EXPRESSION OF INTEREST

INTERNATIONAL ISLAMIC UNIVERSITY ISLAMABAD invites **Expression of Interest (EOI)** for the **Implementation of Campus Management System (CMS) & Enterprise Resource Planning (ERP) at IIUI.**

2. Reputed IT Services Organizations may submit their Technical Proposal (under sealed cover) in accordance with instructions of documents. Interested parties must be registered with Income Tax and Sales Tax Departments and should be on active tax payer list of Federal Board of Revenue (FBR).

3. Documents, containing detailed requirements, terms and conditions, etc. are available at Room No. 213, 2nd Floor, Administration Block, Sector H-10, New Campus International Islamic University, Islamabad. Documents can also be downloaded from www.iiu.edu.pk and www.ppra.org.pk. Price of the bidding documents is **Rs. 1,000/-** *(Non-refundable)* in shape of Call Deposit/Bank Draft in favour of IIUI.

4. The EOIs prepared in accordance with the instructions in the documents, must reach on or before **14th May 2019** **up-till 10:30 a.m** at the following address:

Deputy Director (P&S)
Room No. 213, 1st Floor, Administration Block,
Sector H-10, New Campus
International Islamic University, Islamabad.

5. Proposals will be opened on the same day i.e **14th May 2019** **at 11:00 a.m** in the presence of the bidders/their representatives who may like to attend the opening ceremony.

6. International Islamic University Islamabad reserves the right to accept or reject any/all Proposal(s) in terms of Section-33 of Public Procurement Rules 2004.

Incharge (IT)
Information Technology Centre
Ph: 051-9019284, 9019799

Request for
Expression of Interest

Campus Management System (CMS)
and
Enterprise Resource Planning (ERP)

Request Number: IIU/CMS&ERP/2019/0001

Issued By: International Islamic University, Islamabad

Closing Date &Time: 14th May 2019, 10:30 AM

Contents

1. PART A: About this EOI Process

The International Islamic University is a well renowned public sector higher educational institution in Pakistan. There are eleven (11) teaching faculties having over 40 departments, five (5) Centres, two (2) academies, two (2) institutes and one (1) IT Centre. The total number of students is around thirty thousand including foreign students from over twenty countries. The University has separate male and female campuses. The main objective of this solicitation is to invite reputed and professional software development firms/companies to study daily business processes/routines of different departments of the University and develop CMS and ERP software to automate these processes in an integrative way in order to computerize the whole university processes in a bigger picture.

1.1 Background

The International Islamic University Islamabad is undertaking an Expression of Interest (EOI) process to assist with planning for the Campus Management System (CMS) and Enterprise Resource Planning Solution. CMS solution is required to support the academic processes for the existing and prospective students for both male and female campuses. Further information about the proposed CMS Solution required can be found in 'Part D: Potential CMS Solution Requirements'. ERP solution focuses on Finance, HRM, e-Correspondence, Procurement, Inventory and Planning & Projects Departments. More information about proposed ERP solution required can be found in 'Part E: Potential ERP Solution Requirements'

1.2 How this EOI process works

The purpose of an EOI process is to allow the International Islamic University Islamabad (IIUI) to gain preliminary information from Respondents/Bidders regarding the CMS and ERP Solution requirements set out in Part C, D and E to determine the level of interest in the provision of such solutions by highly expertise organization.

This EOI process will provide information regarding the potential development of the CMS and ERP solutions described in Part C, D and E, and invites prospective Respondents/ Bidders to submit an EOI. Bidders should be aware that the IIUI has option to proceed with the requirements in a manner that are different from that described in Part C,D & E, or may not proceed with the procurement of such solution at all.

Depending on the nature of the EOIs received, the IIUI may:

a) Request more detailed submissions from Respondents/Bidders
b) Establish a limited-term short-listed panel comprising selected Respondents /Bidders, from which future solution can be purchased pursuant to a competitive process, if and when the need arises

c) Decide not to proceed any further or
d) Do something other than the above.

It is important to note that this EOI process is not a Request for Tenders. It is not a commitment or representation of any kind by the IIUI.

The International Islamic University, Islamabad (IIUI) may contact one or more of the Respondents after the Closing Date and Time to discuss the Campus Management System (CMS) and Enterprise Resource Planning (ERP), Statement of Requirements or the IIUI's plans or needs generally. The IIUI may take views or feedback provided by Respondents in their EOI into account when developing any future Request related to the CMS& ERP.

1.3 How to lodge an EOI

1.3.1 Form and content of the EOI

To lodge a valid EOI, you must complete and submit the Compliance Documents for Respondents in Part B. This includes the Respondent Details section, Planning & Risks section, Criteria for Evaluation section. Please note that:

Each Technical Qualification Criterion does not have an equal percentage weighting. Therefore, the weightings identify the relative importance of each Technical Qualification Criterion.

1.3.2 Lodgement format

You are required to lodge an EOI in one of the ways listed in this section. While other methods of lodgement are not applicable to this EOI Request process, therefore you must only lodge your EOI in one of the ways listed below:

Respondents may submit an EOI By Hand or By Post at:

The Deputy Director (P&S)

Room No. 109, 1st Floor, Admin Block
International Islamic University
Sector H-10, Islamabad
051-9019261

By providing your EOI, in a sealed package clearly identified by the EOI Request number: **IIU/CMS&ERP/2019/0001**. Two copies must be submitted, with one copy marked "original" and 2nd copies marked "copy".

Additionally, a full and complete copy of the EOI must also be submitted in electronic form stored on a USB/DVD. Please submit this electronic copy with the hard copies and ensure that the electronic copy is exactly identical to the hard copies.

1.3.3 Closing Time

The Closing Date and Time for submission of EOIs is as set out on the front page of this EOI Request document.

EOIs submitted by post must arrive a Business Day prior to the Closing Time.

1.3.4 Late Submission

EOIs that are not received in full by the Closing Date and Time will not be received by the IIUI. The EOI submitted by fax/e-mail etc. shall not be considered. No correspondence will be entertained on this matter.

The University shall not be responsible for any postal delay or non-receipt/non-delivery of the documents. No further correspondence on the subject will be entertained.

1.4 Where to get more information

If you have any Technical enquiries about this EOI process, please contact the authorised IIUI representative listed below.

The Deputy Director (Software)

Room No. 233, 2nd Floor, Admin Block
International Islamic University
Sector H-10, Islamabad
051-9019284

1.5 How your EOI will be assessed

The University will constitute an Evaluation Committee to evaluate the responses of the bidders.

The Evaluation Committee constituted by the University shall evaluate the responses to the EOI, all supporting documents/documentary evidence. Inability to submit requisite supporting documents/documentary evidence, may lead to rejection.

The decision of the Bid Evaluation Committee in the evaluation of responses to the EOI shall be final. The Bid Evaluation Committee will take system presentation and may ask meetings with the Bidders to seek clarifications on their EOI.

International Islamic University Islamabad reserves the right to accept or reject any/all bid(s) in terms of section-33 of Public procurement Rules 2004.

Each of the responses shall be evaluated as per the criterions and requirements specified in this EOI. In addition, the University will assess your EOI against the Criteria for Evaluation set out in Part B. To the extent that the University considers appropriate, it may also consider any other information available to the University regarding the Respondent or the EOI.

Please be aware that EOIs will be assessed to determine the extent to which it may deliver value for money to the University. All costs, benefits and risks associated with each EOI will be assessed when making a value for money decision.

2. PART B: Compliance Documents for Respondent

This part is to be completed by the Respondent and submitted to the IIUI in accordance with Part A, section 1.3, with the help of "Appendix Bid Templates" where required.

2.1 Planning and Risks

The Respondent must:

a) Demonstrate its organisational planning and resource capability;
b) Identify the key risks that may impact on solution delivery and provide explanation of how these risks will be mitigated and/or managed;
c) The key policies, procedures and guidelines in place to ensure a relevant and high quality solution is provided; and Provide evidence of governance arrangements and accountability practices.

2.2 Mandatory Checklist for Eligibility

Bidders are required to make sure that the following mandatory requirements of eligibility are fulfilled, and submitted within the stipulated time period. Non-submission of any one of the following applicable requirements shall result in disqualification.

#	**Mandatory Eligibility Criteria Checklist**	Yes (✓) /No (×)
1	Proof of SECP Registration	
2	Proof of NTN Registration	
3	Proof of GST Registration	
4	Proof of FTN certificate / Tax exemption certificate *(for public sector entity*) if any.	
5	In case of consortium / Joint Venture (JV) attach consent letter of **each** partner organization clearly specifying its role and responsibilities in the project. Letter should be issued by authorized person of the partner organization and cannot be withdrawn till the completion of project.	
6	Original affidavit (not older than one month) on Stamp Paper(s) of worth Rs.100 or more that Bidder is not insolvent, bankrupt and is not black listed or debarred by PPRA, Government, Semi-Government, Private, Autonomous body or any international organization.	

7	Company letter that the Bidder is an active taxpayer and has submitted its tax return for the preceding fiscal year. Taxpayer list serial number (down loadable from FBR's website) is also to be mentioned.	
8	Extracts from the audited Balance sheet and Profit & Loss; OR Certificate from the statutory auditor which reflects the average turnover of last 03 years is at least Rs. 50 million. Appendix Form-1 (reference 2.3) This turn over should not comprise of sales revenues related to supply of hardware/IT infrastructure	
9	Proof of experience as IT services organization. Prime Bidder should have been in operation for a minimum of five (5) years. Appendix Form-1	
10	Proof which shows the successful completion of at least 3 projects related to CMS/ERP within the past 5 years	
11	Submission of EOI document ordering according to Form 8 format	

Note: Bidders are required to submit filled, signed & stamped copy of the above checklist along with the Proposal.

2.3 Criteria for Qualification

Interested firms should provide information demonstrating that they have the required qualifications and relevant experience to perform the Services. Qualifications requirements for short listing are:

Sr.	Criteria	Requirements	Marks Distribution
	COMPANY PROFILE (40)		
1	Cash Flow Turnover Extracts from the audited Balance sheet and Profit & Loss; OR Certificate from the statutory auditor *Appendix Form-1* (10 marks)	Cash Flow Turnover of IT services organization related to software development during last three (3) financial years (as per the last published Balance sheets) should be at least Rs. 50 millions. This turn over should not comprise of sales revenues related to supply of hardware/IT infrastructure.	Equal to or more than 50 million Rupees: 10 Between 40 million & 50 million Rupees: 08 Between 20 million & 40 million Rupees: 05 Less than 20 million Rupees: 02

<table>
<tr><th>Sr.</th><th>Criteria</th><th>Requirements</th><th>Marks Distribution</th></tr>
<tr><td>2</td><td>Professional Staff curriculum Vitae

Appendix Form-2

(10 marks)</td><td>Full-time professional staff engaged in software development and implementation (Number of Software Development Staff)</td><td><table><tr><td>Equal to or more than 25</td><td>10</td></tr><tr><td>Between 20 & 25</td><td>07</td></tr><tr><td>Between 15 & 20</td><td>05</td></tr><tr><td>Less than 15</td><td>02</td></tr></table></td></tr>
<tr><td>3</td><td>Presentation and demonstration of similar nature system in their premises or at IIU

(20 marks)</td><td>Live demonstration of similar applications</td><td><table><tr><td>Presentation and demonstration</td><td>20</td></tr></table></td></tr>
<tr><td></td><td colspan="3">RELEVANT PAST EXPERIENCE (10)</td></tr>
<tr><td>4</td><td>Last 05 years Projects at least

Appendix Form-3

(20 marks)</td><td>IT services organization/ Prime Bidder must have successfully completed at least 3 similar development and implementation contracts within the past 5 years in projects related to CMS/ERP</td><td><table><tr><td>Equal to or more than 5 CMS/ERP projects</td><td>20</td></tr><tr><td>3 Projects</td><td>15</td></tr><tr><td>Less than 3 Projects</td><td>0</td></tr></table></td></tr>
<tr><td></td><td colspan="3">METHODOLOGY, IMPLEMENTATION PLAN & ARCHITECTURE (50)</td></tr>
<tr><td>5</td><td>Approach, Methodology and Implementation plan

1. Understanding of the objectives of the assignment
2. Completeness and Responsiveness

Appendix Form-4 and 4.1

(20 marks)</td><td>a) The extent to which the consultant’s approach and work plan respond to the objectives indicated in the EOI
b) The extent to Which the proposal responds exhaustively to all the requirements of all the Scope of Work
c) Project Timelines
d) Conflicting requirements in EOI if any</td><td><table><tr><td>Details of methodology and implementation plan by module/by man days</td><td>20</td></tr><tr><td>Partially filled methodology and implementation plan</td><td>08</td></tr><tr><td>Without methodology &implementation plan of assignment</td><td>0</td></tr></table></td></tr>
<tr><td>6</td><td>CMS Application Architecture

Appendix Form-5

(15 marks)</td><td>a) Detail of CMS & ERP Architecture
b) Detail of CMS& ERP development platform
c) Detail of required third party software/packages licenses/ databases
d) Detail of hardware sizing requirement against 32,000 students for CMS deployment and 400 employees.</td><td><table><tr><td>Details of CMS application architecture and system detail</td><td>10</td></tr><tr><td>Partially Architecture and system detail</td><td>03</td></tr><tr><td>Without System Architecture and system detail</td><td>0</td></tr></table></td></tr>
</table>

<table>
<tr><th>Sr.</th><th>Criteria</th><th>Requirements</th><th>Marks Distribution</th></tr>
<tr><td>7</td><td>Lessons Learned, Risk mitigation, Training and Support

Appendix Form-6

(15 marks)</td><td>a) Previous learning
b) Challenges likely to be encountered
c) Proposed riskmitigation
d) Proposed directorate staff structure of CMS & ERP for execution
e) Proposed Roll out plan
f) Training plans for end users and Technical team of IIU along with user and technical documentation
g) Detail about support levels for critical and non-critical issues</td><td><table><tr><td>Completeness of all requirements</td><td>10</td></tr><tr><td>Partial filled</td><td>03</td></tr><tr><td>No submission</td><td>0</td></tr></table></td></tr>
</table>

Bidders, whose bids are responsive, based on minimum qualification criteria as in Qualification Criteria and score at least 70 marks would be considered technically qualified.

2.4 Appendix: Bid Templates

The bidders are expected to respond to the EOI using the appropriate forms given in this section along with other supporting documents for qualification.

Form 1: Company Profile Template

<table>
<tr><td>Name of Company</td><td colspan="4"></td></tr>
<tr><td>Address of the Company</td><td colspan="4"></td></tr>
<tr><td rowspan="5">Detail of contact person (s) and title (s)</td><td></td><td colspan="2">Primary Contact</td><td>Secondary Contact</td></tr>
<tr><td>Name</td><td colspan="2"></td><td></td></tr>
<tr><td>Title</td><td colspan="2"></td><td></td></tr>
<tr><td>Phone #</td><td colspan="2"></td><td></td></tr>
<tr><td>Email</td><td colspan="2"></td><td></td></tr>
<tr><td colspan="2">Year of Registration</td><td colspan="3"></td></tr>
<tr><td colspan="2">Certificates (Attach)</td><td colspan="3">Title of Certificates</td></tr>
<tr><td colspan="2"></td><td colspan="3"></td></tr>
<tr><td colspan="2"></td><td colspan="3"></td></tr>
<tr><td colspan="2">No of Employees</td><td colspan="3"></td></tr>
<tr><td colspan="2" rowspan="2">Latest annual average turnover in millions PKR for past 3 years and attach copy of audited Annual Accounts (of last 3 years)</td><td>1st year</td><td>2nd year</td><td>3rd year</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td colspan="2">Main Area of Expertise: You can add as many areas as you like by separating them with coma.</td><td colspan="3"></td></tr>
</table>

We as bidder for this EOI do confirm that:“Our company is not insolvent, bankrupt and is not blacklisted or debarred by PPRA, Government, Semi-Government, Private, Autonomous body or any other international organization.”

Signature:
Company Seal:
Title:

Name:

Form 2: Technical Staff Curriculum Vitae (CV) Template

Name of Employee:		
Position:		
General Information	Name:	Date ofBirth:
	Telephone:	
	Email:	
	Years with Present Employer:	

Employment Record:

Summarize over all professional experience in reverse chronological order.

DD/MM/YY		**Company/Project/Position/Specific Tech experience**
From	**To**	

Relevant Experience:

Summarize relevant experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project:

DD/MM/YY		**Company/Project/Position/Specific Techexperience**
From	**To**	

Education:

Highest Level of Degree	**University/Year/Degree Title**
PhD/MPhil	
Masters	
Bachelors	

Certifications:

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.

Date:____

[Signature of staffmember and authorized representativeof thefirm]
Day/Month/Year

Fullname ofstaff member: __________________________________

Fullname of authorized representative: ______________________

Form 3: Relevant Experience Template

<table>
<tr><td>Title of Project</td><td colspan="3"></td></tr>
<tr><td>Description</td><td colspan="3"></td></tr>
<tr><td rowspan="5">Contact Details</td><td></td><td>Focal Person of Bidder</td><td>Focal Person of Client Organization</td></tr>
<tr><td>Name</td><td></td><td></td></tr>
<tr><td>Title</td><td></td><td></td></tr>
<tr><td>Phone #</td><td></td><td></td></tr>
<tr><td>Email</td><td></td><td></td></tr>
<tr><td colspan="2">Project Worth (millions)</td><td colspan="2"></td></tr>
<tr><td colspan="2">Project Duration (months)</td><td colspan="2"></td></tr>
<tr><td colspan="2">Technology Stack</td><td colspan="2"></td></tr>
</table>

*Please attach relevant documents to corroborate your information.

Form 4: Methodology and Implementation plan

You should explain the approach to development methodology for carrying out the activities and obtaining the expected output, and the degree of detail of such output.

You are suggested to present Approach and Methodology divided into the following sections

a) Understanding of the project
b) Potential initiatives given the priorities
c) Technical Approach and Methodology
d) Implementation plan
e) Customization Methodology
f) Integration Methodology
g) Maintainability methodology

Form 4.1: Proposed Project Plan

In this section you should propose the main activities of the assignment, their content and duration, phasing and interrelations, milestones, and delivery dates of the reports and deliverables.

The proposed work plan should be consistent with the technical approach and methodology, showing understanding of the TOR and ability to translate them into a feasible working plan. A list of the final documents, including reports/manuals to be delivered as final output, should be included here.

The above should be substantiated with the project plan, as per the following template.

CALENDAR MONTHS																
Sr.	**Activity**	**Dependency**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**..**	**n**
1																
2																
3																
4																
N																

1. Indicate all main activities of the assignment, including delivery of reports/manuals.
2. Duration of activities shall be indicated in the form.

Form 5: Application Architecture

This section should provide a good understanding of the application architecture, development platform, required third party software/licenses and databases. The technical developments have followed open/international standards. Need to provide high level infrastructure design, hardware sizing requirement against 32,000 students and 4000 employees for CMS & ERP deployment in production environment. You are suggested to present and divide into the following sections

a) Detail of application architecture
b) Detail of development platform
c) Detail of required third party software/packages licenses/databases
d) Detail of hardware sizing requirement against 32,000 students for CMS and 4000 employees for ERP deployment

S. No	CMS Server/VM Description	CPU Cores	RAM	SSD	Operating System
S. No	**ERP Server/VM Description**	**CPU Cores**	**RAM**	**SSD**	**Operating System**

Form 6: Lessons Learned, Risk mitigation, Training and Support

In this section you should propose and share following

a) Previous learning & Challenges likely to be encountered
b) Proposed risk mitigation
c) Proposed directorate staff structure of CMS & ERP for execution
d) Proposed Roll out plan
e) Training plans for end users and Technical team of IIU along with user and technical documentation
f) Detail about support levels for critical and non-critical issues

Form 7: Affidavit for Power of Attorney

<u>AFFIDAVIT</u>

I, (name) on behalf of (IT Organization/Company/Consortium/Joint Venture), having its registered offices at (Registered Address), do hereby solemnly affirm and declare as follows;

That, I am the Power-of-Attorney holder in the instant matter and therefore am well acquainted with the facts and circumstances involved herein completely and comprehensively.

That, on behalf of the organization mentioned above, also hereby certify that neither I/our Organization/Company/Consortium/Joint Venture have abandoned any work in Pakistan nor any contract awarded to us for such works have been rescinded, during last five years prior to the date of this bid.

That, I hereby authorize(s) and requests any Bank, Person, Firm or Corporation to furnish pertinent information deemed necessary and requested by the directorate to verify the statements/information or regarding my (our) competence and general reputation.

That, it is understood and agreed that further qualifying information may be requested, and agrees to furnish any such information at the request of the Directorate/project implementing agency.

That, I certify that all the statements/information furnished in the bid document for the <u>Development and implementation of CMS& ERP for International Islamic University, Islamabad </u>are true and correct to the best of my knowledge and matters of record.

And I sign this affidavit on this the ____ day of ______________________, at _______________.

Signature: _______________

Name: __________________ CNIC: _________________

Form 8: Document Submission Format

The interested parties must submit the EOI in the following format.

1. Mandatory eligibility criteria checklist along with required documentation
2. Company Profile
3. Technical Staff Curriculum Vitae
4. Relevant Experience
5. Methodology and Implementation plan
6. Application Architecture
7. Lessons Learned, Risk mitigation, Training and Support

3. PART C: Scope of Work

The main idea behind the CMS& ERP is to automate the student, faculty and staff related whole processes to decrease the workload on the faculty and administration. Both commercially off-the-shelf and open source based solution including middleware and databases should be considered for the development and implementation of CMS & ERP. International development best standards and practices should be adopted for development. Micro-services based architecture should be preferred along with container based deployment. The DevOps methodology is expected for the development of the system.

Firms should propose their own comprehensive implementation plan and timelines in identify phases in which this whole activity will be completed. The technical proposal should include their implementation plan for the project, including the deliverables for each milestone, such as requirement analysis of existing business processes, design, gap analysis, implementation, deployment, user acceptance, Go-Live, support and sign off.

Firm shall be free to run project activities in parallel, the work shall be divided into three (3) proposed phases from our side. Phase 1, Review/Bridging the existing processes/applications; Phase 2, Design Phase: Phase 3, Implementation Phase.

3.1 Review/bridging the processes

a) Carrying out an in-depth analysis of existing business processes by two different teams appointed for CMS& ERP
b) Carrying out an in-depth review of the CMS& ERP specifications
c) Assess/review the re-engineered processes and related CMS & ERP developments in terms of the used methodology, implemented technology and user acceptance
d) Provide technical support to the processes/application in the view of the transition to the full CMS& ERP implementation

3.2 Design Phase

a) Plan the business process re-engineering interventions in terms of selected methodology and business process management tool as well as needed process simulations
b) Mapping (as-is) and re-engineer (to-be) the IIU business processes
c) Define the overall architecture of the CMS& ERP systems to be implemented
d) Prioritize and schedule the processes/business areas for the CMS& ERP interventions for the implementation phase
e) Design the Integration Architecture and Solutions able to integrate the other applications resident in IIU

3.3 Implementation Phase

a) Implement the CMS & ERP according to the proposed architecture and platform
b) Implement the integration services according to integration architecture
c) Conduct system demonstration and user acceptance testing and final deployment in IIU premises
d) Conduct on-the-job training of selected IIU personnel
e) Provide the needed support and maintenance of the provided systems along with the necessary changes
f) Delivery of the full user and technical documentation
g) Post Production Support for at least one year after final acceptance

The firms should also:

a) Hand-over the source code of all the systems/modules developed.
b) Provide the development tools, technologies, APIs, etc. for future enhancements by the IIU.
c) Provide updates of any new release from time to time during the agreed maintenance period.
d) Should impart training and transfer skills for onward customization and maintenance.

e) Provide the ownership of code. The original source code of customization made by the firm shall be the property of the IIU. The IIU shall have complete rights to modify the software to other campuses in future.
f) Should run new system in parallel for at least 06 months to ensure the accuracy and user friendliness of the system.
g) Provide technical support services should be provided for 1 year at least after the successful deployment of software.
h) Provide all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the IIU at no charge for inspection.IIU shall have the right to inspect and/or to test the Software to confirm their conformity to the Contract specifications at no extra cost
i) Provide online help and user manuals covering all features of the systems.
j) Submit data migration plan to move existing data from the legacy software (SIS, Admission and Hostel) to the newly acquired system.

3.4 System Customization & Integration

The proposed system should be designed in a way that integration with other third party systems is possible seamlessly. It should be robust enough to handle runtime minor customization and to perform future customization/module/plug in and maintenance with the minimum effort. The proposed system must:

a) Have a provision to introduce custom fields on existing forms for capturing additional information.
b) Have a provision to customize existing forms to modify the properties of the controls available on the system.
c) Have a provision to introduce new forms and apply workflow on these forms with pre-defined layout and workflow templates and with the option to add custom fields.
d) Be able to include custom scripts at form level.
e) Have an option to customize reports with the help of filters generated using different data fields of that form.
f) Have a provision to enable/disable and show/hide specific system features and modules.

g) Manage minor customization via graphical user interface without customizing the existing code and allow users to generate customized form grids and reports by adding or removing data fields via interface.
h) Provide APIs to develop routine to exchange data between CMS/ERP and other systems
i) All existing available data should be migrated.
j) Provide data import/export facility in CSV and other machine-readable formats to be used in other systems.
k) Have smooth integration for third party applications
l) Should include technical documents of core framework such as data dictionary, schema, system architecture, class diagrams and other necessary documentation for the customization of software.
m) Having support of multilingual (Urdu and Arabic) and multicurrency features

If at any time during performance of the Contract, the Supplier encounters conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.

A delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages, unless an extension of time is agreed upon without the application of liquidated damages.

If the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, 0.5% of the total amount of the Contract per week, up to a maximum of 10% of the total amount of contract. Once the maximum is reached, the Purchaser may consider termination of the Contract.

Part D& E shows the functional requirements of CMS& ERP but not limited to the requirements mentioned here.

4. PART D: Potential Scope of Work (CMS)

The proposed Campus Management System (CMS) will be developed for the Students, Faculties, Examination, Finance, Administration and Academic Wing of International Islamic University, Islamabad. It will include the system that will cover the whole life cycles of students from admission to alumni.

Some of key features and modules that should contain in Campus Management System (CMS) are elaborated in the following and more related information can be obtained from Academic, Student Fee, Examination, Admission, Degree sections etc. The interested party may introduce new modules after studying existing business processes of the IIU. The proposed solution must be able to migrate all existing data of Student Information System into the new CMS.

4.1 Online Admission System

The proposed solution must be able to provide the interface for prospect/student to apply programme/courses online but not limited to functions & features below:

a) The proposed solution must be able to allow the prospects to create own account to register as applicant.
b) The proposed solution must be able to allow prospects to submit application supporting document online including such as transcript, certification, and etc.
c) The proposed solution must be able to configure option to upload image.
d) The proposed solution must be able to provide communication features to allow collaboration/communication between education institution and prospect.
e) The proposed solution must be able to allow prospect to download and print filled admission application form, fee challan, roll number slip and the offer letter from the portal.
f) The proposed solution must be able to allow prospect to provide bank submitted information.
g) The proposed solution must be able to provide the interface for administration and academic department to manage student admission processes online.
h) The solution must provide the dashboard for personnel of Admission Section and students for self-service support according to their role & permission.

4.2 Campuses, Organizational Policies and Permissions

The proposed solution must be able to configure and support but not limited to policies and features below:

a) The proposed solution must be able to support multi campuses creation & access setup
b) The proposed solution must be able to support unlimited faculties, schools, departments, programs, scheme of studies, intake/batches creation, semester offering

The proposed solution must be able to configure and support but not limited to academic policies below:

a) The proposed solution must be able to support setting of study intake and academic semester with subject auto enrolment.
b) The proposed solution must be able to support assessment setting as per programme/intake/semester/subject
c) The proposed solution must be able to support grading scheme setting as per programme/intake/semester/subject
d) The proposed solution must be able to support repeat and re-sit grading scheme setting
e) The proposed solution must be able to set/announce dates for course start/end, course add/drop, exams, result declaration, convocation etc.
f) The proposed solution must be able to support intake/batch to maintain the criteria for degree completion.
g) The proposed system must be able to define quota system.
h) The proposed solution must be able to configure and support finance and charging policies of fee.
i) The proposed solution must be able to maintain payments in multi-currency, multi-year, multi-location, etc.
j) The proposed solution must be able to define scholarship programs, donors and criteria for awarding scholarships.
k) The proposed solution should manage the users according to role and permission to access can be controlled by campus, faculty, department, section and unit wise etc. for editing and viewing data.

l) User account should be global to access other sub and integrated systems like Koha Library System, Time Table, Moodle etc.

4.3 Student Academic Record, Registration/ Enrolment

a) The proposed solution must be able to support student Profile creation
b) The proposed solution must be able to support RFID based card generation & printing
c) The proposed solution must be able to support both manual and auto programmed / course registration
d) The proposed solution must be able to support termination of current programme and register to new program
e) The proposed solution must be able to support add and drop programme/course handling by students
f) The proposed solution must be able to support to withdrawn programme/course handling
g) The proposed solution must be able to support to defer programme/course by students
h) The proposed solution must be able to support add and drop subject handling
i) The proposed solution must be able to support withdrawn subject handling
j) The proposed solution must be able to support defer subject handling
k) The proposed solution must be able to support next semester auto enrolment upon current semester completed.
l) The proposed solution must be able to support allow exceptional scenario, example: transfer from programme A to B and from B to C and from C back to A.
m) The proposed system must be able to apply different checks before joining like the validity of degree duration, enrolment in a single degree program.
n) The proposed system must be able to support joining for program offered in faculty/department other than student’s parent faculty/department.
o) The proposed system must be able to support course exemption for student migration cases from other universities.
p) The proposed system must be able to support readmission cases.

q) The proposed system must be able to cancel, suspend student admission based on the rule defined in the system such as low GPA, misconduct, non-payment of dues etc.
r) The proposed system must be able to manage students migrated to and from other institutes.
s) The proposed system must be able to manage course equivalency of migrated students.
t) The proposed system must be able to close enrolment of student at the completion of study programs.
u) The proposed solution must be able to subscribe students to library services via Koha
v) The proposed solution can have the option to facilitate student to connect to Moodle (LMS) using their account (Optional).
w) The solution must provide the dashboard for personnel of Admission Section and students for self-service support according to their role & permission.

4.4 Student Financial Manager

The proposed solution must be able to configure and support not limited to features below:

a) The proposed solution must be able to support and perform collection by various user defined Mode of Payment
b) The proposed solution must be able to configure and generate fee collection by different mode based on block and credit hours.
c) The proposed solution must be able to support discount and discount reversal
d) The proposed solution must be able to support special bank draft handling for currently differences, bank charges, bounced draft and etc.
e) The proposed solution must be able to support refund processes with policies
f) The proposed solution must be able to support miscellaneous invoice for any item/invoice to be charge, at any time
g) The proposed solution must be able to support and assign Instalment with flexible period and numbers allowed
h) The proposed solution must support adjustment of advances.

i) The proposed system must support waivers, fine and penalties on late payments.
j) The proposed system must be able to Refund fee.
k) The proposed solution must be able to support statements auto deliver and display in student and parent’s portal
l) The proposed solution must be able to provide different statistics and analytics in student financial dashboard for university executives
m) The proposed system must be able to support scholarship cases based on policies for need base scholarship quota, CGPA merit system etc.
n) The proposed solution must be able to support Clearance process for issuance of transcript/degree.
o) The proposed system must provide support to import bank scroll in system for fee collection and verification and provide APIs for real time synchronization with banks like HBL & ABL or any other.
p) The solution must provide the dashboard for personnel of Fee Section and students for self-service support according to their role & permission.

4.5 Scholarship Manager

a) The proposed solution must be able to define different scholarship programs.
b) The proposed solution must be able to record the total budget and grant available for a specific scholarship.
c) The proposed solution must be able to limit scholarship to specific faculties/department/programs/batches.
d) The proposed solution must be able to define criteria for shortlisting of applicants for each scholarship program.
e) The proposed system must be able to accept online applications along with required documents based on the criteria defined
f) The proposed system must provide a separate dashboard for the shortlisting of applicants.
g) The proposed system must be able to enter interview marks and feedback of committee for the applicants.
h) The proposed system must be able to generate merit lists and then notify success applicants via email and SMS.

i) The proposed system must support the payment of scholarship or adjustment of the scholarship against the already paid fee by the student
j) The proposed system must be synchronized with bank.
k) The proposed system must be able to generate invoices in the system to release funds from the donor.
l) The proposed system must be able to generate the scholarship grant utilization report from the accounting system.

4.6 Student Examination/Result Manager

The proposed Student Examination manager module must be able to generate exam docket, exam time table setup, generate prevention lists, print student exam card/slip who paid fee, sitting plan, supervisory staff, support assessment and grading setup for each subject semester / study intake, support exam marks entry by lecturer, relative marking, support auto calculation of GPA / CGPA from the subject final marks, generate exam report and different meeting reports, support marks locking control before printing of transcripts and posting to student portals, support features of Final Year Project (FYP), thesis and research project automation. The proposed system must support convocation key features and should also maintain stock and movement of blank copies of transcripts, provisional certificates, degrees and distinction certificates. The solution must provide the dashboard for personnel of Examination Section and students for self-service support according to their role & permission. All the sensitive information such as student grades, exam data, should be stored in encrypted form in the database.

4.7 Class Auto Time Table Manager

The proposed solution must be able to support and configure auto time table generation using UniTime comprehensive open source academic scheduling solution with parameter settings. The proposed system must allow the role based access to UniTime software and should use the resources as defined in proposed system for scheduling in the time table software. The data available in uniTime will also be available in the proposed system.

4.8 Outcome Based Education

Outcome-based education (OBE) is an educational theory that bases each part of an educational system around goals (outcomes). By the end of the educational experience each student should have achieved the goal. The proposed CMS should be Outcome Based Education system in which it supports to maintain and improve Quality of Education using OBE (Outcome Based Education) Methodology, support to create online syllabus, course materials and lesson plans, support to create online assignments, quizzes and exams along with outcome based grading, support for reports to monitor teaching performance and so on.

4.9 Hostel & Mess/Food Management System

The proposed solution must be able to Maintain the Hostel and Room description with type, capacity and detail of other items in a room, manage the seat allocation through SIS and maintains the seat status whether it is occupied or vacant, manage the re-allocation of seat to student with semester wise and also maintains attachment detail of the same, Maintains the details of fee paid by the students, manage the student clearance with respect to vacant date and submission of other related item of the room, maintains the information of visitors with respect of student and room, provide all related reports of hostel to hostel officials such as occupied and vacant seats list Hostel wise etc. The solution must provide the dashboard for personnel of Hostels and students for self-service support according to their role & permission. The system should be capable of showing occupancy details of all hostels with student identification number, name, session and status of hostel dues. The system should also be capable of identifying the expenditure on hostel management, utilities, maintenance so that the cost benefit ratio could be determined. The system must also be integrated with existing turnstile gates using biometric devices.

4.10 Alumni Manager

The proposed solution must be able to convert student to alumni member, support posting announcement, support alumni member to update existing job information, company, position, salary range and achievements, support alumni member to view event and join, Alumni can register their companies and they can search students with respect to their expertise / qualification / projects/Research for internship/Hiring etc.The solution must provide the dashboard for personnel of Alumni Section and passed out students for self-service support according to their role & permission.

4.11 Campus Transport Management System

The proposed solution must have transport management system that can support vehicles and drivers management, daily vehicle movement, maintenance, repair details, vehicle operational cost with average fuel consumption, account of bus fee, fleet management, route management, report management, repairs data, accidents data with driver details, and management of vehicle parts / lubricants transit store etc.The solution must provide the dashboard for personnel of Transport Section for self-service support according to their role & permission.

4.12 Calendar and Content Management System

The proposed solution must be able to integrate with enterprise level Open Source content Management System and should not limited to functions & features below:

a) The proposed solution must have the state-of-the-art design and should be responsive on all smart devices.
b) The proposed solution must have user friendly tools for publishing content like text, images, videos, slide shows etc.
c) The proposed solution must have robust template for content management like design template, category, order, publishing time, author etc.
d) The proposed solution must have multiple template options for sub sections.
e) The proposed solution must have role based access.
f) The proposed solution must have multilingual support.
g) The proposed solution must have support for Event Management.
h) The proposed solution must have support for discussion forums.
i) The proposed solution must have support for viewing online large PDF documents.
j) The proposed solution must have support for Online Store.
k) The proposed solution must have support for managing Feedback/Queries.
l) The proposed solution must have an option to generate slide shows.
m) The proposed solution must have support for email notifications and Subscription management.

n) The proposed solution must be integrated with popular social networking sites.
o) The proposed solution must be Search Engine friendly and should have support for managing SEO attributes.
p) The proposed solution must have support for integration with third party Analytics.
q) The proposed solution must be secure and should have the option to block, notify and track any vulnerabilities or hacking attempts.
r) The proposed solution must be optimized in terms of load time for faster browsing.
s) The proposed solution must have support for automated backups.
t) The solution must provide the dashboard according to user role & permission.

4.13 E-Correspondence and Document Management System

The proposed solution must be able to provide support for e-Correspondence and Document management but not limited to functions & features below:

a. The proposed solution must provide support for correspondences (Internal, Incoming and Outgoing) and send them electronically and digital signed to users and/or departments/faculties.
b. The proposed solution must provide a flexible way to grant and remove permissions from users and documents without the need of system administrator.
c. The proposed solution must have Private and Shared space for file sharing.
d. The proposed solution must store documents in encrypted format.
e. The proposed solution must provide Delivery and Statistical reports.
f. The proposed solution must enable the users to link related correspondences electronically to each other.
g. The proposed solution must have support for correspondence classification.
h. The proposed solution must have support for email notifications.
i. The proposed solution must provide support for dates assignment and tracking like correspondence received, correspondence written,

correspondence due, assignment made, assignment due, assignment completed etc.

j. The proposed solution must have support for Reminders and Escalations.
k. The proposed solution must have support for data search and filtering based on document attributes.
l. The proposed solution must provide support for version control.
m. The proposed solution must provide support to see the attached documents without need to install any extra software.
n. The proposed solution must support Access Logs for Privacy Compliance.

4.14 Computer Based Test/Exam

The proposed solution must be able to provide the interface for prospect/student to appear in computer-based test with standard functions and features but not limited to following.

a) The proposed solution must have support to set up different admission exams.
b) The proposed solution must have support to setup questions and question categories for a specific exam.
c) The system must have a provision to manage large number of candidates in different sessions.
d) The system must have a provision for test centre management.
e) The system must provide real time results with data analytics for applicants and the administrator.
f) The system must provide facility to create test schedule covering the test date, test center capacity, test center location, engagement of supervisory staff, student allocation, other resources, etc.
g) The proposed system must have the provision to register candidates for a specific exam.
h) The system must provide facility for the student to print and upload entry test fee challan in the system which has been deposited by the student in the bank.

i) The system must provide facility for fee verification, after verification the student is allowed to generate exam admit cardbased on availability of seats in different venue and time slots.
j) The system must conduct exam in a secure environment and should have the capability to resume if session disconnected due to some reason.
k) The proposed system must have the provision to share test results immediately via email and website.

4.15 Integration with Koha Library System

Koha is open source fully featured, scalable library management system used worldwide by public sector universities for managing their library resources efficiently. Koha is already deployed in the University so the students that are enrolled in CMS can automatically enrolled in Koha to borrow the books as well as use the other resources of library through Koha. Besides the RFID student card can also allow the students to enter the building of library.

4.16 Integration with ERP Modules

Every software of any organization must interact with financial system, so proposed CMS must support integration with university financial system/ERP that consolidates the financial impact of the student transactions into the General Ledger for operational reporting and financial analysis. The faculty and staff information in CMS can be integrated with the HR and Procurement Module using integrated system or API.

4.17 Integration with Moodle, Web RTC based video conferencing and VoIP

Moodle is an open source Learning Management System helping teachers and trainers create and deliver effective online learning environments. Proposed CMS should have capacity to integrate with Moodle through CMS. This module should also focus on conducting lab/class in both male and female campus simultaneously with the help of WebRTC video conferencing and integrated with learning management system (LMS) and outcome base education. The proposed solution must have standard functions & features.

4.18 Business Intelligent (BI)

The Proposed CMS should have integrated with comprehensive open source business intelligence systems like Redash, Apache Superset etc, whose aim to support better business decision-making. These systems provide historical, current, predictive views and integrated and separated dashboard of all academic operations/modules.

5. PART E: Potential Scope of Work (ERP)

Scope of project includes documentation of existing processes, process re-engineering and implementation of best suited commercially off-the-shelf software to automate the procedures for increased level of effective productivity, efficiency and facilitation to all concerned and stakeholders. The ERP implementation is believed to have following major components:

a) Process re-engineering of ERP processes
b) Implementation of Off the shelf software along with configuration & customization by domain experts
c) Certification of acceptance from external auditing firm on the panel of IIU
d) Sufficient trainings to Technical & Functional users of the system
e) Technical and functional user manuals
f) The proposed solution must be able to migrate data of current financial year into the new system and the migration process should be executed in start of the project.
g) Post Production Support for at least one year after final acceptance

Objectives

Major objectives of the proposed ERP system include, but are not limited to:

Strategic Benefits

Following are the few significant benefits envisaged and being expected as an outcome of this project implementation;

a) Operational Automation to eliminate duplicate, redundant and inconsistence procedures and data
b) Incorporate global best practices and streamline processes for efficiency
c) Cost effective one point solution for management
d) To control and reduce expenses and costs. University faces increasing demands to compete effectively by upgrading administrative infrastructure to better manage key business processes. Enterprise Resource Planning System coupled with Campus Management

System will assist to achieve targets well in time and within the defined budget.

Benefits to Management

Administration can reap several benefits from Enterprise Resource Planning System, some of which are:

a) Effective communication among faculty, staff, parents and students
b) Centrally stored information repository with zero redundancy
c) Best possible resource optimization
d) Availability of microscopic as well as macroscopic views
e) Delivering accurate, accessible information to stakeholders
f) Ensuring maximum system availability and reliability
g) Integrated, streamlined business processes using advanced functionality
h) Timely reply to external public sector bodies
i) Generation of reports for onward communication to HEC, AGPR, Ministry of Finance, PPRA and other organizations

Deliverables

Following deliverables are expected from the project:

i. Requirements Specification Document(s) and their sign-offs.
ii. Gap identification document(s) and their sign-offs.
iii. Design Document(s) based on Requirements Specification and Gap Analysis and their sign-offs.
iv. User Guides and Training Manuals as per business processes designed.
v. Installation, configuration, customization, and integration covering the scope of the project.
vi. Test Scripts and Procedures for User Acceptance Test(s) and Final Acceptance Test(s) which is required for the issuance of FAC (Final Acceptance Certificate).
vii. Certification of acceptance from external auditing firm on the panel of IIU

viii. Provision of training and recommended documents for certification in technology used by solution along with all technical manuals/documents of the system including but limited to installation and configuration guides & manuals etc in form of html and pdf.

ix. Training to functional users and provision of users manuals.

5.1 Financial Management

General Requirements

a) The solution allows users with security access to override rules where appropriate

b) The solution supports version control of key data concepts, including, but not limited to, awards, courses, units and organizational units etc

c) The solution incorporates extensive and powerful data import and export facilities

d) The solution incorporates a powerful, extensive and user definable set of data query tools.

e) The solution displays information graphically without the need for users to download data to a third party product e.g. system provides the facility to display charts of total actual vs budgeted expenditures category wise, etc. Respondents to detail fully the extent to which the solution meets this requirement.

f) The solution provides the infrastructure to allow screen, form and report field names to be changed to suit institution nomenclature

g) The solutions supports standard browser cut and paste functionality.

h) The system must have ability to integrate Microsoft Outlook or Microsoft Exchange Server with ERP from client computer

i) The system must have ability to monitor and report the overall health of the system

j) Ability to post company specifics, such as policies and forms, in the Web portal

Security & System Features

a) A fundamental requirement is that most if not all security functions can be maintained by the user system administrators without the need for institutional IT support. Respondents are to detail all areas of the solution where IT support is required. Following initial one-time IT-based setup of integration with LDAP, SSO, registration of digital certificates, on-going security functions are web-based and may be distributed across campuses.
b) The solution provides varying granularity for data level security. Respondents to explain fully the level of granularity and an overview of how the security system is structured - e.g. roles/groups/menu functions etc. Security should based around roles that collect users into logical groups. Roles are assigned permission lists, granting access to system objects such as menus, pages, background jobs, reports and row-level security provisions.
c) The solution ensures that at logon, users are required to enter a unique user ID and a password.
d) The solution allows for password ageing
e) The solution enforces password maintenance such as no of attempts allowed
f) The solution allows user system administrators users to maintain security at form, report, job level or data field for roles and/or users without the need for IT/DBA support
g) The solution provides the facility to link security roles to individual users
h) The solution allows for the creation of an unlimited number of security roles
i) The solution allows user system administrators to link menus, forms, reports etc. to security roles
j) The solution allows user system administrators to link multiple security roles to an individual user
k) The solution allows roles and/or users to be configured to have restricted update access for specific forms. e.g. User can only update the employee record among the employees who fall under his/ her department.

l) The solution has the ability to limit data operations (insert, update, delete or query only) assigned to particular roles
m) The solution allows user system administrators the ability to re-set user passwords
n) The solution will provide appropriate security to restrict student access to their own details
o) The solution provides the facility to set up menus and sub-menus for classes of users
p) The solution allows selected security roles/users to override and/or waive rules e.g. a small number of 'super' users with access to most or all functions.
q) The solution allows user system administrators to immediately suspend individual user access privileges
r) The solution has an automatic timeout of connected but inactive users

Ease of Use

a) Shortcut navigation is provided via navigational collection port lets, favorites and hyperlinks.
b) The solution carries forward context values (at least employee ID, designation, department, citizenship, gender, title) from one form to the next. Within a given page, basic context values are carried through on the top of all of the tabs (employee Name and ID and other relevant context values scope). In addition, Student ID and other data items appear in context for search when moving between screens.
c) The solution provides the facility to display multiple employee indicators, displayed along with employee personal details
d) The indicators are user definable
e) The logic behind the indicators is user definable
f) Indicators are linked to security role/s
g) The solution allows users to create list of favorites of forms and reports
h) Ability to move directly from one form to another without the requirement to move up and down menu structures. In particular, the solution provides the

ability for a user to create a user-defined list of links to access pages directly.

i) The solution inserts default values automatically where possible.

j) Intuitive form navigation across all modules, minimizing the need for special training.

k) The solution has consistent form design across all modules

l) System must simplify data access with familiar Microsoft tools, including Microsoft Word, Excel, and SharePoint.

m) Ability to administer organizational structures, including formal and informal hierarchies and position management.

n) Ability to design organizational levels and reconfigure them as per the requirement

o) Ability to add/change organization entities and easily transfers associates within and/or across entities (including companies).

p) Ability to manage organization restructuring including position control and salary changes.

q) Structuring of the organization chart within the application according to various types, such as companies, locations, pay groups, levels etc.

Online Help

a) The solution has a comprehensive electronic user manual for processes, configurations etc and can be easily printed or exported

b) The solution has a context sensitive help on all screens and for all data elements

c) The solution provides comprehensive on-line technical documentation

d) The solution provides an on-line tutorial facility for staff

e) There should be an E-learning Portal for self-learning.

Work Flow

a) The solution provides an integrated workflow engine enabling user definition and modification of business rules. It should include an inbuilt workflow engine, designed for intra-application workflow and integration with external notification mechanisms. The workflow should be based around the concepts of rules, roles and routings allowing work to be routed to individuals or pools of users, evaluated dynamically.

b) The workflow routes information and notifications via the institutes email solution using a protocol such as SMTP.

c) The solution allows workflow to be maintained by business administrators. Normal day-to-day administration of workflow is based on role membership and web-based administration pages. Only structural changes to workflow processes will exceed the scope of business administrators.

d) The solution provides staff with a list of current workflows/tasks awaiting action.

e) System should facilitate in automating business processes through a graphical workflow editor to create business rules and custom workflow hierarchies (or use templates) by business analysts

f) Users should be able to approve project timesheets and expense claims through mobile apps

g) System should provide workflow related KPIs e.g.

   i. Transaction approvals count

   ii. Approval duration

   iii. Minimum & maximum approval durations

h) Count of started, processed, in process, rejected, approved, cancelled and stopped approvals.

Data Integrity

a) The solution provides for comprehensive data validation at point of entry to the maximum extent possible

b) Data is cross-validated at point of entry against other data held within the solution to the maximum extent possible, ensuring data integrity at all times

c) Data is cross-validated at the database level against other data held within the solution to the maximum extent possible, ensuring data integrity at all times

d) The solution architecture provides for extensive and comprehensive implementation of business rules and constraints within the application logic tier.

e) The solution provides extensive validation reports for all batch data creation & update processes. Batch reports log their progress to a batch messages area. They may be viewed readily via the browser.
f) The solution adopts an open format interface that doesn't require proprietary tools
g) The solution will be able to input data item/objects from other sources efficiently and easily
h) The solution supports date effective data to the maximum degree possible, thereby enabling the maintenance of comprehensive data history

Audit

a) The solution includes comprehensive audit trail functionality.
b) The solution provides a history of all on-line transactions especially in the self-service environment

Batch System

a) All reports/jobs to be able to be run on-line and in batch
b) Ability to run any number of jobs/reports in a single batch request; jobs can be set to run in sequence or in any order.
c) Ability to send reports via email as an attachment - in user selectable formats e.g. pdf, csv etc.
d) The solution provides comprehensive and clear run logs including error reports

5.1.1 General Accounting

General

a) IIU has to follow the accounting procedure as defined by the Controller General of Pakistan and audited by the Auditor General of Pakistan. IIU is planning to follow New Accounting Model (NAM) and the five dimensional Chart of Account prescribed by PIFRA (Project to Improve Financial Reporting, Auditor General of Pakistan) as followed by HEC. The proposed solution/system must have proven ability to meet this requirement.
b) IIU allows different expenditure limits for different authorities. These should be catered for.

c) The system should be able to capture the activities of users in terms of the prescribed roles and the forms that they have accessed.
d) An individual user shall be restricted to access only those applications / functionality relevant to his/her job function only.
e) The System shall facilitate the attachment of documents, spreadsheets, or images to an application functionality to provide users with additional information or required documentation.
f) IIU intends to have an integrated financial system whereby all the components are integrated. Likewise other components/modules like Student's Financials from CMS, receipts of grants from HEC etc. should also be integrated with the Financial Systems.
g) The system must support printing of cheques (cheque writer) from payment vouchers on cheque leaves issued by banks.
h) System must be flexible enough to align with a fund-based account classification structure. Unlimited financial dimensions and expanded reporting capabilities accommodate funds, programs, functions, organizations, projects, grants, and locations to support government-specific accounting practices

Reporting

a) System must provide access for a reporting and retrieval tool that works across modules
b) The implementer is expected to configure/implement the reports as per IIU requirement

Accounting Books

a) Supports multiple level parent/subsidiary implementation for multiple accounting books
b) Should support automatic consolidation of accounts between subsidiaries accounting books and parent accounting books
c) Supports implementation of automatic process between Parent and Subsidiary and between subsidiaries transactions at General Ledger level
d) IIU will be preparing financial statements and complete set of management reports periodically, the system should support this periodic reporting

Chart of Accounts

a) The chart of account should be flexibly configurable with PIFRA's CoA with capability to support required number of child levels. It should contain at least five elements as per PIFRA CoA.
b) General Ledger must support the minimum chart of account reporting dimensions: Functional Cost Center, Location Cost Center and General Account. The system should support required number of characters in each of the recording/reporting dimension.
c) The General Ledger should support creating alphanumeric codes in each chart of accounts dimension
d) The General Ledger should provide end-users with the functionality to define, create, and disable codes within the chart of accounts dimensions without the need for technical support
e) General Ledger should allow users to define the codes within the General Account dimension according to the standard financial statements classification (Expenditure, Revenue, Capital, Receipts, Assets, Liabilities and Equities). The General Ledger must recognize this standard classification.
f) The system should have the capability either automatically or manually as per users' requirement to carry forward balances between fiscal years and close expenditure accounts.
g) The General Ledger should support creating Chart of account codes at summary level and at posting level. At summary level the package should allow users to define multiple summary levels with no restrictions on the number of summary codes.
h) At minimum General Ledger should support entry of budget at summary level and/or posting level as per requirement of user, as well as actual amounts at the posting level codes in the chart of accounts dimensions. Also it should have the capability to transfer any sum of budget from one account head to another and keep a record thereof.
i) The system should allow carry forward un-utilized budget balances of the selected accounts as a separate entry and also allow recording the current year's budget recognizable separately. Expenditure to be allowed from the sum total of both balances.

j) The system must have the functionality to support the creation of code combination across the different dimensions within the chart of accounts. General Ledger will not allow entry and posting before the code combination is used
k) The system must have the functionality to define and enforce the pre-defined logical rules for creating a code combination.
l) The system should support prior year entries with suitable controls.
m) General Ledger has a graphical user interface to provide authorized users with a hierarchal view for all reporting dimensions posting and summary level codes with Drag and drop functionality for users to use in maintaining and re-organizing the chart of accounts
n) The implementer is expected to configure the chart of accounts security codes as per HEC requirements

Accounting Calendar

a) General Ledger must allow authorized users to create and define accounting calendar. IIU follows a fiscal year starts from July to June
b) General Ledger must support the configuration of 12 month normal fiscal month in each fiscal year with at least 2 additional adjustment periods at the year end (each for accounting adjustments and post-audit adjustments).
c) The transaction effective date according to accounting calendar in the General Ledger should be the date when the transaction is entered if it falls within the same fiscal month or the last date of the fiscal month if the transaction is entered in a subsequent month.
d) The system should provide the user with a functionality to define a schedule to automatically open the fiscal month within the fiscal year

Currencies

a) IIU uses Pakistani Rupee (PKR) as the functional currency. The accounting set of books should be configured using the PKR, with capability to enter transactions in other international currencies like Saudi Riyals, US Dollar and Euro etc

b) The General Ledger should support the conversion of transaction in foreign currency to the PKR currency using pre-defined accounting exchange

Transaction Entry

a) General Ledger must provide users to enter journals in actual amounts within available budgets.
b) The system must support reversing journals by authorized users.
c) Functionality for Recurring Journals with code combination and amounts should support entering fixed amounts or formula based amounts, and to configure recurring journals for pre-paid expenditures and deferred charges to be agreed with IIU.
d) Functionality for allocation journals should based on fixed percentages or/and calculated percentages (based on statistical amounts or actual amounts).
e) The general ledger must provide users with the functionality to define a schedule to generate recurring and allocations journals automatically and post it to accounts.
f) The approval hierarchy shouldn't conflict with the approval hierarchy defined in each sub-ledger.
g) General Ledger must provide users with a configurable functionality to track Journal by source (for Audit Trail) and type or category.
h) Implementer is expected to implement journal sources and categories/types to be agreed with IIU
i) General Ledger must provide users with the functionality to define different journal numbering sequences and assign it to journal sources and/or categories/types
j) The journal sequence numbering can be either configured for one fiscal year or for fiscal year.
k) General Ledger must allow users to print journals.
l) Journals Voucher print out must be according to IIU requirements and formats.
m) General Ledger must have reports for un-posted Journals (either awaiting approval or approved) or journals not concluded but pending in the workflow.

n) General Ledger must have audit trail reports to show journals created by source/category along with the sequence number, and when deleted showing users name.

o) General Ledger must have reports to allow users to check if journals created from external systems have been validated and created in the General Ledger.

p) The distribution section in the journal form should have a field against each line for users to enter line description. Field length shouldn't be less than 256 characters.

q) General Ledger has a functionality to configure a pre-defined list of descriptions for users to select from (both in the header and distribution sections).

r) General ledger must support transaction amounts beyond 999 billion Rupees.

s) Support drill down from an account balance to the associated journal lines to the complete journal entry, to view both sides of the journal entries that affect the account balances. It should also show the budget balance where applicable.

t) It should have a mechanism for payment of advances and settlement thereof during the same fiscal year and/or in the next fiscal year.

Consolidation

a) General Ledger must provide the users with a functionality to define a parent/subsidiary relationship between different set of books.

b) General Ledger must provide the users with a functionality to define the mapping rules between the subsidiary set of books and the parent set of books.

c) Implementer is expected to design and implement the process for consolidation, including the elimination of inter-company transactions.

d) General Ledger must have audit trail reports to help users validate if the consolidation was successfully created and all subsidiary accounts are fully consolidated.

e) Consolidation process should be initiated and managed from the parent set of books which will call/pull accounts from subsidiaries.

f) General Ledger must support a monthly consolidation process.

Reporting

Report Writer

a) The General Ledger must provide users with a flexible and user friendly tool to allow them to create financial reports without support from technical staff.
b) Implementer is expected to build trial balance using the flexible reports functionality.
c) It must provide reports as per requirements of IIU
d) Implementer is expected to build statement of financial ratios report using the flexible reports functionality

Analysis

a) The implementer is expected to design and implement an analysis model for actual vs. budget. It should combine statistical information to help report users to identify the type of variance while considering monthly, year to date, quarter to date, fully year figures.
b) There should be a What-if analysis report which allows facilitating forecasting for revenues, expenditure and cash.
c) The multi-dimensional analysis tool must allow user to distribute and share reports and analysis electronically.
d) The multi-dimensional analysis tool must allow user to print the reports and analysis.
e) System must be able to perform trend analysis taking financial data for last three to five years without the need to built a separate data warehouse, and yet provide almost real time intelligence reporting. 100% of transaction data should be available for drill down without any data duplication.
f) The system must have a report on budget, statistical, and actual detail for current and all past periods.
g) The system should have the ability to define sophisticated multi-line formulas to derive report figures.
h) The system must have the ability to create summarized reports by headquarter, division, department, cost center, etc.

Audit Trail

It should be possible to configure audit trails for all user activities. The audit trail should capture all data changes with time stamp and user ID stamp.

5.1.2 Budgeting and Control

Nominal Rolls

a) The system should have the facility to allocate budgeted positions for a period with start and end date. A position could be in budget for next year and it also could be for specific time period. This facility should be available based on authority given.

b) The system should calculate Budgeted vs. Actual Headcount and Budget vs. Actual Payroll.

c) The system should be able to provide monthly status of budgets and actual.

d) The system should be able to provide a review of positions approved, recruited and still to be recruited.

e) The system should be able to flag deviations in budgeted headcount.

f) The system should have the facility to forecast the Manpower and costing indicators in the sense of working out the cost impact of proposed future manpower budgets. Actual cost for existing staff and estimated cost for additional staff.

g) The system should be able to provide information to recruitment module on budgeted positions and associated values. Auto updating from recruitment module when position is filled.

h) The system should be able to define the budgets for the post and their integration with sub-system of budgeting and financials

i) System must have the capability such that senior management can analyse salary budget information for their respective department.

j) System must have the functionality of applying salary increases across the departments easily.

k) System can easily plan compensation, overtime, taxes and benefits budget prior to the actual release.

l) User must be able to access current and prior year payroll data in the budget planning.

m) System must have the budget reports so that budget vs Actual can be compared along with the variance comparisons.

n) Approval for manpower planning is required for blocking additional headcount and controlling the manpower

Budget Structure

a) The system should allow defining Objectives, Targets, Goals, Priorities, Outputs, Activities and other indicators, which would be used in the Budgeting Process.

b) The budgeting system should support the New Accounting Model (NAM) as per PIFRA for preparation of budgets and account heads with five dimensions, as well as required child accounts.

c) IIU will follow the cost element, as well as, cost-center budgeting concept. There may be functional/ operational cost-centers and regional/divisional cost centers. The system should support these separate budgets and there consolidation.

d) It should have the capability to prepare separate budgets for current expenditure and development expenditure by different departments, and also to consolidate it.

Budget Entry

a) The budgeting system should allow users to create budgets and also provide them with a functionality to upload the amounts from other applications if required.

b) System should allow usage of Subsidiary data / General Ledger data for budgeting. Information should be uploaded directly into relevant budgeting account heads.

c) Budgeting system should provide users with a functionality to enter budget amounts through creating formulas to calculate amounts.

d) Budgeting system should support budgeting at detail level (posting level accounts) and summary level budgeting.

e) Budgeting system should allow users to create multiple budget versions.

f) Authorized users should have a functionality to freeze one of the budget versions for the budgetary control and variance.

g) The system must have ability to integrate existing ‘Budget Actuals’ and other planning data into a single Excel planning sheet. Wizard based configuration steps of designing and building Excel Templates to be used in budget planning processes

h) System must adopt Automate either top down planning processes or aggregation from bottom-up planning processes.

i) Budget Planning should support GL apportioning based on predefined criterion. This includes allocations across dimensions, segments, departments as well as spreading across the periods in a budget cycle.

j) Ability to use dimensions, segments, departments and business units in budget planning that are not part of Chart of Accounts and Ledger.

k) Generate summary-level reports with the capability to drill down to account-level and transaction-level details without having to generate separate reports.

l) Ability to drill from account and budget balances on a report to related information in ERP.

m) System must have the functionality so that it make organizational commitments transparent using encumbrance and pre-encumbrance accounting with integrated workflow

n) System must enforce legal appropriation compliance and simultaneously allow lower-level departmental budgets with multiple, variable, and hierarchical level budgetary controls

Budgetary Control

a) The package should support budgetary control policy that allows IIU to impose strict control over spend beyond a certain tolerance level and/or amount.

b) Budget over spend tolerance is set on Period to Date balances on certain heads as well as on monthly balances on certain heads. Likewise spend tolerance will not be required in certain heads.

c) Budgetary control configured in the budgeting system should be imposed across all integrated sub-ledgers as per PIFRA CoA.

d) The budgetary control for ordering physical items (i.e. items in stores) should check the funds at the requisition point. If there are funds budgeted then the ordering system (i.e. purchasing) will create an internal requisition to release item from stock.

e) The system must support re-appropriation of funds from one budget head (General Ledger Account) to another. Likewise re-appropriation will take place among cost-centers.
f) Supplementary Budgets maybe required to be prepared budgeting / monitoring for these funds is required. System is expected to facilitate this and provide report of such changes.

Budget for Projects

a) Budget review and monitoring process requirements for normal budgets must be available in the system for the Projects.
b) It should support loaning of budget to projects from other heads, when required and provide a report thereof.

Report Writer

The implementer should design and build reports for all cost-center to show funds available, total funds, funds pre-committed and funds committed for each budgeted item.

5.1.3 Fixed Asset Financial Management

The Fixed Assets module is used for efficiently tracking and maintaining fixed assets. Assets can be grouped by category, type, and location. It supports multiple and simultaneous appreciation or depreciation methods, automatically calculates depreciation, calculates gain/loss on disposition of assets, and creates entries to the general ledger. Amounts for repairs and improvements can be added later to assets for recalculation of depreciation

Fixed Assets Setup

a) System must be able to record the transactions relating to acquiring, disposal and depreciation of fixed assets fully. It must be in line with NAM.
b) Asset profile
c) Assets with categories
d) Depreciation [Dispose Off] Policy
e) Distribute Transactions
f) Integration with General Ledger
g) Asset locations
h) Depreciation policy

i) The system must have the ability to create depreciation or acquisition proposals as a periodic process.

Reports

a) Standard listings
b) Asset categories
c) Asset types
d) Asset depreciation
e) Others

5.1.4 Expenditures / Payables

Application Master

a) The system must maintain supplier details.
b) System should allow relating a vendor to a parent member and child members.
c) System should be capable enough to manage expenses with integrated workflow including budget & grant management, travel requisition, cash advance request, expense entry, credit card reconciliation, and expense report delegation
d) System must have an online portal and workflow tools to enforce spending policies & enable approval processes.

Receipt

System must facilitate expenditure booking against Expenditure Element and Cost Center.

Invoices and Payables

a) The system must also support booking of expenditure and liability upon entry of the invoice.
b) The system must allow capturing of Vendor Debit / Credit notes, advances, payments, cash receipts for refunds and discounts.
c) System must capture employee related payments for advances and prepayments. Employee expenditures, Employee debit / credit notes should be match able against each other and with advances.
d) The system must provide for recording invoice details
e) System must automatically calculate the due date for payment based on the contracted payment terms, unless manually overridden.

f) System must have the functionality to separately treat amounts and invoices where input tax is to be withheld and paid to tax authorities.
g) The system must allow processing of partial payment(s) against and invoice. In this regard system should apply indicative checks.
h) In case of an advance being given to a Vendor, system must correlate each advance to a sanction or Purchase Order No. etc.
i) System must facilitate applying advances/payments against invoices – One advance/payment to one invoice/partly to an invoice/multiple advances/payment to an invoice.
j) The system must allow multiple tier workflows for invoice approval.
k) Recoding of Income tax withholding (payable and receivable) at the time of payment made to suppliers and receipt of payment from customers.
l) Recoding of Sales tax withholding (payable and receivable) at the time of payment made to suppliers and receipt of payment from customers.
m) Withholding tax settlement process on weekly basis, individual withholding tax transaction could be selected for payment.
n) Withholding tax can be selected on invoice level, while making payment to invoice system will calculate withholding tax as per selection on invoice.
o) Selection of withholding tax on item master is available, system will compute withholding tax item wise.
p) CPR number recording process on withholding tax settled transactions.
q) On receipt of tax Challan from customer user can update in AX so that Challan receivable can be tracked.
r) Payment sections, code & nature references on withholding tax transactions & withholding tax reports.

Weekly tax report is available which includes all the details required by tax authorities, moreover report is also available in excel format in prescribed format provided by tax authorities.

Petty Cash/Imprest

a) System must support a mechanism of recording and controlling petty cash expenditure for each of the petty cash funds maintained by different custodians.

b) The recording of Petty cash expenditures is supposed to be the same as normal expenditure. The system must be able to capture for each petty cash reimbursement/ claim the Claim reference, Expenditure codes and Expenditure Amounts.

c) Based on the sanctioned limit and expenditure claim, the system should automatically compute the amount to be replenished.

Payments

a) System must have the capability to link the payments functionality with the payables functionality where applicable and should allow payments once the expenditure gets successfully through matching and approvals.

b) Where part payment / deduction / retention is made, details of such deductions must be maintained in the system under the particular vendor/employee head with the associated invoice.

c) Consolidated payments for various invoices and partial payments against one invoice must be supported by the system with appropriate tracking.

d) System must support workflow for authorization of payments.

e) System must support withholdings based on certain percentages and deductions e.g. taxes, retentions etc.

f) System must support automatic payments (based on payment due date)

g) System must support manual payments through selection of invoices for a supplier.

h) System must be enabled with printing a remittance advice for payments, which shall show the Payee's Name, Payee's address, Vendor/Employee Code, Contact number, Cheque Number, Cheque issue date, Invoice/expenditure reference, Gross invoice amount, Tax deducted, advance deducted against the invoice, Net amount being paid/settled)

i) System should support payments through cheques, letters to bank.

j) At present there is not electronic communication with the banks. However a provision for it required for sending or receiving reports/requests to and from the bank.

k) System must support payment through cash/petty cash.

l) System must be enabled with selecting from which bank account payment(s) needs to be made.

m) System must be able to reverse a cheque in case the payment run fails or the cheque is stalled.

n) System must automatically update the invoice record to a paid status once the payment is made and to the open status once the check is staled/reversed.

o) System must be able to print the Payee name, Currency and Amount in numbers, Amount in words and Date of Cheque on the cheque.

p) System should be able to record stop payments.

q) System should allow consolidated payment advice to the bank - mode wise e.g. through cheque, bank transfer.

r) There should be a facility to view the current bank balance while making payment.

s) System should be able to make bank transfer payment voucher.

t) System must support tracking of retained payments (individually and Consolidated) against performance guarantee / contract.

Enquiry

a) System must allow a flexible enquiry system based on user selectable periods for selected vendor/employee and should be able to show vendor/employee master and transaction information.

b) System must provide for reviewing outstanding advances, retentions, stop payments online.

5.2 Treasury

Bank Reconciliation

The system must support automatic and manual bank reconciliation and match transaction (Payments and Receipts) at the system level while considering the entries at the General / Sub-ledger Level.

Bank Management

a) There must be a facility to view consolidated cash/bank position.

b) System should have a facility to link each bank account with the bank system to exchange electronic information on cash positions.

c) Facility to set minimum & maximum balance with alerts whenever the balance is below or above the norm.
d) System to alert high value expenditures & receipts to ensure control.

e) There should be a facility to issue online instructions to bank for payments/transfer of funds.
f) Recoding of funded facilities & non funded facilities other than letter of guarantee & letter of credit.
g) Bank limits can be record as main limits and sub limits.

Enquiry

System must support online enquiry of bank accounts, bank facilities, investments, loans and guarantees.

5.3 Revenue Collection

Revenue and receipts booking

System must allow for revenue and receipts bookings in the respective head and issue a receipt.

5.4 Grant Management

a) The main purpose of the "Grant Management System" is to have an up to date view of research proposals as well as streamline the tracking of the research proposal at all levels. The department hopes to make available to access research proposals.
b) The system must be enabled with recording the receipts of grant from federal government for revenue and development accounts. And then allocating/ disbursing these to the respective heads of accounts. Currently the Grant is received from the government and is bifurcated under two heads i. e development and recurring. Which are further divided into many other heads like projects and sub projects etc. The system must provide customized reports for revenue and development grants as required by IIU and prescribed by PIFRA. The system must be enabled with recording the receipts of grant from any other source.
c) It is anticipated that System will identify as a useful supervision tool and a point of reference for faculty members.

d) To meet these goals, the department has a secondary objective to present easy to access Internally Funded and Externally Funded research proposals submission and status information in an appealing format.
e) A fully web-based application whose purpose is to provide a comprehensive solution to manage and track the research proposals of the academia.
f) The system should also be a secured as all the updates and transaction can be done by the authorized person.
g) This system includes online submission of research proposals and approval of proposals. Faculty's members can check online the proposal status. This system would be used by members who may be faculty member and staff.
h) There could be three types of operations:
    i. Research
    ii. Research Projects (External funding)
    iii. Research Initiatives (Internal funding)
    iv. Funding for Seminars/Workshops/Symposiums
    v. Travel
    vi. Travel Grants (HEC etc.) (External funding)
    vii. Faculty Travel (internal funding)
i) The system should offer and accommodate at least following phases related to Grant Management;
    i. Pre-Award Process (Proposal Phase)
    ii. Review Phase
    iii. Revise Phase
    iv. Contract Phase
    v. Award Process
    vi. Post-award Process

j) The system should be capable of generating reports on monthly/ quarterly/ annually financial reports related to individual projects as well as cumulative report on the overall Grants issued of various types. The system should also provide feature of auditing of the project as well as overall Grant Management System.

5.5 Payroll System

Pay Fixation/Compensation & Benefits Administration

a) The system should be able to define the compensation elements, allowances, associated benefits, remunerations and other facilities based on employee grade. It should also be integrated with Payroll.

b) System should allow definition of additional compensation elements, new grade e.g. MP grade allowances, associated benefits, remunerations and other facilities to the defaults specified for a employee grade

c) The system should allow creation and maintenance of separate policies for each of the different types of allowances based on grade, employee status, place of work, etc. as described earlier. Allowances' parameters are subject to change, based on Management approval.

d) The system should have the facility of automatic updating of the compensation elements, allowances, associated benefits, remunerations and other facilities on recognizing a change in an Employee's status.

e) The system should have the facility to provide salary position of all employees within the salary range i.e. by quartile, midpoint, blocked, etc.

f) The system should have the facility to administer salary increase programs based on specific criterion.

g) The system should have the facility to provide salary budgeting and costing for different increase options. This includes ability to calculate individual and cumulative effects on current pay practice resulting from a proposed salary change.

h) The system should have the facility to generate transactions for the payroll system for those cases, where the allowances are paid on a monthly basis through payroll.

i) The system should be able generate detailed and summary reports of allowances paid during a month/year, based on grade, organization unit etc. Keep the history and trends of such reports on allowances.

j) The system should be able to define and configure rules, procedures, workflow and policies for medical of the employees based on their grades.

k) The system should allow authorized, manual overriding of the defined policies, in order to deal with exceptional cases.

l) The system should update employee medical balance after payment to the employee.

Data & Validation

a) The system must allow changes to be made in any of the following type of data before payroll processing:
   i. Personal
   ii. Service
   iii. Salary
   iv. Ancillary
b) The system must allow entry and processing of temporary (one time) changes of payments and deductions.
c) The system must confirm the referential data integrity at the time of entry, edit, or deletion of any transaction into the system.
d) The system must check the amount field for every pay, allowance, or deduction for its minimum and maximum limits set out in the policy parameter (if applicable).

Payroll

a) The system must be enabled with calculating and processing allowances and deductions automatically if the allowance or deduction is based on Basic Pay Scale, percentage of current Basic, or formula.
b) The system must be enabled with recording details of loans and advances disbursed to the employees of IIU.
c) The system must be enabled with making recoveries against different loans and advances disbursed to IIU employees. The system must be integrated with the GP Fund system, and must be enabled with communicating;

Receiving

i. Information of advances against GP Fund
ii. Interest status of employee
iii. Sending
iv. Subscriptions deducted from the monthly salaries
v. Recoveries of advances made from the monthly salaries

a) The system must be integrated with the General Ledger system, in order to post the information regarding the salaries of the employees.
b) The system must be integrated with Pension system, to allow transfer of the service and final settlement information electronically.
c) The system must be enabled with calculating interest on loans and advances.
d) The system must be enabled with maintaining the recoveries on loans and their balances like principal amount, paid to-date and outstanding balance and also number of installment paid.
e) The system must be enabled with handling unlimited allowances, deductions, and loans for each employee.
f) The system must be enabled with maintaining following data for an employee:
    i. Service Data
    ii. Department /Region / Division / Project etc
    iii. Employment Type; Contract / Permanent
    iv. Cost Centre
    v. Scale, Grade, Position
    vi. Date of Posting/Appointment
    vii. Date of expiry of Contract period
    viii. Salary Data
    ix. Basic Salary
    x. Allowances
    xi. Deductions
    xii. Recoveries
    xiii. Perquisites.
    xiv. Advances
    xv. Others
    xvi. Ancillary Data
    xvii. Loan Type and amount
    xviii. Recovery rate and amount
    xix. Loan Balances
    xx. Advances and their deductions
    xxi. Leave data

xxii. Interest on Loans

g) The system must be enabled with searching an employee based on a combination of multiple fields.
h) The system must be enabled with automatically stopping the salary of Ad-hoc/Contractual/ project employees and also handle any other period specific transactions (allow effective and end date).
i) The system must be enabled with calculating and deducting Income tax from the salaries of the employees in bulk according to the formula prescribed by the department of Income Tax.
j) System must be enabled with defining the Income Tax rates / brackets as well as changes in the formulas and year to date balance. For example by salary brackets, year, gender, age, etc according to the said rule of Govt. Of Pakistan
k) System must calculate salary arrears and deal with the applicable Income Tax rates for the given period.
l) The system must be enabled with calculating partial or prorated salaries based on defined periods.
m) The system must be enabled with calculating salaries after accounting for unpaid leave information of each employee.
n) The system must be enabled with checking and maintaining the limits of pays, allowances, and deductions as per scale parameters defined for them.
o) System must apply change policy parameters globally from a given effective date.
p) System should calculate and generate the arrears transactions from the effective date for a policy change if the effective date is a prior date and also up dating it.
q) The system must be enabled with deducting GP Fund contribution from the salaries as per rules of Government of Pakistan.
r) System should perform/facilitate data integrity check, and reconciliation after processing of monthly salary before its disbursement.
s) The system must be enabled with updating the GP Fund ledger records with the relevant transactions generated from the processing of monthly salary after successful data integrity check.

t) The system must be enabled with automatically generating the transactions for communicating the monetary information regarding salaries paid during the month to the GL system according to the relevant account head as per the Chart of Accounts.

u) The system must be enabled with reconciling the monthly figures of loans and advances with the corresponding figures available in General Ledger systems.

v) The system must be enabled with recording and processing reversal of salaries.

w) The system must be enabled with communicating reversal information to the GP Fund, and General Ledger systems.

x) The system must be enabled with calculating and disbursing the final settlement to the employee in case of superannuation, retirement, resignation, dismissal, invalidity or death.

y) The system must be enabled with calculating the negative settlement and generating an advice for recovery at the time of final settlement, if recovery is required from the employee instead of payment (in case of advance salary, loans etc.)

z) The system must be enabled with retaining historical records of payments and deduction of each employee for a specified period of time (e.g. 5 years).

aa) The system must be enabled with merging one department/region/division to another as and when required by automatically transferring all employees from one to the other. Likewise the system must be able to split the department/region/division from one to many.

bb) The system must be enabled with postponing recovery of any advance/loan for a specific period of time.

cc) System must have capability to execute the multiple payroll runs for any department / region / division (e.g. earlier payroll run for Christian employees on Easter Christmas).

dd) Also it should be able to import all the data from previous month for making the salary of the current month.

ee) The system must be enabled with generating the salary slips.

ff) There should be an option of sending the salary slip to the employees via email.

gg) Ability to define organizational benefit plans and options, enroll workers in benefits, assign dependent coverage, and designate beneficiaries.

hh) Generation of pay sheet which should have breakup of all allowances/deductions/component details that make up gross salary

ii) Non-Management employees should get gross salary without breakup

jj) System should support multiple types of employee loans e.g. car loan, bike Loan, cash Loan

kk) Ability to deduct salary advances from the next month's salary

ll) Configurable loan approval hierarchy before the disbursement of loan to employee

mm) Ability to process zero interest based loan.

nn) The system should have payroll functionality based on Pakistani localization

Reports

a) The system must be enabled with producing edit lists of all the data entered into the system either by using input documents or communicated through an interface.

b) The system must be enabled with producing Bank advice for all the employees who opt to be paid through bank, as well as through cheque and cash.

c) The system must be enabled with producing Region / Division /Project/ Headquarter wise summary of payments and deductions.

d) The system must be enabled with producing detailed report of loans and advances.

e) The system must be enabled with producing income tax report as per the Income Tax Law, which should contain details of the income tax deductions during the year The system must be enabled with producing report for any desired pay, allowance, or deduction based on any of the following criteria:

    i. Cost Centre(s)

ii. Employee Type(s)
iii. Employee Scale(s)
iv. Employee Grade(s)
v. Employee Position.
vi. Location (HQ/Region/Division/Project)

f) The system must be enabled with producing Cost Centre wise comparative report containing the summary of current month payments and deduction of each employee and summary of previous month payments and deduction of each employee.

g) The system must be enabled with producing Scale Audit Register, which contains the information of the number of employees paid from a Cost Centre designation wise, grade wise, and type of service wise.

h) The system must be enabled with preparing Last Pay Certificate for the employees who are transferred, deputed to some other department, retired, terminated or expired.

i) The system must be enabled with producing annual increment report before these increments are made effective.

j) The system must be enabled with producing a list of retired or retiring employees for a specified period.

k) The system must be enabled with producing pay slips, which provide the details of the salary and service information to every employee.

l) The system must be enabled with producing GP Fund report to provide the monetary activities relating to the GP Fund occurred during the processing of monthly salary.

m) The system must be enabled with producing a report, which provides the details of the deductions made for any facilities from the salaries of employees availing the facility provided by IIU.

n) The system must be enabled with producing report to provide the summary details of payments made to employees (including tax deductions) during the fiscal year.

o) The system must be enabled with generating report showing the new employees processed in a certain month.

p) The system must be enabled with producing arrears payment report for the employees.

q) The system must be enabled with producing a report listing of all the policy parameters currently effective.

r) After processing the monthly payroll run the system must be enabled with producing a allocation report listing all account balance summaries which will be entered into the General Ledger System at the COA codes level.

5.6 Pension

Pension System

a) The system must interface with the General Ledger system and pass Journal entries relating to pension amounts, Bank and reversals.

b) The system must interface with the Payroll System on the basis of employee information.

c) The system must automatically extract or input ex-employees related information from the payroll system when needed.

d) The system must also calculate gratuity as per the rules and regulations and procedures of IIU, where applicable.

e) The system must be enabled with calculating the pension including computation of pension based on certain variable such as length of service, age etc.

Data Required

a) System should be capable to record the Change policy parameters.

b) System must calculate and generate the arrears transactions from the effective date for a policy change if the effective date is a prior date.

c) The system must be enabled with handling multiple payment modes for pension disbursement.

Validation on Requirements

a) The system must be enabled with handling duplicate checks during manual generation of Pensioner IDs.

b) The system must be enabled with applying input validation controls for ensuring that the pensioner and employee IDs are valid.

c) The system should be enabled with applying input validation controls to ensure that recording office codes entered are valid.

d) The system must be able to reconcile with the payroll system to ensure that an employee is not drawing pension and salary at the same time.

e) The system should be enabled with applying input validation controls to ensure that valid Bank Branch IDs are entered. The system must be enabled with capturing and recording the following minimum data if the employee is to become the pensioner:

   i. Pensioner ID
   ii. Employee ID
   iii. Employee Name
   iv. Father's/Husband's Name
   v. Nationality
   vi. National Identity Card No. (NIC)
   vii. Marital Status
   viii. Gender
   ix. Permanent address
   x. Temporary address
   xi. City
   xii. Region / Division / Sub-division
   xiii. Country
   xiv. Telephone Number
   xv. Employee Status and type.
   xvi. Service Type
   xvii. Employee Designation
   xviii. Department
   xix. Cost Centre Region / Division
   xx. Pay Scale/grade
   xxi. Employees Bank Branch
   xxii. Recording Office
   xxiii. Last Drawn Salary
   xxiv. Payment Mode

f) If the pension is not collected by the employee himself and the pensioner is either his widow or dependants then other than the above information following information must also be captured:

   i. Pensioner name
   ii. Pensioner Type
   iii. Father / Husband Name
   iv. Gender
   v. National Identity Card No.
   vi. Marital Status
   vii. Pensioner address

g) System should reconcile the Pension payment accounts with the General ledger account.

Reporting

a) System should produce bank advice, authorizing the bank to disburse pension payments

b) The system must be enabled with letting users define the periods of reporting.

c) The system must be enabled with printing reports, viewing them on line on screen or downloading them directly to a spreadsheet or word processor.

d) The system must be enabled with producing monthly pensioner detailed ledger giving transaction wise details of the pensioner, with opening and closing balances.

e) The system must be enabled with producing the Pension Payment Order (PPO).

f) The system must be enabled with generating a report for all kinds of monetary adjustments made to the pensioner's record in a certain month.

g) The system must be enabled with generating report showing the new pension applications processed in a certain month.

h) The system must be enabled with generating a report detailing the Bank Scroll information.

i) The system must be enabled to generate and send pension slip via email.

j) The system must be enabled with producing reports that would give detail of the pensions disbursed monthly. This report must be able to be summarized by:

i. Pensioner
ii. Bank Branch
iii. Department
iv. Fiscal Period
v. Gross Pension
vi. Net Pension
vii. Gratuity Amount
viii. Amount of Commutation
ix. Date of Restoration of Pension

5.7 Human Resource Management

Organization Structure

a) System should capture manpower charts according to the approved organization chart and the employee data currently placed on position.

b) The system should be able to define and configure the reporting channels, hierarchies, organization (divisions, departments, regions).

c) The system should be able to define rules, policies and procedures for individual and multiple posts (Permanent / contract posts etc.).
d) The system should provide facility to create, edit and eliminate post (s).
e) The system should facilitate configuration of more than one reporting and approval channel.
f) The system should provide definitions of functions, purpose and responsibilities associated with the posts.
g) The system should have the facility to modify job description subject to authorization.
h) The system should have the facility to maintain history of job descriptions.
i) The system should have the facility to inform concerned managers of changes in job description via e-mail or memo.
j) The system should have the facility to link Job descriptions to the manpower charts and to indicate, on the actual charts, which positions in the charts have job descriptions.
k) The system should provide position status information like
    i. Vacant
    ii. Active for employment
l) The system should provide Summary Statistics and user defined reports of Department, e.g. Number of approved positions / grades
    i. Filled/Vacant
    ii. Different types of breakdown
    iii. Qualification analysis, etc.
m) The system should be able to automatically update the organization chart as soon as the employee status changes to show the position as vacant from the start date of deputation, study leave or separation from service by any mean.
n) The System should provide portal page lets that allow easy access to key data from Human Resource Management applications. Each individual business user should be able to personalize the content for their page lets easily.

Manpower Budgeting

a) The system should have the facility to allocate budgeted positions for a period with start and end date. A position could be in budget for next year and it also could be for specific time period. This facility should be available based on authority given.
b) The system should calculate Budgeted vs. Actual Headcount and Budget vs. Actual Payroll.
c) The system should be able to provide monthly status of budgets and actual.
d) The system should be able to provide a review of positions approved, recruited and still to be recruited.
e) The system should be able to flag deviations in budgeted headcount.
f) The system should have the facility to forecast the Manpower and costing indicators in the sense of working out the cost impact of proposed future manpower budgets. Actual cost for existing staff and estimated cost for additional staff.
g) The system should be able to provide information to recruitment module on budgeted positions and associated values. Auto updating from recruitment module when position is filled.
h) The system should be able to define the budgets for the post and their integration with sub-system of budgeting and financials
i) System must have the capability such that senior management can analyse salary budget information for their respective department.
j) System must have the functionality of applying salary increases across the departments easily.
k) System can easily plan compensation, overtime, taxes and benefits budget prior to the actual release.
l) User must be able to access current and prior year payroll data in the budget planning.
m) System must have the budget reports so that budget vs Actual can be compared along with the variance comparisons.
n) Approval for manpower planning is required for blocking additional headcount and controlling the manpower

o) Rate changes and increases should be effective-dated for payroll processing.
p) Managers should have the ability to plan for compensation, overtime, taxes and benefits.
q) System must have the functionality of applying salary increases across the departments easily.

Succession Plan

a) The system should able to keep list of positions that need succession planning.
b) The system should able to match job profile & person specifications.
c) The system should able to identify employees (Shortlist).
d) The system should able to match job profile with employee profile.
e) The system should recommend trainings for identified employees (Gap Analysis).

New Hire Requirements

a) The requesting Departmental Head should be able to raise Employment Requisition (ER) online through the system.
b) While creating the ER the requesting authority should be able to retrieve the job description from the organization Chart to attach to the ER through the system.
c) The system should provide the manager concerned to be able to review the job description for the vacant position to ensure that the functions, responsibilities and the minimum educational and experience requirements are currently valid.
d) System should support single/multiple levels of approval of the ER.
e) The system should ensure that the requisitioned post in ER is within the approved budget.
f) System should maintain interview question templates for each job
g) System should provide hiring and on boarding checklist to facilitate the hiring process
h) Administer recruitment initiatives, such as web advertisements, web applications and screening, developments, applicants and applications, and correspondence with candidates.

i) Employee list should be generated according to various criteria

Job Placement

a) The system should provide an interface to Internet and internal electronic mail/intranet system to advertise for the vacant positions.
b) The system should have the facility for maintenance of data on recruitment and advertising agents.
c) The system should accept resumes/ applications for the advertised jobs online.
d) Ability to publish jobs on job portal
e) Ability to maintain resume bank
f) System should have a requisition library of job templates that can be utilized when creating requisitions.
g) System should allow administrators to customize text on the e-mail messages (including confirmation acknowledgement and job filled) to external and internal applicants/candidates
h) System should allow users to e-mail potential interview times, applications, corporate material, and job opening status.
i) System should provide a library of standard communication correspondence for printing and distribution.
j) System should allow administrators to schedule interviews, notify interviewers of times, locations and topics to cover.
k) Ability to distinguish applicant/candidate status for internal or external candidates.
l) Ability to associate applications and resumes to a specific requisition without having to change screens/databases.
m) System should maintain history that consists of one candidate record with all the associated recruiting activity regardless of the number of requisitions.
n) Ability to store resumes for future use by category, job title, skill, or other user-defined attributes.
o) System should allow applicants/candidates to modify or replace their existing resume.

p) System should support search of applicants/candidates based on a variety of criteria (e.g., location, skills, prior employers, zip code, and metropolitan areas).

Candidate Tracking & Selection

a) System should assist in online tracking/monitoring of applicants through each stage of the recruitment cycle.
b) The system should have the facility to store and index applications received online through the system, through e-mail or otherwise.
c) The system should have the query facility to search for one or more applicants and then drill down into their detailed resume information.
d) The recruitment data bank should hold individual applicants' resumes containing personal details, competencies, previous work experience and academic attainments. It should be possible to identify the source of the application.
e) The system should allow flexibility in retrieval of information from the data bank, for example by name, competencies, designation etc.
f) The system should have the ability to define a short-listing criteria (ion)) based on some defined parameters.
g) The system should create hard copy call letters or send e-mails to short-listed candidates or to unsuccessful candidates.
h) The system should create test and interview schedules.
i) The system should record scores for recruitment tests.
j) The system should record interview results with detailed comments.
k) The system should have the ability to propose/establish a suitable salary offer for selected candidate based on proposed grade, position, qualification, experience, department rules and the details of interview report.
l) The system should provide multilayer workflow approvals for recruitment.
m) The system should be able to create an offer letter for the successful applicant.
n) The system should be able to maintain the employment reference checks addressed to the candidate's current and previous employers.

o) The system should maintain an easily available history file of unsuccessful candidates; this would help in deciding whether the candidate should be considered or not considered for a similar position arising in the future depending on the reasons (e.g. medically unfit, decline the offer, security disapproval).

Pre-Placement

a) The system should maintain medical examination results.
b) The system should maintain the record of the degrees/qualifications of the candidates attested by the HEC.
c) The system should record details of the negotiation process with a selected candidate.
d) Hiring managers and recruiters should be able to review pre-screened applicant/candidate
e) Hiring managers and recruiters should be able to track applicant/candidate status
f) Hiring managers and recruiters should be able to schedule interviews
g) Hiring managers and recruiters should be able to communicate with applicants/candidates via e-mail
h) Hiring managers and recruiters should be able to view communication history
i) Hiring managers and recruiters should be able to report on communications

New Hire Process

a) The system should have a checklist for all the necessary documents required from a successful candidate.
b) The system should generate alert if the necessary documents required from a successful candidate have not been received and entered in the system.
c) System should be able to generate and assign employee ID number to the successful applicant

Confirmation in Service

a) System should provide facility for creation of checklist to be filled by departmental heads for employee confirmation in service after completion of probation period.
b) System should allow extension in probationary period, if required.

Performance Management

Performance Evaluation

a) System should be able to define and store a set of KPI / Objectives for each individual.
b) System should support periodic evaluations. The results of periodic evaluation must be stored in such a way that reports can be generated in a variety of ways showing the development of individuals and in summary form of any grouping of employees.
c) System should be able to store recommendations for promotion and merit based salary increments.
d) Skills Management & Training module should be interlinked with the Performance Management/Appraisal module, to identify training needs and to perform Training Needs Analysis (TNA).
e) The system should be able to perform completion of appraisal forms on-line or printing of hard copies.
f) The system should be able to prompt when particular appraisals are required for employees.
g) The system should provide correct routing of forms through the workflow.
h) The system should keep all the appraisals for an individual and allow for easy retrieval of historical data.
i) Ability to manage worker competencies to identify and effectively deploy the right people for the right tasks.
j) Ability to review performance levels through discussions, and then outline steps for improvement by creating and implementing goals for workers.
k) System should allow users to set up, deliver, and analyse training courses that include agendas, sessions, and tracks, together with demographic information about participants.

l) System should enable administrators to assign different review forms for different employees within the same review cycle.
m) System should enable employees to complete self-evaluations.
n) Ability to track performance review status and dates (e.g., complete, incomplete).

Career Development & Training

Skills/Competency Management

a) The system should provide facilities to record skill components / competencies in each job description.
b) Skills / competencies should be grouped in user definable sections (e.g. Human relations, Technical knowledge, or Procedural XYZ knowledge).

Training Delivery

a) The system should be able to create course data (from training data):
    i. Internal courses
    ii. External courses
    iii. Conferences & seminars
    iv. Annual
    v. Occasional
    vi. Local & Foreign Scholarships
b) The system should be able to nominate individuals on following criteria:
    i. Seniority
    ii. Individual who have not received training earlier
    iii. Employee performance records should be used as input to a facility to identify training needed
c) System should be able to handle management approvals for training applications
d) The system should be able to create Individual training schedules:
    i. Training completed
    ii. Training planned
    iii. Booked/scheduled
    iv. Not booked/scheduled

e) System should record details regarding, training cost incurred and training budget available.
f) The system should have the facility to monitor the individual visa status for foreign training.

Training Management

The system should be able to maintain the training management data requirements:

a) Brochure information, Contents, Title, Subject
b) Prerequisites, Target group
c) Objectives
d) Method of instruction, Assessment method
e) Dates (start and finish), Duration

Employee Service

Personnel Administration

In the system, the employee Profile Actions include:

a. Basic data of an employee
b. Retrieve (from the Applicant's database) the previous work experience of the employee.
c. Maintain record of all skills/ training and educational qualifications attained by an Employee before and during employment.
d. Maintain language(s) proficiency of the employee.
e. Maintain details as required of professional qualifications /memberships attained by employees.
f. Maintain record (per employee) of career plan
g. Hold a competence profile against each employee in the department.
h. Match employee competencies to the requirements of a specified job/ position in the department.
i. Maintain all necessary basic data needed for each employee.

In the system the dependents Data Action should include:

a. Maintain Dependent's data (spouse(s) and children) for each employee as defined by users.

b. In case of any change in the number of dependents, generate necessary transactions to effect the change in entitlements
c. Follow-up employee's marital status and continuous eligibility of dependents

The following employee actions should be facilitated, but not limited to these:

a. New Appointment (from recruitment)
b. Deputation in/ out
c. Promotion
d. Transfers
e. Study Leave
f. Resignation
g. Termination
h. Dismissal
i. Suspension
j. Increment
k. Annual Leave
l. Service/ Salary Certificates
m. Medical Scheme administration
n. Education allowance administration
o. Loan Applications
p. Salary advance requests

The system workflow should generate and send emails to the concerned after the execution of above employee actions.

Contract Management, Monitoring & Control

System should be able to define and maintain contracts for permanent / contract employees.

Leave Administration

a) The system should have the facility to define and configure rules, procedures, workflow and policies for all kind of leaves based on grades. For example annual, sick (with pay, half-pay and without pay), Hajj, Maternity, etc.
b) The system should have the facility to maintain/enter date of resumption from leave to trigger future payments to the employee.
c) The system should have the facility to accrue leave as of date.
d) The system should have the facility to provide information regarding available leave as of any date.

e) Ability to control absenteeism by establishing, communicating, and monitoring absence policies. This includes approval procedures and centralized or self-registration.
f) Ability to implement and track profile-based clock in and clock out registrations for workers, enable workers to register work time for specific activities, and generate pay information that can be exported to a payroll system.
g) Flexibility to not consider late for an employee on a particular date in case of special situations
h) Leave accruals and leave administration can be processed without Time and Attendance feature.
i) Leave plans can be configured for a lump sum accrual on an annual basis.
j) Leave plans can be configured to accrue based on length of service and user defined rates.
k) Leave plans can be configured to accrue based on user-defined frequencies.
l) Leave plans can be configured to adhere to user-defined carryover rules.
m) System should support unlimited types of leave.
n) Ability to track the approved date when the employee’s leave of absence is expected to start and alert the relevant users on user defined rules.
o) Ability to track the approved date when the employee is expected to return from the leave and alert the relevant users on user defined rules.
p) Maintains of leave of absence history.
q) Employees should be able to view Leave/leave plan balances.
r) Employees should be able to request Leave/leave.
s) Manager should be able to view Leave/leave plan balances.
t) Managers should be able to view pending employee Leave/leave requests.
u) Manager should be able to request Leave/leave.
v) Workflow approval processes must be included for Leave/leave requests initiated by employees or managers.
w) Ability to have multiple leave rules based on the state in which the employee works.

End of Service

a) The system should be able to enrol all Employees in the Statutory Pension Scheme.
b) The system should define and change Employee and Employer contributions towards Pension Scheme.
c) The system should be able to generate Payroll transactions for automatic deduction of Employee’s contribution to the Pension Scheme and produce a report of the deductions every month as defined in the sub head “Pension” in the Payroll Module.
d) The system should be able to compute end of service benefits for employees based on grades.
e) The system should be able to facilitate automatic generation of the Final Settlements for outgoing employees, including outstanding salaries, recovery of allowances (if any), outstanding overtime, outstanding leave and End of Service Benefits.

Administration Requirements

Personnel Administration Data

The system should maintain the employee contact address details. This includes:

a) Residence contact address (residence telephone, pager, mobile phone,
b) Work contact address (site, location, building, floor, room, extension, Dependant details
c) The system should facilitate printing of all forms with contents pre-filled (as much as possible) based on the Information available in the Database.
d) The system should provide Admin. with the employee up-to-date data details regarding work location, contact address, e.g. Telephone Directory.

Disciplinary Actions & Grievance

a) The system should facilitate the management of disciplinary and grievance cases including:
   i. Registration of new cases
   ii. Follow-up & tracking
   iii. Linkages with individual employee profiles

b) System should support single/multiple levels of approval for handling disciplinary actions and grievances.
c) System should provide the format for charge sheets.

Employee Self Service

a. Self Service feature is required in the ERP, however the requirement would be that of standard B2E (Business to Employee) solution, where the portal users would be able to view any information prepared (and allowed to be viewed) by the HR department/any other department. This service would be required as read only template.
b. However we had mentioned 100 portal users who would be able to retrieve standard forms and send any request, to be processed by the HR or other departments in keeping with IIU's routine work flow process.
c. Self-service system in the form of a secure web page accessed using an Employee number/ active directory user and password is required.
d. Access may be provided to data stored about the employee and for Employees to provide the company with information, including but not limited to:
    i. Employee records – Read and selective update
    ii. Current and previous pay slip details – Read only
    iii. Commission / Incentive program – Read and selective update
    iv. Company and state benefits – Read only
    v. Paid, Unpaid, Sick, Sabbatical and Compassionate leave agreed pending and history – Read only
    vi. Leave request messages – Input only
    vii. Messaging interface for employee notices including but not limited to:
        - Employees' suggestions, ideas, complaints etc.
        - Availability of training courses
        - Details of job vacancies
    viii. Access interface for managers and supervisors to view information from and send information to their sub-ordinates. This will facilitate notification / negotiation of:

- Holiday requests and authorizations
- Business and team goals

ix. Integration with the e-mail server for e-mails notifications such payroll disbursement etc.

x. IIU would be interested in any other aspects of employee interaction which may have proven beneficial in other projects

5.8 Procurement & Inventory Management

Procurement

General

a) System should be able to follow the rules and procedures as defined by IIU.

b) System must support Ranking of approved supplier lists by item or commodity.

c) Ability to associate supplier item numbers with in-house Sl. /part numbers.

d) Ability to prevent purchases from un-approved supplier where applicable.

e) The System should provide portal pagelets that allow easy access to key data from Human Resource Management applications. Each individual business user should be able to personalize the content for their pagelets easily.

f) The System should provide portal pagelets that allow easy access to key data from Human Resource Management applications. Each individual business user should be able to personalize the content for their pagelets easily.

g) System must help vendors operate more efficiently by enabling them to perform a variety of tasks online, such as updating profile data, requesting additional users, updating commodity and catalogue content, submitting invoices, reviewing payments, and more

h) There should be a vendor portal so that vendors can access to apply online for registration with in system.

i) System must have the capability and framework for integration with common shipping carrier software for tracking of inventory

j) There must have facility to copy new purchase orders from existing ones.

k) Establish a centralized buyer capability across your organization to support procurement policies and processes. Easily set up and maintain multiple purchasing policies and apply them to different sets of purchasers throughout the organization

Purchase Requisitions

a) The system must be able to support manual or automatic purchase requisitions (PR) creation, as per user requirements, based on:
    i. Inventory replenishment recommendation
    ii. Procurement Committee recommendation
    iii. Requisitions by authorized employees
b) The system must be able to have automatic purchase order (PO) generation from PR to eliminate duplicate data entry.
c) The system must be able to tie PR number to PO and allow:
    i. PO search by PR number
    ii. PR search by PO number
d) The system must be able to supports requisition tracking and inquiry, and to alert Purchasing department on the PR's that should be reviewed and processed.
e) The system must allow users to combine multiple PR's into one PO.
f) Allow users to split one PR into multiple PO's or PO lines.
g) Users must be able to input multiple comment lines and attached to the PR's and PO's.
h) Ability to customize requisition summary screens to meet the user needs.
i) The system must be enabled with distributing expenditures across multiple cost centers, projects or departments.
j) Ability to create the account distributions automatically during requisition creation.
k) System must be able to support attachment of notes, multimedia, etc.
l) System must be enable enough so that self-service capabilities to empower employees to order day-to-day goods and services from searchable online catalogues.

Quotation/Tender

a) Users must be able to generate request for quotation (RFQ)/RFP to be sent to vendors, published.
b) The system must be able to track vendor response.
c) The system must be able to support vendor quotation maintenance and inquiry.
d) The system must be able to support multiple price breaks.
e) Users should be able to attach standard text document (e.g. terms and conditions) on all RFQ’s.
f) Users must be able to create and update quotations based on vendor response.
g) The system should alert users to review quotations that are going to expire in a certain time frame.
h) The System must be flexible enough to evaluate vendors based on PPRA rules. System must be capable enough to perform Technical and Financial Evaluation of Business Partners based on predefined criterion.

Purchase Order Creation & Maintenance

a) The system must provide online PO maintenance and inquiry functions to add, change, delete and list PO.

b) Users must be able to locate existing vendors through flexible search facility during PO creation, maintenance and inquiry:
   i. search by partial vendor code
   ii. search by partial vendor name
   iii. others (please specify)

c) Once a purchase order is confirmed, any further changes to the PO will create a PO new revision. The system should provide a facility to track multiple revisions of the same PO.

d) Re-approval is required whenever a new PO revision is created.

e) The system must be able to control the approvals by amount, cost center, budget, account, item, category, and location.

f) Users must be able to print only the PO lines changed in a particular PO revision.

g) Users must be able to create the PO automatically from on-line requisition.

h) System should support consolidate and centralize purchase requirements from multiple projects, cost centers or locations.

i) The system must allow users to enter multiple items per PO.

j) The system must allow users to enter multiple shipment delivery dates for a PO line.

k) There should be facilities to inquiry all outstanding PO's items by:
   i. PO and PR number, PO number showing the status of PO
   ii. Item/Part number and category
   iii. Due Date, etc.

l) The system must be able to support blanket order (that is, an agreement to buy certain items at a predefined price over a certain period).

m) The system must have a facility to 'call off' against a blanket order with validation of the price, date, and purchase amount.

n) Users must be able to assign primary/preferred vendor for each item.

o) The system must have a facility to put a vendor on hold by:
   i. prohibit the release of PO's for the vendor
   ii. putting a specific item/vendor combination on hold

p) The users must be able to define multiple vendors per item/part.

q) Users must be able to generate PO's in multiple currencies.

r) Users must be able to generate PO for:

   i. direct item (stock item)

   ii. indirect item

   iii. spare part/consumable

   iv. services

   v. others

s) Users must have the option to include extra information or notes to be displayed/printed on PO when required.

t) User must have the option to store standard notes relating to items and/or vendors to be displayed and/or printed on PO.

u) Users must be able to define receiving quantity tolerances for each item/part.

v) Users must be able to define receiving early/late tolerances for each item/part.

w) The system must provide the option to prohibit it or issue a warning when a receipt violates such tolerances.

x) The system must be able to track the purchase price history.

y) Ability to customize the Purchase Order Summary screen to meet the users need.

Receiving

a) The system must provide on-line PO receipt transaction and automatic update of stock balance and PO status on receipt of items.

b) The system should generate a full audit trail of all receipts to be posted to the GL.

c) The system must provide automatic conversion of purchasing unit of measure to stock unit of measure.

d) Ability to control receiving routing.

e) Users must be able to indicate goods under inspection and not available for production

f) Ability to receive unordered items and later match them to Purchase order.

g) Ability to keep track of lot and serial number during receiving.
h) The system must support substitute items.
i) There must be a facility to handle material rejects after inspection and reflect on the PO as outstanding quantity.
j) Ability to view expected receipts by promised date and the viewing of complete receiving history.

Import Purchases

a) Calculation of assessable value as per standard format provided by Custom Authorities.
b) Duties and taxes recording and calculation on assessable value basis or ITP value
c) Recording and calculation of sales tax on import, calculation on the basis of assessable vale plus custom duty. Third party liability in case of sales tax on import.
d) Shipment tracking details which includes shipment clearing details.
e) Recording of vendor liability on risk and reward transfer.
f) Calculation of estimated landed cost on the basis of estimated charges percentages.

Vendor Analysis and Performance Measurement

a) The system must maintain a detailed history of each vendor's performance and provide comprehensive analysis based on:
a. quality
b. delivery quantity
c. delivery time
d. price

Self Service Procurement

a) Self-service procurement solution for the entire organization
    i. Role-based catalogs
    ii. Powerful and flexible search capability
    iii. Workflow approvals anytime, anyplace
    iv. Procurement cards
    v. Supplier enablement

b) Requisition Processing
c) Provide a single source for employees across the enterprise to order products.
d) Use the Catalogue Browser to find the right item quickly.
e) Highlight the best value items based on contracts, preferred suppliers, or recommendations, and obtain real-time price and availability before submitting a request.
f) Compare products side by side to select the right one for you.
g) Enter a special request for unique or one-time purchases.
h) Request items from inventory locations and query inventory levels before submitting the request.
i) Use powerful express forms to gather complete details related to complex requests.
j) Maintain, group, and share favorite item lists by requester.
k) Specify delivery to multiple locations and delivery schedules for each line item, multiple accounting charges per delivery, and one-time shipping locations
l) Requesters to select, compare, and order items and services from role-based online catalogs that are tailored to their role in the organization.
m) Use of synonyms, match case, and Boolean logic to find items easily that meet requesters' criteria.
n) Parametric search of attributes that are registered to a category needed during the approval process.
o) Configure workflow approvals based on criteria appropriate to the organization.
p) Receive notification of approvals through email, a work list item on the portal, or wireless device, and perform approvals while out of the office using a wireless device.
q) Use serial and parallel approval paths or add approvers, reviewers, or both, as needed during the approval process.
r) Authorize line item approval and re-approval for multiple line requests.
s) View full details about requests, including detailed product information, cost distributions, attachments, and requester comments.
t) Edit requests during the approval process

Inventory Control System

Definitions & setup

a) Item/Product Profile
b) Product General Info
c) Suppliers
d) Units
e) Locations

Inventory Transactions

a) Item Listings
b) Manual/automatic Transactions, Transfer & Adjustments
c) Inventory in/out
d) Goods Receipt Notes
e) Item issuance note/requisition

Search Reports

a) Item Search – by category
b) Item Search – by location
c) Item Search – by item description
d) Item Search – by serial number
e) Item Search – by types

Inventory Transfer & Adjust

a) Inspection of returned products
b) Inventory Transfer & Adjustments – Outputs
c) Basic lookup reports
d) Intimation letter to party for returned products
e) Inspection report
f) Inventory adjustment
g) Inventory rejections

Reports

a) Item listings
b) Activity based analysis [items in/out]
c) Inventory in hand

d) Stock register
e) Suppliers/vendors
f) Purchase requisitions
g) Purchase orders
h) Rejections

5.9 Project Management

General

a. System should be designed to prepare & manage PC-I, PC-II, PC-III, PC-IV, PC-V.
b. The system should have the facility to document the projects as per required formats such as PC-I to PC-V with the capability to extract existing formats for editing or updating, saving etc.
c. System shall be designed so that it is easy to operate by end users, provide an intuitive graphical interface and shall be web-enabled.
d. System shall provide the feature to export data to spreadsheets and/ or text files for incorporation into desktop reports or for further analysis.
e. System shall facilitate the attachment of documents, spreadsheets, or images to many windows within the Applications to provide users with additional information or required documentation.
f. System should have the capability to searching any document/ report based on any of the IDs defined as well as query based on multiple IDs and filters.
g. System must provide facilities for archive and purge.
h. System should have a very extensive security and authorization control system so that only authorized persons/ staff should have access to change or view the data.
i. There should also be an option of edit summary to see what changes were made and who made them.
j. The system shall have capability to be integrated with Other Modules, like financials, Purchasing, Cash Management, Self-service Web Applications

Projects

a. The system shall be capable to create required work breakdown structures to organize project activities for the projects.
b. The System shall provide the ability to define Project templates to speed data entry when creating new projects and also copying from existing Projects
c. The Projects system shall be able to define the following but not limited to:

i. Project classifications, such as faculty development, infrastructure development, research & development, etc.
ii. project status and project types
iii. Campus, faculty and department wise distribution
iv. Subject wise distribution
v. Head of Department responsible of the projects
vi. Expenditure/Revenue categories, debit advises &interfacing with financial module/GL for voucher preparing & audit submission.
vii. Maintain data base for defined variables such as scholars, professors, universities, programs,
viii. Complete cycle of individual scholars/professors/events starting from application, selection, progress, completion, and/or placement in universities etc as per requirement of each project.

d. Ability to assign project and task managers and other key players at project or work breakdown structures level.
e. The system shall be able to classify the types of projects on the basis of HR development, faculty development in University, research, publications, trainings for skill enhancement, scholarships for academic enhancement, sports events, provision of physical resources to university, and any other basis.
f. The system should support projects of scholarship categorized as Merit scholarship or Need based scholarship.
g. For scholarship projects the system should keep record of students, supervisors, field of studies, tenure, fee structure, MoU or agreement with the university.
h. The system should have capability to import data from existing spread sheets or as forwarded by universities

Project Planning

a. The System shall be interfaced with the financial module for budgetary controls, payments for expenditures, remittance of scholarships, payments of grants to constitutional units of IIU or any other matter pertaining to finance & accounts. In addition following features should be provided:
   i. Project wise budget allocation/ availability should be there.

ii. System should show budget allocated/ utilized & remaining status.

iii. Ability to define controls by person, expenditure category, organization and type of charge etc; create any combination of transaction controls.

iv. Users shall have the flexibility to enter transactions and data entry report over the web, route for approval or via Excel spread sheet and upload the information as and when required

v. There should be provision for Planning of the project on the basis of prescribed formats of HEC and Planning Commission

Project Monitoring

a. There should be a provision of Monitoring of the project based on prescribed formats of HEC and Planning Commission including but not restricted to the following:

   i. Project wise budget allocation in institutions
   ii. Release & Expense Detail(Line Item-Wise)
   iii. Track record of issues/recommendations highlighted during monitoring visits
   iv. Discipline wise expense details
   v. Quarter/Annual Report Generation (Quarter/Annual)
   vi. System should also be enabled with Audit/ Monitor the progress of the project by some authorized persons. The monitoring function of the module could match the objectives of the project as defined in the PC-1 with the actual project work as well as the cost.

b. The System should be able to:

   i. Manage all project-related construction-in-process and expenditures for capital projects
   ii. Associate project assets with work breakdown structure, collect actual project costs and then capitalize the assets
   iii. Have the project information flow from project to assets hence eliminating redundant data entry and ensuring accuracy
   iv. Keep financial record of the Scholars who had been given the Scholarship by HEC

v. Ability to enter or import transactions incurred in major currencies like Dollar, Sterling, and Euro.

c. System must be able to:

i. share resources across organizations System must supports cross-charge transactions
ii. Ability to allocate costs from one or more source project to one or more target projects based on user-defined allocation rule.
iii. Ability to use amounts in specific Head of accounts as sources for allocations to one or more projects.
iv. Support Step-Down or Parallel allocation rules
v. System shall provide flexibility to generate receipts/invoice and record revenue where applicable as per PIFRA Chart of Account.

5.10 Asset Management

a) System shall be designed to know what type of assets (moveable and immovable) is possessed by IIUI.

b) System shall be designed to know about all moveable assets like office equipment, laboratory equipment, office machinery, electrical installations and vehicles deployed in university.

c) System shall know about all immoveable assets like lands, buildings, roads, sheds, etc with their present condition, maintenance requirements, annual ground rent payments, lease managements etc.

d) System should track the financial, contractual, and inventory details of hardware throughout their lifecycles

e) Record and execute all preventive and corrective maintenance activities on deployed assets and perform regular audits, right up until asset retirement.

f) Automate asset lifecycle corrective maintenance work orders and other processes to minimize wasted resources and eliminate repetitive tasks

g) System should enforce asset policies and facilities to help meet regulatory compliance requirements.

Queries and reports:

a. System must be able to:

i. Monitor project as per user defined variable including but not restricted to, university, scholarships, professors, events, grants, research, publications etc.
ii. Define access privileges by Database Administrator user.

b. System must be able to provide customized reports as required by each project and to review summary reports and then drill down to more detailed reports and then to detailed transactions or activities.
c. System shall provide inquiry features to users to view information.
d. Ability to export data in on-line queries to desktop spreadsheet and reporting tools
e. User must be able to track and make inquiries on project status, including: but not restricted to budget, expenditure, revenue, universities, scholars, professors, events, completion date with actual target, placements, achievements etc. as required by each project
f. The System shall be able to report and maintain accounting records at the transaction level in more than one currency.
g. The System shall provide the enterprise-wide project information and enable user to perform multidimensional analysis of project information across projects and organizations.
h. System must be able to show the respective accounting transactions.
i. Ability to generate cash forecast by project basis.
j. System shall be capable to generate asset lifecycle end user required reports

5.11 Clinical & Health Services

The proposed solution must be able to configure and support but not limited to features below:

a) The proposed solution must be able to configure patient scheduling.
b) The proposed solution must be able to record patient data like health information, medicines, allergies, procedures prescribed, previous history etc.
c) The proposed solution must have patient portal.
d) The proposed must be able to process prescriptions.

e) The proposed solution must have provision for laboratory related tasks to monitor delivery of reports, analysis of reports etc.
f) The proposed solution must be able to manage the assets related to clinical & health services.
g) The proposed system must support administrative processes and dashboard for reporting.

5.12 Help Desk/Support System

The proposed solution must be able to configure and support but not limited to features below:

a) The proposed system must allow automated ticket creation in different categories.
b) The proposed system must support ticket modification by end user and managers.
c) The proposed system must generate SMS and email alerts for different events.
d) The proposed system must maintain separatelog for each issue.
e) The proposed system must support automatic ticket assignment based on the issue type and to the concerned section(s).
f) The proposed system must support ticket assignment to individual or team.
g) The proposed system must support ticket search by user, department or faculty.
h) The proposed system must have workflows for handling delays and priority.
i) The proposed system must have the ability to evaluate the performance of individual/teams working on Help desk.
j) The proposed system must support submission of tickets from both registered and un registered users.
k) The proposed system must provide role based dashboard for Reports / Stats.

5.13 Business Intelligent (BI)

The Proposed ERP should be integrated with comprehensive business intelligence systems whose aim to support better business decision-making. These systems provide historical, current, predictive views, integrated and separated dashboard of all administrative operations/modules.