

**Guidelines to Develop NCCS Research Fund Proposals**

# Background

National Centre for Cyber Security (NCCS) was established by Planning Commission of Pakistan through Higher Education Commission as a Centre of Excellence in Cyber Security. NCCS has a research fund of PKR 200 Million at its disposal. This research fund will aim at conducting research and development activities in the specific areas of cyber security which are not catered for in NCCS PC-1 document. The successful outcome of this fund shall put in place a combination of cutting edge technological research and development of integrated solutions that are in line with the market demand.

# Guidance Notes

This research fund applies to the process of funding research projects that come under various fields of Cyber Security. The novel and innovative project ideas having commercial value and industry based partnerships with clearly defined objectives and outcomes would be given priority. The key areas which will define the scope of the project should not be similar to the ongoing projects/activities carried out at NCCS partner Labs under the current PC-1 (projects scope are available at NCCS website). Any proposal having significant overlap with the research work already been conducted at NCCS partner Labs will not be considered for the research fund. The proposals could be submitted in the following priority areas:

**KEY AREAS**

* Cryptology, Crypt Analysis and Encryption Algorithms
* Open Source Intelligence
* Web and Big-Data Security and Privacy
* Cloud and Data Centre Security
* Cyber-Threat Intelligence
* Framework of Social Media Security Amalgamated with Freedom of Speech
* 5G Security and Privacy
* Industrial Control Systems Security and Auditing
* Human Factors of Cyber Security
* Dark Web Forensics
* FINTECH Security
* Artificial Intelligence aided Security

The proposals need to be projects leading to products or services which solve a current problem or identify a new opportunity; are marketable, leading to positive cash-flows.

# Responsibilities of PI

P.I of the research project shall certify the following:

1. Certify that the P.I is a full time Faculty Member of the University / Degree awarding institutes.

ii. Certify that the equipment(s) demanded for the subject research is / are not already available at the University / Institute.

iii. Certify that the project under reference has not been submitted to any other funding agency including HEC/PSF/IGNITE or others.

iv. Certify that this research / portion of research has not been funded by any other funding agency including HEC in the past.

v. Certify that the subject research is genuinely novel and that there is no plagiarized material including self-plagiarism.

# Possible Partners

The proposals need to be academia-industry joint projects leading to products or services which solve a current problem or identify a new opportunity; are marketable, leading to positive cash-flows. In another way the local Industrial R&D can join nearby academic research experts of the university to solve their problem, upscale the process or prototype their innovative idea to a successful business.

This grant can be used by the applicant to develop partnerships of their universities with business community. All proposals will be expected to have identified how their collaboration will develop partnerships outside the university with active industrial sector.

# Business Model

## **Executive Summary**

The executive summary will follow the title page. The summary should tell the reader what you want.

**Business Description**

The business description usually begins with a short description of the industry. When describing the industry, discuss the present outlook as well as future possibilities. You should also provide information on all the various markets within the industry, including any new products or developments that will benefit or adversely affect your business.

**Market Strategies**

Market strategies are the result of a meticulous market analysis. A market analysis forces the entrepreneur to become familiar with all aspects of the market so that the target market can be defined and the company can be positioned in order to garner its share of sales.

**Competitive Analysis**

This is to determine the competitors’ strengths and weaknesses within your market, strategies that will provide you with a distinct advantage, the blockades that can be developed in order to prevent competition from entering your market, and any weaknesses that can be exploited within the product development cycle.

**Design & Development Plan**

This is to provide investors with a description of the product's design, chart its development within the context of production, marketing and the company itself, and create a development budget that will enable the company or product to reach its goals.

**Operations & Management Plan**

The operations and management plan is designed to describe just how the business functions on a continuing basis. The operations plan will highlight the logistics of the organization such as the various responsibilities of the management team, the tasks assigned to each division within the company, and capital and expense requirements related to the operations of the business.

In case of introducing new product in existing industry or industry problem solution the operations plan will highlight the logistics of the existing industry/organization such as the various responsibilities of the management team, the tasks assigned to each division within the company in regard to this product or process induction in industry, and capital and expense requirements related to this intervention.

**Financial Factors**

Every successful business plan depends on financial data at its back, but that doesn't mean it's any less important than up-front material such as the business concept and the management team.

# Eligibility

Applicants must be based within a Higher Education Institution in Pakistan and have backing by their Head of the Institution. Co-PI could be from local Industrial Partner or R&D institutions. PI should be a PhD holder having extensive knowledge in the domain of cyber security. Faculty members (PIs/Co-PIs) affiliated with NCCS Partner Labs could only apply in areas different than their Lab’s existing research domains.

# Duration and value of award

* Duration of each research project will be 12-18 months.
* **Total grant for each proposal: (Maximum upto) Rs 15 Million**
* Proposals with partner industry contribution (in cash or kind) will be preferred
* In addition to 13 funded projects, Rs. 5 million will be reserved in the research fund head for administrative tasks, additional procurement of equipment and unforeseen circumstances

# Application Process

Proposals for funding should be submitted on the standard Application Form available on the NCCS website. Application Forms can be downloaded from the following link <http://www.nccs.pk/collaborations/apply>

Completed applications must be routed to NCCS Secretariat on following address: NCCS Secretariat, FMC Block (5th Floor), Air University E-9, Islamabad, through the University ORIC or Directorate of Research where the applicant team is located; dually endorsed by head of University and head/General Manager/CEO/CFO of Partner Industry. Proposals will be received till July 15th, 2020 and evaluated on first come first serve bases.

# Evaluation Process

There will be a 3 stage approach to evaluating proposals:

1. Secretariat will formulate an editorial board of 3 to 5 experts. The board will shortlist proposals based on relevance to the field of cyber security. Incomplete and irrelevant proposals will be rejected. Proposals with industrial partner investing in cash or kind shall be preferred. The funding proposal along with details of credentials of industry partner shall be initially evaluated by editorial board.
2. After initial scrutiny of all proposals the secretariat will forward the list of long listed proposals and profiles of recommended reviewers to NCCS NSC for approval, before forwarding the proposals to reviewers. Shortlisted applications shall be sent to reviewers as per area of specialty.
3. The proposal shall then be sent to 2 x Local/International reviewers. Shortlisted proposals shall be compiled by the secretariat and forwarded to NSC for approval.
4. Top ranked proposals in each category may be asked to give a presentation to the board. Depending upon the availability of funds top ranked proposals shall be recommended to NSC for approval for award of grant. Agreement shall be signed between selected PIs and secretariat and first installment of funds shall be released.

# Monitoring

Each partnership may be monitored over the course of the project and can be called to pitch the progress or product display.

# Reporting

Each partner is required to submit to NCCS a six monthly progress report with presentation, after the start of the partnership, an end-of-year report and a final report on completion of the project. These will be both technical and financial; the items to be covered will be specified at the time of finalising the contract.

# Data Protection Statement

All information on the application forms of proposals that are successful and funded by NCCS will have details made public and it is a condition of application to the scheme that you agree to this.

Please confirm that you agree to the use of the data in the application in this way.

# Signatures, Submission and Deadline

Please follow the advice set out in these guidelines carefully. Applications should be submitted on the application forms available on the website.

If necessary signed letters of support from Partner Industrial/R&D institutional heads or equivalent can be submitted separately.

# Proposal Information sheet

Proposal information sheet in M.S. excel is given with dummy data entered for the basic information of the proposal must be filled by Principle Investigator and send with the soft copy in email.

# Application Procedure

The deadline for submission of proposals is **15th July 2020; however, applications will be processed on first come first serve bases.**

The paragraph numbering below follows the section numbers on the Application Form

1. **Project Title**

Please choose a title that uniquely describes your project and clearly identifies the primary subject area for the activity.

1. **Key Subject Words**

Please provide up to 6 key words that most closely relate to the application area.

1. **Project Objectives**

Please summarise the main objectives of the proposed project in terms that might be understood by a non-specialist. Please provide in a maximum of 100 words.

1. **Proposed Start and End Dates for your project**

The project will commence once the contract has been signed and will run for no more than 24 months.

1. **Information about applicants**

The details of the Project Team Leaders in each institution and their contact details should be provided.

1. **Overview of the Project**

Please provide an overview of the proposed project in a language suitable for a general audience. Include the project objectives, proposed process and anticipated outputs and impact.

1. **Proposed Goals / Objective:**

Please clearly identify the output in the form of a product or process, need or relationship to non-university partner

1. **Project Business Development Plan / Work plan for the Project**

Please provide an overview of your Business plan to include activities taking place. Please note that this Business plan will form the basis of your contract and progress will be measured against working towards its delivery.

1. **Proposed Project Outputs**

Please summarise briefly the intended outputs of the proposed co-operation – both qualitative and quantitative. Please try to fill all columns.

1. **Other sources of funding**

In this section please include details of any funding which will be received by the project which is from a source outside of the participating institutions. Include details on the exact nature & amount of this funding, the donor organisation and the anticipated time frame.

1. **Proposed Team (Principle Investigator, Industrial Partner and Co PI)**

This section details about project team and their profile.

1. **Financial Proposal**

Please summarise the estimated costs (PKRs in Million) over the 1.5-year period of the project and present this information in prescribed **M.S excel spreadsheet** and same will be mentioned in the main application form.

You are also required to complete the shorter table in the application setting out your requests for funding. Please refer to the section in the Guidelines that set out what activities can be funded and what are ineligible. Note that funds cannot be employed to contribute towards the salaries of staff other than allowed nor for administration, estate costs or other institutional overheads.

Air fares should normally be the most reasonable economy class fare.

1. **Justification**

Please justify your requests for staff, Salaries Allowances, expandable Supplies and permanent equipment in background of the existing facilities available at the host Institute.

1. **Referees/Reviewers**

Enlist 3 academic and 2 Industrial Reviewers.

1. **Check list**

Check list is provided to have a holistic review of proposal developed whether it followed all guidelines which for sure made application pass successfully initial scrutiny phase.

1. **Attachments**

Make Sure CNIC, Photo, Industry Support letter, Key performance Indicators, CVs of PI, CO-PI, Industry Partner must be included in one M.S world application file and create PDF of the same. No loose above documents will entertained.

**Proposal soft copies through email and hard copies through surface mail should reach before 00:00 Hrs 15th July, 2020.**

**Address:**

**Qanaita Mehmood**

Research monitoring and Evaluation Officer NCCS

National Centre of Cyber Security

5th Floor, FMC Block, Air University Islamabad - 051-9153655, 051-9153653

**Completed applications should be submitted electronically (Microsoft word & PDF) to:** **secretariat.nccs@gmail.com** **(cced to** **director@nccs.pk****;****qanaita.mehmood@nccs.pk****,****bilal.afzal@nccs.pk****).** Please give subject of your e-mail as ‘NCCS-PI Name-University name Abbreviation’ i.e. (NCCS-Qanaita-AU)

**Once submitted, we cannot accept any changes to the application.** If you have any questions about your application please contact at qanaita.mehmood@nccs.pk, bilal.afzal@nccs.pk