METI
Ministry of Economy, Trade and Industry

Human Resource Development in the Manufacturing Sector in India —JIM & JEC—

Ministry of Economy, Trade and Industry
Technical Cooperation Division
Trade and Economic Cooperation Bureau

A video introducing JIM & JEC programs is available on the METI Channel on YouTube.
https://www.youtube.com/watch?v=FD2RbIy9AcY&feature=youtu.be

1. Outline

Japanese company's problem

- Many Japanese companies in India are **not able to recruit sufficiently high quality floor shop leaders and engineers**, which is a big problem in their business development.

Make in India, Skill India

- The main policy pillar of Modinomics proposed by Prime Minister Modi in August 2014.
- Promote manufacturing industry in India through acceptance of direct investment. **(Make in India)**
- Improve skills of young people by vocational training project. **(Skill India)**

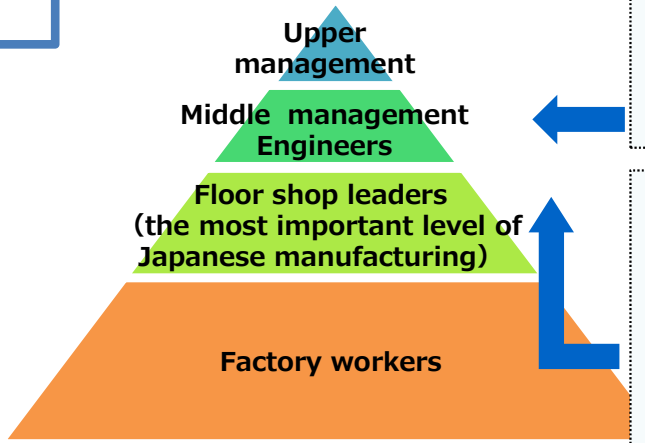
JIM･JEC Project

Japan-India Institute for Manufacturing

- The Ministry of Economy, Trade and Industry, Japan and the Ministry of Skill Development and Entrepreneurship, India signed the MOC in November 2016 to facilitate the projects as follows:
- **Train 30 thousand floor shop leaders and engineers to Japanese standards in the next 10 years.**

(1) Japan-India Institute for Manufacturing (JIM)
(2) Japanese Endowed Courses (JEC)

Target of JIM･JEC



Train future middle management engineer candidates by providing specialized, practical manufacturing education to engineering colleges in India

Train future shop floor leaders in India to the Japanese standard level in key Japanese concepts such as KAIZEN, 5S and Japanese work principles and rules at a new institute operated by Japanese companies.

2. Expectations for JIM and JEC

Speeches at the India Japan Business Plenary (September 2017)

◆ **Speech by Prime Minister Abe (Excerpt)**

I would also like to contribute to Prime Minister Modi's "Skill India." Japanese companies eagerly desire to have leaders on the shop floor who are industry-ready. This summer, four institutes were started as Japan-India Institutes for Manufacturing by Suzuki, Toyota, Daikin and Yamaha Motor, and I am happy to hear that Hitachi Construction Machinery and Toyota Tsusho are also planning to start institutions. (...) **I would like to say this to young people in India: Please come to Japan-India Institutes for Manufacturing.**



Video screening at the summit session

◆ **Speech by Prime Minister Modi (Excerpt)**

From the activities launched today, you can see the depth of the relationship between the two countries. (...) **Human Resource Development through the Japan-India Institutes of Manufacturing developed by Japanese companies.** In addition to Gujarat, they will be developed in Karnataka, Rajasthan and Tamil Nadu.


Representatives of companies operating JIMs/JECs

Statements of Prime Minister Modi at summit meetings

◆ **Japan-India summit meeting (October 2018)**

I appreciate that eight JIMs such as Suzuki, Toyota, Yamaha Motor, Daikin and Toyota Tsusho have been launched.

◆ **Japan-India summit meeting (September 2017)**

I appreciate Japanese companies' contributions to "Make in India."

◆ **Japan-India summit meeting (November 2016)**

I greatly appreciate the establishment of Institutes for Manufacturing by Japanese companies.

I hope more Indian students will be motivated to learn the Japanese language.



3. Development of JIM and JEC

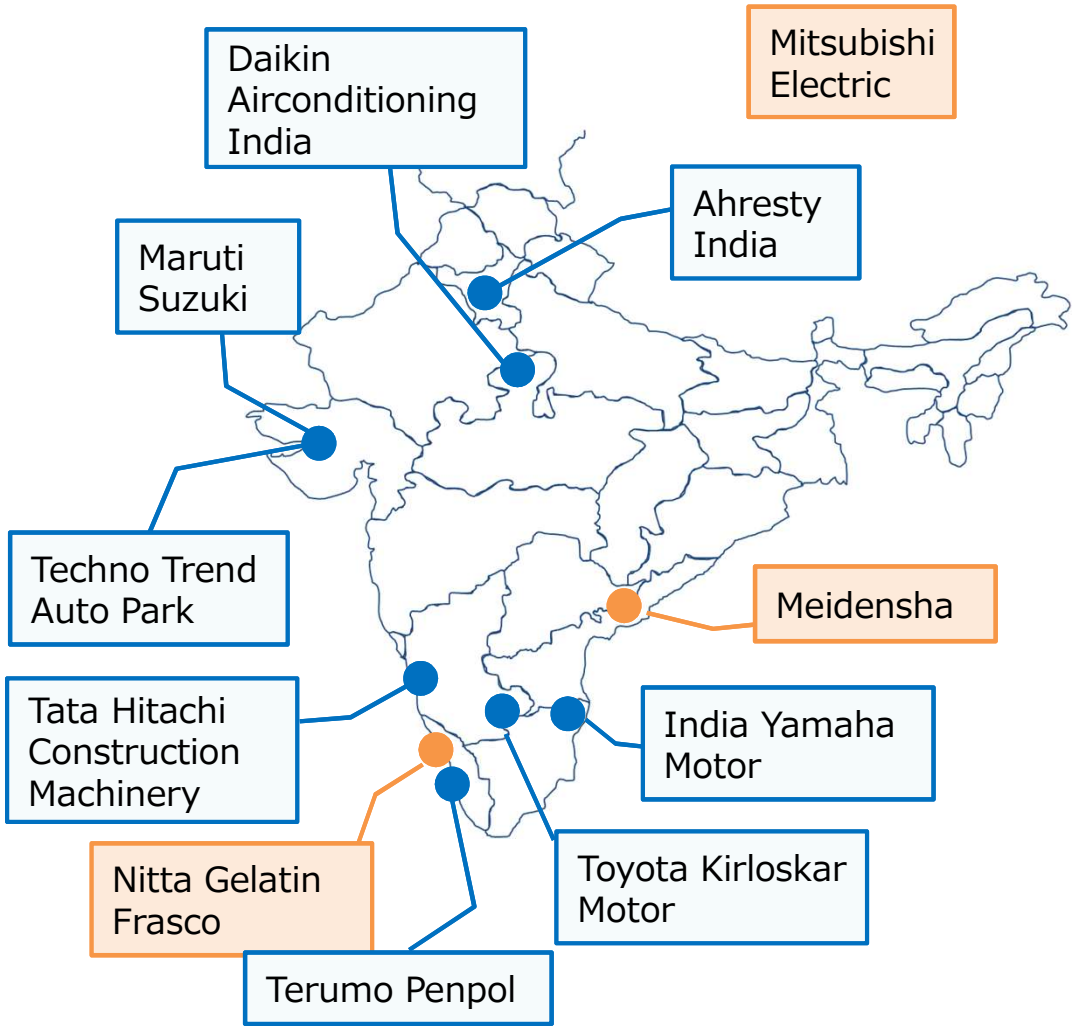
- **Eight JIMs** and **Three JECs** have been launched.

JIMs

		Start date	Number of students
1	Maruti Suzuki	August, 2017	Approx. 400
2	Toyota Kirloskar Motor	August, 2017	Approx. 60
3	Daikin Airconditioning India	August, 2017	Approx. 30
4	India Yamaha Motor	July, 2017	Approx. 40
5	Tata Hitachi Construction Machinery	July, 2017	Approx. 50
6	Ahresty India	July, 2018	Approx. 40
7	Techno Trend Auto Park	September, 2018	Approx. 35
8	Terumo Penpol	December, 2018	Approx. 50

JECs

		Start date	Number of students
1	Meidensha	September, 2017	Approx. 100
2	Mitsubishi Electric	May, 2018	～Approx. 100
3	Nitta Gelatin Frasco	March, 2019	Approx. 20



4. Japan-India Institute for Manufacturing (JIM)

1. JIM (Japan-India Institute for Manufacturing)

- **Japanese companies in India will make young Indian talent acquire the concepts and skills of Japanese manufacturing by using existing factories and facilities to develop future shop floor leaders.**
- Also matches "Make in India" "Skill India" proposed by Prime Minister Modi.

2. Curriculum

- **Concepts and skills of Japanese manufacturing must be taught from the basic level to the practical level. Skills training must also be provided.**

<Main contents>

- **Discipline**: Basic rules and attitudes needed for working in factories
- **Manufacturing spirit**: KAIZEN, 5S (Sort, Set in order, Shine, Standardize, Sustain)
- **Skills**: Practical skills (Welding, Painting, Assembly, Mechatronics, etc.)
- **Logical thinking**: Problem analysis and solution proposals
- **Hands-on training in a factory**: Practical on-site education (on-the-job training)

3. Duration

- 1 year or longer（1 year～3 year)

4. Expected course of graduate

- The courses of the graduates are not limited to the operating company but may include related companies, but of course the graduate themselves are responsible for all career decision-making.

5. Other

- A Japanese company is a company where over 50% of capital investment is provided by a company based in Japan, or a company where 50% of capital investment is provided by a company based in Japan and its president is Japanese.
- **METI will certify institutions that satisfy all of the above requirements as JIM.**

5. Overview of JIMs



Young people
mainly in rural areas

Admission

・Screening based on ability



Japan-India Institute for Manufacturing



Practice



Classroom lectures



Dormitory life

Hiring/Accepting trainees

・Receive graduates as future floor shop leaders
・Provide students with practical training



Japanese companies in India

Support

・Provide equipment for practical training and curriculam
・Screen students and teachers
・Provide operating expenses

Government of Japan
AOTS, APO, JICA

Support

・Certify institutes as JIM
・Provide support for training expenses for lecturers
・Provide common soft skill teaching materials

Support

・Promote the utilization of CSR expenses
・Grant NCVT accreditation (based on needs of companies)

Government of India

Support *Individual negotiation

・Provide land and buildings
・Provide support for operating expenses

State governments of India

6. Advantages of JIMs

Under the JIM program, human resources can be developed flexibly according to human resources needs (knowledge/skill level, quantity) of companies.

Human Resources/Labor

- Medium- to long-term human resource development produces **human resources with a deep understanding of the company's manufacturing** and **loyalty to the company**.
- Excellent students **can be trained to become future shop floor supervisors at an early stage**.
- Japanese government JIM accreditation will help attract the highest level of students.
- Cooperating with the NEEM (National Employment Enhancement Mission) Scheme, an educational system approved by the government of India, **assists the companies in accepting students to participate in OJT and providing students "Earn and Learn model"** .

*NEEM Scheme: An education system approved by the government of India as an effort to promote employment which provides practical education to young people who are otherwise unable to receive education due to family circumstances

Society/Community Contribution

- Participating companies **are highly valued by the government of India** as they **contribute to the "Make in India" and "Skill India" initiatives** proposed by Prime Minister Modi.
- The program **provides vocational training and employment opportunities for young people** living near the factories, **contributing to local communities**.
- A portion of JIM operating expenses **fall under CSR expenses**.

Major supports by METI

- Provide accreditation to institutions as JIMs and inform other governments of their progress.
- Provide common soft skill teaching materials for JIMs.
- Provide support in dispatching lecturers. (the Asian Productivity Organization, the Association for Overseas Technical Cooperation and Sustainable Partnerships)

7. Introduction of eight JIMs

Maruti Suzuki JIM



- A JIM was established at Ganpat University in Mehsana, Gujarat.
- The largest JIM, with about 400 students.
- Students are able to obtain an NCVT certificate from the government of India, certifying the completion of vocational training.



Toyota Technical Training Institute (TTTI)



- Toyota Technical Training Institute was certificated as a JIM in August 2017, the 10th anniversary of its establishment.
- The school focuses on the holistic development of employees from automobile sector knowledge and skills to mental attitude and physical health.



Daikin Japanese Institute of Manufacturing Excellence





- A JIM was opened in Neemrana Industrial Area, Rajasthan.
- All students of the first class were female as a part of an effort to promote women's advancement in the manufacturing sector.
- Students aim to acquire the basics of air conditioning as well as assembly of air conditioners while participating in OJT in a factory.

YAMAHA MOTOR NTTF Training Center

- YAMAHA MOTOR NTTF Training Center is operated in cooperation with the NTTF (Nettur Technical Training Foundation), a vocational training institution in India.
- Students acquire knowledge and skills about manufacturing motorcycles through rotating OJT cycles in a factory.





7. Introduction of eight JIMs

Tata Hitachi JIM

- Tata Hitachi JIM was opened in Dharwad, Karnataka in December 2017.
- The school is operated in cooperation with the MPTA(MPTA Skill Training Foundation), a vocational training institution in India.
- The school focuses on the holistic development of knowledge, skill and attitude related to construction machinery sector.





Techno Trend Auto Park (Toyota Tsusho)

- Toyota Tsusho established JIM in Mandal, Gujarat with Japanese companies in their Industrial Park.
- Under the NEEM Scheme, students can earn and learn, they train students as leaders who master production skills.
- At the end of the course, they can get a diploma.



Ahresty Japan-India Institute for Manufacturing



- Ahresty Japan-India Institute for Manufacturing was established in Bawal, Haryana in July 2018.
- Students aim to acquire the basic knowledge about automobile components, processing and die casting skills through participating in OJT in the factory.



Terumo Penpol





- A JIM was established in Thiruvananthapuram, Kerala in December 2018.
- 50 students take class in Malayalam for 18 months.
- Students aim to acquire discipline, manner and the basic knowledge about medical devices manufacturing.

8. Model Cases of JIM

Case 1 : One company alone, not using NEEM scheme



Japanese company

Establishment
Operation
Dispatch lecturers
Recruitment for students



JIM



Classroom lectures

Training by Japanese company



Practices

OJT by Japanese company
(Training equipment)

- ✓ **Training expense of JIM lecturers will be covered by METI. (→P15)**
- ✓ **Dispatch of JIM lectures will be covered by METI. (→P15)**
- ✓ **A part of operation expense could count as CSR spending if it meets requirements.**

Corporate Social Responsibility Policy Rules

- In the Company Act, 2013, all companies who corresponds to one of the following must spend CSR expenditures. (At least 2% of the average net profit of the company of immediately preceding three years must be spent)

  ①Net worth of rupees five hundred crore or more
  ②turnover of rupees one thousand crore or more
  ③A net profit of rupees five crore or more
  ] during any financial year

- Example : Eradicating extreme hunger and poverty, Promotion of education, Promotion gender equality and empowering women (･･･) **Employment-enhancing vocational skills**

<Activities would not qualify as CSR>

- Activities undertaken by the company in pursuance of its normal course of business.
  (→If you use working production line for JIM's training, JIM's expense wouldn't qualify as CSR expense)
- The CSR activities that benefit only the employees of the company and their families.
  (→ If JIM's students got stipend in NEEM Scheme, JIM's expense wouldn't qualify as CSR expense.)

※If you actually counted as CSR expenses, please contact your company's accounting / law office.

8. Model Cases of JIM

Case 2 : One company alone, using NEEM scheme



Japanese company

Establishment
Operation
Dispatch lecturers



JIM



Classroom lectures

Training by Japanese company/Vocational training school



Practices

OJT by Japanese company (Factory equipment)

Contact



Vocational training school
(NEEM Agent)

Operation
Recruitment for trainee

- ✓ **Training expense of JIM lecturers will be covered by METI. (→P15)**
- ✓ **Dispatch of JIM lecturers will be covered by METI. (→P15)**
- ✓ **It is possible to operate JIM by cooperating with vocational training school.**
- ✓ **Trainee can earn and learn by NEEM scheme, so they will feel more attractive to JIM.**

NEEM Scheme（National Employability Enhancement Mission Scheme）

- This scheme is under the jurisdiction of AICTS（All India Council for Technical Education）.
- The objective is to expand the employability of bachelor / diploma graduates through providing opportunities to learn practical skills in OJT.
- AICTS certifies the organization that meets the training execution ability as NEEM agent. (NEEM Agents List https://www.aicte-india.org/sites/default/files/NEEM%20Agents.pdf)
- Each company contracts with NEEM Agent, accept Trainee（Students）and trains.

8. Model Cases of JIM

Case 3 : Multiple companies, using NEEM scheme



Japanese operating company

Establishment
Operation

Contact

Dispatch lecturers
Recruitment for trainee



JIM



Classroom lectures

Training by Japanese company/Vocational training school



Practices

OJT by Japanese company (Factory equipment)



Vocational training school (NEEM Agent)

Dispatch lecturers



Japanese company

- ✓ **Training expense of JIM lecturers will be covered by METI. (→P15)**
- ✓ **Dispatch of JIM lecturers will be covered by METI. (→P15)**
- ✓ **It is possible to operate JIM by cooperating with vocational training school.**
- ✓ **Trainee can earn and learn by NEEM scheme, so they will feel more attractive to JIM.**
- ✓ **By operating JIM with multiple companies, the burden will be reduced**

9. Example of JIM's curriculum

- The contents of the curriculum can be organized according to the situation of each company.

Example 1

First 3 months

Curriculum		Hour/week
Classroom lectures	Manner, moral	2 hours
	Manufacturing method (math, engineering etc.)	11 hours
	Safety education	2 hours
	Soft Skill Text	5 hours
Practical skills	Manufacturing skills how to use machines	20 hours

After 4 months

Curriculum		Hour/week
Classroom lectures	Manufacturing method (math, engineering etc.)	4 hours
Practical skills	OJT in manufacturing process	43 hours
	Manufacturing skills how to use machines	2.5hours

Example 2

42hours/week × 6 months or 1 year or 2 years

Curriculum		Hour/week
Classroom lectures	Safety, manner, moral	30% of total
	Name and function of machines	
Practical skills	Disassembly, maintenance, Assembly	70% of total



Participating companies can use "Soft Skill Text" (Made by METI)

<Contents of "Soft Skill Text">

Chapter1 Living and conduct norms
Chapter2 English communication
Chapter3 Understanding manufacturing industries and manufacturing sites
Chaper4 History of Japanese technology

10. Japanese Endowed Courses (JEC)

1. Overview

- Widely popularize Japanese companies by having them provide **students who will potentially play central roles as managers or engineers** in the future with practical specialized education
- Training students in **IT sector**, not limited to manufacturing sector

2. Curriculum

- **Educate specialized technologies possessed by Japanese companies through lectures and practical instruction**

<Main contents>

- Lectures based on on-the-job experience
- Practical instruction provided by engineers who actually work for Japanese companies

3. Course period

- Flexible (Except for cases of only one day)

4. Other

- A Japanese company must be involved in operations.
  *A Japanese company is a company where over 50% of capital investment is provided by a company based in Japan, or a company where 50% of capital investment is provided by a company based in Japan and its president is Japanese.

1 1. Overview of JEC



Engineering colleges and universities in India

Japanese Endowed Courses



New curriculum



Lectures



India

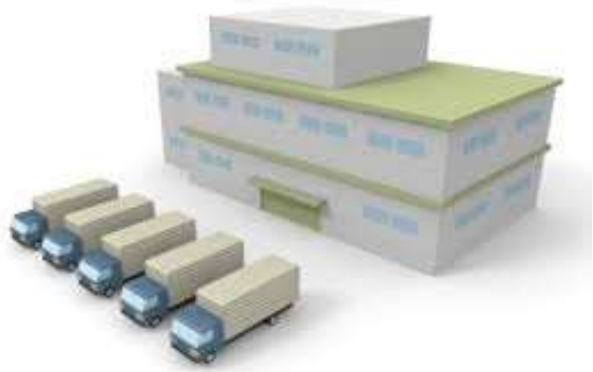
Support

・Approve credits

(Individually coordinate with colleges or universities)

Job search activities
Practical education

・Internships



Japanese company

Support

・Dispatch lecturers

・Provide curriculum

Provide a portion of expenses



Government of Japan
AOTS, APO

1 2. Introduction of three JECs

JEC Provided by Meidensha





University	N.B.K.R Institute of Science & Technology (a private engineering university)
Location	Vidyanagar, Andhra Pradesh
Targeted department	Department of Electricity, etc.
Number of students	Approx. 100
Course contents	・Technology related to power generation/ transformation/distribution and electric transformers ・Japanese-standard manufacturing, safety, quality ・Japanese culture ・Internship in a factory
Course period	One year beginning September 2017 (Approx. 50 hours)
Goals	Hire excellent students and develop core human resorces

JEC Provided by Mitsubishi Electric India





University	25 colleges across India
Location	–
Targeted department	Students in technical university & vocational training school
Number of students	～100
Course contents	・Basic technology of Factory automation
Course period	1～3 days / program
Goals	Contributing to the development of the FA industry in India and improving Mitsubishi Electric's awareness and familiarity to young Indian engineers.

1 2. Introduction of three JECs

JEC Provided by Nitta Gelatin/Frasco



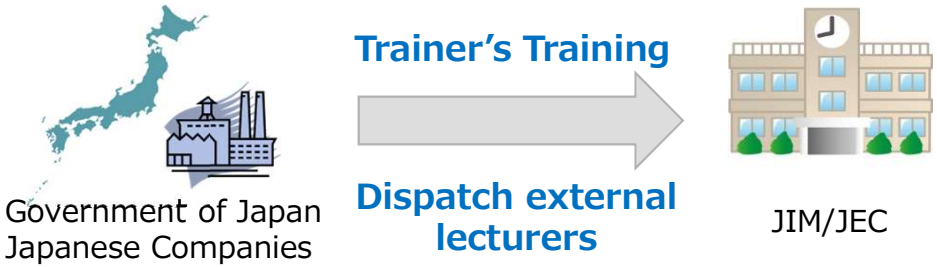


Administration	Nitta Gelatin India Limited Frasco Advanced Technology Private Limited
University	Little Flower Engineering
Location	Kochi, Kerala
Targeted department	Final school years students
Number of students	Approx. 20
Course contents	・Basic knowledge about Japanese manufacturing ・Basic knowledge about manufacturing management ・Skills of CAD/CAM/CNC ・Basic Japanese
Course period	Two weeks beginning March 2019
Goals	Hire excellent students and develop core human resources

<Ref.> Support by METI

Trainer's Training (AOTS)

Objective : Training local stakeholders so that Japanese Companies can do business in developing counties easily.
Targets countries : India and other ODA countries



【Subsidized expenses】
・Travel expenses for experts
・Honorarium for experts / interpreters
・Expense of translation
・Expense of printing
・Expense of venue

The Association for Overseas Technical Cooperation and Sustainable Partnerships（AOTS）
https://www.aots.jp/jp/project/ejp/index.html

Experts Dispatch Programs (APO)

Objective : Improve productivity at local Japanese-affiliated companies and other local firms eligible for support
Targets countries : India and other ODA countries



【Subsidized expenses】
・Travel expenses for experts
・Accommodation expenses and daily allowances for experts
・Expenses for interpreters
・Technical guidance fees (Up to 10,000 yen/day)

Asian Productivity Organization（APO）
http://www.apo-tokyo.org/jp/news/3024/