

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 project directors 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 project director and the infrastructure and support provided by the institution.

A detailed evaluation form is provided to assist evaluators achieve the objective of guiding project directors 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: _____ Due Date: _____

The Proposal:

Title of Proposal: _____
 Project Director: _____
 Title/Department: _____
 Principal Investigator: _____
 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?

- I am actively engaged in developmental work in this specific area.
 I have carried out developmental work in the past in this specific area.
 I have taught advance 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 Background:

[section 2 of the proposal]

Evaluate the key strengths and weaknesses of the efforts of PD 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 PD 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:

Low			Average		Good		Very Good		Excellent	
0	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section Weightage: 12 %

Section Rating (Rank obtained x Weightage):

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 focused on alleviating rate limiting factors and removing bottlenecks in the value chain described in the literature search?	
c.	Are the objectives measurable and clearly defined?	
d.	Will achieving the targets significantly remove key bottlenecks described in the	

literature search?																																		
Key Strengths:																																		
Key Weaknesses:																																		
Objectives Section Evaluation Ranking:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Low</th> <th colspan="2">Average</th> <th colspan="2">Good</th> <th colspan="2">Very Good</th> <th colspan="2">Excellent</th> </tr> <tr> <th>0</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td> </tr> </tbody> </table>	Low			Average		Good		Very Good		Excellent		0	1	2	3	4	5	6	7	8	9	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Section Weightage: 12 %	Section Rating (Rank obtained x Weightage):																																	
Other Comments:																																		

3. Methods and Approach: *[section 4 of the proposal]*

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

	Yes/No
a. Does the methodology suggest how key bottlenecks will be removed?	
b. Does the methodology provide solution to key challenges mentioned in the literature search?	
c. Does the methodology contain analysis, design, development, implementation and testing plans?	
d. Does the methodology include information like block-diagrams/ schematics for proposed hardware/software solution, algorithms, high-level code or mathematical descriptions?	
e. Is the proposed methodology implementable?	
f. Will proposed objectives be achieved through implementing the proposed methodology?	

Key Strengths:

Key Weaknesses:

Methodology Section Evaluation Ranking:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Low</th> <th colspan="2">Average</th> <th colspan="2">Good</th> <th colspan="2">Very Good</th> <th colspan="2">Excellent</th> </tr> <tr> <th>0</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td> </tr> </tbody> </table>	Low			Average		Good		Very Good		Excellent		0	1	2	3	4	5	6	7	8	9	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Section Weightage: 24 %	Section Rating (Rank obtained x Weightage):																																	
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
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a.	Do project activities support methodology? Special attention should be paid to activities that are focused at addressing key challenges and their solutions mentioned in literature search and methodology.	
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:

Non-Existent			Obscure		Vague		Satisfactory		Clear	
0	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section Weightage: 6 % Section Rating (Rank obtained x Weightage):

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 3 to 4 months apart?	

Key Strengths:

Key Weaknesses:

Monitoring & Evaluation
Section Evaluation Ranking:

Non-Existent			Obscure		Vague		Satisfactory		Clear	
0	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section Weightage: 8 % Section Rating (Rank obtained x Weightage):

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 broader impacts of the proposed project?	
c.	Is the commercialization aspect of the project elaborated?	
d.	Does the proposed product/solution address the current and future needs of industry?	
e.	Does the proposal describe process for technology transfer to potential beneficiaries and utilization in an industrial value chain?	
f.	Does the project have capability to produce widely used products which can be distributed through commercial or other channels?	
g.	Are plans for producing, marketing, distributing and diffusion of the developed products/solutions adequate?	

Key Strengths:

Key Weaknesses:

Utilization Plan Section
Evaluation Ranking:

Non-Existent			Obscure		Vague		Satisfactory		Clear	
0	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section Weightage: 8 %

Section Rating (Rank obtained x Weightage):

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:

Significant Over-estimate <input type="checkbox"/>				Over-estimate <input type="checkbox"/>				Good Estimate			
Significant Under-estimate <input type="checkbox"/>				Under-estimate <input type="checkbox"/>							
0	1	2	3	4	5	6	7	8	9	10	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Section Weightage: 6 %

Section Rating (Rank obtained x Weightage):

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 methodology?	
c.	Is the project team organized efficiently?	
d.	Is the number of project team members justified?	
e.	Are graduate and undergraduate students being trained for R&D through the project?	
f.	Do the project activities and manpower requested match with each other?	

Key Strengths:

Key Weaknesses:

Manpower Requirement
Section Evaluation Ranking:

Significant Over-estimate	Significant Under-estimate			Over-estimate				Under-estimate			Good Estimate		
0	1	2	3	4	5	6	7	8	9	10			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Section Weightage: 6 %

Section Rating (Rank obtained x Weightage):

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.	Is the equipment requested essential for the project activities?	
d.	Does the equipment claimed according to the technical tasks involved in the project?	
e.	Does the demand for equipment match properly with the technical activities in the project methodology?	
f.	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? Does the methodology support the re-use?	

Key Strengths:

Key Weaknesses:

Demanded Equipment Section Evaluation Ranking:	Significant Over-estimate <input type="checkbox"/>	Over-estimate <input type="checkbox"/>	Good Estimate								
	Significant Under-estimate <input type="checkbox"/>	Under-estimate <input type="checkbox"/>									
	0	1	2	3	4	5	6	7	8	9	10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section Weightage: 6 % Section Rating (Rank obtained x Weightage):

Other Comments:

9. Capability of the Project Directors: *[Annexure A in the proposal]*

(a) Evaluate the key strengths and weaknesses of the Project Director (PD) and rank his/her ability to conduct and manage the proposed project.

		Yes/No
a.	Is the PD aware of latest developments in the proposed area?	
b.	Has the PD been working on similar projects in the past?	
c.	Does the PD have published work in the proposed area?	
d.	Does the PD have industrial experience in the proposed area?	

Key Strengths:

Key Weaknesses:

Capability of Project Director Evaluation Ranking:	Poor			Adequate		Good		Very Good		Excellent	
	0	1	2	3	4	5	6	7	8	9	10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section Weightage: 6 % Section Rating (Rank obtained x Weightage):

(In absence of JPD, PD weightage should be 8%)

Other Comments:

(b) Capability of Joint Project Director(s): Evaluate the key strengths and weaknesses of the Joint Project Director (JPD) and rank his/her ability to conduct and manage the proposed project.

		Yes/No
a.	Is the JPD aware of latest developments in the proposed area?	
b.	Has the JPD been working on similar projects in the past?	
c.	Does the JPD have published work in the proposed area?	
d.	Does the JPD have industrial experience in the proposed area?	

Key Strengths:

Key Weaknesses:

Capability of Joint Project Director Evaluation Ranking:	Poor			Adequate		Good		Very Good		Excellent	
	0	1	2	3	4	5	6	7	8	9	10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section Weightage: 2 % Section Rating (Rank obtained x Weightage):

Other Comments:

(c) Capability of the Principal Investigator Organization (PI): Evaluate the key strengths and weaknesses of the PI and rank accordingly.

		Yes/No
a.	Does the PI have good R&D reputation? In case of academic institute does the PI have HEC or international R&D ranking? (For information about PI please visit PI's website)	
b.	Does the PI have any existing funded R&D projects?	
c.	Does the PI have well established research and development facilities/labs?	

Key Strengths:

Key Weaknesses:

Capability of the PI Evaluation Ranking:	Poor			Adequate		Good		Very Good		Excellent	
	0	1	2	3	4	5	6	7	8	9	10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section Weightage: 4 %

Section Rating (Rank obtained x Weightage):

Other Comments:

10. Overall Rating of the Proposal:

In summary, I rate the proposal as:

Poor (0-2)	Adequate (3-4)	Good (5-6)	Very Good (7-8)	Excellent (9-10)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Excellent: Outstanding proposal in all respects; deserves highest priority for support.
- Very Good: High quality proposal in nearly all respects; should be supported if at all possible.
- Good: A quality proposal worthy of support.
- Adequate: Proposal lacking in one or more critical aspects; key issues need to be addressed.
- Poor: Proposal has serious deficiencies.

11. Recommendations (for INTERNAL EVALUATOR only):

- Recommended in its current form for external evaluation.
- Recommended for external evaluation with the following revisions. Does not require any internal re-evaluation.

Suggested revisions:

- Recommended for internal re-evaluation with the following revisions.

Suggested revisions: _____

Not Recommended because of the following reasons:

12. Recommendations (for EXTERNAL EVALUATOR only):

'Application recommended for approval' in current form.

'Application recommended for approval' with the following modifications.

Suggested modifications:

'Application recommended for re-evaluation' with the following revisions.

Suggested revisions:

'Rejection of application recommended' because of the following reasons:

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