#  GUIDELINES

**&**

 **FORMAT**

**FOR**

**SUBMISSION OF**

**PROJECT PROPOSALS**

## UNDER THE SCHEME

**“*Assistance to Collaborative Projects between Institution and Industry for Technology Development/Adoption*”**

**(CPIITA)**

Rajiv Gandhi Science and Technology Commission

Government of Maharashtra

Apeejay House, 3rd floor, Dinshaw Vaccha Road,
Beside K. C. College, Churchgate
Mumbai-400020.

##### Rajiv Gandhi Science & Technology Commission

##### Government of Maharashtra

#####  “Assistance to Collaborative Projects between Institution and Industry for Technology Development/Adoption” (CPIITA)

1. **Preamble: -**

The Government of Maharashtra has set up the Rajiv Gandhi Science and Technology Commission as a Statutory Body under [Maharashtra Act No. XV 2004](https://rgstc.maharashtra.gov.in/pdf/ACT_in_English.pdf) for advancement, propagation and promotion of applications of Science and Technology for benefit of the people. The objectives of the Commission include –

1. To propagate application of Science and Technology through adaptation of technology, formulation of projects for using the technology, field demonstrations, imparting necessary training, publications and consultancy.
2. To act as catalyst or facilitator for transfer of technology from laboratories and other research efforts to application of Science and Technology on a larger scale.
3. To create facilities in institutions for undertaking application-related research and development in areas or disciplines where such facilities are not available or are inadequate.

The emphasis is clearly on applications of Science and Technology for socio-economic development. These activities need to be undertaken in a project mode with clear targets and time frames for implementation. These activities are expected to be undertaken through the existing academic and research institutions (the term Institution used hereafter would collectively mean both/any one of them) depending upon their expertise, capabilities, facilities and interest. Obviously, such institutions would include laboratories, universities, science and engineering institutions and various field agencies of the Government

1. **Present activities and need for supporting R&D projects of interest to industry**

The Commission is already implementing a scheme “[Assistance for S&T Applications](https://rgstc.maharashtra.gov.in/system/files/RGSTC_Scheme_Assistance_for_S_T_Applications%20%281%29_0.doc)” to support innovative applications of Science and Technology for socio-economic development. These applications could be linked to the material resources, specific problems, specific skills and potential for development. The activities could also be area specific or sector specific. Under the peer review system, if the proposals are found to be useful, the Commission provides necessary financial and logistic support for implementation of such projects. This scheme has got a good response from the institutions and a number of projects have been provided financial support by the Commission. Some of the technologies developed under the projects have been transferred to industry/end users. To decentralize the project activity and to support short-term projects of localized nature at affiliated colleges, the Commission is also implementing a scheme “[Assistance for S&T Applications Through the University System](https://rgstc.maharashtra.gov.in/activities)” Under this scheme funds are provided to the Universities in Maharashtra to operate the scheme in the areas of their jurisdiction.

The Commission is also pursuing efforts to create a holistic innovation ecosystem through linkages with institutions like MCCIA, Tata FISE, DSSE at IIT Bombay etc. with a view to create a broad-based environment to facilitate research translation to industry/start-ups/NGOs.

With the objective to encourage the industry-academia interaction and promotion of the innovative activities at engineering institutions, RGSTC has been implementing the Pilot Scheme named “RGSTC TIFAC MSME Internship programme for Engineering Students”. Under this scheme internships are being provided to selected engineering students for projects having direct linkage with specific industrial problems at local industries. It is a part of the project activity in the curriculum. The response is encouraging and some of the developed technologies have been adopted by the industries.

Technological innovation is a continuous chain of translational activities beginning with an idea and going all the way up to its commercialization/large scale deployment. The ecosystem in which such translation takes place does require ability to bridge different kinds of gaps (valleys of death) that often arise. It is thus necessary to develop a comprehensive approach that brings in diverse kinds of support that becomes necessary. While we are moving forward with some of the elements as described above, the efforts so far have focused on creating the push to technology translation. In addition, we should also create a pull effect by promoting ideas from entrepreneurs, start-ups, enterprises and NGOs (the term Industry used hereafter would collectively mean all/any one of them) and bring in a support system for the research inputs they need. A number of Government schemes to support Industry in start- ups/product development do exist. They provide guidance and support for entrepreneurship and financial inputs, It would thus be useful to develop a scheme to enable such Industry to tap available research/technology development capabilities as well as build relevant knowledge ecosystem in the geographical area of their activity. Such a scheme would facilitate and promote industry driven collaborative projects at Institutions and create the necessary pull effect for development of new products/technologies or to commercialize the already developed products /technologies.

1. **Scope of R&D projects to support industry needs**

Stimulating horizontal interaction between Institution and Industry for upgrading the S & T application development capability is one of the objectives of the Commission. The Commission has been making efforts to strengthen the project activities by making them more participative, broad-based and effective. Instead of restricting only to projects generated primarily by researchers alone, it is also desirable to encourage and support projects arising out of specific demands/needs of Industry and meet their R&D requirements through supporting the work at Institutions. By and large, currently available innovation support to Industry often focuses on addressing financial and commercial issues. Academia and research institutions participating for building new inputs through research along with imparting education to students would add much needed complimentary support to industry while strengthening academia itself. The combination of these efforts can accelerate technology development and its commercialization and make the process more robust. There is thus a strong case for supporting R&D projects at Institutions in support of Industry led product development / start-up. Such a proposal should be initiated by the interested industry/start-up, develop an acceptable R&D proposal for work at an Institution in dialogue/consultation with them and submitted to RGSTC in prescribed format. The commission could then carry out due diligence through peer review of such joint collaborative proposal and approve funding to the academic/research institution. The project progress would need to be monitored by a committee consisting of RGSTC reviewers, concerned industry and experts in the field.

In this connection it is worth mentioning here the following provisions in the Commission Act:

* To function as the prime mover for stimulating horizontal interaction between the universities, research and development institutions, industries and other institutions for developing and upgrading science and technology applications.
* Undertake studies and surveys to identify the technology gaps, where there shall be special emphasis on agriculture surveys, items that affect rural economy, artisan’s cottage industries, small scale units, agro based

industries, building materials, horticulture, agriculture, economic exploitation of minor minerals, marine products and some other products as the commission may determine with a view to create value added products.

* To provide necessary seed capital and other inputs on identified projects for propagating application of science and technology.

Besides funding the innovative application-oriented research projects at institution level, research projects linked to specific demands of the end-users such as industry need to be encouraged to convert these innovations into economic activity and enterprise. Here a scheme is formulated in which collaborative projects between the Institutions and Industries could be supported. The scheme envisages inviting proposals originating from industries for Joint R&D collaborative projects between the research institutions and industry. Such an approach would help in generating innovative research projects of interest to Industry, scaling up bench scale work, pilot projects, field demonstrations and locations specific projects. These would be demand driven projects and would improve the possibility of faster progress in terms of technology led development.

1. **Broad features of the scheme:**
* To support innovative technology development with participation of research institutions and industries/ end-users.
* To scale up technologies already developed to pilot plant /plant scale operations.
* To commercialize technologies available with research institutions and relevant to the needs /benefits of Maharashtra.
* To facilitate development of start-ups by sourcing technologies from research institutions as also developed under RGSTC projects.

Under this scheme joint sponsorship would be provided by RGSTC and End-users/Industries to collaborative projects at research institutions falling in following categories:

1. **Technology adoption by the start-up.**

An already established start-up/industry may like to take up commercialization of technology already developed or to be developed by a research institute with [RGSTC funded projects](https://rgstc.maharashtra.gov.in/sanctioned-projects) with due customization*.* Consideration may also be given to individuals with exceptional entrepreneurship drive.

1. **Demand based research & technology development.**

The industry/group of industries/industry association wanting to develop technologies addressing the common issue or problem faced by the related industrial sector.

1. **Scaling up of the lab scale processes/ technologies developed under projects sponsored by RGSTC.**

End-user/industry may be interested in scaling up the lab scale work done at the institution for commercialization.

1. **Replication of successful technologies/models outside Maharashtra.**

End-user/Industry may be willing to source technologies from the institutions (even outside Maharashtra) for deployment in Maharashtra.

1. **Increasing competitiveness in MSME (Micro, Small & Medium Enterprises) sector.**

Institution partnering with industries for upgrading technologies in MSME sector to address a technology challenge being faced, raise quality of products and their competitiveness. This could take the work done under the scheme “RGSTC TIFAC MSME Internship programme for Engineering Students” forward.

1. **Evaluation and validation of developed products.**

Products which are developed by the research institutions and also small-scale industries often need evaluation and validation to accelerate their commercialization. This could be better achieved by joint efforts of research institution and industry. Standardization of products and processes for larger market access is often necessary. For example, in case of the bio-pharma products clinical trials and in case of agriculture products field trials are a critical step in taking the product to the market.

1. **Nature of Support**

It is expected that Institutions proposing the collaborative project would already have tied up funding support for their start up or business-related aspect of the product development effort. Primary objective of this scheme is to support R&D component of this effort to be done by the partnering Institution either in their own laboratories or at field locations of the project. The funding share of partnering R&D institution and proposing Industry will be reviewed as a part of project appraisal process. All relevant information should be provided by proposers for this purpose. Details of Commission funding support would be decided based on the needs of the individual project on a case-to-case basis. It is expected that a significant input for such an effort would be in the form of in-kind contribution by the R&D institution as well as proposing Industry, such use of existing facility, raw materials and allied services. The project is expected to be anchored by the research institution to whom all funds for the project are to be provided.

While the best available R&D expertise should be sought by the proposing Industry, the project should be hosted in an Institution in Maharashtra. Further, such an effort should also involve academic/R&D institution in the geographic area where the project deployment is being targeted. This is important from the perspective of human resource capacity building. Thus, if the partnering R&D institution is not located in the geographical area where the project deployment is targeted, the proposers should also identify a local academic/R&D institution and host an appropriate component of the proposed project there.

1. **Guidelines for formulating proposals**
* The proposal to be jointly designed and implemented by the partnering institution and industry. The participating industry should ensure that the work plan meets the objectives of end-use expected from the project.
* Proposals linked to innovative science and technology inputs in support of value creation would only be encouraged.
* The proposal should facilitate technology translation, transfer and commercialization.
* The proposal may contain an innovative approach to tackle specific problem faced by the End-user/Industry.
* The research grant may be provided as per need of the project and may consist of equipment, manpower, student internships (at rates corresponding to “RGSTC TIFAC MSME Internship programme for Engineering Students”), consumables, travel, pilot plant study, and any other specific costs associated with the project.
* The proposal may be formulated through a consultative process among collaborators, and clearly spell out roles and responsibilities of partnering institutions.
* The Proposal should have specific quantifiable objectives with clearly spelt out scientific and technical details.
* The Institution and the Industry need to sign an agreement between them for implementation of the project.
* Priority will be given to the projects which tend to rank higher on economic viability.
* In case of a common problem posed by any specific Industrial sector, a focused study may be supported by the Commission.

The institute and the industry to agree on following points:

* Both parties (Institution and Industry) will help in technology development/demonstration/pilot plant set up under the said project for its stipulated duration or until completion of its objectives whichever is earlier.
* Both the parties will have access to R&D facilities /setup developed for the said project.
* The IP generated under the project by the Institution will be non-exclusively available to the parties involved as well as to any other interested industry or end-user.
* Any Intellectual Property Rights developed in the project from RGSTC grant will be **jointly** owned by the industry and the institution.
* Intellectual Property Rights with respect to the said Project shall be determined by the guidelines laid down by RGSTC.
* RGSTC may ask the partnering industry to financially/ in kind contribute to the joint project.
* The parties will have access to publications and reports pertaining to the project.
* Prescribed format for MoU is given at **Appendix I**
* The IPR issue may be tackled keeping in mind that the technology transfer is principle focus. Adequate support would be provided to facilitate IPR benefits to the owner
1. **General terms and conditions**
2. The Principal Investigator assumes financial and other administrative responsibilities of the project. Funds would be released to the Head of the Institution undertaking the project.
3. Project proposal must include co-investigator from the Institution.

1. Formal agreement between the collaborating institutions/industry should be submitted with the proposal.
2. International travel is not permissible under the project.
3. The manpower recruited for the project should be paid as per the rules of the Institute and guidelines of the Government, if any.
4. The proposals are considered for approval/rejection by the Project Appraisal Committee. The Committee may seek expert opinion, wherever required.
5. The institute/industry is expected to have core expertise and facilities for the project.
6. On completion of the project a detail technology document is expected to be submitted by the project implementing institution.
7. **Documents/ Enclosures required with the proposal:**
8. Endorsement from the Head of the Institutions (on letter head)
9. Certificate from Investigator(s)
10. Details of the proposals (15 copies)
11. Names and addresses of experts/Institutions who may be interested in the subject/outcome of the project (circulation list).

1. Registration Certificate, Memorandum of Association and Rules and Regulations of the Institutions (for NGOs).
2. Balance Sheet, Audited Statement of accounts and the annual report (pertaining to the last two financial years) (for NGOs).
3. Certificate from Industry
4. **Instructions for filling up the proforma**
5. Please use papers of A-4 size (21 cms x 29 cms).
6. Please type as per the layout given in the format on both sides.
7. Please do not skip reproduction of any section even if the answer is “nil” or given elsewhere.
8. Project title should be precise and should not exceed normally 20 words within two lines.
9. Use telegraphic language to the maximum extent possible for objectives, work plan, methodology, expected outcome etc.
10. **Submission of the Proposal**

All the correspondence, including proposals may be sent to the following address:

Dr. N. G. Shah

Member Secretary,

Rajiv Gandhi Science and Technology Commission,

3rd Floor, Apeejay House

Dinshaw Vachha road, Near K C College

Churchgate, Mumbai-400 020.

Email: rgstcmaha@rediffmail.com

1. **Attaching two Appendices as below:**

Appendix I : Likely format of Agreement/MoU between Institution and Industry

Appendix II: Format for submission of proposals under “Assistance to Collaborative projects between Institution and Industry for Technology Development/ Adoption”

**Steps in the process for evaluation**

Inviting Detailed Project Proposals

Preliminary scrutiny at the commission and reference to minimum 2 domain experts

Conveying referees comments to PI for response

Presentation of project proposals to the Project Appraisal Committee and sanctioning the approved proposal for implementation

Monitoring and review by the Project Monitoring Committee

**Appendix I**

**Likely format of Agreement/MoU between the institution and industry**

* Introduction
* Roles and responsibilities of each party
* Obligation of parties
* Terms for equipment purchase and use
* Revision, Modification and Amendment
* Settlement of disputes
* Effective Date, Duration and Termination
* Indemnification
* Confidentiality
* Force Majeure
* Non-Exclusivity
* Protection of Intellectual Property Rights/ Ownership
* Agreement to be duly signed by Competent Authorities of the Institute as well as the Industry

**Appendix II**

FORMAT FOR SUBMISSION OF PROPOSALS UNDER

“Assistance to Collaborative Projects between Institution and Industry for Technology Development/Adoption” (CPIITA)

PROGRAMME OF RAJIV GANDHI SCIENCE AND TECHNOLOGY COMMISSION, GOVERNMENT OF MAHARASHTRA.

**(TO BE FILLED BY APPLICANT)**

1. **Identification:**

Project title

………………………………………………………………………………………………………………………………………………………………………………

KeyWords …………………………………………………………………………………….

1. Broad Area/ Category

 (i) Technology adoption

(ii) Demand based research & technology

(iii) Scaling up of the lab scale technologies developed under projects sponsored by RGSTC

(iv) Replication of successful technologies/models

(v) Upgrading technologies in MSME sector to address a technology challenge being faced

(vi) Evaluation and validation of developed products

4. Duration: (number of months)

5. Total estimated budget:

 Institution:

 Industry:

1. Principal Investigator (from Institution)

6.1 Name:

6.2 Department:

6.3 Designation:

6.4 Organisation/Institution Name:

6.5 Address (Including Telephone (official & residence), E-mail, Fax) :

1. Co-Investigator (from Institution)

7.1 Name:

7.2 Designation:

7.3 Department:

7.4 Industry Name:

7.5 Address : (Including Telephone (official & residence), E-mail, Fax):

1. Industry Coordinator/representative
	1. Name:
	2. Designation:
	3. Department:
	4. Industry Name:
	5. Address : (Including Telephone (official & residence), E-mail, Fax):
2. **I)** **Details of the Institution**

(a) Major Facilities

(b) Expertise available

(c) List of on-going and completed projects giving the following details.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Project Title** | **Start date** | **Completion date** | **Project cost** | **Sponsoring organization.** |
|   |   |   |   |   |

**II) Details of the Industry:**

a) Name:

b) Year of Establishment

c) Registration Number:

d) Type: Public limited /Private limited

e) Summary of the activities for the previous financial year:

* R& D activity:
* Manufacturing:

f) Has the Industry Received /Applied For Funding From Government/Any Other Agency? If yes then details of research Projects executed by the company in last 3 years.

g) Proposal document to be routed through competent authority

**B) Technical details**

1. **Background**

1.1 Description of problem

1.2 Review of work already done

1.3 Rationale for taking up the project

1.4 Relevance to State priorities

1. **Challenge and Constraints**

Please identify strengths and weaknesses of the implementers vis-à-vis current project in terms of technical expertise, team building, past record etc. Also list the perceived opportunities and threats and describe how PI/Organisation proposes to capitalise on them or avert them.

1. **Description of Proposal**

3.1 Objectives of the project. (Brief and to the point)

3.2 Preliminary Investigations done by organisation. (if any)

3.3 S&T component in the project.

3.4 Linkage with S&T Institutions / NGOs / resource persons / R&D organization / Industry for technical backup.

3.5 Other organizations working in this area.

3.6 Methodology detailing stepwise activities and sub-activities.

1. **Work Plan**

Phase-wise plan of action up to post project activities detailing time schedule. Milestones may clearly be indicated. PERT/GANTT chart may be attached.

1. **Output of the Project**

Attempt may be made to quantify output in measurable parameters.

1. **Likely Impact** (Please attempt to quantify)
2. **Parameters for monitoring effectiveness of project**
3. **Suggested Post Project Activities**
4. **Budget Estimates:**

**Summary (Institution+Industry)** (In Rupees)

 **-----------------------------------------------------------------------------------------------------------**

Item BUDGET

 ---------------------------------------------------------------

 1st Year 2nd Year 3rd Year Total

-------------------------------------------------------------------------------------------------------

1. Recurring
2. Salaries/Wages
3. Consumables
4. Travel
5. Other Costs

 ---------------------------------------------------------------------------------------------------------

1. Non-Recurring

Permanent Equipment

Grand Total (A+B)

---------------------------------------------------------------------------------------------------

**Estimated Budget of the component to be supported by RGSTC**

**Budget for salaries/ wages**

(In Rupees**)**

**------------------------------------------------------------------------------------------------------------**

Designation Monthly BUDGET

(number of Emoluments ---------------------------------------------

persons) 1st yr. 2nd yr. 3rd yr. Total

 (m.m.) (m.m.) (m.m)\*

Full time

i)

ii)

Part time

i)

ii)

Total

\* m.m.- man months to be given within brackets before the budget amount.

**Budget for permanent equipment** (In Rupees)

**------------------------------------------------------------------------------------------------------------**

Sr.No. Name of equipment \* Estimates cost

------------------------------------------------------------------------------------------------------------

1.

2.

------------------------------------------------------------------------------------------------------------

Total

\* Please give justification for each equipment.

**Estimated Budget of the component to be supported by Industry**

 **Budget for salaries/ wages**

(In Rupees**)**

**------------------------------------------------------------------------------------------------------------**

Designation Monthly BUDGET

(number of Emoluments ---------------------------------------------

persons) 1st yr. 2nd yr. 3rd yr. Total

 (m.m.) (m.m.) (m.m)\*

Full time

i)

ii)

Part time

i)

ii)

Total

\* m.m.- man months to be given within brackets before the budget amount.

**Budget for permanent equipment**

(In Rupees)

**------------------------------------------------------------------------------------------------------------**

Sr.No. Name of equipment \* Estimates cost

------------------------------------------------------------------------------------------------------------

1.

2.

------------------------------------------------------------------------------------------------------------

Total

\* Please give justification for each equipment.

**D. PROFORMA FOR BIODATA OF INVESTIGATORS**

1. Name :
2. Date of Birth:
3. Institution:
4. Academic career:

Professional career:

1. Award/prize/certificate etc. won by the investigator:
2. Publication (Numbers only):

Books Research Paper, report

General articles

Patents Others (please specify)

1. List of completed and ongoing projects

Sr.No. Title of project Duration Total cost Funding Agency

 From To

1. Projects submitted

Sr.No. Title of project Name of Organisation Status

(Name & Signature )

Date :………………………

Place……………………….

 **ENDORSEMENT FROM THE HEAD OF INSTITUTION**

 **(TO BE GIVEN ON LETTER HEAD)**

**PROJECT TITLE:**

1. Certified that the Institute welcomes participation of Dr./Shri/Smt/Km ……………………… ………………………………as the Principal Investigator and Dr./Shri/Smt./Km…….………… …………………………………………….. as the Co-Investigator for the project and that in the unforeseen discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project (with due intimation to RGSTC).
2. Certified that the equipment, other basic facilities and such other administrative facilities as per terms and conditions of the grant, will be extended to investigator(s) throughout the duration of the project.
3. Institute assumes to undertake the financial and other management responsibilities of the project.

 Name and Signature of Head of Institution

Date:………………..

Place:………………..

**REMARKS**

 In regard to research proposals emanating from scientific institutions/laboratories under various scientific departments, the Head of the institution is required to provide a justification indicating clearly whether the research proposal falls in line with the normal research activities of the institution or not and if not, the scientific reasons which merit its consideration by Rajiv Gandhi Science & Technology Commission.

**CERTIFICATE FROM THE INVESTIGATOR**

PROJECT TITLE

1. I/We agree to abide by the terms and conditions of the RGSTC grant.
2. I/We did not submit this or a similar project proposal elsewhere for financial support.
3. I/We have explored and ensured that equipment and basic facilities will actually be available as and when required for the purpose of the project. I/We shall not require financial support under this project, for procurement of these items.
4. I/We undertake that spare time on permanent equipment will be made available to other users.
5. I/We enclosed the following materials.

ITEMS NUMBER OF COPIES

1. Endorsement from the Head of One

 the Institution (on letter head)

1. Details of the proposals 15
2. Registration Certificate, Memorandum of

Association, rules and regulations of the

Institution, audited Balance sheet and Annual

Report of previous two years. (applicable only

for NGOs, field groups, registered societies)

1. Any other (Please specify)

Name & Signature of Investigator

Date :………………………

Place ……………………….

**CERTIFICATE FROM INDUSTRY**

……………(Name of the Company) is pleased to collaborate with …….(Name of the Institution) in execution of the jointly developed project entitled …….(Title of the Project) of interest to the Industry. The Company assures full support and contribution to the project. The Company would also enter into MoU with the Institution for implementation of the project. The Company also assures adoption of the technology developed under the project on non-exclusive basis and supports its utilization on a wider scale in the interest of the state of Maharashtra.

Head /Competent authority of the Industry