



# European Business and Technology Centre

## *Workshop on Efficiency, Performance and Sustainability*

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[www.ebtc.eu](http://www.ebtc.eu)

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## EBTC supports clean technology transfer from the research stage to the product/service launch in the Indian market.

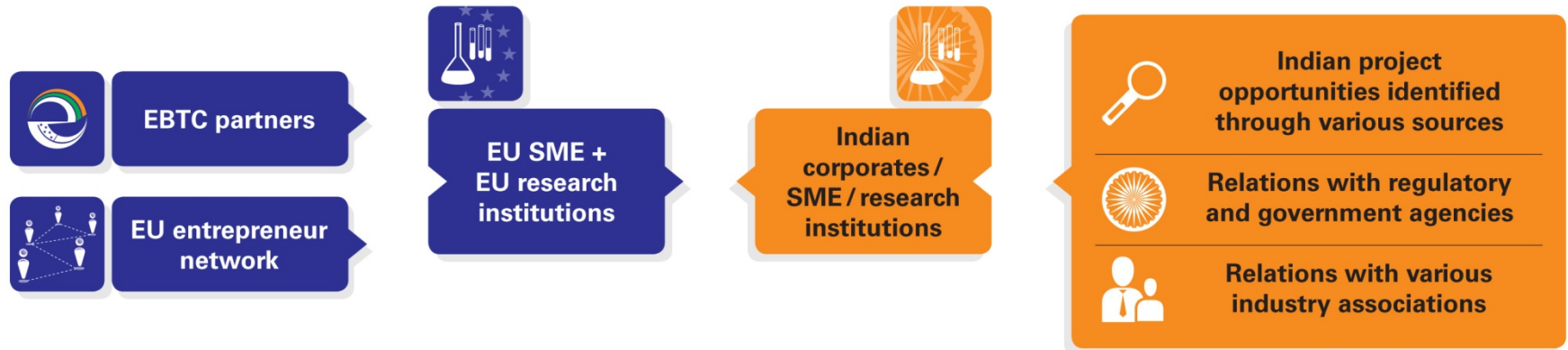
- **4 locations across India:** New Delhi (HQ), Mumbai, Bengaluru and Kolkata
- **4 core sectors:** Biotech, Energy, Environment and Transport
- **4 steps from 'visibility' to 'incubation':**
  - Promoting Europe in India & India in Europe.
  - Providing information and intelligence.
  - Supporting the market entry process from scratch.
  - Providing a holistic range of services, including incubation and support for businesses and R&D.
- **Working in partnership:**
  - Consortium partners give access to SMEs and knowledge institutions e.g. **Fraunhofer Institute, Danish Technological Institute, IVL Swedish Environmental Research Institute**, and more.
  - Shareholder partners include the **Euro-India Research Centre, European Business Group India, European Renewable Energy Council, The Council of EU Chambers of Commerce in India**, and more.

 **Technical expertise in sunrise sectors with wide geographical coverage**

# About EBTC: Consortium Partners



# How EBTC works: from research to market



## Why is it important?

- Adapting advanced EU technologies in India.
- Collaborative research and product development.
- Business development for EU entities.
- Assisting Indian companies with EU solutions for its projects.
- Indian entities can work jointly to leverage cost advantages.
- Bringing value to EU and Indian entities.
- Lowering the cost of technology transfer.

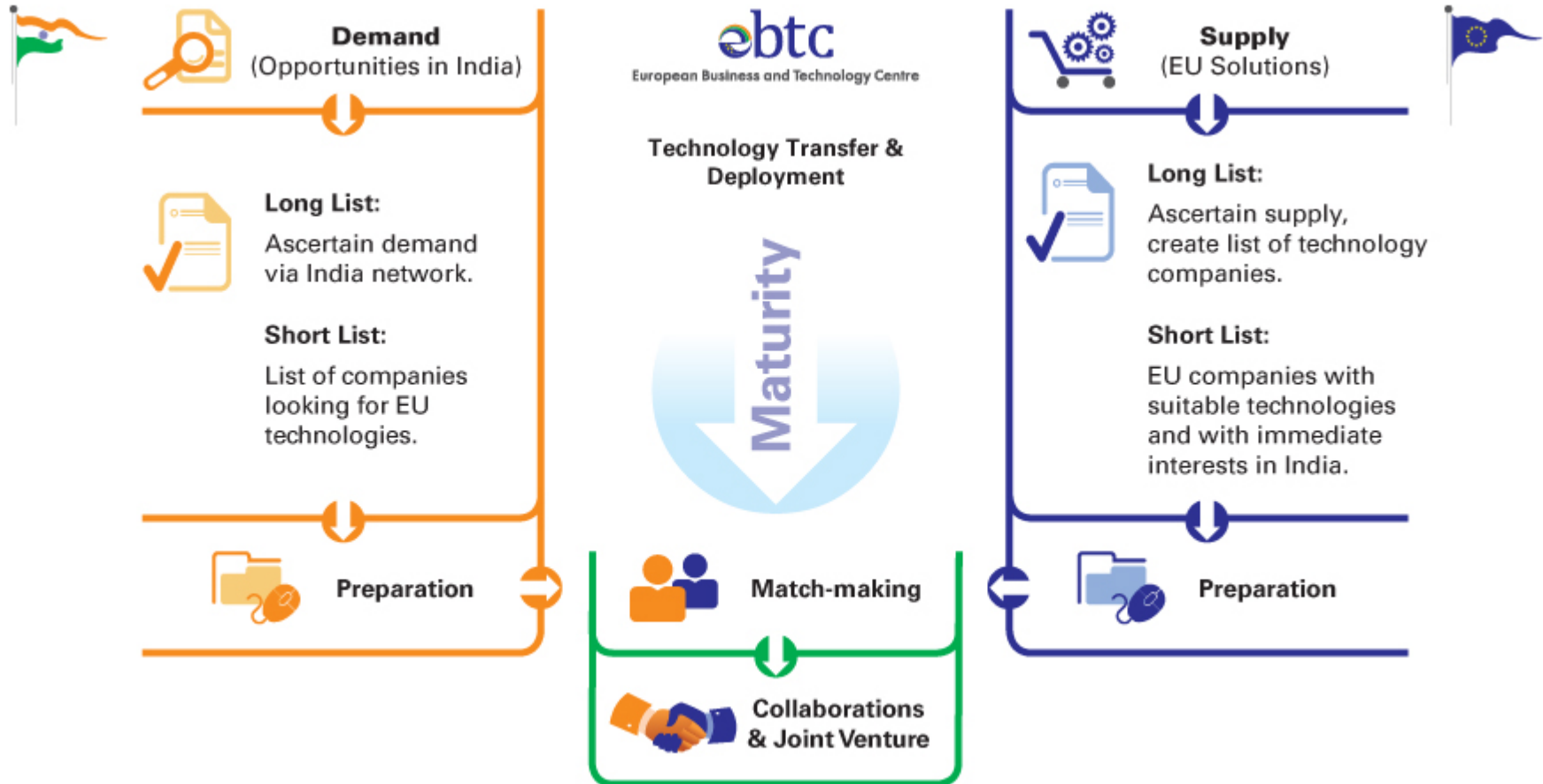
## How will it be executed?

- Starting point: Indian or EU entity looking for collaboration.
- Identify collaboration partner through EBTC network.
- Connect Indian and EU entities.
- Mentor and handhold the collaboration, including structuring joint working relationship, facilitating financing, assisting in mitigating IPR issues (which can arise).
- Feedback from EBTC to EU and Indian institutions.

 **EBTC's powerful collaborative matrix**



# Technology transfer and deployment



➔ Demand-supply matching essential for successful collaborations



## Demonstration projects

- Develop pipeline and coordination of demonstration projects available with central and state research institutions e.g. DST
- Supporting global demonstration programmes e.g. large scale interdisciplinary programmes like Smart Grid, Carbon Capture and Storage (CCS) and Concentrated Solar Plants (CSP)

## Laboratory to market movement

- Commercialization of research
- Facilitate the removal of barriers in basic and applied joint research between India and the EU
- Support the launch of products from joint research in the Indian market
- Support the incubation of joint research spinoffs in the Indian market

## Intellectual Property Rights (IPR)

- IPR helpdesk: activities include information services, IP filing facilitation centre in India, IP services, and technology commercialization
- Coordinating with industry bodies for providing strategic inputs related to IP laws
- Research reports related to IP in coordination with EU partners
- Joint workshops on IPR with Indian partners



## Collaboration between clusters

- EBTC has an MoU with the EU cluster collaboration platform
- EBTC will be setting up a cluster helpdesk to:
  - Increase mutual awareness on cluster policies development methods and management practices
  - Foster cooperation between research and innovation clusters in Europe and in India
  - Facilitating the access to, and contact with, the appropriate stakeholders and understanding their respective research, innovation and industrial environments in Europe and in India

## EBTC Project:

EU-India collaboration for Transport Cluster Development







## EU Partner:

- Ceipiemonte, Italy and Indian partner: Government of Karnataka (proposed)
- MoC with Copenhagen Cleantech Cluster

 **EBTC as an inductive platform**



## IPR – India Helpdesk: Intellectual Property (IP) service profile

 <b>Informational Services</b>	Information on Indian IPR acts, rules, & regulations	Aggregate IP concerns of European companies	Webinars, presentation, case studies for IPR	Template agreement for IPR
 <b>IPR Filing Services</b>	IP filing in Indian patent office for European SMEs	Support IP prosecution with Indian patent office	Reduce IP risk for licensing, technology transfer, and other IP concerns	IP registration/coordination with Indian patent office
 <b>IP Services</b>	Patent searches: prior art, patentability, FTO, validity searches	Patent prosecution support in India for European SMEs	Identification of Indian partners for technology transfer	
 <b>Technology Landscape</b>	Prepare landscapes for clean tech technologies - India scenario		Identify opportunity of technology collaboration	
 <b>Licensor/Licensee Searches</b>	Commercialisation studies	Licensee searches using product and patent databases	Portal for mapping buyers, and sellers	
 <b>IP Due Diligence</b>	IP due diligence report facilitation /preparation	Freedom-To-Operate (FTO) searches	IP competitive landscape (India) on specific technology	

For more information: e-mail us at [ipr@ebtc.eu](mailto:ipr@ebtc.eu) / visit us at [www.ebtc.eu/ipr](http://www.ebtc.eu/ipr)

■ Free services  
 ■ Fee based services  
 ■ Patent Office Fee + EBTC fixed charges  
 ■ Subscription based

 **EBTC: comprehensive IPR services provided**

## Step 1

### Market Insight

- Guidance on doing business and research in India
- Information on regulatory framework
- Information on market access barriers
- Intellectual Property Rights (IPR)- Helpdesk
- Focused market reports



## Step 2

### Market Access Roadmap

- Screening of projects in India at national or state level
- Identification of potential business partners
- Design of market entry strategy
- Customised market intelligence

## Step 3

### Market Strategy Implementation

- Proactive incubation services to acclimatize with minimum risk and costs
- Hands-on-support in bidding for projects
- Assistance in finalizing pilot projects
- Liaising with government and financial institutions



**EBTC services: taking European organizations from the point of considering the Indian market to implementing their projects**

## Role

- To be the business and research interface for EU's power industry for enabling technological collaboration, co-development and transfer.
- To set in place strategic plans for addressing issues in the evolving power sector, such as clean coal technologies.

## Activities

- To become the EU platform for EEC.
- Be a part of the technical working groups tackling common challenges.
- Joint pilot projects to introduce cutting edge technologies for the Indian power sector.
- To provide a platform for experts in the power sector for technological development.
- Set-up an business-focus development centre.
- Help to conduct studies which will allow EU companies to understand the Indian market better and help to fill up knowledge gaps.

 **EBTC is an EU platform for advancing business and research cooperation for clean technologies such as clean coal**

## Short Term

- Case study of the Indian power sector –
  - Start with the generation sector
- Identify requirements of clean coal technology solutions and develop business cooperation
- Identify issues at the EEC platform and facilitate with EU companies and research institutions to address those critical issues

 **EBTC can initiate the activities immediately**

## Long Term

### Business Cooperation

- ✓ Develop an expert network of EU companies and research institution
- ✓ Work on critical technological issues (gaps) identified at the EEC platform
- ✓ Identify demand-side issues at the regional level in India.
- ✓ Best practices mapping in operations and maintenance in EU
- ✓ Clean coal technology events
- ✓ Facilitate pilot projects
- ✓ Address IPR concerns
- ✓ Identify European funds



**EBTC will leverage its end-to-end services for clean coal technology**



## Long Term

### Capacity Development

- ✓ Joint studies with EEC
- ✓ Facilitate research initiatives
- ✓ Research commercialization
- ✓ Capacity building (Customized training at the sector-level)
- ✓ Webinars

 **EBTC understands that capacity development is imperative before project development can make succeed**

**EBTC has helped to facilitate technology transfer to India from countries including:**

- 1. Poland - RAFAKO**
- 2. Sweden – The municipality of Sundsvall**
- 3. Sweden - Winova**
- 4. France – Ciel & Terre & Tech Sub**
- 5. Spain – Idener**
- 6. Spain – PICVISA**

**EBTC also works to identify project opportunities and build capacity in India:**

- 7. Capacity building in Karnataka & Tamil Nadu.**

# EBTC Case Study 1: Poland – RAFAKO



- **Technology / Project type:** 'Circulating Fluidized Bed Boilers'
- **Organizations:** RAFAKO(Poland) & Hari Machines Ltd (Kolkata, India)
- **EBTC's role:** technical and business development expertise which resulted in an agreement signed between the two organizations in August 2011 during EBTC's flagship energy mission
- **Status:** Hari machines is quoting CFBC boilers, based on the RAFAKO technology, to different clients. They are projecting a market of 62 crores. The capacity of the boiler that a Hari machine is dealing with is up to 150 MW

## Generating Steam

Hari Machines ties up with Rafako SA of Poland, largest European boiler maker

Hari Machines Ltd. is now facilitated to offer CFBC Boiler technology from 60 tph to 450 tph with 154 bar pressure and 560 Deg C under Design engineering & Technology from RAFAKO S.A., Poland (largest boiler manufacturing company in Europe) suitable for combustion of washery rejects, dolochar, F-grade coal with high ash contents and biomass. In 2011, RAFAKO SA celebrates its 62 years of continuous success as the design, manufacturing development and manufacture of industrial and power generation boilers and environment protection plant. RAFAKO was started in 1949 and has substantially grown each year to become the largest and most successful manufacturers and leader of a range of boilers fired with coal, oil, gas or a combination of these fuels, as well as other boilers, including CFBC Boilers, HRSG and stoker fired boilers, PC Boilers for sub and supercritical steam parameters. RAFAKO also offers waste thermal treatment plants and biomass combustion boilers.

This cooperation will help HML to address the market potential with the on-



going clean coal technology through CFBC Boiler aiming to capture the market of core industries segment of iron & steel, cement, Large power plant project & process oriented industry by 100% utilisation of high ash contents coal, washery rejects from Coal Washery, dolochar from Sponge DRI & biomass fuel. Boiler manufacturers, the world over, are focusing on energy efficiency and multiple fuel usage to ensure energy security.

Aside from the above, Hari Machines Ltd. has retained with one of the leading global Thermal Engineering consultant agency Ur-TDE, Kempen, Dusseldorf, Germany design engineering consultant for WHR and AFBC Boilers. Mr. H.J Riedel, the Managing Director of the Company was Ex-Design Head of LENTJES, GmbH. Mr. Riedel has worked in the field of waste Heat recovery from various process application and liquid, gas and solid fuel fired boiler with different fluidized bed combustion technology.

Hari Machines is expected now to offer the best techno commercial solution in steam generation requirement for customers with the State-of-art manufacturing facility support of global relevant technology and being located industrially best to raw material sources and Industries in Eastern Region. The manufacturing set-up of Hari Machines is fully equipped with Membrane Panel Welding Machine (PEMA MAKE), Serpentine Tube Bending, CNC Cutting & Boring machines for stress relieving for Plate bending machines, radiography enclosures, shot blasting facility etc.



## Case Study: Needs of the Indian power sector

- Capacity enhancement
- Evacuation
- Continuous improvement in distribution facilities
- Embracing new technologies e.g. smart grid.
- Integration of renewable energy



**EBTC recognizes the above case study as an anchor point for long term business cooperation**

# B2B cooperation: power plants

- Boilers
- Turbines
- Balance of plant
- R&M solutions
- Retrofitting old plants
- Energy audits
- Energy efficiency solutions



**EBTC is interested to work in the above areas**



# Thank You!

Contact us at [delhi@ebtc.eu](mailto:delhi@ebtc.eu)



**European Business and Technology Centre**

**EBTC New Delhi (Head Office)**

DLTA Complex, South Block, 1st Floor

1, Africa Avenue, New Delhi 110 029, INDIA

Tel: +91 11 3352 1500

Fax: +91 11 3352 1501

[delhi@ebtc.eu](mailto:delhi@ebtc.eu)

[www.ebtc.eu](http://www.ebtc.eu)

New Delhi | Mumbai | Bengaluru | Kolkata | Brussels

## More about EBTC...



- **European Service Provider** – EBTC is working with European organizations, bilateral Chambers of Commerce and Embassies to leverage existing efforts and build synergies
- **Global Europe Strategy** – EBTC in India is part of the EU's strategy to enhance Europe's competitiveness in a globalised market
- **Knowledge of the Indian Market** – EBTC publishes periodic studies and reports on the Indian market scenario and has the practical know-how in all aspects of doing business in India
- **Technical Expertise** – EBTC has experts working in the focus sectors of Biotechnology, Energy, Environment and Transport
- **Network** – EBTC is well connected with government organizations, R&D institutes, private companies, financial institutions and industry associations across India
- **Geographical Coverage** – With headquarters in New Delhi and regional offices in Kolkata, Mumbai and Bengaluru, EBTC's network stretches across India



**Competence and value for you**

# EBTC Consortium Partners



- **Denmark** - Danish Technological Institute
- **Estonia** - Baltic Innovation Agency
- **France** - Lyon Chamber of Commerce and Industry
- **Finland** - Finpro
- **Germany** - Fraunhofer Institute for Factory Operation and Automation
- **Germany** - Steinbeis-Europa-Zentrum
- **Germany** - DII
- **Italy** - Piemonte Agency for Investments, Export and Tourism
- **Italy** - Politecnico di Torino
- **Italy** - Milan Chamber of Commerce
- **Italy** - Unioncamere Piemonte
- **UK** - Coventry & Warwickshire Chamber of Commerce
- **UK** - Coventry University Enterprises
- **UK** – One Nucleus
- **Spain** - Acc10
- **Sweden** - IVL Swedish Environmental Research Institute

# EBTC's Shareholder Partners

1. Agence Wallonne à l'Exportation et aux Investissements Etrangers (AWEX)
2. British Business Group (BBG) India
3. Euro-India Research Centre (EIRC)
4. European Business Group (EBG) India
5. European Hydrogen Association (EHA)
6. European Renewable Energy Council (EREC)
7. Indo-Belgian-Luxembourg Chamber of Commerce & Industry (IBLCCI)
8. Indo-German Chamber of Commerce (IGCC) – Founding Shareholder
9. Indo-Italian Chamber of Commerce & Industry (IICCI)
10. Indo-Spanish Chamber of Technology (ISCT)
11. Indo-French Chamber of Commerce and Industry (IFFCCI)
12. Luxembourg European Institute for Asian Studies (LEIAS)
13. Portugal Global (AICEP)
14. The Council of EU Chambers of Commerce in India (EUCCI)

 **Collaboration is the foundation**