures /posters / flyers <input type="checkbox"/> DVD /Film /Multimedia	<input type="checkbox"/> Coverage in specialist press <input type="checkbox"/> Coverage in general (non-specialist) press <input type="checkbox"/> Coverage in national press <input type="checkbox"/> Coverage in international press <input checked="" type="checkbox"/> Website for the general public / internet <input checked="" type="checkbox"/> Event targeting general public (festival, conference, exhibition, science café)	
<b>23 In which languages are the information products for the general public produced?</b>		
<input type="checkbox"/> Language of the coordinator <input type="checkbox"/> Other language(s)	<input checked="" type="checkbox"/> English	

**Question F-10:** Classification of Scientific Disciplines according to the Frascati Manual 2002 (Proposed Standard Practice for Surveys on Research and Experimental Development, OECD 2002):

## FIELDS OF SCIENCE AND TECHNOLOGY

## 1. NATURAL SCIENCES

- 1.1 Mathematics and computer sciences [mathematics and other allied fields: computer sciences and other allied subjects (software development only; hardware development should be classified in the engineering fields)]
- 1.2 Physical sciences (astronomy and space sciences, physics and other allied subjects)
- 1.3 Chemical sciences (chemistry, other allied subjects)
- 1.4 Earth and related environmental sciences (geology, geophysics, mineralogy, physical geography and other geosciences, meteorology and other atmospheric sciences including climatic research, oceanography, vulcanology, palaeoecology, other allied sciences)
- 1.5 Biological sciences (biology, botany, bacteriology, microbiology, zoology, entomology, genetics, biochemistry, biophysics, other allied sciences, excluding clinical and veterinary sciences)

## 2 ENGINEERING AND TECHNOLOGY

- 2.1 Civil engineering (architecture engineering, building science and engineering, construction engineering, municipal and structural engineering and other allied subjects)

- 2.2 Electrical engineering, electronics [electrical engineering, electronics, communication engineering and systems, computer engineering (hardware only) and other allied subjects]
- 2.3. Other engineering sciences (such as chemical, aeronautical and space, mechanical, metallurgical and materials engineering, and their specialised subdivisions; forest products; applied sciences such as geodesy, industrial chemistry, etc.; the science and technology of food production; specialised technologies of interdisciplinary fields, e.g. systems analysis, metallurgy, mining, textile technology and other applied subjects)

### 3. MEDICAL SCIENCES

- 3.1 Basic medicine (anatomy, cytology, physiology, genetics, pharmacy, pharmacology, toxicology, immunology and immunohaematology, clinical chemistry, clinical microbiology, pathology)
- 3.2 Clinical medicine (anaesthesiology, paediatrics, obstetrics and gynaecology, internal medicine, surgery, dentistry, neurology, psychiatry, radiology, therapeutics, otorhinolaryngology, ophthalmology)
- 3.3 Health sciences (public health services, social medicine, hygiene, nursing, epidemiology)

### 4. AGRICULTURAL SCIENCES

- 4.1 Agriculture, forestry, fisheries and allied sciences (agronomy, animal husbandry, fisheries, forestry, horticulture, other allied subjects)
- 4.2 Veterinary medicine

### 5. SOCIAL SCIENCES

- 5.1 Psychology
- 5.2 Economics
- 5.3 Educational sciences (education and training and other allied subjects)
- 5.4 Other social sciences [anthropology (social and cultural) and ethnology, demography, geography (human, economic and social), town and country planning, management, law, linguistics, political sciences, sociology, organisation and methods, miscellaneous social sciences and interdisciplinary, methodological and historical S1T activities relating to subjects in this group. Physical anthropology, physical geography and psychophysiology should normally be classified with the natural sciences].

### 6. HUMANITIES

- 6.1 History (history, prehistory and history, together with auxiliary historical disciplines such as archaeology, numismatics, palaeography, genealogy, etc.)
- 6.2 Languages and literature (ancient and modern)
- 6.3 Other humanities [philosophy (including the history of science and technology) arts, history of art, art criticism, painting, sculpture, musicology, dramatic art excluding artistic "research" of any kind, religion, theology, other fields and subjects pertaining to the humanities, methodological, historical and other S1T activities relating to the subjects in this group]