**Terms of Reference (TOR)**

For

Development and Implementation

of

**Institutional Management Information System (MIS)**

at

**SANT LONGOWAL INSTITUTE OF ENGINEERING AND TECHNOLOGY**

**SANGRUR, PUNJAB**

(Deemed University under MHRD, Govt. of India)

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**Terms of Reference (TOR) for**
**Web-Based Management Information System (MIS)**

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## 1. BACKGROUND

SANT LONGOWAL INSTITUTE OF ENGINEERING AND TECHNOLOGY (SLIET) invites consultants to submit their proposal to implement an End-to-End integrated MIS System at SLIET.

Sant Longowal Institute of Engineering & Technology (SLIET) was established by the Government of India to provide technical education in emerging areas of Engineering & Technology. It caters to the technical manpower requirements at various levels by adopting a concept of modular system in imparting technical education with emphasis on practical training in industry. This institute was set up in 1989 under Rajiv Gandhi-Longowal accord with an aim to fulfill the cherished dreams of Late Sant Harchand Singh Longowal. The Institute is fully funded by Ministry of Human Resources & Development, Government of India. The educational programs of this institute are non-conventional, innovative, practical oriented and contain all aspects of new education policy (1986) of Govt. of India. The Institute offers programs at Certificate, Diploma, Degree, Post Graduate (M. Tech., MBA and M.Sc.) levels in various branches of Engineering, Technology & Sciences and Ph.D. programs in Science, Management, Engineering and Technology. The programs in the Institute provide direct entry at Certificate (12 programmes), Diploma (11 programmes), Degree (10 programmes), M. Tech. (05 programmes), MBA, M.Sc. (03 programmes) and Ph.D. (all departments) levels and vertical mobility at Diploma and Degree levels of education, besides non-formal education programs. The Institute has acquired the status of a Deemed University in the year 2007. The institute has about 3500 students, 181 faculty and 272 staff members with 11 academic departments.

SLIET intends to implement state of the art **Institutional management Information system (MIS)** solution to have integrated information platform. SLIET is expected to accrue the following benefits from solution implementation:

- MIS Solution for SLIET's academic and administrative Functions
- Benefit by implementing the educational best practices that are embedded in university management system with respect to all relevant functions.
- All major functions like Admission, Academics, Examinations, Finance & Accounts, Human Resource Management, Library, Hostel system, Facilities etc. to be covered under solution scope.

## 2. Statement of Objectives
**The specific objectives of the proposed consultancy are to:**
**Create a web–enabled Monitoring and Evaluation Framework** in consultation with SLIET and to:
  I. Develop, implement, opertationalize and maintain a user-friendly, interactive, web-based computerized **Institutional MIS** for functioning all institutional activities. This system should provide suitable flexible interactive user-friendly tools to allow collection of inputs from various stakeholders, produce standard reports, and allow specialized queries to track all aspects of institutional progress at any time. The MIS will monitor all key inputs and activities of the institute.

II. Improve governance by achieving transparency and accuracy by embedding best business practices and processes into all its operations, doing away with non-value adding/redundant processes in the course of regulating and establishing excellence in Institution.

III. Integrate all its activities into Enterprise Resource Planning software (in phased manner). The activities can be broadly categorized as below :

    a) SLIET internal operations (e.g. General Administration, HR, Finance & Accounts, Procurement, Stores, Facilities, Business Process Management i.e., workflow through files, appointment of members for senate, boards and other bodies, RTI Act etc .)

    b) All administrative services to the key stakeholders :

        i. Students (Admission, Examination, Result, transition, Degree and all activities concerning students etc)

        ii. Faculty and Staff (Personal Information, Leaves, Service Benefits, Salary details, etc)

    c) All academic activities (Admission, time-table, teaching, learning, curriculum development, question paper / question banks, examinations life cycle and Results)

    d) All activities related to Library (Books, Magazines, Journals, Videos, other learning resources and user management)

    e) To develop student, employee, parent and alumni portals.

IV. Create a service oriented environment for students, faculty and staff to achieve excellence in Technical Education and Research.

V. Making the SLIET family (Management, Faculty, Staff and Students) free from routine paper based activities and enabling them to focus on its core activities related to technical education and research.

VI. Be fully web-enabled including all the network and cyber security features.

VII. Have a robust set of communication and reporting tools.

VIII. Utilize modern workflow capabilities in streamlining interactions among functional processes.

IX. Provide application development tools to support the continuous development/refinement of applications.

X. Provide interactive validation of data entry by users

XI. The System shall allow timely, secure and transparent storage of data, easy handling of storage, processing and retrieval of large quantities of data, flow of information, searching and sorting of specific information uniformly, accurately & quickly and easy generation of reports.

XII. It is expected that a fully operational MIS will become an invaluable tool to aid decision-making in the management and development of SLIET.

## 3. DETAILED SCOPE OF WORK

The consultants' duties and responsibilities will include but not necessarily be limited to the following:

### 3.1 Systems Requirement Specification (SRS)

The complete set of information to be captured by the will be finalized during the SRS phase. The consultant will prepare a project blueprint covering all the aspects such as complete hardware and software requirement on the basis of cloud/any other state of the art technology.

The various departments/ sections in SLIET are mentioned below to have an idea about scope of SRS:

**Administrative Block**
- Director Office
- Registrar Office
- Deans' offices
- Academic Section
- Examination/Secrecy Cell
- Accounts & Audit Section
- Stores and Purchase Section
- SLIET Entrance Test (SET) office
- Administrative section

**Academic Departments**
- Department of Computer Science & Engineering
- Department of Electronics and Communications
- Department of Electrical and Instrumentation Engineering
- Department of Chemical Technology
- Department of Food Engineering
- Department of Physics
- Department of Mathematics
- Department of Chemistry
- Department of Mechanical Engineering
- Department of Physical Disabilities
- Department of Management and Humanities

**Central Services**
- Workshop
- Library
- Health Centre
- Guest House/Transit Accommodation
- Student Activity Centre
- Estate Office
- Computer centre
- Other Allied services including horticulture, security and Sanitation, vehicle control etc.

**Hostel Systems**
All Boys and Girls hostels

**3.2 Web based MIS System**
The broad and indicative list of the desirable features of MIS includes,

- To be developed as web based application with Graphic User Interface (GUI).

- To be designed on evolutionary mode to accommodate the possible future expansion of the system or meet future requirements arising.

- To ensure portability of the system to multiple platforms.

- The MIS must ensure compatibility w.r.t. CPU architecture, operating system/ browser etc and also with the existing information and system in use at the institution level.

- To be able to generate reports and performance indictors in a text as well as graphic form (such as bar chart, pie charts or line graphs) to aid decision makers in definite manner.

- To embed security measures against the data hacking/ tempering, data access, and data in transit etc.

- To have conditional access to the nominated person with defined level of access and appropriate security.

- To capture data at source and there must be enough validation checks and crosscheck which will prevent spurious data to be entered.

- To incorporate general utilities like email, search option, number of hits etc.

- All activities related to Intranet and Mailing Solution etc.

**3.3 Training and Capacity Building**

Training of the users of the MIS is an integral component of the MIS implementation.

- The objectives of the training program will be to orient the users regarding the hardware and software of the MIS and all the functionality of MIS System as per the type of Users. Data Entry, Usage, entering data into the MIS at their level, and trouble-shooting with the help of the user's manual be developed for the purpose and generation of outputs.

- The consultant will develop a training kit and users' manual for training purposes and as a reference guide for the users of the MIS. The users' manual will include a complete description of the MIS System and operating instructions.

- Technical training: Technical training shall be provided by the consultant as per requirements of SLIET.

- **User Acceptance Testing (UAT) Plan**

  The consultants are expected to give a detailed UAT plan for the institutional MIS evolved through its at-least two rounds. Although the UAT shall be the responsibility of the SLIET, the consultant shall provide hand holding support in finalizing the test cases for the UAT and also undertaking these tests on behalf of SLIET to show the complete functionality of the system.

- **Maintenance and Support**
  - The consultant will maintain the system for a period of three years under warranty after acceptance by the SLIET.
  - The consultant is also expected to maintain the system for remaining project lifetime post warranty.
  - The consultant will be expected to create a help desk (telephone/ e-mail) to provide support during the implementation and maintenance phase. Such a help desk based support is expected to provide the necessary operational support to all the users across SLIET.


## 4. SCHEDULE FOR COMPLETION OF TASKS

The software should be designed, developed and implemented within 180 days from the date of award of contract, and ready for user acceptance test. A detailed road map (180 days) for development of complete software system must be submitted along with the proposal, which will be used as progress assessment tool.

*The Web based MIS System is envisaged to meet all the objectives as stated and to cover all the points but not limited to the scope of work.*


## 5. FINAL OUTPUTS REQUIRED OF THE CONSULTANT

- The consultant shall hand over a fully functional web based MIS System to SLIET.
- The consultant shall develop a detailed User Acceptance Test (UAT) plan (in 2-3 rounds) for the project.
- The consultant shall be responsible to host the developed system on a cloud computing/ any other state of the art technology as finalized complete with requisite server infrastructure, security, bandwidth etc and shall make the portal available over the Internet/LAN to all the stakeholders as per the agreed SLA.
- The consultant is expected to be responsible for maintenance of the system for the whole project life after the warranty period. The maintenance support shall be assessed as per the agreed SLA.

- The consultant shall be responsible for the migration of data/data-entry into the system and provide training and capacity building for various stakeholders viz students, parents of students, teachers, staff members, HOD's, Dean's, section in-charges, administrators, Director, BOM members, others.
- The consultant shall provide appropriate training depending on the type of users as per the mutually agreed plan.

## 6. PROCEDURE FOR REVIEW OF PROGRESS

The following is the procedure for review of progress reports, inception status, final draft and final reports:

- The consultant is expected to keep the client/stakeholder informed of all the activities under taken, progress made therein and future plans.
- The consultant shall initially prepare a weekly report and e-mail the same to the client/stakeholder on the commencement of next week.
- The consultant & client/stakeholder can decide the format(s) of report writing mutually. The consultant will be under obligation to change/ alter the format (s) as and when desired by the client/stakeholder.
- The consultant shall prepare a Monthly Report mentioning gist of all the activities under taken, progress made, corrective action taken, if any, during the month.
- The Report Writing shall start from the first week itself of Commencement of the contract with the consultant.

## 7. ELIGIBILITY CRITERIA

> *(Checklist of necessary supporting documents to be enclosed with EOI is given at page 10)*

1. The Consultant should be primarily an IT Company and Service provider dealing with application development & management services for education domain and should have been in the business for a period exceeding five years as on date- Memorandum and Articles of Associations should be enclosed.

2. The consultant must be providing support for all phases of the software development life cycle for at least 5 years in India and currently active in business of software production/development.

3. An undertaking (self certificate) is to be submitted that there has been no outstanding bankruptcy, judgment or pending legal action that could impair operating as a *going concern.*

4. An undertaking (self certificate) is to be submitted that the consultant hasn't been blacklisted by any Central/ State Government Department/ Central Government funded organizations/ State Government funded organizations/ World Bank, or other World Bank organizations (including the UN Organizations) and is not under investigation by Government or UN Member State Government.

5. The Consultant should have software solution for Universities and Educational Institutions.

6. The Consultant should be the owner/OEM of the software product.

7. The consultant should have completed at least three projects of similar nature (University/ Engineering Institution) in past five years. (The details of such jobs should be furnished **[Annexure-I]** with a copy of the Purchase Order).

8. The Consultant should have been certified enterprise-wide at **CMMi Level 4** or higher Certification.

9.  Consultants shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the Government of India ("GOI")/State Governments / Regulatory agencies.

10. SLIET reserves the right to carry out the capability assessment of the Consultants and its decision in this regard shall be final & binding to all.

11. Upon award of work order, the successful Consultant shall sign an agreement with SLIET within **21** days.

12. The Consultant should have at least 150 technically qualified software workforces in India for this specific business domain**.**

13. The annual turnover should not be less than Rs. 15 crore per annum from the IT consultancy and IT Support services during each of the last three years, excluding running year (i.e. FYs 2010-11, 2011-12 and 2012-13). A certificate to this effect from a competent authority in original must be submitted.

14. The consultant should obtain all required licenses of the proprietary products (if any used) and transfer to SLIET for lifetime of software. (total ownership required)

## 8.  RESPONSE REQUIREMENTS

- Interested consultants responding to the EOI must provide information (brochures, organization details, short description of similar/relevant assignments including associated quality statistics like Size/ Effort/ Budget variances, and Defect density, brief description of the competencies and financial statements) indicating that they are qualified to perform the above-mentioned services.

- Respondents must submit one hard copy of their response along-with all enclosures to the designated point of contact by the date and time specified in this EOI.

- Please ensure that document should be properly indexed and flagged.

*A list of key professionals (along-with minimum qualification and experience) whose CV and experience would be evaluated shall be provided as per **ANNEXURE-II**.*

## 9.  LAST DATE & ADDRESS

Last date for submission of the EOI is **June 26, 2013** (**21 days** from publication of EOI) by **04:30 pm** at the address mentioned below**,**


**Coordinator (TEQIP-II),**
**Office of TEQIP-II, Science Block,**
**Sant Longowal Institute of Engineering & Technology (SLIET),**
**Longowal - 148106 (Distt. SANGRUR)  Punjab INDIA**

**ANNEXURE-I**

DETAILS ON SIMILAR ASSIGNMENTS/PROJECTS UNDERTAKEN

**Name & Place of Consultant Firm:** …………………………………………………………………………………………….

| | Title of Assignment/ Project | Name and Place of Client | Value of Assignment/ Project (Rs. Lakh) | Duration of Assignment/ Project (Months) | Start Date (dd/mm/yyyy) | Completion Date (dd/mm/yyyy) | Services Rendered (bullet points) | Short Description on application utility (3-5 bullet points) | Currently under maintenance? (Yes/No) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |

**(Name & signature of authorized signatory)**

**ANNEXURE-II**

DETAILS ON TECHNICAL SOFTWARE PROFESSIONALS IN INDIA

**Name & Place of Consultant Firm:** ………………………………………………………………………………………

| | Name of staff member (technical software professional) | Designation | Qualification/Year | Date of Joining Firm (dd/mm/yyyy) | Professional Experience (years.months) | Professional Domain |
|---|---|---|---|---|---|---|
| **1** | | | Undergraduate/Year<br>Postgraduate/Year | | | |
| **2** | | | Undergraduate/Year<br>Postgraduate/Year | | | |
| **3** | | | Undergraduate/Year<br>Postgraduate/Year | | | |

**(Name & signature of authorized signatory)**

## CHECKIST OF NECESSARY SUPPORTING DOCUMENTS TO BE ENCLOSED WITH EOI

| No. | Items | Enclosed: Yes/No | If Yes, Enclosure No. |
|---|---|---|---|
| 1 | Registration Certificate of the Firm | | |
| 2 | List of software products for which the Firm is owner/OEM | | |
| 3 | List of active software solutions for universities & educational institutions developed, implemented and maintained by the Firm | | |
| 4 | Certificate regarding a CMMI Level 4 enterprise | | |
| 5 | Competent authority's certificates on annual turnover in each of last three years (i.e. FYs 2010-11, 2011-12 and 2012-13) | | |
| 6 | Purchase orders (atleast three) on completed assignments/projects of similar nature (universities & educational/engineering institutions) in past 5 years | | |
| 7 | Details on completed assignments/projects of similar nature (universities & educational/engineering institutions) in past 5 years (see format annex-I) | | |
| 8 | List of Firm's technical software professionals in India (see format annex-II) | | |
| 9 | An undertaking (self certificate) by the Firm regarding no outstanding bankruptcy, judgment or pending legal action that could impair operations as a going concern | | |
| 10 | An undertaking (self certificate) that the Firm has not been blacklisted by any central/state government department/organization, World Bank or IDA (including UN organizations) and is not under investigation by any government agency or UN member state government | | |