Ministry of the Environment
Government of Japan
環境省

IGES
Institute for Global Environmental Strategies

WSDS/Thematic track
Promoting environmentally sound technologies and best practices
(New Delhi, 15 Feb. 2018 - 13:30 - 15:30)

IGES-TERI efforts to promote environmentally sound technologies deployment in India

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B2B Matching: Feasibility studies

FS on Gas Heat Pump (GHP)

FS on Electric Heat Pump (EHP)

FS on Compressed air (CA)

FS on Induction Furnace (IF)

FS on Once Through Boiler (OTB)

FS on Steam System Optimization (SSO)

B2B Matching: Demonstration projects and impact evaluation

- **Electric Heat Pump (EHP): 30%-40% energy saving** due to reduction in fuel consumption of boiler and electricity consumption of chiller

- **Gas Heat Pump (GHP): 35%-45% energy saving** due to switch from electricity to Natural Gas as source of energy

B2B Matching: Awareness creation and capacity building

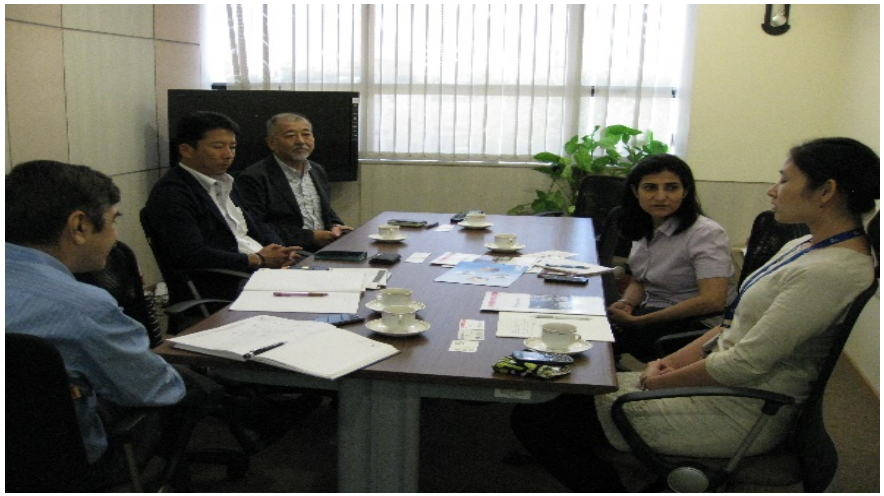
On site trainings for plant engineers

In house trainings for energy auditors (TOT)

Awareness creation and capacity buildings for businesses managers and/or owners

B2F Matching: Explore potential financing options

Mtg. with Small Industries development bank in India (SIDBI)



Mtg. with JICA (India)

Mtg. with JBIC (India)

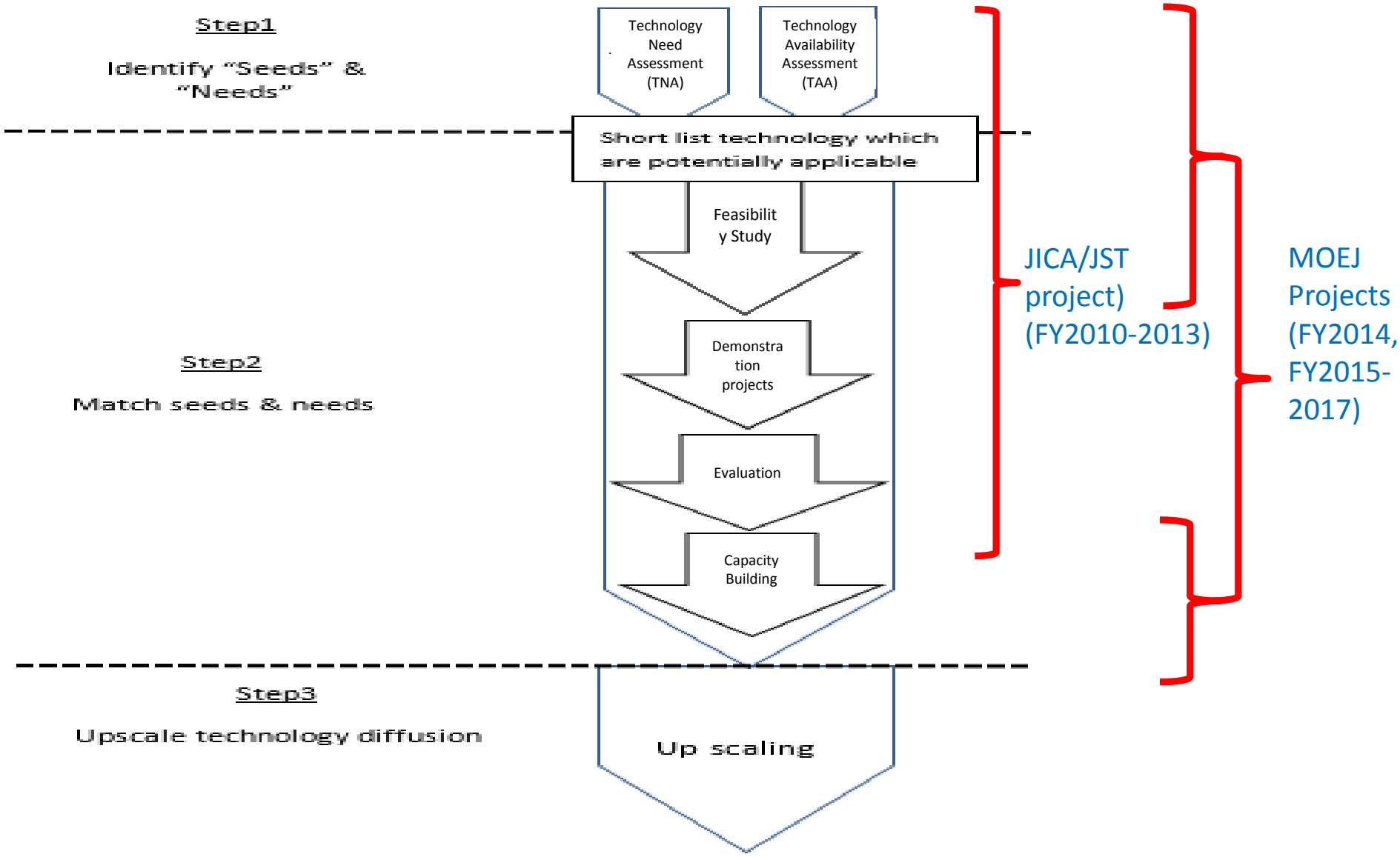
B2P Matching: Explore supporting policy/programme options

e.g. mtg. with Central Boiler Inspectors regarding IBR

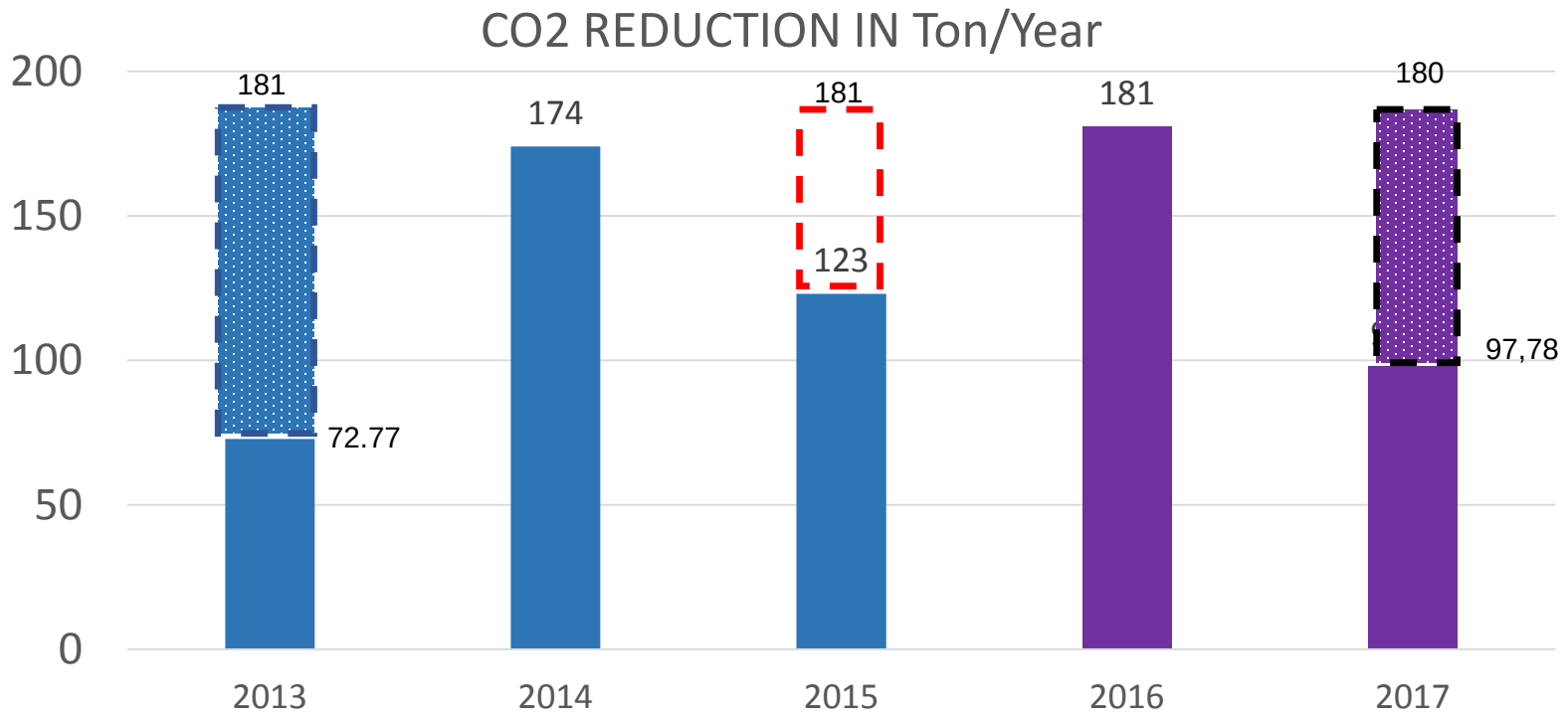
e.g. Mtg. with Gujarat Energy Development Agency (GEDA)

e.g. mtg. with MCCIA, MEDA and SHAKTI foundation

In brief: The whole technology transfer process is addressed, while creating synergy among efforts/projects



Emission reduction from EHP demonstration project:
-Average CO2 reduction is 180 ton/year



Notes:

- Note: In Year 2013, EHP started operation in 23 Jul.
- Year 2015, EHP was under breakdown for 4 months
- Year 2017, the data was just until Mid July.

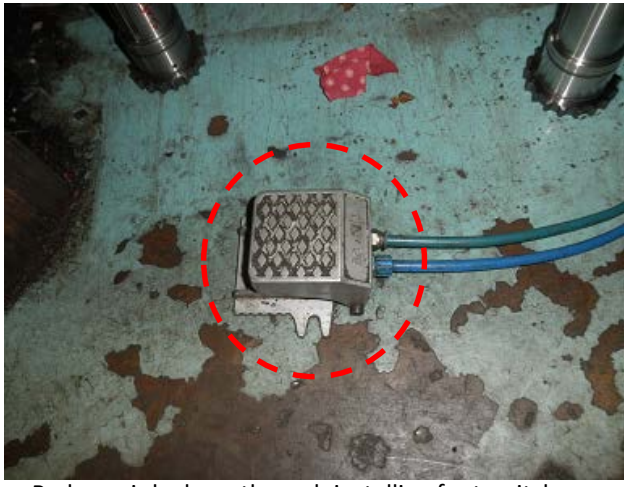
Emission reduction from improving compressed air systems:

-20-40% emission reduction due to implementation of the proposed BOP;

-10 to 20% more could be generated by implementing Japanese hard technologies

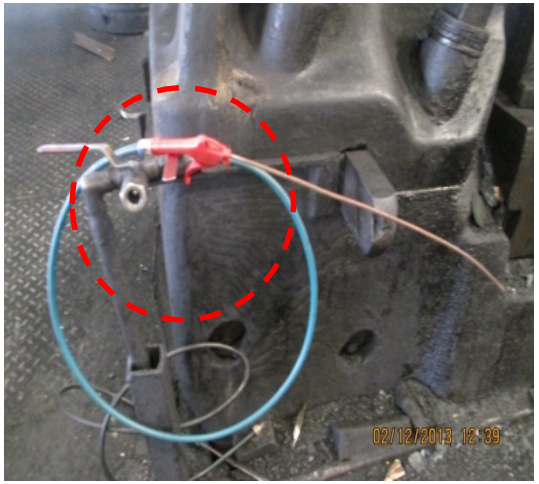
Installation of new receiver and new air compressors (not inverter type)

Adjusting pressure setting



Reduce air leakage through installing foot switch

Reconsider pipe size and design

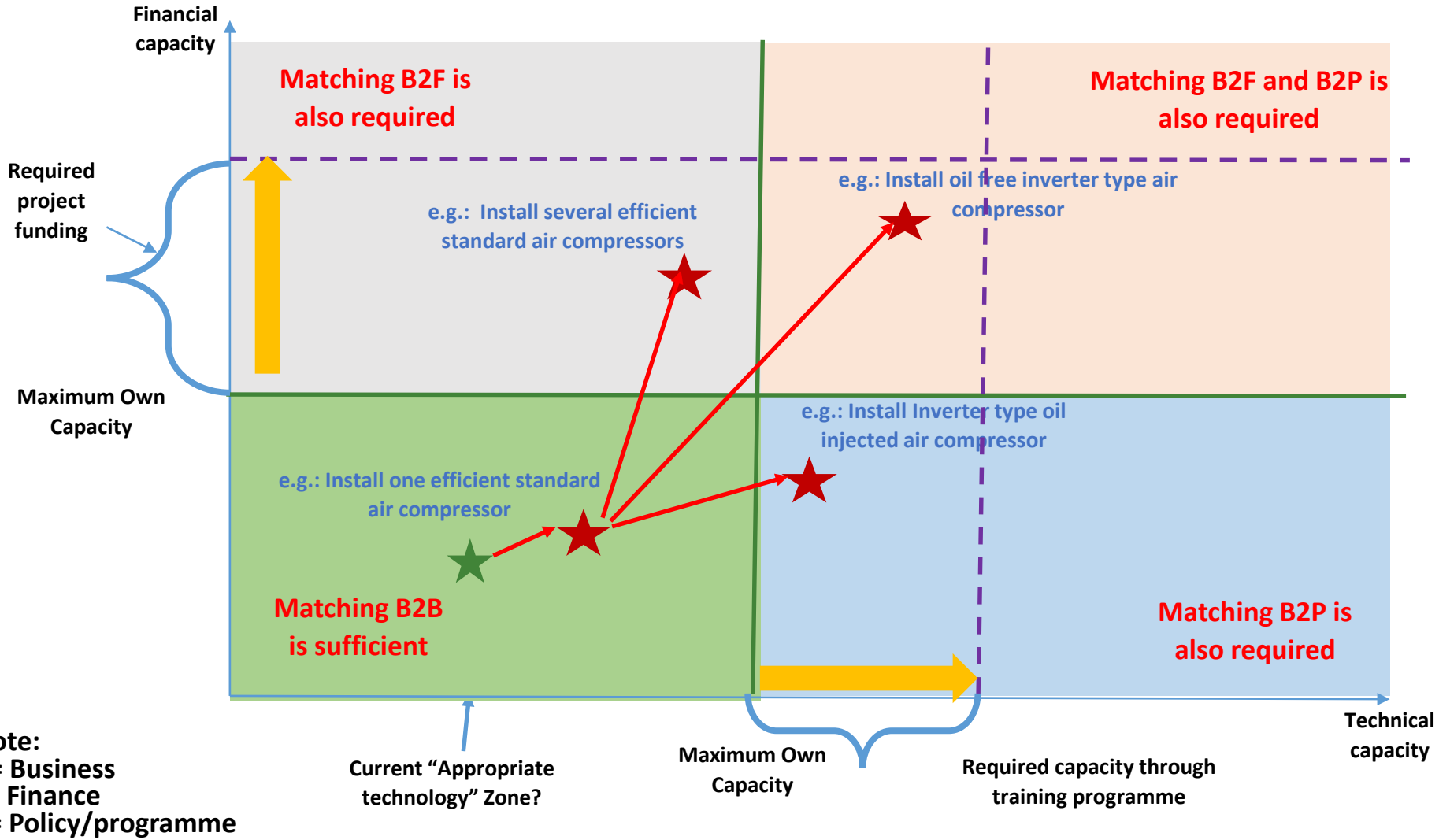


Start the use of efficient air gun

Examples of untapped potentials

Sites	Proposals for hardware/equipements installation	Estimated Energy saving (kWh/year)	Estimated emission reduction (Ton/year)	Estimated operation cost saving (Million JPY/year)	Initial cost (in Japan market) (1000JPY)	Estimated Pay back period (Year)
Mahindra Hinoday Co. Ltd	Install Inverter A.C (NL-0)	308,160	302	3,513,024	7,000	2.0
	Install Inverter A.C (NL-1)	308,160	302	3,513,024	7,000	2.0
	Install Inverter A.C (NL-2)	256,543	251	2,924,592	5,000	1.7
	Install two stages A.C	391,500	384	4,463,100	30,000	6.7
	Install Booster	108,864	106	1,241,050	3,000	2.4
Ahmednagar Forging Co. Ltd.	Install Inverter A.C	350,000	343	3,990,000	10,000	2.5
	Install 2 stage A.C	130,500	128	1,487,700	10,000	6.7
Bombay Dyeing Co. Ltd.	Install Inverter A.C	60,830	56	693,462	3,000	4.3
Arvind Textile Co. Ltd.	Install Inverter A.C	660,200	647	7,526,280	12,000	1.6
	Install high-efficiency drain trap	158,000	155	1,801,200	4500	2.5
Morarjee Textile Co. Ltd.	Install Inverter A.C	660,200	647	7,526,280	12,000	1.6
	Install Booster	109,000	107	1,242,600	1,400	1.1
Raymond UCO textile	Install Inverter A.C	660,200	647	7,526,280	12,000	1.6
	Install high-efficiency drain trap	63,200	62	720,480	1,800	2.5

What support is actually needed and which stakeholder(s) could/should provide it?



Note:
B= Business
F= Finance
P= Policy/programme

Key challenges to tap opportunities:

- High upfront cost of Japanese technologies;
- Significant information/knowledge gap exists: No comprehensive database on “seeds” and “needs” (technologies, financing options, stimulating policies, case studies, approximate prices, etc.)
- Incomplete, fragmented, and uncoordinated efforts among stakeholders to tap opportunities;
- Communication barriers (mindset, language, etc.).

>> It was concluded that there is a need to initiate a stakeholders' matchmaking platform to address all the above challenges in practical and systematic manner.

Initiating Japan-India Technology Matchmaking Platform (JITMAP)

Key feature of the platform

- **Bilateral**: Specific focus on Japan and India;
- **Multistakeholder**: Ensuring **wider networking**, **knowledge & expertise**, **resources**;
- **Practical**: unique forum where matching B2B, B2F and B2P can occur **on the ground** as well as **online** in faster way;
- **Comprehensive**: Information and knowledge sharing about various aspects (**technologies data base**, **policies data base**, **financing options data base**, etc). not just about one of them as in most existing platforms;
- **Systematic**: It addresses **all the stages** of Technology Transfer process, with **special focus given to follow up activities**;
- Ultimate goal is to materialize the opportunities rather than just identifying them; **Develop information rather than just collect and share it**;
- **It is not an alternative option** to existing platforms, but rather a complementary one to them.

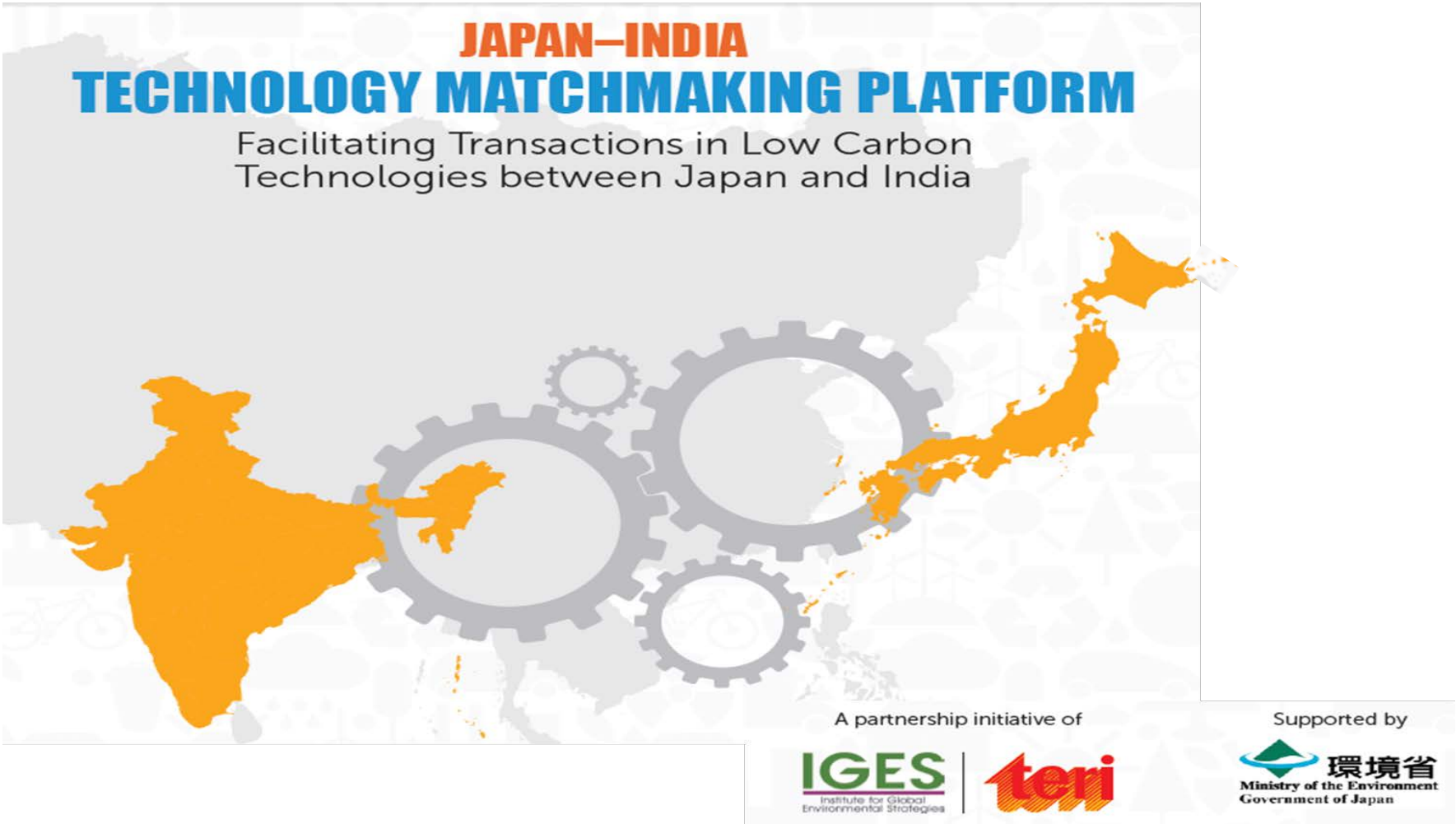
Japan-India Technology Matchmaking Platform (JITMAP)

- JITMAP was initiated/launched as a trial basis on **Jul. 13th, 2016**. IGES and TERI as core members.
- Leading Indian organizations has joined as dialogues members, namely: GEDA, MEDA, MCCIA, GITCO. Others are also expressing interests, from India and Japan.
- Overall we think that JITMAP is working/operational given that:
  - -Actual emission reduction has been generated;
  - -Business opportunities have been created;
  - -Positive and encouraging feedbacks were received from Japanese private sector with whom we have been working. The involvement of Honda, Kobelco compressor, Bando chemical in FY2017 is well acknowledged.

- Holding this Thematic Track, attended by high level representatives from Japan and India is and additional achievement under JITMAP. It is the best timing to launch the JITMAP website, which means to kick off the online matching as well.

Japan-India Technology Matchmaking Platform (JITMAP)

http://jitmap.org



Thank you for your kind attention