

REVIEW COMMITTEE BY DEPARTMENT OF HEAVY INDUSTRY ON
Scheme for “Enhancement of Competitiveness
in the Indian Capital Goods Sector

Suggestions to the Review Committee
from Indian Machine Tool Manufacturers’ Association

**‘R&D and Technology Development Centres of
Excellence for Machine Tools and Production Technology’**

1. Projects may be proposed by industries based on the “Technology Roadmap for Machine Tools” [*comprehensive report in 2010 by Office of the Principal Scientific Adviser to Government of India*], as well as recent developments, market demand, etc.
2. Projects proposed need to be for development of technology (either processes or products), or for development of metalworking machine tools currently not manufactured in India at present – and which are imported and have a good market potential in future.
3. Project proposals for technology development may be made by industries along with Indian Institute of Technology Madras [IIT-M] (where technology development is involved) or by industries alone where machine tool development is the primary objective.
4. Companies may be assessed as to their financial and technical strengths before awarding grant for development. A suitable format may be designed for the purpose and included in the detailed project report (DPR) to be so submitted.
5. Proposer industry needs to make a DPR in a standard format {*designed as a template*} that provides information on the following aspects :
 - a. Description of the technology / machine tool to be developed.
 - b. State-of-the-art in the world; main owners of technology / manufacturers of machines; any technology denial situation and other relevant factors.
 - c. State-of-the-art in India: whether technology is available in India or machine tool is currently made in India, with specifications, features and other details.
 - d. Need for the Project – closing technology gap with global manufacturers; meeting market demand now served by imports; etc.
 - e. Market demand estimate with specifications, price, etc.
 - f. Distribution of relating to the Project between the Centre of Excellence and the industry.
 - g. Details of testing, field trials, etc.
 - h. Schedule for completion.
 - i. Project development cost as per format to be designed [*draft given herewith*]. This will give all component costs of the project – indicate industry contribution; and the grant required from the Scheme (up to 80 %).

- j. Full financial statements of the company.
 - k. Technical strengths of the company.
6. Department of Heavy Industry (DHI) need to constitute a Screening Committee for Machine Tool & Production Technology projects which will have members from academia, R&D, industry and Government having deep knowledge of machine tool and production technology field. This Screening Committee will screen and evaluate Project proposals submitted to it, and upon due diligence recommend Project proposals that meet the criteria, to the Apex Committee for final discussion and decision / approval.
 7. It is suggested that the Committee for R&D in Machine Tools (C-MAT) constituted by Office of the Principal Scientific Adviser to Government of India, on which DHI is represented, be adopted for this purpose, as it is staffed by competent persons. C-MAT is also familiar with evaluating projects and funding mechanisms of the government.
 8. DHI needs to also constitute a Project Management and Review Committee (PMRC) which will periodically review the approved Project *{once in four months}*, and give such inputs as to take it through to its successful completion.
 9. The intellectual property rights (IPR) generated by the Project need be assigned to DHI, with the participating industry having first right to use it, free-of-charge. If this is not done in two years, the IPR may be offered to any others. Royalty will accrue to DHI.
 10. The PMRC will have to declare the project successful / unsuccessful.
 11. It needs to be recognised that all Projects may not lead to a successful completion. In such cases, the DHI needs to retain rights to the assets acquired from the grant-in-aid towards the Project. DHI may allow it to be disposed, as per Government of India rules.
 12. It is suggested to operationalise the Centre of Excellence through formation of a special purpose vehicle (SPV) formed between DHI, IIT-M and IMTMA. The SPV would be governed by a Management Committee with representation from all three constituents (as also comprise experts from R&D, industry and academia). Management Committee will oversee the implementation of the Projects. It will act similar to the Board of a company. CMTI will be part.
 13. Projects recommended by the Screening Committee and approved by the Apex Committee will be intimated to the SPV Management Committee.
 14. Funding from the Scheme will flow to the SPV, which will then allocate the available funds to participating industry, IIT-M or other academic / research organisation which will be participating in the Project. This way funding to industry for approved R&D projects can be delivered through the SPV. The 80 : 20 rule will apply to the SPV.
 15. SPV will be audited by Government of India as per procedures applicable to IIT-M.
 16. This model has been adopted by Department of Industrial Policy & Promotion, Ministry of Commerce and Industry, Government of India in the Industrial Infrastructure Scheme.

17. IIT-M may be given a reasonable sum to set up the Centre of Excellence with core staff and basic facilities so as to attract R&D projects. Without this it may be difficult to get industries to come to IIT-M with their Projects.
18. Centre of Excellence once established needs to have wider publicity, for which some funds need to be provisioned from the Scheme.
19. Machines / equipment will be procured on project-need basis, and will form part of the Project cost.
20. On Project cost estimate, industry contribution in design, engineering, in-house manufacture, assembly, testing etc. will be cost-apportioned on the basis of man-hour or man-week cost, machine-hour cost, etc., which can be certified by Auditors of the company. This procedure is followed by organisations like Bhabha Atomic Research Centre which give out work on development projects to industry. The extent of resources used (man-hour, man-week, machine-hour, etc. for each function) multiplied by unit cost will be the total cost of these activities. This will be given in the cost estimate and will be considered as industry contribution to the project.
21. Assessment of academic institutions participating in the Project could be made based on the following parameters :
 - a. Academic strength in the subject of R&D project.
 - b. Availability of staff and research scholars with interest, and competence in the specific subject of R&D.
 - c. Previous experience in the area of the project.
 - d. Any patents / publications in the area.
 - e. Linkages to any other academic institutions which can bring R&D strength to the institution.
 - f. Financial strengths.
 - g. Any other factors that may be relevant.

Suggested Format for Project Development Cost and Contribution from Industry

S. No.	Cost Head	Industry contribution	DHI grant contribution
1	DPR preparation for submission to DHI	xxx	
2	Design : 1. In-house design 2. Consultancy / specialist inputs at CoE / others	xxx	xxx
3	Engineering and process planning	xxx	

4	Materials : 1. Raw material / castings / forgings 2. Imported bought-out parts 3. Indigenous bought-out parts 4. Sub-contract items / services		xxx xxx xxx xxx
5	Manufacture : 1. In-house manufacture 2. Sub-contract / special manufacture 3. Assembly	xxx xxx	xxx
6	Testing & Field Trials : 1. In-house testing 2. External testing 3. Field trials	xxx xxx	xxx
7.	Admin expenses, PMRC visits, etc.	xxx	xxx
8.	Patenting, IPR management		xxx
9.	Capital equipment / software essential for project		xxx

Parameters to assess industry unit submitting project to DHI –

1. Annual reports.
2. Audited balance sheet & profit and loss statements.
3. Ownership profile.
4. Number of years in business.
5. Product profile, at present.
6. Technical manpower resources in-house for design, engineering, manufacture, assembly, testing, etc.
7. Manufacturing facilities.
8. Previous record of developing products.
9. Previous record of using government grants / incentives, if any.
10. Any other as may be desirable.

‘Integrated Industrial Infrastructure Facilities for Machine Tool Industry’

1. Machine Tool Park (MTP) is intended to promote growth as well as capability enhancement of the machine tool industry in India.
2. MTP need to be promoted in conjunction with the primary representative body of the Indian machine tool industry.
3. Promoters would need to form a separate not-for-profit company (SPV) for the specific purpose of promoting growth and development of the machine tool industry in India. SPV, so formed, need to be registered under the Indian Companies Act 2013.
4. MTP need to have units already manufacturing or planning to manufacture machine tools and related equipment, service providers and other organisations contributing to the Indian machine tool industry. It may include select other industries having synergy with the Indian machine tool industry.

5. MTP could be allowed for overseas machine tool and related multi-national companies, which propose to invest in setting up manufacturing units in the MTP.
6. MTP to be open to all eligible machine tool and manufacturing technology companies from any part of India. All companies proposing to locate their units at the MTP may need to become members of the SPV.
7. SPV need to be managed through a Board / Executive Committee duly constituted as per the memorandum of Association of the SPV.
8. Board / Executive Committee shall reserve two places permanently which shall be filled by nominees of the Union and State Governments.
9. SPV to be responsible for acquiring land for the MTP.
10. SPV must have clear title to the land without any encumbrances. It must have rights to sell / lease / sub-let industrial plots / offices to units locating at the MTP.
11. SPV may acquire land on its own or have it allotted through State industrial development boards. In the latter case, land may be obtained on long-term lease if that is the practice followed by State authorities.
12. Total cost of the project to set up the MTP shall be cost of land plus cost of infrastructure to be established.
13. Funding from the Scheme, in the form of grant-in-aid, would be limited to creation of infrastructure facilities at the MTP. Infrastructure facilities, so created, need to be of the highest standards comparable to the best in its class.
14. SPV need to obtain all approvals / clearances as may be required from Central and State Governments as also the Statutory Bodies under whose jurisdiction the MTP is located.
15. Disbursement of grant-in aid funds from the Scheme need to be made at appropriate stages of the Project implementation as per the procedures set out in the Scheme. Such disbursement need to be made directly to the SPV company.
16. SPV need to be responsible for the management, maintenance and further development of infrastructure facilities at the MTP for which it may collect a user fee from the units located there.
17. DHI may need to institute a Monitoring Committee under the Scheme to periodically review developments / progress of the Project. Monitoring Committee, to be chaired by the concerned Joint Secretary at the Department, could conduct a review once in four months, followed by an annual appraisal.

Infrastructure Facilities proposed at the MTP to be funded by the Scheme, in the form of grants-in-aid :

1. Setting up of modern, world-class infrastructure at the MTP such as roads, electricity, water supply, sanitation, communication and other utilities / services including safety and security necessary for the units housed in the MTP.
 2. MTP need to adhere to the land use guidelines / rules applicable under various Statutes.
 3. MTP infrastructure need to have administration and housing facilities for essential personnel, guesthouse / hotel for visitors, training / conference / seminar facilities, in due course of time.
 4. MTP need to have water harvesting and conservation, sewerage treatment plant and other measures to ensure conformance to environmental standards and pollution control. MTP need to offer a pleasant, high quality working environment encouraging units to invest at the MTP.
 5. SPV need to be responsible for implementation of the Project as well as creation of the infrastructure.
 6. MTP need to allocate space for setting up a Common Facility Centre, in due course of time (through a funding mechanism by Government of India).
 7. Given shortage of power, MTP need to allocate space for setting up a power plant of suitable capacity, in due course of time.
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