



# Request for Proposal

## E-Learning and Evaluation Systems (9<sup>th</sup> and 10<sup>th</sup> Grade Science Subjects)

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## 1. Objectives

The increase in demand for skilled human resource in our country has increased the pressure on our learning institutions, at all levels, by many folds. Besides bringing many changes in the job market, this situation has also amplified the demand for modern tools of learning. This scenario has given an opportunity to the ICT experts to further expand the horizons of their field of study. The Information and communication technology has already helped in facilitating the learning process by providing various tools of investigation to the researchers and by making the class room environment more conducive for learning applied concepts. Considering the success of ICT based technologies in improving the class room learning environment the National ICT R&D Fund plans to actively support a sequence of projects focused at developing effective e-learning tools. In the first phase the Fund intends to support the development of e-learning environment for the following disciplines at the secondary school level, conformant to the requirements of boards of intermediate and secondary education:

- a) Mathematics
- b) Physics
- c) Chemistry
- d) Biology

Through this request for proposal (RFP) the National ICT R&D Fund seeks proposals for designing and implementing e-learning environment through the “E-learning and Evaluation Systems” Project.

The goal of this project is **to develop an effective e-learning and evaluation system for the above mentioned subjects for the students of 9<sup>th</sup> and 10<sup>th</sup> grade.**

## 2. National ICT R&D Fund – An Introduction

National ICT R&D Fund was created in January 2007 by Ministry of IT with the vision to transform Pakistan's economy into a knowledge-based economy by promoting efficient, sustainable, and effective ICT (IT and Telecommunications) initiatives through synergic development of industrial and academic resources. Collaborative efforts between academia, research institutions, and industry are greatly encouraged to ensure that local economy can reap the monetary benefits of investment in research. We have significant funds available for proposals that are geared towards creating ICT related technologies.

Research grants are awarded for state of the art ICT-related development and research projects by individuals or groups from academia and/or industry actively involved in the development and research individually or collaboratively.

The grants cover honoraria for the project director and co-project directors, salaries for researchers, stipends for student research assistants, and supporting staff. Grants also cover

travel(s) within and outside the country for project-related activities and for project-related scientific conferences.

### **3. Scope of Services**

The importance of a good teacher in the learning process can not be denied in any learning environment. A good instructor not only facilitates the comprehension of complex issues by a student but also inspires him/her for hard work. With the increase in enrolment in the public schools, the task of a Pakistani teacher is becoming more and more complex and there is a growing need to support the teacher in his/her efforts to meet this complex challenge.

The National ICT R&D Fund intends to strengthen the educational system by introducing e-learning methodologies in the system for teaching science subjects. Through this RFP the company is soliciting proposals from IT institutions, academics, and professional software development companies to develop an 'E-Learning and Evaluation System' for teaching mathematic, physics, chemistry and biology courses to students preparing for matriculation examination.

The applicant shall be required to:

1. Develop an intelligent e-learning and evaluation system for physics, chemistry, biology and mathematics. The implemented evaluation and feedback methods should be based on the established techniques available for e-evaluation and e-feedback;
2. Organize the course work of the above mentioned subjects in modules for the students of 9<sup>th</sup> and 10<sup>th</sup> grades. These modules would most likely, but not necessarily be aligned with the chapters in text books;
3. Provide a formal description of learning expectations for each module;
4. Provide evaluation mechanisms (tests) for each module congruent to the learning expectations described above;
5. Provide mechanisms for detailed feedback on strengths and weaknesses of students based on their performance in the tests;
6. Suggest remedies to overcome these weaknesses;
7. Provide solutions to questions in the test;
8. Provide a record keeping mechanism for a student's progress;
9. Provide a plan for receiving feedback from stakeholders like students, teachers, tutors, parents etc.
10. Provide an open architecture and APIs so that users can contribute content.
11. Investigate the strategy to address the issues of platform as well as content obsolescence due to evolution of hardware, software and telecommunication technologies.
12. Provide a plan for incremental roll out of the system and its contents.

## **4. Proposal Submission**

Proposal Application Forms are available from [www.ictrdf.org.pk/eles](http://www.ictrdf.org.pk/eles). One hard copy of the completed application form is to be submitted to Solicitation and Evaluation Department (S&E) and a soft copy to [helpdesk@ictrdf.org.pk](mailto:helpdesk@ictrdf.org.pk).

## **5. Evaluation of Proposal**

The Solicitation and Evaluation Department is responsible for evaluating proposals both technical and financial. Each proposal is evaluated internally as well as externally. External evaluation is performed by experts in the relevant disciplines from academia as well as industry. Evaluation forms are available on our website [www.ictrd.org.pk/eles](http://www.ictrd.org.pk/eles).

### **5.1 Internal Evaluation**

The process of Internal Evaluation starts with the submission of proposal by the applicant. The company formally informs the applicant of the receipt of the proposal. In case the information provided in the proposal is inadequate, the proposal is sent back to the applicant highlighting its deficiencies from both technical and financial perspectives, the applicant is also provided sufficient help to improve the proposal and the revised proposal is again evaluated. In case, the proposal is rejected, the applicant is informed accordingly.

### **5.2 External Evaluation**

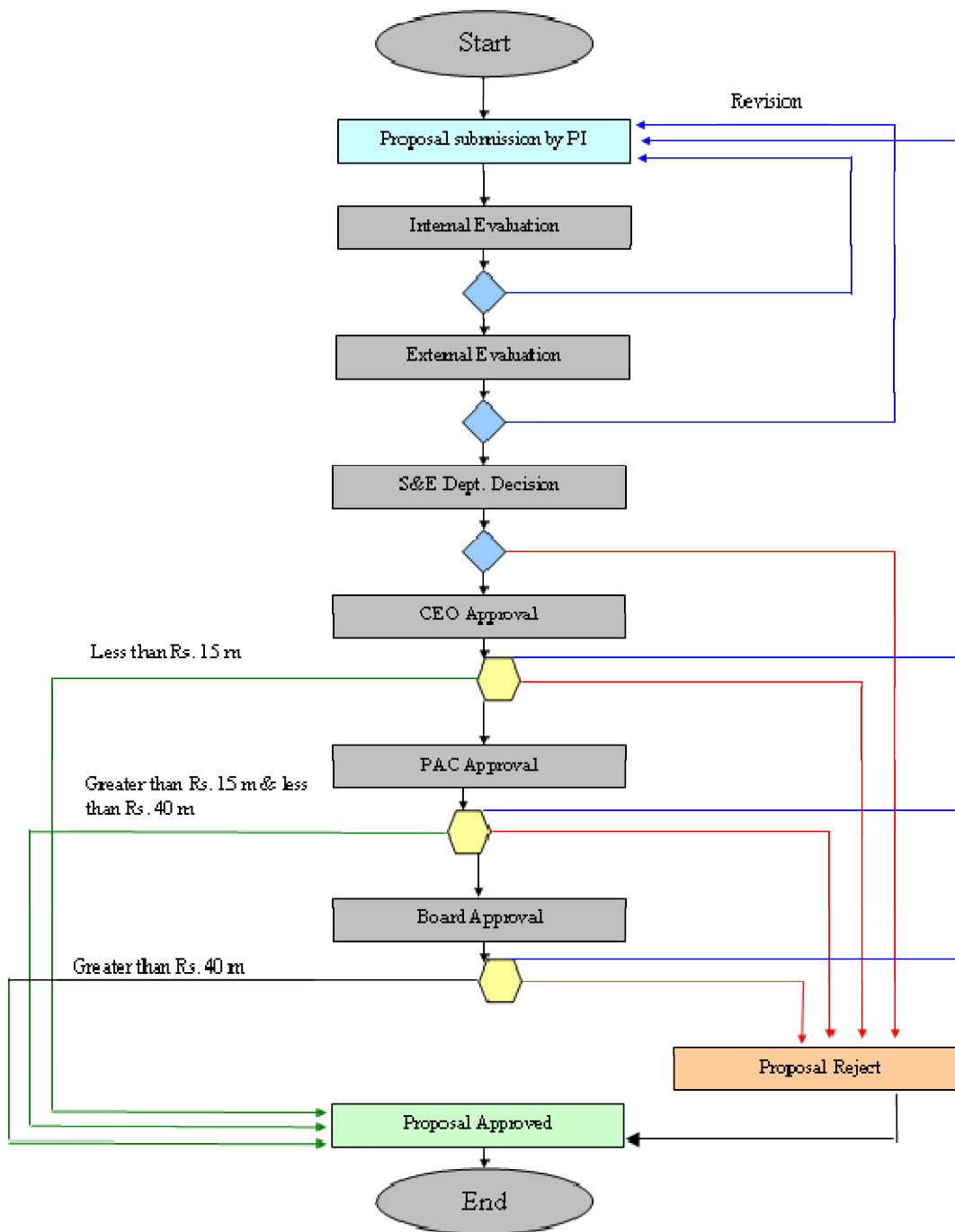
After successful completion of internal evaluation the proposal is sent to at least two external evaluators who have expertise in the relevant area. In case of any changes or modifications marked by External Evaluators, the applicant is informed to do the same. The modified proposal is again sent to external evaluators for re-evaluation, if needed.

### **5.3 Recommendation or Rejection by Solicitation & Evaluation Department**

Based on the results of internal and external evaluations, S&E Department takes an unbiased decision about recommendation or rejection of the proposal. Any proposal recommended by S&E will be processed further for approval.

### **5.4 Acceptance of Proposal**

Once a proposal is approved by the internal and external evaluators, further evaluation process depends upon the level of funding requested. A Proposal requesting funding less than Rs.15 million does not need further evaluation. A Proposal that requests funding exceeding Rs.15 million is further evaluated by Project Appraisal Committee (PAC). PAC can ask for revision or rejection of proposal. A Proposal requesting funding exceeding Rs.40 million is further evaluated by the Board of Directors after approval given by PAC. The Board can ask for revision or rejection of the proposal. In case of rejection the applicant is informed within 7 days of the final decision.



*Process flow of the Proposal*

## 6. Agreement

A written agreement will be made between National ICT R&D Fund and applicant. The applicant will undertake to administer the grant according to the agreement and to provide necessary facilities for the project.

The applicant will also be required to submit 'project progress reports' from time to time as prescribed in the 'monitoring schedule' and as agreed upon by the applicant and the company.