

Institute of Space Technology

**National Center of GIS and Space Applications**



**Research Fund Proposal Form**

[Title of the Proposal]

[Name of Principal Investigator]

[Affiliation]

NCGSA Ref. No: \_\_\_\_\_\_\_\_\_

**Table of Contents**

[A. Cover Sheet 3](#_Toc67266653)

[B. Project Brief 4](#_Toc67266654)

[C. Principal Investigator 5](#_Toc67266655)

[D. Focal Person from Partner Industry 5](#_Toc67266656)

[E. Project Summary & Endorsements 6](#_Toc67266657)

[F. Project Details 7](#_Toc67266658)

[1. Executive Summary 7](#_Toc67266659)

[2. Proposed Objectives and Goals 7](#_Toc67266660)

[3. Research Background and Literature 7](#_Toc67266661)

[4. Research Methodology 7](#_Toc67266662)

[5. Implementation Schedule 7](#_Toc67266663)

[6. Project Impact 7](#_Toc67266664)

[7. United Nation’s Sustainable Development Goals (SDGs) 8](#_Toc67266665)

[8. Project Partners 8](#_Toc67266666)

[9. Brief Business Plan 8](#_Toc67266667)

[10. Project Outputs 9](#_Toc67266668)

[11. Existing Resources for The Project 9](#_Toc67266669)

[12. Project Management Structure 9](#_Toc67266670)

[13. Estimated Budget 9](#_Toc67266671)

[14. Budget Justification 10](#_Toc67266672)

[15. Research Evaluators 10](#_Toc67266673)

[16. Key Performance Indicators 11](#_Toc67266674)

[17. References 11](#_Toc67266675)

[NCGSA Research Fund Checklist 12](#_Toc67266676)

**RESEARCH FUND PROPOSAL FOR PROTOTYPE / PRODUCT / PROCESS / SOLUTION DEVELOPMENT UNDER NCGSA**

# Cover Sheet

|  |
| --- |
| A1. **[TITLE OF PROPOSED PROJECT]**  A2. CLASSIFICATION (Mention the Most Appropriate Type of Proposed Research)  ⬜ Prototype  ⬜ Product  ⬜ Process  ⬜ Software and / or Hardware Solution Development  ⬜ Models & Maps  ⬜ Others (Please Specify)  A3. TARGETED RESEARCH DOMAIN  ⬜ Remote Sensing & Geographic Information Science  ⬜ Small Satellite Technology  ⬜ Positioning, Navigation & Timing  ⬜ Astronomy, Astrophysics & Astrobiology  ⬜ Space Popularization & Outreach  ⬜ Space Applications & Advanced Systems  A4. TOTAL PROJECT COST (Million PKR)  A5. PROJECT DURATION (Months)  A6. INDUSTRIAL PARTNER  A7. TARGET MARKET FOR COMMERCIALIZATION (Mention the proposed market / End Users) |

# Project Brief

|  |
| --- |
| B1. PROJECT BRIEF Please give the short brief of the project (Max. 250 Words)    B2. INTELLECTUAL PROPERTY BACKGROUND   1. What is the status of your idea vis-à-vis similar IP/Patents? 2. Have you already filed a patent / Copyright application? 3. If a patent/IP already exists on your idea/concept, then what is your strategy and rationale in commercializing the proposed research? 4. Proof of funding i.e., award letter if prototype is developed or basic R&D is completed (National HEC, PSF, Ignite and or International, etc.). Please specify;   ­­­­­­­­­­­­­­­ |

# Principal Investigator

**(From Higher Education Institution / R&D Organization)**

|  |  |
| --- | --- |
| **Principal Investigator** | Name |
| Position/Title |
| Department |
| Highest Degree |
| Tel. # (Office & Mobile) |
| Email |
| CNIC / Passport No. (please attach a copy) |
| **Name of Institution** |  |
| **Address of Institution** | Street Address |
| City |
| Country |
| Tel. # (Office & Mobile) |
| Email |

# Focal Person from Partner Industry

**(From Local Industry or Public / Private Organization)**

|  |  |
| --- | --- |
| **Focal Person** | Name |
| Position/Title |
| Department |
| Highest Degree |
| Tel. # (Office & Mobile) |
| Email |
| CNIC / Passport No. |
| **Organization Name** |  |
| **Organization Address** | Street Address |
| City |
| Country |
| Tel. # (Office & Mobile) |
| Email |

# Project Summary & Endorsements

|  |  |
| --- | --- |
| **Name of Project** |  |
| **Name of PI** |  |
| **Proposed Duration** | In Months |
| **Proposed Starting Date** | From July 2021 |
| **Total Budget of the Project** | (In Million PKR) |
| **NCGSA Component** | **Year – 1:** (In Million PKR) |
| **Year – 2:** (In Million PKR) |
| **Industrial Contribution** | **Year – 1:** (In Million PKR) |
| **Year – 2:** (In Million PKR) |

|  |  |
| --- | --- |
| SIGNATURE OF PRINCIPAL INVESTIGATOR  Date | SIGNATURE OF FOCAL PERSON OF PARTNER INDUSTRY  Date |

|  |  |
| --- | --- |
| **ENDORSEMENT OF THE HEAD OF INSTITUTION**  (Head of Higher Education Institution / R & D Organization)  Signature & Stamp  Date:  Name:  Title:  Address:  Phone:  Fax:  E-mail: | **ENDORSEMENT OF THE HEAD OF INDUSTRIAL ORGANIZATION**  Signature & Stamp  Date:  Name:  Title:  Address:  Phone:  Fax:  E-mail: |

# Project Details

## Executive Summary

The Executive Summary should provide an overview of the proposal and the proposed research project. It should clearly identify how the proposed project addresses a social challenge and is related to the defined research area. It should briefly describe the objectives of the research and methodology that will be adopted towards achievement of defined objectives. In addition, it should identify the roles of partners – academic and industrial – that will contribute to the success of the proposed project.

***(ONE PAGE ONLY)***

## Proposed Objectives and Goals

The broad research goals and objectives should be clearly described, as well as the activities to be undertaken to achieve the project goals. Market need analysis and / or relationship of the proposed outputs with industry must be described. It should also identify the end users of the proposed outputs.

***(ONE PAGE ONLY)***

## Research Background and Literature

Provide a brief survey of the relevant literature, and describe how the proposed project builds on prior research. It is expected that the proposed project will take a systems-level approach to building a research program. This section shall consist of problem statement, the scientific background and social & commercial needs of the proposed research in reference with the prior research in the area.

***(MAXIMUM THREE PAGES)***

## Research Methodology

Describe how the research plan will be accomplished over the anticipated duration of the proposed project, and identify appropriate milestones and anticipated deliverables. Describe in detail the scientific approach towards achievement of the proposed goals. Please clearly identify the role of each partner in this section towards the successful completion of the project. Describe the plan of dissemination of the outputs to the scientific and commercial communities. This section should have a description of ethical considerations relating to the study.

***(MAXIMUM FIVE PAGES)***

## Implementation Schedule

This section shall provide a high-level overview of the planned research activities of the proposed project. Develop a Gantt Chart to demonstrate how the project will proceed in a timely fashion. Section can include a narrative that provides further details on the project schedule.

***(MAXIMUM TWO PAGES)***

## Project Impact

Clearly describe the impact of the proposed project on aspects such as (but not limited to) transfer of research outcomes into the economy for innovation, commercialization, socio economic growth. Describe why the proposed research is important, and why it would be a timely contribution to research in this field. Identify the effects of research on import substitution and/or export enhancement, specialized technology-oriented human-resource development and capacity building, public awareness & outreach and job market enhancement.

Some examples are below.

1. Utilization of local Data / Maps
2. Utilization / Creation of indigenous technology (Self Reliance)
3. Creation of Employment, utilizing current skill or creating new skills
4. Impact on local manufacturing or service cluster.
5. Solution to current local problems using GIS and Space Applications
6. Reverse Engineering (adaptive research)
7. Export potential and global market possibilities with impact on local job creation.
8. (Any other)

***(ONE PAGE ONLY)***

## United Nation’s Sustainable Development Goals (SDGs)

Identify the SDGs addressed in the proposed project and elaborate that how the proposed research will contribute towards the achievement of the identified SDGs in the socio-economic context of Pakistan. For details on SDGs please visit: *https://sdgs.un.org/goals*

***(ONE PAGE ONLY)***

## Project Partners

Describe all the Academic & Industrial partners / collaborators briefly in this section. Clearly describe the role of collaborators for the proposed project. Identify the research skills and resources that the collaborator possesses, and describe the anticipated role in the research agenda for the project. it is expected that the Principal Investigators has secured upfront commitments from collaborators prior to the submission of the proposal.

Please include a brief introduction of the collaborating / partner industry including (but not limited to) information on industry type, turnover, import/export profile, stock exchange listing etc. Please indicate the portion of the proposed research project to be carried out by the industry. Briefly describe the additional financial resources that the Industrial collaborators bring to support the project.

The NCGSA Research Fund is committed to strengthening the linkages between the academia and Industry to enhance the impact of academic research. Describe how the proposed project will address this, through activities such as student internships and dissemination of results. This section may further be divided into the subsections of “Academic Partner”, “Industrial Partner” and “Other Partners”.

***(MAXIMUM TWO PAGES)***

## Brief Business Plan

Provide a broad description of the Business Plan including SWOT analysis, financial analysis, market value and how the proposed project will become commercially viable.

***(MAXIMUM TWO PAGES)***

## Project Outputs

Describe the targeted quantifiable outputs of the projects. Please fill the **Target Outputs Forms** *(NCGSA-RF-F-04/00)* separately.

***(ONE PAGE ONLY)***

## Existing Resources for The Project

**Facilities and Equipment:** Describe the physical resources and facilities that are available to the proposed project. Be sure to comment on how these resources and facilities will enable the workplan of the proposed project to be accomplished. List the major available facilities and equipment with their purpose separately for the host organization and parents.

**Human Resource:** Enlist the available human resource to be involved in the project, the resource available at host organization and partners maybe mentioned separately. Comment on the capacity of the available project team to deliver results in timely manner.

**Additional Funding:** Please describe if the funding from some other source is available for the said project. This should be other than the funding committed by the partner(s) against this proposal.

Please fill the **PI & PIO Information Form** *(NCGSA-RF-F-03/00)* separately.

## Project Management Structure

In this Section, describe the proposed project management team structure for the proposed project using an organogram. Please give the information on the following project roles.

**Principal Investigation:** Short profile of the PI in 250 words describing recent research accomplishments. *Attach detailed CV separately.*

**Co-Principal Investigation:** Short profile of the Co-PI in 250 words describing recent research accomplishments. *Attach detailed CV separately.*

**Focal Person(s) from the Partner Organization(s):** Short profile of the focal person in 250 words describing recent research accomplishments. *Attach detailed CV separately.*

## Estimated Budget

NCGSA will fund a project up to 15 Million PKR for a maximum duration of two years and preference will be given to the proposals having industrial partner with in cash / kind contribution. Please fill the **Budget Form** *(NCGSA-RF-F-02/00)* separately.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **DESCRIPTION** | **YEAR 1** | | **YEAR 2** | | **Total Amount** | |
| **NCGSA** | **Industry Contribution** | **NCGSA** | **Industry Contribution** | **NCGSA** | **Industry Contribution** |
| A. Personnel Cost (HR) |  |  |  |  |  |  |
| B1. Permanent Equipment |  |  |  |  |  |  |
| B2. Expendable Supplies & Consumables |  |  |  |  |  |  |
| B3. Services |  |  |  |  |  |  |
| C. Travel Cost |  |  |  |  |  |  |
| D. Miscellaneous / Contingencies |  |  |  |  |  |  |
| E. University Overheads |  | *Nil* |  | *Nil* |  | *Nil* |
| **Grand** **Total** |  |  |  |  |  |  |
| **Total Budget** |  | |  | |  | |

## Budget Justification

Please give the justification, purpose and role of each HR position, Permanent Equipment and Supplies and other expenditure heads anticipated in the project and mentioned in the Budget Form.

**Personnel Cost (HR):** All positions, including PI and industrial partner, must be fully justified. Please give qualification, experience, brief Job Description of each member of the project team. Tabulate the human resource positions to be hired for the project.

**Permanent Equipment:** Clearly identify major items costing more than 25,000 PKR and give proper justification of the items costing over 0.1 Million PKR. Minor items (under Rs. 25,000) may be lumped into one. Tabulate the list of equipment to be purchased under this project.

**Expendable Supplies:** Clearly identify major items costing more than 25,000 PKR and give proper justification of the items costing over 0.1 Million PKR. Minor items (under Rs. 25,000) may be lumped into one. Tabulate the list of supplies be obtained under this project.

**Other Costs (Travels, Services etc.):** Please justify the major expenditures costing above 25,000 PKR. Tabulate the list of services be obtained under this project.

## Research Evaluators

Kindly provide the following details of the 6 subject matter experts / renowned scientists (preferably from Pakistan) related with the area of your proposed research, who may evaluate your proposal, if required.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No.** | **Name** | **Affiliation** | **Email** | **Cell Number** |
| **Academic Experts from Higher Education Institutions / R&D Organizations** | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| **Industrial Experts from Industry / Government and Private R&D Organizations** | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

## Key Performance Indicators

Provide the Key Performance Indicators on the Biannual (Six – Monthly) timeline. Following Table maybe used for the complete project duration.

|  |  |
| --- | --- |
| **1 – 6 Months** | |
| **Major Tasks and / or Deliverables** | **Responsible Partner** |
|  |  |
| **7 - 12 Months** | |
| **Major Tasks and / or Deliverables** | **Responsible Partner** |
|  |  |

## References

Proposals should follow accepted academic practice in citing references throughout the proposal. References should be reported in APA / IEEE format.

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

**Counter Sign**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature & Stamp of Principal Investigator Date:

# NCGSA Research Fund Checklist

Please ensure the following for the submission of complete research proposal, incomplete proposals will not be accepted.

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Activity** | **Yes / No** |
|  | Download the NCGSA Research Fund & allied forms from *https://ncgsa.org.pk/ncgsa-research-fund/* |  |
|  | Complete the Research Fund Proposal on prescribed form *(NCGSA-RF-F-01/00)* |  |
|  | Completely fill the Budget Form, according to the HEC budget guidelines *(NCGSA-RF-F-02/00)* |  |
|  | Completely fill the PI & PIO Information form *(NCGSA-RF-F-03/00)* |  |
|  | Completely fill the Target Outputs form *(NCGSA-RF-F-04/00)* |  |
|  | Attach all filled forms with Research Fund Proposal *(NCGSA-RF-F-01/00)* |  |
|  | Attach copy of CNIC of Principal Investigator |  |
|  | Get the Endorsement of Head of PIO on the Section E of Research Fund Proposal |  |
|  | Get the Endorsement of Head of Industrial Partner on the Section E of Research Fund Proposal |  |
|  | In case Sr. 9 is not feasible attach a letter of Support / Commitment from Industrial Partner |  |
|  | Attach a letter of Support / Commitment from all partners involved in the project |  |
|  | Attach CV of Principal Investigator with recent photograph |  |
|  | Attach CV of Co-Principal Investigator |  |
|  | Attach CV of Industrial Focal Person |  |
|  | Attach a proof of Registration / Certification / NTN / STN from Industrial Partner |  |
|  | Attach any quotations / proof of cost for the equipment costing 0.5 Millon PKR per item |  |
|  | Send all aforementioned documents original & 2x copies (i.e., 3 properly binded files) to “NCGSA Secretariat, Institute of Space Technology, 1, Islamabad Highway, Islamabad, Pakistan” |  |
|  | Upload soft copy of signed & stamped documents with all attachments on *https://ncgsa.org.pk/ncgsa-research-fund/* (Merged PDF Files – Allied Document to be attached with Research Fund Proposal) |  |
|  | Email soft copy of signed & stamped documents with all attachments on *researchfund@ncgsa.org.pk & ncgsa@ist.edu.pk* Subject the email as “NCGSA Research Fund – Name of PI – Name of PIO” (Editable Files: Word and Excel Files - PDF only of scanned attachments) |  |
|  | Submit the proposals with all attachments through all 3 mediums (Sr. 17-19) till **April 23, 2021.** |  |