

Guidelines for Evaluation Technical Research & Development Proposal

National ICT R&D Fund is dedicated to creating an innovation centric research and development ecosystem that is congruent to socioeconomic landscape in Pakistan. The fund promotes the view that an incremental innovation removes bottlenecks and alleviates rate limiting factors from value chains. Funded proposals are expected to perform research and development that leads to innovation and resulting wealth generation in the country. We encourage proposals that perform original research as well as leverage results of existing research to develop solutions for important industrial, commercial and social problems.

The probability of wealth generation through incremental innovation depends upon the following factors:

1. Economic, industrial, commercial and social importance of the value chain.
2. Importance of the rate limiting factors addressed.
3. Level of success in alleviating rate limiting factors.
4. The price point at which the rate limiting factors are alleviated.
5. Time frame in which the rate limiting factor are alleviated. This is also known as the window of opportunity. Delays in providing solution could result in decreased importance of the value chain by the time the rate limiting factor is alleviated.

Evaluators are expected to take a nurturing attitude and guide Principal Investigator toward developing proposals that achieve the objective of wealth generation through innovation. It is expected that an approved R&D proposal will provide the following information:

1. Concrete objectives.
2. Succinct description of
 - a. Value chains that are focus of the proposal,
 - b. Key bottlenecks and rate limiting factors associated with these value chains.
3. Literature search related to important and well known solutions that focus on these value chains and rate limiting factors.
4. Known key strengths and weaknesses of these solutions.
5. Weaknesses of well known and established solutions that will be removed by the proposed solution.
6. Techniques used to achieve improvements mentioned above.
7. Justification for using these techniques.
8. High level description (outlines, design, and algorithmic description etc.) of proposed solution.
9. Progress that has already been made and positive results received so far.
10. Project plan and intermediate deliverables.
11. Plan to integrate proposed solution with the existing industrial or academic environment.
12. Capabilities of Principal Investigator and the infrastructure and support provided by the institution.

A detailed evaluation form is provided to assist evaluators achieve the objective of guiding Principal Investigators towards developing superior quality proposal.

(Note: Please click in the box to check or uncheck. To write your comments, click on the shaded area and start typing.)

Request for: Internal Evaluation External Evaluation
 Date of Request: June 01, 2012 **Due Date:** June 14, 2012

The Proposal:
 Title of Proposal: _____
 Principal Investigator: _____
 Title/Department: _____
 PI's Organization: _____
 Address: _____

Items included in the proposal:

<input type="checkbox"/> Cover Page	<input type="checkbox"/> Table of Contents	<input type="checkbox"/> Proposal Summary
<input type="checkbox"/> Proposed Objectives	<input type="checkbox"/> Research Background	<input type="checkbox"/> Benefits / Outputs
<input type="checkbox"/> Milestones	<input type="checkbox"/> Time Lines	<input type="checkbox"/> Budget (with breakup)
<input type="checkbox"/> Resumes	<input type="checkbox"/> Additional Items:	

Evaluator's Details:

Name: _____
 Designation: _____
 Institution: _____
 Address: _____
 Tel #: _____ Cell #: _____ Fax: _____
 Email: _____ Home Page: _____

To The Evaluator: To what degree are you familiar with the proposed topic/project?
(Mark all that are applicable)

I am actively engaged in research and developmental work in this specific area.
 I have carried out research and developmental work in the past in this specific area.
 I have taught courses in this specific area.
 My experience is in the general area but I have not worked in this specific area.

Other Comments: _____

1. Research and Development Background:

[section 2 of the proposal]

Evaluate the key strengths and weaknesses of the efforts of PI in referencing the literature/ research background of the proposed area and assessing current state of the art and challenges associated with it. Also rank accordingly.

		Yes/No
a.	Does the literature review describe the value chain and justify its importance?	
b.	Does the literature review describe key bottlenecks and rate limiting factors associated with the relevant value chain?	
c.	Does the literature review provide succinct information about existing solutions to the key bottleneck and rate limiting factors?	
d.	Are challenges and shortcomings in the existing solutions discussed?	
e.	Has PI justified need and motivation for the proposed project?	
f.	Is the research background summary and references relevant to the proposed project?	

Key Strengths:

Key Weaknesses:

Research Background Section Evaluation Ranking:	Unsatisfactory <input type="checkbox"/>	Needs Improvement <input type="checkbox"/>	Satisfactory <input type="checkbox"/>	Above Average <input type="checkbox"/>	Well Above Average <input type="checkbox"/>
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Other Comments:

2. Proposed Objectives:

[section 3 of the proposal]

(a) From a **research** point of view, evaluate the key strengths and weaknesses of the proposed research objectives (if any) and rank accordingly:

Key Strengths:

Key Weaknesses:

(b) From a **development** point of view, evaluate the key strengths and weaknesses of the proposed development objectives (if any) and rank accordingly.

		Yes/No
a.	Do the proposed objectives targets ICT related research and/or development?	
b.	Are the objectives measurable and clearly defined?	

Key Strengths:

Key Weaknesses:

Objectives Section Evaluation Ranking:	<input type="checkbox"/> Unsatisfactory	Needs Improvement <input type="checkbox"/>	Satisfactory <input type="checkbox"/>	Above Average <input type="checkbox"/>	Well Above Average <input type="checkbox"/>
Other Comments:					

3. Methods and Approach:

[section 4 of the proposal]

Evaluate the key strengths and weakness of the methods and approach described by PI in the methodology section to achieve the ultimate project objectives and rank accordingly.

	Yes/No
a. Does the proposed approach suggest how key bottlenecks will be removed?	
b. Does the proposed approach address the current key challenges in the proposed area?	
c. Does the proposed approach contain analysis, design, development, implementation and testing plans?	
d. Does the proposed approach include high-level information like block-diagrams/ schematics etc. for proposed hardware/software solution?	
e. Is the proposed approach implementable?	
f. Will proposed objectives be achieved through implementing the proposed research and/or development process?	

Key Strengths:

Key Weaknesses:

Methods and Approach Evaluation Ranking:	<input type="checkbox"/> Unsatisfactory	Needs Improvement <input type="checkbox"/>	Satisfactory <input type="checkbox"/>	Above Average <input type="checkbox"/>	Well Above Average <input type="checkbox"/>
Other Comments:					

4. Project Structure/Design:

[section 4.D&8 of the proposal]

Evaluate the key strengths and weaknesses of the project structure/design and rank accordingly.

	Yes/No
a. Do project activities support proposed approach? Special attention should be paid to activities that are focused at addressing key challenges in the relevant domain.	
b. Does the Gantt chart list activities in enough details to be evaluated?	
c. Is there possible overlap in project activities so that goals can be achieved in a timely fashion and within the window of opportunity?	

Key Strengths:					
Key Weaknesses:					
Project Structure/Design Section Evaluation Ranking:	Unsatisfactory	Needs Improvement	Satisfactory	Above Average	Well Above Average
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Comments:					

5. Monitoring and Evaluation of the Project Plan: *[section 4.E of the proposal]*

Evaluate the key strengths and weaknesses of the monitoring and evaluation of the project plan and rank accordingly.

		Yes/No
a.	Do the deliverables target proposed objectives?	
b.	Are deliverables concrete and tangible?	
c.	Are milestones and deliverables aligned with completion of major phases and activities of the project?	
d.	Are the deliverables defined on quarterly basis?	

Key Strengths:

Key Weaknesses:

Monitoring & Evaluation Section Evaluation Ranking:	Unsatisfactory	Needs Improvement	Satisfactory	Above Average	Well Above Average
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Comments:					

6. Utilization Plan: *[section 5 of the proposal]*

Evaluate the key strengths and weaknesses of the project utilization plan and rank accordingly.

		Yes/No
a.	Are the benefits for stakeholders, described in the proposal related to the value chain?	
b.	Are there any major impacts of the proposed project discussed?	
c.	Is the commercialization aspect of the project elaborated?	
d.	Does the proposed product/solution address the current and future needs of relevant industry?	
e.	Does the proposal describe process for technology transfer to potential beneficiaries and utilization by relevant stakeholders?	

f.	Are achievable plans for producing, marketing, distributing and diffusion of the developed products/solutions provided?										
Key Strengths:											
Key Weaknesses:											
Utilization Plan Section Evaluation Ranking:	<table border="1"> <tr> <td>Unsatisfactory</td> <td>Needs Improvement</td> <td>Satisfactory</td> <td>Above Average</td> <td>Well Above Average</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	Unsatisfactory	Needs Improvement	Satisfactory	Above Average	Well Above Average	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unsatisfactory	Needs Improvement	Satisfactory	Above Average	Well Above Average							
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
Other Comments:											

7. Time Requirement: *[section 8 of the proposal]*

Keeping the ultimate objectives of the project in mind, evaluate the key strengths and weaknesses of the proposed project time line and rank accordingly.

		Yes/No
a.	Does the timeframe of the proposed project match the proposed project activities?	
b.	Is the proposed time duration justified, keeping in view the proposed objectives and scope of the project?	
c.	Can the project duration be reduced?	

Key Strengths:

Key Weaknesses:

Time Requirement Section Evaluation Ranking:	<table border="1"> <tr> <td>Significantly Under Estimated</td> <td>Under Estimated</td> <td>Good Estimate</td> <td>Over Estimated</td> <td>Significantly Over Estimated</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	Significantly Under Estimated	Under Estimated	Good Estimate	Over Estimated	Significantly Over Estimated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Significantly Under Estimated	Under Estimated	Good Estimate	Over Estimated	Significantly Over Estimated							
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
Other Comments:											

8. Proposed Resources / Budget: *[section 4.B/C of the proposal & Budget File]*

Keeping the proposed methodology in view, evaluate the proposed resources/ budget of the project and rank accordingly.

(a) Manpower Requirement:

Evaluate the key strengths and weaknesses of the composition of the project team (Technical + Support staff), taking into consideration their number and expertise and rank accordingly.

		Yes/No
a.	Are proper teams formed for various phases for possible parallel processing to reduce project duration?	

b.	Is the expertise of project team adequate for the proposed approach?	
c.	Is the number of project team members justified according to proposed activities?	
d.	Are graduate and undergraduate students being trained for research and/or development through the project?	

Key Strengths:

Key Weaknesses:

Manpower Requirement Section Evaluation Ranking:	Significantly Under Estimated	Under Estimated	Good Estimate	Over Estimated	Significantly Over Estimated
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other Comments:

(b) Demanded Equipment:

		Yes/No
a.	Is the request for equipment justified?	
b.	Have the specifications for the demanded equipment been provided?	
c.	Does the equipment claimed according to the technical tasks involved in the project?	
d.	If the project is an extension of another project, has the equipment already purchased and used during previous project (already completed or nearing completion) been catered for while demanding new equipment?	

Key Strengths:

Key Weaknesses:

Demanded Equipment Section Evaluation Ranking:	Significantly Under Estimated	Under Estimated	Good Estimate	Over Estimated	Significantly Over Estimated
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other Comments:

9. Capability of the Principal Investigator(s):

[Annexure A in the proposal]

(a) Evaluate the key strengths and weaknesses of the Principal Investigator (PI) and rank his/her ability to conduct and manage the proposed project.

		Yes/No
a.	Is the PI aware of latest developments in the proposed area?	
b.	Has the PI been working on similar projects in the past?	

c.	Does the PI have published work in the proposed area?	
d.	Does the PI have industrial experience in the proposed area?	
Key Strengths:		
Key Weaknesses:		
Capability of PI Evaluation Section Evaluation Ranking:	May be Challenging <input type="checkbox"/>	Satisfactory <input type="checkbox"/>
	Very Suitable <input type="checkbox"/>	
Other Comments:		
<p>(b) Capability of Co-Principal Investigator(s): Evaluate the key strengths and weaknesses of the Co-Principal Investigator (CPI) and rank his/her ability to conduct and manage the proposed project.</p>		
		Yes/No
a.	Is the CPI aware of latest developments in the proposed area?	
b.	Has the CPI been working on similar projects in the past?	
c.	Does the CPI have published work in the proposed area?	
d.	Does the CPI have industrial experience in the proposed area?	
Key Strengths:		
Key Weaknesses:		
Capability of Co-PI Evaluation Section Evaluation Ranking:	May be Challenging <input type="checkbox"/>	Satisfactory <input type="checkbox"/>
	Very Suitable <input type="checkbox"/>	
Other Comments:		
<p>(c) Capability of the Principal Investigator's Organization (PIO): Evaluate the key strengths and weaknesses of the PIO and rank accordingly.</p>		
		Yes/No
a.	Does the PIO have good research and/or development reputation? In case of academic institute does the PIO have HEC or international R&D ranking? (For information about PIO please visit PIO's website)	
b.	Does the PIO have any existing funded R&D projects?	
c.	Does the PIO have well established research and/or development facilities/labs?	
Key Strengths:		
Key Weaknesses:		
Capability of PIO Evaluation Section Evaluation Ranking:	Unsatisfactory <input type="checkbox"/>	Satisfactory <input type="checkbox"/>
	Above Average <input type="checkbox"/>	Well Above Average <input type="checkbox"/>
Other Comments:		

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10. Overall Rating of the Proposal:

In summary, I rate the proposal as:

Unsatisfactory	Needs Improvement	Satisfactory	Above Average	Well Above Average
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Overall Recommendations:

- Recommended for approval in its current form.
- Recommended for approval with the following revisions. Does not require any external re-evaluation.
Suggested revisions:
- Recommended for re-evaluation with the following revisions.
Suggested revisions:
- Not Recommended because of the following reasons:

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Date: _____ Signature: _____

Please return this form, by e-mail and fax, before due date to:

**Solicitation & Evaluation Department
National ICT R&D Fund
6th Floor, HBL Tower
Jinnah Avenue Islamabad.**

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Fax: (+92 51) 921 5366**