



FRENCH EMBASSY IN INDIA

FRENCH

Research & Innovation ecosystem

The French Research & Innovation landscape



- Five ministries involved:
 - Research, Health, Environment, Industry & Defence
- Main Funding agency
 - French National Research Agency (ANR) budget 900 Millions Euros - Dedicated calls for proposals for joint PPP research projects (Instituts Carnot)
- Many dedicated Research Organizations fostering R&I
 - CEA, CNRS, INSERM, INRA, IRD, INRIA, CNES, etc.
- World class Graduate Schools
 - Polytechnique, Ecole Normale, Ecoles des Mines, Centrale, etc.
- Extensive clusters of Universities and Centres of Excellence
- Structures dedicated to PPP & innovation in research
 - Instituts Carnots, Competitiveness clusters, Technology Research Institutes, etc.

The French research landscape

A few figures

- Research budget: 2.26% GDP (5th OECD) – 43 Bn €
- 234 200 Scientists (57% in private companies)
- Sc. publications : 4,1% - ranked 6th in world
- Domains similar to major countries except mathematics (very high)
- 34 science Nobel laureates (2005 in Chemistry, 2007 & 2012 in Physics, 2008 & 2011 in Medicine)
- 11 Fields Medals (Mathematics – 2 in 2010)
- Technological successes: in transport HST (TGV), Ariane, Airbus, Nuclear energy, Computational Biology, etc. all displayed at the India France Technology Summit last October.

Commission Innovation 2030, chaired by Anne Lauvergeon



The report was released recently with 7 ambitions.

In December 2013 the call for proposals was launched, and widely opened to international participation.

1. Energy Storage
2. Materials recycling
3. Marine resources development
4. Vegetable proteins and green chemistry
5. Individualized medicine
6. Silver economy
7. Big Data

300 millions € to support innovation, www.innovation2030.org/en/

To support innovative SMEs

- The innovation agency Oséo that changed name in July into BPIFrance



- 661 M€ were dedicated to innovative SMEs in 2011 in grants or repayable advances :
 - Support to innovation, 315 M€
 - Funding from partners (regions), 89 M€
 - Industrial Strategic Innovation projects, 107 M€
 - Single Interministerial Fund, 112 M€
 - National Investment Plan, 36 M€

Agreement BPI & TDB was signed in Feb 2013 during the State visit of French President

French Competitiveness Clusters

- A competitiveness cluster brings together large & small companies, research laboratories & educational establishments in a specific region to develop cooperative efforts
- Linked to a region and a sector with a partnership approach to a common strategy of development
- 71 clusters:
 - In which 7 200 companies: 73 % SMEs, 15% medium-size enterprises, 12% big companies
 - SMEs have received 64% of the financial support dedicated to companies
 - State funding: 2005-2007: 1,5 B€ / 2009-2013: 1,5 B€
- Active in emerging technologies (nanotechnology, biotechnology, eco-technology, etc.) as well as more mature sectors (automotive, aerospace, etc.).



FRENCH EMBASSY IN INDIA

INDO FRENCH **SCIENCE AND TECHNOLOGY**

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Our Objectives:

- Enabling sustainable ST&I partnerships between France & India
- Developing collaborative research & innovation networks
- Establishing joint research platforms

Our network and tools

- Bilateral agreements between institutes
- Grants, fellowships and mobility support, ANR-DST calls (2013-14-15)
- Financed networks, joint labs, mixed units
- CEFIPRA, the Indo French ST&I fund
- Two French Research Institutes based in India
- *Research, Development & Innovation Club* for French companies established in India
- Feasibility study for an EU-India platform funded by EC
- The Indo-French Water Network, IFWN
- The India-France Technology Summit October 2013

Indo French Joint Labs



And another in Bangalore soon to be signed between CNRS and NCBS!

Success story - Indo French Centre for Applied Mathematics

- Initiated during the visit of President in 2010, agreement signed in 2012
- Based at the Indian Institute of Science in Bangalore
- Network with several partners including:
 - CNRS, Ecole Polytechnique, Ecole Normale Supérieure, INRIA, Université de Nice Sophia-Antipolis & Université de Toulouse III-Paul Sabatier
 - IISc & TIFR Bangalore, IIT Bombay and IIT Kanpur
- IFCAM aims to provide mathematicians from both countries with a collaboration platform
- IFCAM funds joint research projects, exchange visits of faculty and students, exploratory visits, post-doctoral fellowships, joint research workshops, annual summer/winter school, ...

<http://www.math.iisc.ernet.in/~ifcam/>



CEFIPRA / IFCPAR

The Indo French ST&I fund



- Autonomous funding agency under the joint control of DST and the French foreign affairs Ministry
- Through the strong pioneering political will of the French and Indian governments (1987)
- Mandate:
 - Supporting collaborative research projects
 - Organizing seminars and workshops on relevant themes
 - Encouraging PPPs
- Objective:
 - Promotion and development of Indo French cooperation: financing joint research projects, seminars, support to institutes, publications, other initiatives etc.

CEFIPRA key numbers

- Core budget: 3.1m€ in 2013; shared equally by both Gov
- Since 2012, open to funding from Indian & French research organizations, companies, foundations, donors, etc.
 - e.g. Targeted program with Saint-Gobain Research India on sustainable habitat for hot and/or humid climate.
- Avg duration of projects: 3yrs ; Avg funding: 190k €
- Rolling submissions of proposals
 - 2 Peer review panels per year (May/Nov)
 - 1 out of 4 proposals accepted
- 450+ projects approved
- 110+ scientific seminars organized
- 2000+ visits ; 4000+ scientists; 300+ PhDs ; 200+ Postdocs

Research, Development & Innovation Club



- Why?

Solicited by the French enterprises due to the attractiveness in collaborating with India, and the growing number of foreign R&D centres.

In 2009, we count 750 foreign R&D centers in India, only 100 in 2003.

- For whom?

Existing French R&D Centres : Alstom in Baroda, Danone in Delhi, EADS, L'Oréal & Schneider Electric in Bangalore, Lafarge & Total in Bombay, Renault, St Gobain & Valeo in Chennai, Faurecia in Pune

Companies that collaborate either with public research institutes, or through subcontracting with private entities (for ex CROs)

- When?

The French Embassy in India launched the Club in 06/2012 to bring together French actors of R&D and innovation in India – currently has 34 French members

- How?

Objectives of the Club: sharing of experiences, exchanging best practices, increasing synergies and constituting databases to help French companies, etc.

Indo French Water Network



www.ifwn.org

- Building on longstanding partnerships in the water sector
 - Bangalore: Indo French Cell for Water Sciences – IISc & IRD
 - Hyderabad: Indo French Centre for Ground Water Research – NGRI & BRGM
- Aims:
 - Link Indian & French actors in water with a structured dialogue
 - Promote collaborations of all kinds (academic, scientific, industrial...)
 - Promote interdisciplinary research projects with an emphasis on technology and the social sciences
 - Support the transfer of innovative solutions from research
 - Ensure the visibility of actors and their current actions
- Feb 2013: IFWN launched in Delhi
- Aug 2013: IFWN launches its first call for seminars
- Sept 2013: Charter validated by high-level Steering Committee
- Nov 2013: first IFWN-supported seminar in IISc Bangalore
- Feb 2014: second IFWN-supported seminar in University of Pondichéry



INDIA-FRANCE
TECHNOLOGY
SUMMIT | 23-24
OCTOBER 13
NEW-DELHI



France Partner Country for the 2013 Technology Summit

<http://vimeo.com/82530222>



Confederation of
Indian Industry



सत्यमेव जयते
Department of Science
and Technology



INDIA-FRANCE TECHNOLOGY SUMMIT

23-24
OCTOBER 13
NEW-DELHI



An innovative model for an Indo-French meeting gathering a mix of companies, universities, and research organisations in a broad sector range.



INDIA-FRANCE TECHNOLOGY SUMMIT | 23-24 OCTOBER | 3 NEW-DELHI



***27 Thematic Roundtables
with a total of 900 participants***



Reports of roundtables on www.indiafrancesummit.org



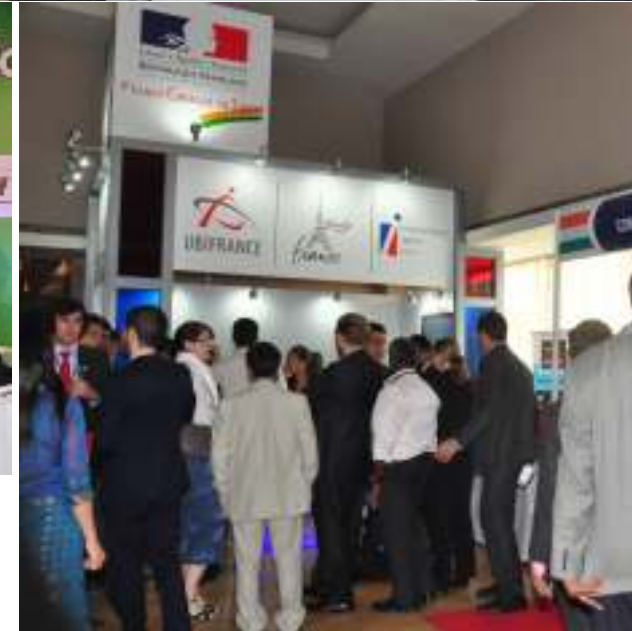
INDIA-FRANCE TECHNOLOGY SUMMIT | 23-24 OCTOBER | 3 NEW-DELHI



- ✓ Largest Technology Summit
- ✓ 900 participants
- ✓ 600 Business to Business (B2B) meetings
- ✓ 70 French research institutions
- ✓ 62 French Industries
- ✓ 100 Indian research institutions
- ✓ 170 Indian companies
- ✓ 27 Thematic Roundtables
- ✓ 5 Technology Showcase
- ✓ 11 MoUs signed
- ✓ 23 Sponsors Companies
- ✓ 51 Stalls



Watch the movie <http://vimeo.com/82530222>



Other Initiatives

- Space collaboration between CNES and ISRO:
 - Joint satellites Megha-Tropiques (2011) and Saral (2012)
- ANR – DST calls : expanding funding for projects
 - Second call closed end Oct 2013 on engineering and neuroscience – *next call summer 2014*
- Raman-Charpak PhD fellowships
 - PhD sandwich fellowships in both directions France-India / India-France for 6 months exchange – *next call Feb 2014*
- EU-India cooperation
 - European Infect-ERA network, coord by France, joint call associating 15 European funding Agencies and the Indian Department of Biotechnology on “Human Infectious diseases” – deadline 2nd April
 - India SI House, 7 countries, coord by France, to build an Indo-EU House on the model of CEFIPRA.

Thank you for your attention



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Keep abreast of all the latest news of the Science Department of the French Embassy and sign up for our quarterly newsletter at

www.frenchscienceindia.org