

Call for Proposals for Technology Development under Technology Systems Development Programme (TSDP)

Department of Science & Technology (DST), Govt. of India is implementing a Technology Systems Development Programme (TSDP). The Programme supports activities aimed at developing and integrating technologies to evolve technology systems both in the advanced/emerging areas and in traditional sectors/areas. Under the Programme, feasibility of fresh ideas/ concepts is assessed for their potential conversion into useful technology/product.

The mandate of Technology Systems Development Programmes (TSDP) is for converting proof-of-concepts for development of pre-competitive/commercial technologies/ techniques/ processes. The commercialization of these technologies needs further assessment/incubation, which does not fall in the scope of the programmes. Transfer of technology developed under the project to the industry will be the onus of the host institutions. The projects related to only hard core technologies will be considered. Fundamental/exploratory/basic/applied research oriented projects would be discouraged. Proposals of incremental R&D over the existing technologies may be considered for support. Theme based concept proposals for proof of feasibility will not be considered under TSDP-DST. Only full fledged complete proposals for development of technology/process/product will be considered under TSDP. Projects related to design and development of Software/IT, as required for products and processes, as a part of technology development project shall be considered. Pure software development does not fall in the scope of the programme. Technology upgradation of Industry Clusters in select areas should be taken up under TSDP. The proposals where in all/most of the comments are negative will be considered by the Committee, in absentia. The proposal where in the project cost is less than Rs.30:00 lakhs will be considered in absentia.

The specific objectives of the Programme are to:

- ❖ develop and integrate technologies following a holistic approach in identified areas;
- ❖ promote application of modern/advanced technologies to socio-economic problem solving;
- ❖ encourage developments in application of R&D activities; and
- ❖ promote activities aimed at improving technology, technique, material, methods and other appropriate activities conducive for development of technology status in identified areas.

Some of the typical areas in which Proposals can be submitted are Glass and Ceramics Technology Up-gradation., Molecular/Biomolecular Electronics/Conducting Polymer and Biosensors, Waste (Plastic, Hospital & Electronic) Utilization and Management, Laser/ Plasmas/ Microwave Technology, Alternate Fuels, Fuel Conservation, Efficient Utilization of Fuels, Innovative Civil Infrastructure Technologies etc.. The above list is not exhaustive and Proposals in other innovative areas are equally welcome if the activity is perceived to be useful by DST for technology advancement in the country and is not being taken up under any other major R&D programmes of the Government of India.

The Project Proposals could be submitted through out the year for financial support by scientists/engineers/ technologists working in academic institutions/registered societies/R&D institutions/laboratories having adequate infrastructure/facilities to carry out Technology Development work/prototype building. Under TSDP, DST always prefers Multi-disciplinary, Multi-institutional, Industry associated mega budget project for development of technology, technique, process, product etc. including field trials, up-scaling of the developed technology.

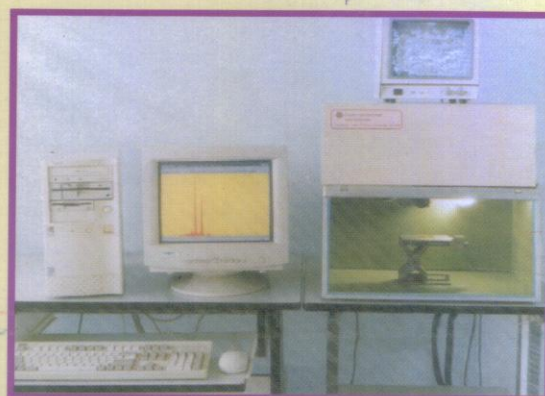
The guidelines for formulation and submission of projects and the prescribed format can also be collected from Dr. Rajeev Sharma, Scientist-D & Member Secretary (PAC on Tech. Systems), Room No: 20, Hall-C, Department of Science and Technology, Technology Bhavan, New Mehrauli Road, New Delhi – 110 016 (E-mail : rajeevsharma@nic.in, Telephone : 011-26602187, 26590310, Mobile: 9971888229). The complete proposals (15 copies) and/or suggestions regarding additional areas for technology development may be addressed to :

Dr. Neeraj Sharma, Advisor & Head (TDT Division), Room No 1A, Administrative Block, Department of Science & Technology, Technology Bhavan, New Mehrauli Road, New Delhi-110 016, Phone: +91-26590223, Telefax: +91-11-26964781, Email: neerajs@nic.in.

GUIDELINES AND FORMAT FOR SUBMISSION OF PROPOSAL FOR SUPPORT UNDER TECHNOLOGY SYSTEMS DEVELOPMENT (TSD) PROGRAMME



Plasma Waste Destruction System for Plastic and Medical Waste (FCIPT-IPR, Gandhinagar)



Development of Gold Analyser Non-Destructive, Transparent, Quick and Accurate Gold Analysis (CSIO-Chandigarh)



सत्यमेव जयते

Government of India
Technology Development and Transfer (TDT) Division
Department of Science & Technology
Technology Bhawan, New Mehrauli Road
New Delhi-110016
www.dst.gov.in

PROJECT PROPOSAL
FOR CONSIDERATION UNDER
TECHNOLOGY SYSTEMS DEVELOPMENT
PROGRAMME (TSDP)

PROJECT TITLE

SUBMITTED BY

(Name of Principal Investigator)

(Name and Address of the Organisation)

(Date of Submission)

1: Cover Sheet

**PROJECT PROPOSAL FOR CONSIDERATION
UNDER
TECHNOLOGY SYSTEMS DEVELOPMENT (TSD) PROGRAMME
Department of Science and Technology, Govt. of India**

For office use

File No:

Date of Receipt

PROJECT TITLE

SUBMITTED BY

(Name of Principal Investigator with designation)

(Name and Address of the Organization)

(Date of Submission)

FORMAT FOR SUBMISSION OF PROPOSAL FOR SUPPORT UNDER TECHNOLOGY SYSTEMS DEVELOPMENT PROGRAMME (TSDP)

CONTENTS

S.No	ITEMS	Page No(s)
1	Cover Sheet	
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3	Project Summary	
4	Detailed Proposal	
5	Bio-Data of the Principal Investigator/ Co-Principal Investigator	
6	Budget Estimates	
7	Undertaking from the Principal Investigator	
8	Endorsement from Head of the Organization	
9	Endorsement from Collaborating Industry/ Agency, if any.	

1. Cover Sheet

1. **Project Title:**

2. **Nature of Project (Please see item No. 2 under "Detailed Project Proposal"):**

3. **Principal Investigator (PI):**

 Name:
 Designation:
 Address:
 Telephone No:
 E-mail:
 Date of birth:

4. **Co-Principal Investigator (Co-PI)**

 Name:
 Designation:
 Address:
 Telephone No:
 E-mail:
 Date of birth:

5. **Names and Addresses of Collaborating Organization(s) (if any) with name(s) of persons responsible:**

6. **Name and Address of participating Industry (if any) with name(s) of persons responsible:**

7. Duration of the Project

8. Project Objectives *(In bullet form, please quantify as far as possible)*

9. Deliverables *(In bullet form; quantifiable physical output)*

10. Justification of taking-up the project *(In bullet form)*

11. Methodology in brief:

12. Names and Addresses of identified User Agencies

13. Immediate Beneficiaries (Immediately on completion of the project; possibilities are collaborating industry, participating agency, sector of the society in case of societal projects)):

8. Budget for the Project

(Amount in Lakhs of Rupees)

S.No	ITEM	DST Share	Other Agencies' Share
Total			

14. List of Equipment with Cost. Requested from DST:

15. List of the equipment available with the PI's Lab for utilization of the project activities:

16. Techno-economic analysis of the project:

2. PROJECT SUMMARY

- 1. Project Title:**
- 2. Principal Investigator:**
(Name, Designation and Affiliation)
- 3. Collaborating Agencies/Industries:**
- 4. Duration:**
- 5. Total Budget:**
 - 5.1 DST Share:**
 - 5.2 Collaborators' Share:**
- 6. Objectives** (*In bullet form*):
- 7. Innovative Elements/Components of the Project:**
- 8. Outcome/ Deliverables and their Expected Impact** (*In bullet form*):
- 9. Target Beneficiaries:**
- 10. Brief Technical Details** (*300 words*), **giving Justifications for the Project, the underlying Scientific Basis and the Methodology:**
- 11. Cost Benefit (C-B) Analysis)/ Cost-Economic Analysis Report**
- 12. Role of Industry:**
- 13. Technical specifications of the final deliverables:**

3. Detailed Project PROPOSAL

1. Title of the Project

2. Nature of the Project

(please tick):

- i) Technology Development in association with an industry/ user agency.
- ii) Laboratory scale demonstration of a process/ device
- iii) Pilot plant demonstration for techno-economic analysis
- iv) Nationally co-ordinated project to develop a specific technology platform
- v) Development of a base technology and creation of a national facility
- vi) Development of a technology of societal importance
- vii) Laboratory level development of a technology of societal importance
- viii) Field level demonstration for social acceptance
- ix) Development of a cutting-edge technology relevant to the country
- x) Development of a technology of strategic importance
- xi) Applied/basic research only
- Xii) Any other *(please specify)*

3. Duration

4. Names of participating Organizations with their addresses

5. Objectives of the Proposal *(precise and preferably quantified process parameters/ product specification etc. in the bullet form):*

4.1 Overall Development Objectives

4.2 Intermediate Objectives *(corresponding to each milestone)*

6. Fulfillment of Technology Qualifiers' Criteria:

Please tick if the proposal is

based on established R&D outcome/results	
conforming to national / international specifications	
potentially useful, demand driven and required by other agencies and users	
a development of technology for multiple applications	
an adaptation of existing technology for its applications other than originally intended	
meeting a critical national need (present/ future) and strengthening technological capabilities for the same	
an application of advanced science and technology with a promise of giving competitive solutions	

7. Critical Review of R,D&E Scenario (*include references*) **identifying Gaps**

- 6.1 National Status Review
- 6.2 International Status Review

8. Origin and Justification of the Proposal
(*Please justify based on the identified Qualifiers' criteria*)

9. Summary Outline of the Project (*with Schematics, where possible; Define the Problem and give technical details*)

10. Expected Outcome in Physical Terms

- i) New/ Upgraded Product
- ii) New/ Upscaled Process
- iii) New/ Upgraded System
- iv) Services (including Software)
- v) Feasibility Analysis
- vi) Any other

11. Targeted Specifications of the Expected Outcome

12. Deliverables of the Project (*precise and in bullet form*)

13. Methodology
(*Please highlight how success in the project execution will be ensured*)

14. Milestones with Dates, Work Elements for each and the Organisation responsible for each Work Element

S. No.	Milestone	Target Date	Work Elements	Responsible Organisation
			1. 2. 3.	
			1. 2. 3.	
			1. 2. 3.	

15. Work Plan
(*Provide a bar chart giving project activities and milestones. Highlight milestones*)

16. Bench Marks to be achieved (*In quantitative terms*):

17. Critical Review of the Current Status of the Technology:

17.1. National

17.2. International *(If relevant)*

18. Justification with reference to current status *(in terms of technical/economic/societal aspects):*

19. Summary of the Project *(with Schematics, where possible; Define the Problem and give technical details)*

20. Deliverables *(To be precise and quantified in bullet form)*

21. Methodology to be adopted *(Please include flow sheet if applicable)*

22. Milestones with Target Dates, Work Elements for each Milestone and the Organization(s) responsible for each:

S. No.	Milestone	Target Date	Work Elements to reach the respective milestones	Organization(s) responsible for each work element
1.			a) b) c) ...	a) b) c) ...
2.			a) b) c) ...	a) b) c) ...

23. Bar Chart /PERT-Chart *(Graphical representation of the above activities):*

24. Items for Outsourcing *(if any):*

S. No.	Item	Justifications	Agency from which outsourcing to be made		
			First Year	Second Year	Third Year
1.					
2.					
3.					

25. Names of 4-6 Area Experts *(Please give complete postal address, telephone numbers and e-mail addresses):*

26. Any other Information relevant to the Project Proposal and its Execution

4. BIO-DATA OF THE PRINCIPAL INVESTIGATOR/ CO- PRINCIPAL INVESTIGATOR

1. Name:

2. Gender: Male

Female

3. Date of Birth:

4. Designation & Affiliation

5. Postal Address

6. Phone Numbers:

7. E-mail ID:

8. Qualifications *(starting from University Level)*

S.No.	Degree	Institution	Year

9. Employment Experience

S.No.	Position and Organisation	Nature of Job	Period

10. List of Publications *(for the last 5 years only)*

10.1 Journal Publications

10.2 Conference Presentations

11. Patents filed/granted with details

12. Books published /Chapters contributed

13. Sponsored Research Projects

S. No	Title	Sponsoring Agency	Period	Amount <i>(Rupees in lakhs)</i>	Achievements

14. Consultancy Projects

S. No	Title	Sponsoring Agency	Period	Amount <i>(Rupees in Lakhs)</i>

15. Sponsored Research/Consultancy Projects submitted for approval.

S. No	Title	Agency to whom submitted	Duration	Date of Submission	Amount <i>(Rupees in Lakhs)</i>

16. Experience of Technology Development and Transfer (patent filed/granted), if any

5. BUDGET ESTIMATES

1. Break-up of the Total Budget

(Amount in Rupees in Lakhs)

S.No	Item	1 st Year		2 nd Year		3 rd Year		Total	
		DST	Collaborator*	DST	Collaborator*	DST	Collaborator*	DST	Collaborator*
1.	Manpower								
2.	Consumables								
3.	Contingency								
4.	Other Costs (Outsourcing, Fabrication, Testing, Patents, etc.)								
5.	Travel								
6	Permanent Equipment								
7	Overhead Charges								
	Total								

Grand Total:

DST SHARE:

COLLABORATORS' SHARE:

* Give Financial Contributions of each Collaborator separately.

2. Itemized Budget

(Please provide justification)

2.1. Manpower

Budget for Salaries (DST Component)

Designation	Qualification	Salary per month	Number of Persons	Amount <i>(Rupees in Lakhs)</i>	Justification

Budget for Salaries (Collaborator's Component)

Designation	Qualification	Salary per month	Number of Persons	Amount <i>(Rupees in Lakhs)</i>	Justification

2.2. Consumables

Budget for Consumable Materials (DST Component)

(Amount in Rupees in Lakhs)

1 st Year	2 nd Year	3 rd Year	Total	Justification including the basis of cost estimates/quotations

Budget for Consumable Materials (Collaborators' Component)

(Amount in Rupees in Lakhs)

1 st Year	2 nd Year	3 rd Year	Total	Justification including the basis of cost estimates/quotations

2.3. Contingencies

Budget for Contingencies (DST Component)

(Amount in Rupees in Lakhs)

1 st Year	2 nd Year	3 rd Year	Total	Justification including the basis of cost estimates

Budget for Contingencies (Collaborators' Component)

(Amount in Rupees in Lakhs)

1 st Year	2 nd Year	3 rd Year	Total	Justification including the basis of cost estimates

2.4. Other Costs (Outsourcing, Fabrication, Testing and Patenting, etc.)

Budget for Other Costs (DST Component)

(Amount in Rupees in Lakhs)

Item	1 st Year	2 nd Year	3 rd Year	Total	Justification including the basis of cost estimates/quotations
Outsourcing					
Fabrication					
Testing					
Patenting					
Others					

Budget for Other costs (Collaborators' Component)

(Amount in Rupees in Lakhs)

Item	1 st Year	2 nd Year	3 rd Year	Total	Justification including the basis of cost estimates/quotations
Outsourcing					
Fabrication					
Testing					
Patenting					
Others					

2.5. Domestic Travel*

Budget for Domestic Travel (DST Component)

(Amount in Rupees in Lakhs)

1 st Year	2 nd Year	3 rd Year	Total	Justification; indicating journeys, mode and class of transport

(* No foreign travel is permitted under DST grants. Class and mode of transportation should be as per the entitlement of the concerned staff in the Organisation. Travel component of visits of the Project Review Committee would be added by DST separately in the Project cost)

Budget for Domestic Travel (Collaborator's Component)

(Amount in Rupees in Lakhs)

1 st Year	2 nd Year	3 rd Year	Total	Justification; indicating journeys, mode and class of transport

2.6. Equipment*

Budget for Permanent Equipment (DST Component)

Description of Equipment	Foreign/Indigenous	Unit Landed Cost (CIF+Custom Duty+ others)	Number of Items	Total (Rupees in Lakhs)	Justification in relation to Project requirement

Budget for Permanent Equipment (Collaborator's Component)

Description of Equipment	Foreign/Indigenous	Unit Landed Cost (CIF+Custom Duty+ others)	Number of Items	Total (Rupees in Lakhs)	Justification in relation to project requirement

* A List of equipment and facilities available to the investigators and **relevant to the project** be provided separately.

6. UNDERTAKING FROM THE PRINCIPAL INVESTIGATOR

Project Title:

- 1.** I have carefully read the terms and conditions of the Technology Systems Development Programme and I agree to abide by them.
- 2.** I have not submitted this or a similar Project Proposal elsewhere for financial support.
- 3.** I shall ensure that no item/equipment shown available in the Project Proposal from my Organisation, shall be purchased under the Project.
- 4.** I undertake that idle capacity of the permanent equipment procured under the Project will be made available to other users.
- 5.** I have enclosed the following :
 - a. Endorsement from the Head of the Organization (*on letter head*)
 - b. Endorsement from the Collaborating Industry/Agency
 - c. Project Proposal complete in all respect (*15 hard copies and a soft copy*)

Principal Investigator:	Name
	Signature
	Date
	Place

7. ENDORSEMENT FROM HEAD OF ORGANISATION

(On the official letter-head)

Project Title

1. Affirmed that the Organisation welcomes the participation of Dr/Mr/Msas the PI and Dr/Mr/Ms.....as the Co-PI for the Project and that in the unforeseen and legitimate event of discontinuation by the PI, the Co-PI will assume full responsibility for completion of the Project. Information to this effect, endorsed by me, will be promptly sent to DST
2. Affirmed that the equipment and basic as well as other administrative facilities as per the terms and conditions of the award of the Project, will be made available to the Investigator(s) throughout the duration of the Project
3. The Organisation shall ensure that the financial and purchase procedures are followed as per the prevailing norms of the Organisation, within the allocated budget.
4. The Organisation shall provide timely the Statement of Expenditure and the Utilisation Certificate of the Funds under the Grant as required by DST in the prescribed format.

**(Head of Organisation)
Seal/Stamp**

**Date
Place**

8. Endorsement from collaborating Industry/ Agency

(On the official letter- head)

I have gone through the Project Proposal entitled..... submitted by *(Name of PI)* of *(Name of the Organisation)* for DST funding and noted the obligations and responsibilities indicated in our name as stated below :

1. Contribution in financial terms *(Rupees in Lakhs)*
2. Contribution in kind *(List activities)*

I hereby affirm that my Organisation/Industry is committed to participate in the Project to the full extent as indicated in the Project Proposal including the financial liabilities accruing therefrom as detailed above. A summary profile of my Organisation is given below:

Name of Organisation
Nature of Business
Number of Employees
Annual Turn over

The Annual Report for the preceding financial year is enclosed.

(Head of the Industry/Agency)
Seal/Stamp

Date
Place