



**MEMORANDUM OF UNDERSTANDING**

**BETWEEN**

**DEFENCE RESEARCH & DEVELOPMENT LABORATORY (DRDL),  
HYDERABAD**

**and**

**INDIAN INSTITUTE OF TECHNOLOGY, MANDI**

This MoU is entered into on this 08th November 2023 between parties:

**DEFENCE RESEARCH & DEVELOPMENT LABORATORY**, having its Head Office at Defence Research & Development Laboratory Kanchanbagh, Hyderabad-500058, represented by Director, **DRDL** (hereinafter referred to as **DRDL** in short, which expression unless repugnant to the context mean and include their successors and assigns),

**AND**

Indian Institute of Technology having its office at Kamand, Mandi, Himachal Pradesh - 175005, represented by Director, IIT Mandi (herein after referred to as in short IIT Mandi, which expression shall where the context so requires or admits, be deemed to include its successor and permitted assignees).



## PREAMBLE

WHEREAS DRDL is responsible for the design and development of state-of-the-art Missile Systems and technologies required for the deterrence and defence of the country. Systems and Technologies developed by DRDL are deployed on underwater, sea, land as well as air based platforms.

DRDL is working on several technologies required for the Missiles and Strategic Systems including; Aerodynamics and Airframe Design, Computational Fluid Dynamics, Solid, Liquid, Ramjet and Scramjet Propulsion, Precision Fabrication, Systems Analysis, as well as the Command and Control systems for missile based weapon systems.

WHEREAS IIT Mandi, which is charged with the responsibility of generating technical manpower in different areas of engineering and technology, is also contributing to the rapidly growing scientific and technological knowledge and professional excellence in Science and Technology by undertaking industrial & applied research and consultancy.

NOW, THEREFORE, in consideration of the mutual promises made herein and of good and valuable consideration, the receipt and sufficiency of which both DRDL and IIT Mandi hereby acknowledge, DRDL and IIT Mandi, hereby agree to promote/ encourage academic and research cooperation on terms & conditions stipulated below:

### 1. Scope of the MoU

This MOU details the modalities and general conditions regarding collaboration between DRDL and IIT Mandi, for enhancing within the Country the capabilities, expertise, and competence without any prejudice to prevailing rules and regulations in DRDL and IIT Mandi, and without any disregard to any existing mechanism evolved and approved by the competent authorities under Government of India. The scope of the MOU covers collaborative R&D, academic interaction leading to higher qualifications and other programs to benefit students and staff of both the organizations. The link involves collaboration between DRDL and IIT Mandi on research projects relevant to the defence sector and academic interaction in the areas related to the defence sector.

### 2. Objectives

The activities under the link will be as described below for collaboration which forms the schedule to this Memorandum of Understanding. The schedule may be amended by mutual agreement and such amendments will form part of this understanding.



## 2.1 DRDL Association with IIT Mandi

DRDL will be considered as an associated Research Centre of IIT Mandi and IIT Mandi will offer off campus PhD/M.Tech (Research) registrations for the candidates who are selected, sponsored by the DRDL and will be doing fulltime research in DRDL. IIT Mandi will award degree on the successful completion of the academic and other requirements. Regulations for such provisions will be framed (later on) based on mutual discussion and approved by the competent authorities of both the institutions.

## 2.2. Student Exchange

- (i) Scientific/Engineering Officers of DRDL who are interested in carrying out M. Tech.(R)/Ph.D. at IIT Mandi will be facilitated as external candidates or part-time doctoral students on application depending upon their suitability and merit. The candidates from DRDL may be exempted from appearing in written test and mandatory attendance, if any, conducted by IIT Mandi for admission to M.Tech. (R)/Ph.D. programme and may be selected based on direct interview only.
- (ii) Joint supervision of PhD students: Scientific/Engineering Officers of DRDL can jointly supervise Ph.D. / M. Tech (R) students with faculty members from IIT Mandi under the following terms:
  - a) Students from IIT Mandi may opt to work at DRDL for their M.Tech./Ph.D. project, dissertation or thesis in areas related to the defence sector.
  - b) Ph.D./ M.Tech. (R) students enrolled with IIT Mandi would be able to carry out a part of their research work at DRDL.
  - c) The specific part of the Ph.D. /M. Tech. (R) research work to be carried out at DRDL will be identified/recommended by the PG/Doctoral Committee at IIT Mandi, as per requirements.
  - d) The Ph.D./M. Tech. (R) scholars working under the collaboration will have joint supervisors - the Supervisor will be a faculty member from IIT Mandi and the Scientific/ Engineering Officer of DRDL will be co-Supervisor for the students/ scholars.
  - e) The topic/title of the thesis under the collaboration will be chosen in consultation with DRDL and should be within the scope of DRDL research activity and relevant to the defence Sector to the extent possible.



f) The selection and enrollment of the student will be carried out as per the selection guidelines and procedures of IIT Mandi.

g) The PG/Doctoral Committee should carry out periodic reviews of the research scholars at IIT Mandi and DRDL.

h) The students have to submit a brief report on the progress of work to DRDL on a quarterly basis.

i) The researcher pursuing Ph.D. / M. Tech. (R) under this collaboration will be solely responsible for paying his/her tuition fee, etc. as per norms of IIT Mandi.

### 2.3 Faculty Exchange:

- (i) The Supervisor from DRDL for the Ph.D. /M. Tech. (R) students can visit IIT Mandi and vice versa for a limited period as per requirement in connection with the research work. The expenditure incurred towards the visit by the staff/ faculty will be met either from the joint collaborative project(s)/ other funded project(s) under execution by the staff/faculty, if any or by the respective parent organization from the funds identified for such visits.
- (ii) Both Institutions shall encourage lectures from staff/ faculty at the other institution in the areas relevant to the defence sector. Visiting lecturers from either Institution shall be paid TA/DA (as applicable) and honorarium for lectures delivered as per the prevalent rates of the host institution.

### 2.4 Research Collaboration

DRDL and IIT Mandi may jointly submit research projects for consideration under the "R&D schemes of relevant Ministry/Department being implemented through DRDL". The projects will be evaluated as per the existing norms of the R&D scheme. If the project is approved for funding support, a separate MoU will be entered into between DRDL and IIT Mandi for the execution of the project.

### 2.5 Knowledge Dissemination

- (i) **Joint Conferences/ Workshops:**
  - a. Both institutes agree to hold/conduct, whenever feasible, joint workshops/ conferences on topics related to the defence sector.
  - b. Joint Workshop or Symposium would also be conducted by IIT Mandi and DRDL to disseminate the knowledge gained through the research findings from the joint collaborative R&D projects.



c. The matters related to the conduct of the joint conferences/ workshops will be discussed and agreed upon in writing by the appropriate responsible representation of both institutes.

(ii) Young scientific/engineering officers of DRDL may be allowed to participate in short-term courses (in the areas related to the defence sector) offered by IIT Mandi from time to time, based on nomination from DRDL. The registration fees may be waived off for such participants.

(iii) The information on technologies / products developed as part of the collaboration, will be made available on DRDL website (<https://www.drdo.gov.in/labs-establishment/contact-us/defence-research-development-laboratory-drld>) and IIT Mandi website (<http://www.iitmandi.ac.in>).

## 2.6 Sharing of Facilities

(i) The two institutes agree to share the required R&D facilities to promote academic and research interaction.

(ii) The two institutes shall provide access to the library to staff/ faculty as per the prevailing rules and norms in the respective institutes.

(iii) Accommodation/ canteen facilities whenever available, will be provided to the staff/ faculty and research students by both the institutes as per the respective rules and regulations of the institutions.

## 2.7 Co-ordination Committee

(i) Day-to-day implementation of this MoU will be coordinated by the "Research Advisory Committee" at DRDL and respective school at IIT Mandi.

(ii) Further, a Committee comprising of the following members will constitute the Co-ordination Committee to monitor and review all activities under the MoU between the two institutes:

- a. Director IIT Mandi and/or his nominee(s),
- b. Director, DRDL and/or his nominee(s)
- c. HoD of the concerned department(s) from both Institutions will be invited on a need basis.

(iii) The Co-ordination Committee shall:

- a. Review the progress of the identified programmes periodically, based on the output outcome indicator of the MoU as per Annexure-I.
- b. Consider the continuance/ extension of the MoU.



### 3. Patent and Technology Transfer Mechanism

- (i) Research findings shall be owned jointly by DRDL and IIT Mandi. Any publications, IPR etc. arising out of the joint research efforts shall be owned by both DRDL and IIT Mandi. The publications under the collaboration should be co-authored by the concerned staff of DRDL and Research Scholar and/or faculty of IIT Mandi. Prior intimation should be provided to DRDL/IIT Mandi regarding the submission of jointly authored technical manuscripts prepared under the collaboration.
- (ii) DRDL and IIT Mandi will jointly patent the product/Technology/process developed. The patents will be applied in the name of the Director General, DRDL or his nominee and Director, IIT Mandi and the patent rights will jointly vest with DRDL and IIT Mandi.
- (iii) The cost of patenting will be shared by DRDL and IIT Mandi on an equal basis.
- (iv) Technology transfer fees and Royalty shall be decided by mutual consent of DRDL and IIT Mandi after achieving key milestones.
- (v) Transfer of technology to a third party shall be allowed with mutual consent between DRDL and IIT Mandi and all commercial benefits such as royalty shall be available to DRDL and IIT Mandi and will be equally shared.

### 4. Confidentiality

- (i) DRDL and IIT Mandi shall undertake on their behalf and on behalf of their employees/ associates to maintain strict confidentiality and prevent disclosure thereof of all the information and data exchanged/generated pertaining to work under this MoU for any purpose other than this MoU. Each Party shall keep all Confidential Information provided by the other party strictly confidential and agree not to disclose any Confidential Information of the other Party to any third party without the prior written consent of the other, or to use any such confidential information for any purpose other than as contemplated by this Agreement. Each Party hereby agrees to keep any Confidential Information transmitted to it or obtained by it from the other Party relating to the processes employed by the Parties in this project strictly confidential and not to disclose the same or, any part thereof save to those of its employees, affiliates, representatives who require to know the same strictly on need to know basis. Each Party agrees to use all reasonable efforts/endeavors to ensure that any employees, affiliates or representatives to whom such disclosure is made shall



keep such information confidential and shall not use the same for their own purposes or for the purposes of any third party or for any purpose other than provided for under this MOU.

- (ii) No party will disclose any investigation to the media/ any unauthorized person from each institute in any form, whether electronic/ print without mutual consent and approval by Coordination Committee.

#### **5. Statutory Requirements**

- (i) All activities under this MoU will be carried out in accordance with statutory provisions like Workmen's Compensation Act, Labour (Regulation and Abolition) Act, Contract Labour (Regulation and Abolition) Act, Employees Provident Act or any other related enactment passed by the Parliament or State Legislature and any rules/laws made there under by the either Central or respective state Governments.
- (ii) Since the collaboration is between DRDL and IIT Mandi, the terms of the MoU cannot be extended to any other organization/ cannot be clubbed with any other MoU of the IIT Mandi.

#### **6. Force Majeure**

None of the participating agencies / bodies shall be held responsible for non-fulfilment of their respective obligations under this contract due to the exigency of one or more of the force majeure events such as but not limited to Acts of God, war, natural calamities such as flood, earthquakes etc., and strike, lockout, epidemics, riots, civil commotion etc. provided on the occurrence of cessation of any such events, the party affected thereby shall give notice in writing to the other party within one month of such occurrence or cessation. If the force majeure conditions continue beyond six months, the signatories shall then mutually decide about the future course of action.

#### **7. Validity of Agreement**

The MoU comes under immediate force on the date of signing and is valid for 5 years (Five years), from the date of signing. Prior to the expiration date, the MoU may be reviewed for possible extension, if required and may be extended with mutual consent of the parties.

#### **8. Amendments to the MoU**

No amendment or modification of this MoU shall be valid unless the same is made in writing by all the parties or their authorized representatives and specifically stating the same to be



an amendment of this MoU. The modifications / changes shall be effective from the date on which they are made / executed, unless otherwise agreed to.

#### **9. Settlement of Disputes and Arbitration**

- (i) In the event of any dispute or any difference among the parties, such disputes or differences shall be resolved amicably by mutual consultation or through the good offices of the Director, DRDL and IIT Mandi.
- (ii) In the event of any dispute between the parties to this Memorandum of Understanding, it will be resolved as per the Indian Arbitration and Conciliation Act 1996.
- (iii) The venue for arbitration shall be Hyderabad/Mandi and the language of arbitration shall be English or Hindi.

#### **10. Jurisdiction**

The courts at Hyderabad and Mandi shall have jurisdiction in all matters concerning this MoU including any matter arising out of the arbitration proceedings or any award made therein.

#### **11. Indemnity**

Each Party of this Agreement shall be responsible for its own acts and/or omissions and those of its Officers, employees and agents. The Parties shall fully indemnify and hold the other party harmless against the claims arising from the use of third party IPR in its respective work share.

#### **12. Financial Implications**

This MoU is without any financial commitment. If there be a need of any financial commitment, the administrative procedures of DRDL and IIT Mandi shall be followed.





IN WITNESS WHEREOF PARTIES HERETO HAVE ENTERED INTO THIS AGREEMENT EFFECTIVE AS THE DAY AND YEAR FIRST ABOVE WRITTEN.

| For and on behalf of <b>DRDL</b>  | For and on behalf of <b>IIT Mandi</b>   |
|---|---|
| <p><i>GAM</i> 8 NOV '23<br/>Sh. G. A. Srinivasa Murthy<br/>Distinguished Scientist<br/>Director, DRDL</p> | <p><i>L Behera</i> 8/11/23<br/>Prof. Laxmidhar Behera<br/>Director, IIT Mandi</p> |
| <p><i>S. Krishna Mohan</i> 08/11/23<br/>Dr. S. Krishna Mohan<br/>TA &amp; DPA</p>                         | <p><i>Syed Abbas</i> 8/11/2023<br/>Prof. Syed Abbas<br/>Dean (SRIC &amp; IR)</p>  |



**Annexure I**

| OUTPUT                                 |  |        | OUTCOME             |   |        |
|--|--|--------|---------------------|---|--------|
| Output                                 | Indicator(s)                             | Target | Outcome             | Indicator(s)                                  | Target |
| Collaborative Research and Development | No. of Students under DRDL collaboration |        | Scientific Know-how | No. of Publications in Peer-reviewed Journals |        |
|  | No. of collaborative research undertaken |        |                     | No. of Patents Filed                          |        |
|  |  |        |                     | No. of Technology Transfer Initiated          |        |

