STANDARD REQUEST FOR PROPOSAL

Procurement of Consulting Services (SRFP)

For

"Khesar Gyalpo University Information System (KGUIS) additional module and enhancement"

Procuring Agency: Khesar Gyalpo University of Medical Sciences of Bhutan

Date: 13th March 2019

ACRONYMS

CQ   Consultants Qualifications
CV   Curriculum Vitae
EoI   Expression of Interest
MoF   Ministry of Finance
IC   Individual Consultant
PPPD   Public Procurement Policy Division
SRFP   Standard Request for Proposals
TOR   Terms of Reference

Definitions

(a) Consultant: An individual or a legal entity entering into a Contract to provide the required Consulting Services.

(b) Consulting Services: Expert services of a professional and/or intellectual nature, provided by the Consultant based on specialized expertise and skills, in areas including, but not limited to, preparing and implementing projects, conducting training, providing technical assistance, conducting research and analysis, preparing designs, supervising the execution of construction and other works, undertaking studies, advising Procuring Agencies, building capacity, preparing tender documents, supervising procurement, and others.

(c) Contract: The formal agreement in writing, including the General Conditions (GC), the Special Conditions (SC), and the Appendices, entered into between the Procuring Agency and the Consultant, on acceptable terms and conditions and which are in compliance with all the relevant provisions of the laws of the Kingdom of Bhutan, for the provision of the required Consulting Services.

(d) Data Sheet: Such part of the Instructions to Consultants used to reflect specific assignment conditions.

(e) Day: A calendar day.

(f) Government: Royal Government of Bhutan (RGoB).

(g) Instructions to Consultants (Section 2 of the RFP): The document which provides the shortlisted Consultants with all the information needed to prepare their Proposals.

(h) In Writing: Communicated in written form (e.g. by mail, electronic mail, fax, telex) with proof of receipt.

(i) LOI (Section 1 of the RFP): The Letter of Invitation being sent by the Procuring Agency to the shortlisted Consultants.

(j) Personnel: Professional and support staff provided by the Consultant or by any Sub Consultant and assigned to perform the Services or any part thereof; "Foreign Personnel" means such professional and support staff who at the time of being so provided have their domicile outside

Bhutan; "Local Personnel" means such professional and support staff who at the time of being so provided have their domicile inside Bhutan.

(k) Procuring Agency: RGoB agency with which the selected Consultant signs the Contract for the Services.

(l) Proposal: The Technical Proposal and the Financial Proposal.

(m) RFP: The Request for Proposal to be prepared by the Procuring Agency for the selection of Consultants, based on the SRFP.

(n) SRFP: The Standard Request for Proposals, which must be used by the Procuring Agency as a guide for the preparation of the RFP.

(o) Services: The work to be performed by the Consultant pursuant to the Contract.

(p) Sub-Consultant: Any person or entity to whom/which the Consultant subcontracts any part of the Services.

(q) Terms of Reference (TOR): The document included in the RFP as Section 5 which defines the objectives, goals, scope of work, activities, tasks, responsibilities of the Procuring Agency and the Consultant, required outputs and results of the assignment, as well as background information (including a list of existing relevant studies and basic data) to facilitate the Consultants' preparation of their proposals.

Letter of Invitation (LOI)

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Khesar Gyalpo University of Medical Sciences of Bhutan
Royal Government of Bhutan
Thimphu: Bhutan

KGUMSB/Pro/Tender (03)/2018-2019/ 865   Date: 13ᵗʰ March 2019

Request for Proposal

The **Khesar Gyalpo University of Medical Sciences of Bhutan** invites eligible and qualified consultants having valid trade license to provide the consultancy services for the **Development of additional modules and enhancements of Khesar Gyalpo University Information System (KGUIS)**. The interested consultants must provide information indicating their qualification to perform the services (brochures, description of similar assignments, experience in similar conditions, availability of appropriate skills among staff, etc.) and others if any.

The selection process of a consultant shall be in accordance with the procedures set out in the Procurement Rules and Regulations.

Timeline for bid submission and opening:

Bid Security: **Nu. 50,000.00 (Fifty Thousand) only.**

Download of bidding document: **13ᵗʰ March 2019 to 13ᵗʰ April, 2019**

Bid Submission: **10:00 AM on 13ᵗʰ April, 2019 at Procurement Section, KGUMSB**

Bid Opening: **11.00 AM on 13ᵗʰ April, 2019 at Conference Hall, KGUMSB**

For more details and to download the bidding document, please visit the University website www.kgumsb.edu.bt. Interested consultants may obtain further information, if any from ICT Section, KGUMSB prior to submission of RFP at telephone number +975-02-328990/97/99 during office (*0900 to 1700 hours*).

Management

1. **INTRODUCTION**

1.1. Firms/individuals are hereby invited to submit a technical and financial proposal for consulting services required for the Assignment named in the attached LOI Data Sheet (referred to as "Data Sheet"). The proposal could form the basis for future negotiations and ultimately a contract between your firm and the Client named in the Data Sheet.

1.2. A brief description of the Assignment and its Objectives are given in the Data Sheet.

1.3. The Assignment will be implemented in accordance with the procedure indicated in the Data Sheet.

1.4. To obtain firsthand information on the Assignment and on the local conditions, firms/individuals are encouraged to pay a visit to the Client before submitting a proposal and attend a pre-proposal conference as specified in the Data Sheet. Firms/individuals must take into account the local conditions while preparing the proposal.

1.5. The Client will provide the inputs specified in the Data Sheet, and will assist the Consultants in obtaining licenses and permits needed to carry out the services, and make available relevant project data and reports.

1.6. Please note that (i) the costs of preparing the proposal and of negotiating the contract, including a visit to the Client, are not reimbursable as a direct cost of the Assignment; and (ii) the Client is not bound to accept any of the proposals submitted.

1.7. Consultants shall not be under a declaration of ineligibility for corrupt and fraudulent practices specified in the Standard Request for Proposal (Large Assignments) Instruction to Consultant Clause 4.

2. **DOCUMENTS**

2.1 To enable firms/individual to prepare a proposal, please find and use the attached Documents listed in the Data Sheet.

2.2 Consultants requiring a clarification of the Documents must notify the Client, in writing, not later than seven days before the proposal submission date.

2.3 At any time before the submission of proposals, the Client may, for any reason, whether at its own initiative or in response to a clarification requested by an invited consulting firm, modify the Documents by amendment.

3. **PREPARATION OF PROPOSAL**

3.1 Firms/individuals are requested to submit a technical and a financial proposal. Your proposal shall be written in the language specified in the Data Sheet.

Technical Proposal

3.2 Firms/individuals are expected to examine all terms and instructions included in the Documents. Failure to provide all requested information will be at your own risk and may result in rejection of your proposal.

3.3 During preparation of the technical proposal, firms/individuals must give particular attention to the following:

i) If firms/individuals consider that the firm does not have all the expertise for the Assignment, you may associate with other firms or entities, including the other firms invited for this Assignment and/or local consultants, subject to restrictions specified in the Data Sheet, to enable a full range of expertise to be presented;

ii) The financial proposal for the Assignment should be substantially in accordance within the available budget; iii) The estimated man months for the assignment are stated in the data sheet for your information. However, firms/individuals should feel free to submit your proposal on the basis of man months which firms/individuals consider necessary to undertake the assignment.

3.4 The technical proposal must provide the following information, using, but not limited to, the formats attached in Annexure 2:

i) A brief description of the Consultant's organization and an outline of recent experience on assignments
of a similar nature. The information provided on each assignment should indicate, inter alia, the profiles of the staff provided, duration, contract amount and firm involvement;

ii) Any comments or suggestions on the TORs, and a description of the methodology (work plan) which the Consultants propose to execute the services, illustrated with bar charts of activities.

iii) The composition of the proposed staff team, the tasks which would be assigned to each and their timing;

iv) Curricula Vitae (C.V.) recently signed by the proposed key professional staff or an authorized manager in the home office.

v) Estimates of the total time effort (person x months) to be provided for the services, supported by bar chart diagrams showing the time proposed (person x months) for each professional staff; and

vi) The Consultant's comments, if any, on the data, services and facilities to be provided by the Client indicated in the TORs.

3.5. The technical proposal must not include any financial information.

Financial Proposal

3.6. The financial proposal should list the costs associated with the Assignment. These normally cover: remuneration for staff, accommodation (per diem, housing), transportation, for mobilization and demobilization, and equipment (vehicles, office equipment, furniture and supplies), printing of documents, surveys. Your financial proposal should be prepared using, but need not be limited to, the formats attached in Annexure 3.

3.7. The financial proposal must take into account the tax liability and cost of insurances specified in the Data Sheet.

3.8. Costs may be expressed in currency as provided in data sheet

4. SUBMISSION OF PROPOSALS

4.1. Firms/individuals must submit one original proposal and the number of copies indicated in the Data Sheet. Each proposal will be sealed in an outer envelope which will bear the address and information indicated in the Data Sheet.

4.2. The completed technical and financial proposal must be delivered on or before the time and date stated in the Data Sheet.

4.3. The proposal must be valid for the number of days stated in the Data Sheet from the date of its submission during which firms/individuals must maintain available the professional staff proposed for the assignment. The Client will make its best effort to complete negotiations at the location stated in the Data Sheet within this period.

5. PROPOSAL EVALUATION

5.1. A two-stage procedure will be adopted in evaluating the proposals:
   i) a technical evaluation, which will be carried out prior to opening any financial proposal;
   ii) a financial evaluation.

   Firms will be ranked using a combined technical/financial score, as indicated below.

Technical Proposal

5.2. The evaluation committee appointed by the Client will carry out the evaluation applying the evaluation criteria and point system specified in the Data Sheet. Each responsive proposal will be attributed a technical score (St.).

Financial Proposal

5.3. The evaluation committee will determine if the financial proposals are complete and without computational errors. The lowest financial proposal (Fm) will be given a financial score (Sf) of 20 points.

5.4. Proposals will finally be ranked according to their combined technical (St) and financial (Sf) scores using the weights indicated in the Data Sheet" $S = St \times T\% + Sf \times F\%$.

6. **Negotiations**

6.1 Prior to the expiration period of proposal validity, the Client will notify the successful Consultant who submitted the highest scoring proposal (technical + financial) in writing by registered letter, cable telex or facsimile and invite to negotiate the Contract.

6.2 Negotiations normally finish within five days. The aim is to reach an agreement on all points, and initial a draft contract by the conclusion of Negotiations.

6.3 Negotiations will commence with a discussion of technical proposal, the proposed methodology (work plan), staffing and any suggestions made to improve the TORs. Agreement must then be reached on the final TORs, the staffing and bar charts, which will indicate activities, staff, periods in the field and in the home office, staff months, logistics and reporting. Special attention will be paid to optimize the required outputs from the Consultants within the available budget and to define clearly the inputs required from the Client to ensure satisfactory implementation of the Assignment.

6.4 Changes agreed upon will then be reflected in the financial proposal, using proposed unit rates

6.5 6.6 The negotiations will be concluded with a review of the draft form of Contract. The Client and the Consultants will finalize the contract to conclude negotiations.

7. AWARD OF CONTRACT

7.1 The Contract will be awarded after successful Negotiations with the successful Consultants. If negotiations fail, the Client will invite the Consultants having obtained the second highest score to Contract negotiations. Upon successful completion, the Client will promptly inform the other Consultants that their proposals have not been selected.

7.2 The selected Consultant is expected to commence the Assignment on the date and at the location specified in the Data Sheet.

8. CONFIRMATION OF RECEIPT

8.1. The consultant shall acknowledge the following:

i) The receipt of the letter of invitation by the consultant.

ii) Whether or not the consultant will submit a proposal.

Clause No.	Clauses
1.1.	The name of the assignment is: **"[Khesar Gyalpo University Information System (KGUIS) additional module and enhancement]"** Name of the Procuring Agency: *Khesar Gyalpo University of Medical Sciences of Bhutan* Method of selection: *Quality and Cost Based Selection (QCBS)*
1.2.	The description and the objectives of the Assignment are: **Khesar Gyalpo University Information System (KGUIS) additional module and enhancement**
1.3.	The scope of the assignment and expected time of its completion are: *30th June 2019* Training is a specific component of this assignment: *Yes* All cost should be clearly indicated for the assignment
1.4.	The lump sum of Nu. 50000 EMD (cash warrant, Demand Draft and Bank Guarantee) should be submitted to following address *The Director* *Khesar Gyalpo University of Medical Sciences of Bhutan* *Post Box 446* *Old Medical Block, JDWNRH, Thimphu*
1.5.	A pre-proposal conference will be held: *No* The Procuring Agency 's representative is: *Thinley Dorji (Mr.)* Address: *Khesar Gyalpo University of Medical Sciences of Bhutan* Designation: *Procurement Asst.* *Telephone no. +975-02-328990/97/99* **E-mail: thinleydorji@kgumsb.edu.bt** Clarifications may be requested not later than **7** *days* before the submission date. The address for requesting for clarification *Telephone no. +975-02-328990/97/99* **E-mail: ictoshering@kgumsb.edu.bt**
1.6.	The Procuring Agency will provide the following inputs and facilities: *(a) will available information that are relevant in executing the program;* *(b) access to relevant officials of the authority and to other relevant agencies for necessary information to carry out the work;* *(c) List of relevant stakeholders with their contact details.*

1.7.	The documents are: *TORs, Contract Form, Annexure*
1.8.	The Proposal submission address is: ***Director*** ***Khesar Gyalpo University of Medical Sciences of Bhutan (KGUMSB),*** ***Post Box 446,*** ***Old Medical Block, JDWNRH, Thimphu***
1.9.	Proposals shall be submitted in the following language: ***English***

2.1.	Amounts payable by the Procuring Agency to the Consultant under the Contract to be subject to local taxation: ***Yes***. ***Pay such taxes on behalf of the consultant.***
2.2.	***The consultants must submit an one original and a copy of technical proposal, and original financial proposal .***
2.3.	Proposals must be submitted no later than the following date and time: **13*th* April 2019 before 10:00 am.** Financial Proposal to be submitted together with Technical Proposal: ***Yes (Technical and financial proposal sealed in different envelope which is further enclosed in a single envelope)***
2.4.	Proposals must remain valid ***until 60 days*** from the date of submission.

2.5.	Criteria, sub-criteria and the points system for developing the system are broken down as follows: **100%**

The proposal will be based on the following factors:

   i. *Technical proposal including the Qualification and experience and the past track record of successful completion of similar assignments.*

   ii. *Financial bids.*

Besides the submitted bid, the consultancy firm or individual consultant will be given an opportunity to present their technical proposal to the Management of the Authority. The presentation will also be taken into account while evaluating the proposal.

Evaluation criteria for Technical proposal is 60 percent, 20 percent on presentation and 20 percent Financial. The presentation date will be intimated by KGUMSB Tender committee.

TECHNICAL EVALUATION CRITERIA	
(i) Specific experience of the Consultant relevant to the assignment: 1. KGUIS [5] 2. IMS [3]	8
(ii) Adequacy of the proposed methodology and work plan a) Technical approach and methodology [20] b) Work plan and schedule[5] c) Organization and staffing [5] 1. Adequacy of Staff a) Team Leader b) System Analyst c) Programmer d) Report Designer e) Tester f) Document	30
(iii) Key professional staff qualifications and competence for the assignment: Sub Criteria:	15

1) Qualifications [5] 2) Training [2.5] 2) Adequacy for the assignment and role includes experience [5] 3) Experience in region and language [2.5]	
(iv) Suitability of the transfer of knowledge (training) program:	5
(v) Participation by nationals among proposed key staff	2
PRESENTATION CRITERIA	
(i) Specific experience of the Consultant relevant to the assignment: 1. Knowledge on KGUIS [10]	5
(ii) Understanding of Question Bank, Online Exam and Result Analysis	10
(iii) Integration with existing system (database, programming language/framework, etc)	5

Note: To qualify for financial evaluation, the bidder should score minimum of 50% from technical and presentation i.e. out of 80%.

2.6.	Consultant to state local cost in Ngultrum: *Yes* The single currency for price conversions is ***Bhutanese Ngultrum (BTN).*** The source of official selling rates is the Royal Monetary Authority of Bhutan. The date of exchange rates is: ***the date of payment***.

2.7.	The formula for determining the financial scores is the following: The weights given to the Technical and Financial Proposals are: Technical = _____ [*80%*], and Financial = _____ [*20%]*
2.8.	Expected date and address for contract negotiations: ***The Director*** ***Khesar Gyalpo University of Medical Sciences of Bhutan*** ***Post Box 446*** ***Old Medical Block, JDWNRH, Thimphu*** Expected date for commencement of consulting services: **18th April 2019**

TECHNICAL PROPOSAL

TO

_____

_____

_____

Sir:

Subject:Hiring of Consultancy Service for _____

_____

      Regarding Technical Proposal

I/We _____ Consultant/Consultancy firm herewith enclose Technical Proposal for selection of my/our firm/organization as Consultant for _____.

Yours faithfully,

Signature
Full Name _____
Designation _____
Address _____

                              (Authorized Representative)

Format of Curriculum Vitae (CV) For Proposed Key Staff

Proposed Position:

_____ **Name of Firm:**

Name of Staff:___

Profession:_____

Date of Birth:___

Years with Firm:_____ **Nationality:**___
Membership of Professional Societies: _____
Detailed Tasks Assigned:_____
<u>**Key Qualifications**</u>:
(Give an outline of staff member's experience and training most pertinent to tasks on assignment. Describe <u>degree of responsibility held </u>by staff member on relevant previous assignments and give dates and locations. Use up to half a page).

Education:

(Summarize college/university and other specialized education of staff member, giving names of schools, dates attended and degrees obtained. Use up to a quarter page).

Employment Record:

(Starting with present position, list in reversed order, every employment held. List all positions held by staff member since graduation, giving dates, names of employing organization, title of positions held and location of assignments. For experience in <u>last ten years</u>, also give types of activities performed and client references, where appropriate. Use up to three-quarters of a page).

Languages:

(Indicate proficiency in speaking, reading and writing of each language by "excellent", "good", "fair", or "poor").

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this biodata correctly describes myself, my qualifications and my experience.

_____ **Date:**_____
Signature of Staff Member or   Day/Month/Year authorized official from the firm

Please attach "Work Programme and Time Schedule for Key Personnel

WORKPROGRAM AND TIME SCHEDULE FOR KEY PERSONNEL
MONTHS (in the form of bar chart)

S. No.	Name	Position	1	2	3	4	5	6	7	8	Number of Months
1											
2											
3											
4											

FORM FIN 1 <u>FINANCIAL PROPOSALS</u>

TO

_____

_____

_____

Sir:

Subject: Hiring of Consultants' Services for _____

_____

Regarding Price Proposal

I/We _____ Consultant/consultancy firm herewith enclose Price

Proposal for selection of my/our firm/organization Consultant for _____

I, the undersigned, hereby declare to the best of my knowledge and belief, this information is true and correct.

Yours faithfully,

Signature _____

Full Name _____

Designation _____

Address _____

(Authorized Representative)

SCHEDULE OF SUMMARY PRICE PROPOSAL
FORM FIN-2 SUMMARY OF COSTS

Item	
Total Costs of Financial Proposal	

FORM FIN-3 BREAKDOWN of Costs by Activity

Group of Activities (Phase)	
Remuneration	
Reimbursable Expenses	
Subtotals	

FORM FIN-4 BREAKDOWN OF REIMBURSABLE EXPENSES

(This Form FIN-4 shall only be used when the Time-Based Form of Contract has been included in the RFP)

N°	Description	Unit	Unit Cost	Quantity	Amount
1	Per diem allowances	Day			
2	Miscellaneous travel expenses	Trip			
3	Communication costs between [*Insert place*] and [*Insert place*]				
4	Drafting, reproduction of reports				
5	Equipment, instruments, materials, supplies, etc.				
6	Use of computers, software				
7	Local transportation costs				
8	Office rent, clerical assistance				
9	Training of the Procuring Agency's personnel				

(Modify as appropriate)

Sample Contract for Simple Consulting Services Small Assignments Time-Based Payments

CONTRACT

THIS CONTRACT ("Contract") is entered into this *[insert starting date of assignment]*, by and between *[insert Client's name]* ("the Client") having its principal place of business at *[insert Client's address]*, and *[insert Consultant's name]* ("the Consultant") having its principal office loca_{ted at} *[insert Consultant's address]*.

WHEREAS, the Client wishes to have the Consultant performing the services hereinafter referred to, and

WHEREAS, the Consultant is willing to perform these

services, NOW THEREFORE THE PARTIES hereby

agree as follows:

1. Services
    (i)   The Consultant shall perform the services specified in "Terms of Reference and Scope of Services," which is made an integral part of this Contract ("the Services").

    (ii)   The Consultant shall provide the reports listed in Terms of Reference, within the time periods listed in such Annexures, and the personnel listed in Annexure 2, "Cost Estimate of Services, List of Personnel and Schedule of Rates" to perform the Services.

2. Term
The Consultant shall perform the Services during the period commencing *[insert start date]* and continuing through *[insert completion date]* or any other period as may be subsequently agreed by the parties in writing.

3. Payment
    A.   Ceiling

For Services rendered pursuant to ToR, the Client shall pay the Consultant an amount not to exceed a ceiling of *[insert ceiling amount]*. This amount has been established based on the understanding that it includes all of the Consultant's costs and profits as well as any tax obligation that may be

imposed on the Consultant. The payments made under the Contract consist of the Consultant's remuneration as defined in sub-paragraph B below and of the reimbursable expenditures as defined in sub-paragraph C below.

    B.   Remuneration

The Client shall pay the Consultant for Services rendered at the rate(s) per man/month spent[1] (**or** per day spent **or** per hour spent, subject to a maximum of eight hours per day) in accordance with the rates agreed and specified in Annexure 3, "Cost Estimate of Services, List of Personnel and Schedule of Rates."

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[1] Select the applicable rate and delete the others.

	C.		Reimbursables

The Client shall pay the Consultant for reimbursable expenses, which shall consist of and be limited to:

(i) normal and customary expenditures for official travel, accommodation, printing, and telephone charges; official travel will be reimbursed.

(ii) such other expenses as approved in advance by the Client.[1]

D. Payment Conditions

Payment shall be made in *[specify currency]* not later than 30 days following submission of invoices in duplicate to the client.

4. Project Administration

A. Coordinator

The Client designates Mr./Ms. *[insert name]* as Client's Coordinator; the Coordinator shall be responsible for the coordination of activities under the

Contract, for receiving and approving invoices for payment, and for acceptance of the deliverables by the Client.

B. Timesheets

During the course of their work under this Contract, including field work, the Consultant's employees providing services under this Contract may be required to complete timesheets or any other document used to identify time spent, as well as expenses incurred, as instructed by the Project Coordinator.

C. Records and Accounts

The Consultant shall keep accurate and systematic records and accounts in respect of the Services, which will clearly identify all charges and expenses. The Client reserves the right to audit, or to nominate a reputable accounting firm to audit, the Consultant's records relating to amounts claimed under this Contract during its term and any extension, and for a period of three months thereafter.

5. Performance Standard

The Consultant undertakes to perform the Services with the highest standards of professional and ethical competence and integrity. The Consultant shall promptly replace any employees assigned under this Contract that the Client considers unsatisfactory.

6. Confidentiality

The Consultants shall not, during the term of this Contract and within two years after its expiration, disclose any proprietary or confidential information relating to the Services, this Contract or the Client's business or operations without the prior written consent of the Client.

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[1] Specific expenses can be added as an item (iii) in paragraph 3.C.

7.	**Ownership of Material**	Any studies, reports or other material, graphic, software or otherwise, prepared by the Consultant for the Client under the Contract shall belong to and remain the property of the Client. The Consultant may retain a copy of such documents and software.
8.	**Consultant Not to be Engaged in Certain Activities**	The Consultant agrees that, during the term of this Contract and after its termination, the Consultants and any entity affiliated with the Consultant, shall be disqualified from providing goods, works or services (other than the Services or any continuation thereof) for any project resulting from or closely related to the Services.
9.	**Insurance**	The Consultant will be responsible for taking out any appropriate insurance coverage.
10.	**Assignment**	The Consultant shall not assign this Contract or Subcontract any portion of it without the Client's prior written consent.
11.	**Law Governing Contract and Language**	The Contract shall be governed by the laws of *[insert government]*, and the language of the Contract shall be *[insert language]*.
12.	**Dispute Resolution**	Any dispute arising out of this Contract, which cannot be amicably settled between the parties, shall be referred to adjudication/arbitration in accordance with the laws of the Kingdom of Bhutan.

FOR THE CLIENT   FOR THE CONSULTANT

Signed by _____   Signed by _____

Title: _____   Title: _____

Terms of Reference

1. Introduction

Background on Khesar Gyalpo University of Medical Sciences of Bhutan

The Khesar Gyalpo University of Medical Sciences of Bhutan was established in May 2013 by the University of Medical Sciences Act of Bhutan which was enacted in 2012. Since its establishment in 2013, KGUMSB has come a long way. The University has made a successful journey - trying to set a firm foothold in the region as a premier centre in providing quality health education.

The University literally started from making gingerly steps in pursuit of the mandate to provide medical education and to address the shortage of healthcare workers in the country. The University began formulating various academic rules and regulations, guidelines, designing curricula for postgraduate residency program to launching the postgraduate residency program in 2014. The crowning glory for the University was the launching of the University as the Khesar Gyalpo University of Medical Sciences of Bhutan after His Majesty the King by Her Majesty the Queen. The University also take pride in His Majesty's ascent as the Chancellor to the University.

Background on KGUIS

Khesar Gyalpo University Information System (KGUIS) (kguis.kgumsb.edu.bt) is developed with the aim to go paperless by making HR and Student information system dynamic and online. It is web-based system that can be accessed online from anywhere with a simple internet connection. No additional software is required to use this system. It is centralized web-based application system that allows efficient and reliable information updates with higher security.

With implementation of KGUIS, the University has been able to automate most of its daily task. Moreover, the system has been able to assist the faculty and HR members in performing their tasks as they can now easily access the student and staff data faster and easier.

The KGUIS helps University to manage various operations such as generating transcript and results for students, submission of performance appraisal online and keeping track of annual expenditure. It allows quick accessible flow of information that provides student, faculty and administrative staff with useful tools in conducting their task.

The KGUIS comprises of three main components of HR, Student and Finance information.

2. Objective of Project

The Objective of the Project is fourfold:

1) **Development of Question Bank.**
2) **Online Exam**
3) **Result Analysis**
4) **Changes within the existing KGUIS.**

3. Scope of the Project

- The detailed scope of Development of Question Bank, Online Exam, Result Analysis, and Changes within the existing KGUIS.

4. Duration of the Project

The project should be completed within 2 months from the day of signing the contract between the parties.

5. Technical Requirements

1. General requirements:

The proposed system should comply/adhere to following technical requirements/functionalities, but not limited to:

a. Use Responsive Web Design technologies,
b. Implement data validation for both client and server (e.g.: AJAX technologies, JavaScript, etc.)

c. Don't Repeat Yourself (DRY) principle in coding is recommended
d. Implement Search, Save, Create, Read, Update, Delete (SCRUD) operations
e. Adopt Role-Based Access Control (RBAC) to authorize user's access to system resources based on roles.
f. Maintain consistent aesthetics and UI of the software;
g. Ensure compatibility to all the browsers (Mozilla Firefox, Internet Explorer, Google Chrome, Opera, Safari, etc.);
h. Software should be scalable and upgradeable as and when the number of users and contents increases;
i. Maintain and ensure that the web-based software system supports maximum concurrent users;
j. The system should run optimally (page load time below 30 seconds) on a PC connected to a network with minimum bandwidth of 512 kbps;
k. Image and other content customization features should be inbuilt within the system to allow standard content sizes (e.g. standard image sizes for easy uploading and processing).

i. Data Reuse:
All data requirements that overlap with the current KGUIS will have to use the existing data in the KGUIS and will not be collected again.

ii. Access Control:
The access to the Question Bank, Online Exam and Result analysis module within the System shall be via a common logon preferably using the existing KGUIS.

The current KGUIS system has provision to manage the access rights for the users by individual or group level and at page level, which could be applied. The current users involved are:

1. **HR**
2. **STUDENT SERVICE**
3. **EXAM CELL**
4. **ADMIN**
5. **ALUMNI**
6. **FINANCE**

6. Report Requirement:
A total of 1 reports will be developed by the consultant. The reports may include requirement to use data from the current KGUIS.

7. Audit Trails and Time Series Data
The KGUIS has some audit trail features and it also has provision to record time series data. This is a mandatory requirement. Inclusive education information system should follow the same features or the bidder can propose another Audit trail or time series data recording method.

8. Legacy data Migration/Correction & upgrading of database
If there is a need to transfer some attributes to a new database table, the legacy data in the existing KGUIS database must be migrated to the new database.

9. Backup and Recovery
The KGUIS team backs up the data manually on a daily basis. The vendor is expected to automate the backup KGUIS as a whole.

The problems other than hardware failure will be addressed by the vendor under warranty support for the first 2 years from the user acceptance. The vendor should also provide adequate training to the System Administrator from KGUMSB so that routine checks and basic recovery can be handled in- house.

In addition, the vendor must address the following during the warranty period: The backup of the database should be taken on daily basis. Full backup of relational database and source code files should be taken on monthly basis whenever changes take place. A full (cold) backup should always be kept in a safe location.

10. **Development Platform:**
1. The consultant/firm shall comply with the existing KGUIS system during the development of the additional modules.
2. While the inclusive Question Bank, Online Exam and Result Analysis should be built in the same platform (to KGUIS). The firm is expected to be proficient with the following platforms to migrate and make changes in the KGUIS.
3. **Development Language:**
   - PHP
   - Codeigniter Framework
   - Database System: The database for the current application is MySQL.
   - Database Design and Modelling: use only existing database and should comply with existing database standards such as Table naming conventions, data modelling, data types, codes, etc.
   - Server Operating System: While the system should be compatible with windows and other open OS platform, it is expected to be installed in open operating system platforms.

11. **Security Requirements:**

The consultant shall adhere to following security requirements:

- The Information Management and Security Policy (IMSP) document during deployment.
- The system should provide audit trails and logs mechanism for content changes performed by system users.
- Maintain time series data so that certain information is not lost with passage of time and repeated updating.
- Include up-to-date CAPTCHA program as a remedy to stop spam and other intrusions wherever required.
- Handle Session Hijacking, session replay, etc
- Input Validation to prevent attacks such as buffer overflows, cross-site scripting, SQL Injection, etc
- The system would ensure that the users follow login procedures.
- The access to the database should be based on the user roles of the organization.
- A proper audit trail must be built within the proposed system.
- **SSL Certificate should be installed on the existing system**

12. **Development Methodology:**

- Modular based approach based on prototyping model must be used for the design and development of the system.
- The Vendor will initially carry out a detailed requirement study including Process Re-engineering wherever possible, which will result in formulation of a Software Requirement Specification (SRS) document, Software Design document and associated AS-IS and TO-BE workflows. They will also study the KGUIS System and design and present the proposed system.
- On acceptance of SRS, workflows and Design document by the client, the vendor will develop and present a non- functional prototype of the system to the client and obtain approval for the above. This will help in better user acceptance of the system.
- The vendor will build on the approved prototype, the new system which will be fully functional at its own premises. The vendor must have its own Software Development Laboratory within its local premises with adequate Hardware and Software which will be inspected and verified by KGUMSB for compliance.
- KGUMSB will deploy one or two developer from their side for the project. This is done for better Transfer of Technology. However, their role is to learn the details of the design and modules so that at later stage small corrections can be done in-house. The Software Development Vendor must not bank on their skills for implementing the system. But, it is also necessary for the vendor to involve these developers actively in the project and it will be monitored by KGUMSB.
- After the development is over, the developed software will be first tested in the premises of the vendor by the testers from vendor's side. Any bugs reported will be asked to fix.
- The bugs are classified into two categories: Critical and Non- Critical. The Critical bugs are those which freeze the system and the normal functioning of KGUMSB or any other Agency is affected by the system's malfunction. Otherwise, it will be Non-Critical. The vendor must give immediate attention to the Critical bugs and attend to them within 3 hours of receiving the complaint from the client in any form of media. The critical bugs must be fixed within 2 working days. However, in some exceptional cases, the vendor may negotiate for time extension if acceptable to the client. The Non- critical bugs should be fixed within 4 days.
- The final testing of the software package will be done by the different stakeholders of the system and they will sign a letter of acceptance. After the user acceptance test succeeds, the software will be deployed by SDV for live operation at KGUMSB.

- The SDV will be responsible for setting system configuration, uploading of the system, database migration, maintaining the server once the application is uploaded
.

13. **Deliverables:**

The following are deliverables of the assignment:

- Software architecture design document;
- User requirement document (SRS, incremental prototype)
- Recommend an adequate server hosting environment for the developed solutions
- User Manual, data recovery manuals, test documentations
- Comprehensive environment set up manuals
- User training
- Source codes, database scripts, content, and relevant documentations to the client
- Project completion report

14. Maintenance within the warranty period.

15. **Network connectivity requirement**

The proposed system would use the existing Local Area Network (LAN) covering all its Divisions. The external agencies should connect and communicate with the premises using leased line facilities and/or web-based interfaces.

The client will be responsible for initial setting up of the Linux Server and Database Server and providing connectivity to the LAN. However, uploading of the system, maintenance of the server once the application is uploaded will be done by the vendor under the Warranty Support and Annual Maintenance Contract thereafter.

16. **Training of Master Trainers/ Users**

The vendor must provide comprehensive training to ICT Staff (Coding, Database structures, Environment Setup, Backup and recovery, develop and integrate reports in BIRT) and Master Trainers in the operation of the system.

17. **Responsibility**

Client
- Shall ensure fortnightly updates are reviewed and comprehensive requirement specifications are provided within review period;
- Shall maintain the delay register and notify the vendor of all delays in writing;
- Shall appoint the point of contact or project focal person(s);

- Inform the stakeholders and arrange for joint sessions with the firm
- Ensure that payments are made as per the contract

Vendor

- Shall set up a dedicated development environment at their premise with proposed team members working on the project.
- Shall ensure timely delivery of deliverables;
- Shall provide work schedules and meeting dates one week prior to the meeting so that meetings may be arranged without delay.
- Shall provide work schedules and meeting dates at the beginning of the project and reminder one week prior to the meeting so that meetings may be arranged without delay.
- Shall provide the system development platform acceptable to client;
- Shall maintain the delay register and inform the client on the delays;
- Shall appoint a project manager who shall be the point of contact; and
- Shall recommend suitable hosting environment (server specifications and similar) to host the system safely and efficiently.
- Shall provide fortnightly updates to clients (functional features, presentation of views, demos, etc. of the system),
- Shall carry out at least 2 iterations of requirement or specification reviews for each sprint before implementation of next module from the product backlog.
- Shall train ICT staffs of KGUMSB on following but not limited:
    1. **Coding**
    2. **Database structures**
    3. **Environment Setup**
    4. **Backup and recovery**
    5. **develop and integrate reports in BIRT.**

18. **Post development services:**

Warranty

Provide two years of warranty after the user acceptance sign off. During this period, the vendor is responsible for following technical support:

- update patches,
- fix bugs,
- make changes.

Change Management

The next enhancement of the system, if required, will be awarded directly to the same vendor provided the estimated budget for the enhancement does not exceed the limit set in the procurement rules and regulations. The Vendor is expected to quote for daily rates in the financial bid.

19. **Copyrights**

The KGUMSB is the owner of the software and shall remain as sole owner of the:

- source code,
- user manuals,
- software requirement specifications,
- test reports and
- any documents related to this project.

SCOPE OF WORK

KGUMSB invite Tender for the development of additional module and maintenance of the KGUIS software package for KGUMSB from reputed National Software Development Vendors (SDV). The scope of the work is as under:

i. Study the existing procedure of the various stages of work of different modules in KGUIS and document it with AS-IS workflow diagrams and get acceptance of the client.

ii. Apply process re-engineering wherever possible and propose TO-BE workflow diagrams. Obtain a user acceptance on the TO-BE workflow diagrams from the client.

iii. Prepare Software Requirement Specifications (SRS) or Functional Specifications (FS) document and Software Design document (SDD) for the computerized web-based system and submit the same along with workflow diagrams.

iv. On acceptance of the SRS/FS by KGUMSB, design and develop a non-functional prototype (HTML, CSS based) that is in line with the requirements indicated so that client gets the feel of the system that is being developed and provide necessary feedback on the frontend aspects.

v. On acceptance of the non-functional prototype by KGUMSB, design and develop an appropriate software package that is in line with the requirements indicated.

vi. Question Bank Module includes following features:

- Blueprinting (Map questions to particular curriculum and learning outcomes)
- Create, administer, analyze and report on your exams using a single, intuitive package
- Integrate your exam data into other systems using an API
- set up the question bank with as many groups as you need – and each group can have an unlimited number of subgroups.
- Accept model/key answers against each question
- Storage of questions and model answer for future reference and use
- Randomly generate a set of questions from bank on the demand
- Identification of level of questions (difficulty level)

- Easy to add/import questions from word/excel format as per different topics & subjects
- Support different types of questions including images, formulas and videos
- Categorization of question as per difficulty level.
- Question wise key answer and explanation
- Bookmark questions and review them anytime
- Random selection of questions
- Difficulty Level of a Questions
- create, preview, and edit questions in a database of question categories.

vii.Online Exam module includes following features
- Question Types (Select different question types – multiple choice, single correct answer, short written answer and objective structured clinical exam (OSCE)
- Auto marking and grading of answers
- Run secure digital exams
- Real-Time Monitoring (Data is synced securely with the server during the exam allowing you to monitor the exam progress in real-time)
- Setup time limit
- Navigation during exam

viii.Result Analysis module includes following features:
- Store and organize your questions and their performance statistics
- Reports & Exports (Wide range of customizable reports are available for export. Candidate feedback reports are available as PDFs, in our exam delivery portal or use API to integrate into student portals)
- Student Performance Analysis.
- Detailed analysis of result and auto reporting, Changes in existing KGUIS
- Improve the existing HR performance evaluation module
- Development of CV similar to the one in CSIS (RCSC)
- Filter as per requirement
- Upload passport and CID against field name
- Alumni module to be added

ix.Provide Online Help facility in the software as and when required.

x   Test the software by SDV (software development and validation) at least in three locations and revise the software to the extent needed on the basis of the test reports generated by the SDV and the independent tester from KGUMSB.

xi   Provide comprehensive training to ICT personals and master trainers in the operation of the software, backup, configuration, etc. The terms and conditions to be followed are indicated in Annexure III.

xii   Provide complete source code along with software drivers and other system files needed for installation and execution of the package.

xiii   Provide detailed installation and operations/user manual which will facilitate the users in successfully using the software package.

xiv   Provide detailed technical manual incorporating the System Design and other technical features incorporated in the software package.

xv   The SDV, after initial training of ICT Personals and master trainers, must provide assistance to master trainers for a period of at least six months so that the master trainers gain necessary expertise and confidence in deploying the software developed by SDV.

xvi   Provide free support for a period of two years from the time of acceptance of the software by KGUMSB and carry out revisions, if any, arising out of bugs or minor changes during the said two years period (Warranty support).

xvii   Provide services for Change Request on demand of the client whenever major changes are required in the system under CRC.

xviii   Implement and provide the software with all the standard security features inbuilt to ensure integrity of data. The SDV will be responsible for the recovery of the data that is tempered because of lack of standard security features. The software package must have user access roles through which can assign or revoke rights of a user to a function or data.

xix   Provide the Plan for recovery, if the software package or the database fails, which includes managing backups of the database and the package itself. Perform necessary recovery of the system when needed.

ToR for Training of ICT personals and Master Trainer

i. The master trainers refer to all those system users including System Administrator, Data Administrator, Network Administrator, Managers and other end users specified by the client. The list of Master Trainers will be provided by the client one week before the trainings begins.

ii. The vendor must provide a sufficiently detailed training plan before the start of training to KGUMSB. The plan should contain an indicative list of resources that would be allocated from the vendor's side.

iii. The SDV shall provide the necessary infrastructure for the training at a suitable location.

iv. The KGUMSB shall be responsible for identifying the master trainers and other trainees.

v. The training will be conducted for 10-15 days as required and decided by KGUMSB in consultation with SDV. The training should not take more than 1 month.

vi. The trainees must be provided with training materials/manuals that would cover all the facets of the software and installation. The trainees must also be provided with other training aids and tools, which would help them to receive proper trainings and better understand the system modules and usage.

vii. The vendor will provide adequate training to the System Administrators, Data Administrators or Managers from KGUMSB on system deployment & operation, server and system configuration and installation, backup services, Directory Management, security requirements, and other necessary technical services, which will enable them to use the system for timely and accurate production of required information within their area of authority and responsibility.

viii. A minimum of one representatives from each faculty of KGUMSB will be trained as master trainers on the usage and operation of the System.

ix. The deployment of two/three developers from KGUMSB for the project will also be part of training of master trainers. The SDV must actively involve them in all the phases of system development, so that there will be better transfer of technology and build in-house capacity to manage small corrections at later stage.

x. On completion of the training, the master trainers and Users will be performing a rigorous test on the system and submit their observation(s). The observations will cover the following topics:

· Comments on the training - lecture, coverage, materials & lab sessions;

- Comments on User Interface and suggestions for betterment;
- Comments on operational flow;
- Response time of the system;
- Bugs encountered and error management facilities;
- Data validation and security measures; and

- Documentations

xi. The KGUMSB would review the above feedbacks and direct the vendor to take necessary corrections or remedies. Based on the observations/comments made by the training participants, should the KGUMSB feel that the training is not satisfactory or not adequately covered, then the vendor is liable for providing additional trainings.

Change Request Contract (CRC)

i. If there is a major change(s) in the requirements of the system, the vendor must provide
post implementation support under a Change Request Contract for *2 years* from the date of acceptance of the software package by KGUMSB

ii. Change Request Charge will be estimated in terms of the man-day rate. In the financial proposal, the vendor must submit the man-day rate for each person who will be involved in the change management. The rates should be valid for **2 years**. The total cost for the change will be worked out from the quoted rates and the total man days needed to address the changes.

iii. The man-day rate payable to the vendor, as quoted for the first year, shall subject to adjustment for the 2nd and 3rd year, taking in consideration of the local inflation. The adjustment will be made in accordance to the procurement manual of the Government in relation to the software engineering works.

iv. The format for quoting man-day rates is provided in the **Annexure 6**.

v. The Change Request is completely need based and payments are made only based on the major changes agreed between the parties.

vi. The vendor must use all reasonable efforts to study the requirements of the system thoroughly during the initial implementation period.

vii. The vendor shall not entertain frequent changes in the system from the client, once the requirements are finalized, which will adversely affect the project completion date and delay the project. However, the changes that come through the change management shall be executed by the vendor under the terms and conditions of Change Request Contract (CRC).

viii. Whenever there are major new requirements due to change in the procedures/guidelines of the KGUMSB, the client will ask for additional requirements through a Change Request Document. The work involved in the change request and the cost will be worked out by both clients and vendor and a cost will be agreed within the framework of the Change Request Contract (CRC).

ix. The CRC will be initiated, if the change is considered major, bringing in a major impact
 on the database or adds more input screens.

x. The minor modifications of fields within an existing screen or changes having minor or no impact on the database will be handled as specified in the Warranty Support. The minor changes will not be handled by Change Management Contract.

xi. The CRC will also be initiated, if the Client decides to introduce any new technologies in replacement of the Solution or along with the Solution, due to advancement of the technologies, as may deem necessary for the system by the vendor. Such CRC will occur, provided that the above work scope is not being covered under the license agreement.

xii. The SDV will be in binding to carry out the Change Request Contract made by the client for 3 years after the acceptance of the system by the KGUMSB. An agreement will be signed for this contract.

Man-Day Rates for the Change Management for the 1st Year

Sl.No.	Personnel involved in the Project	Rate per Man-Day (in Nu.)

Note: The Amount quoted should be inclusive of all taxes/duties. The rates for second and third years will be negotiated later, taking the first year rate as the baseline.

Checklist of Project Deliverables

1. *Software Requirement Specification Document (High level SRS and Low level SRS)*
2. *Software Design Document (SDD)*
3. *Non-functional HTML Prototype*
4. *Working and Tested Software with source code*
5. *User and Administrator Manuals for the system including Online Help*
6. *Setup and Release notes for each new release*
7. *Test Cases and Reports*
8. *All database scripts*
9. *Training of trainers*
10. *Any other relevant documents, supporting software, etc.*

NON DISCLOSURE AGREEMENT

This agreement is entered into this ___ day of _____, 20__ by and between _____ (hereinafter "Recipient"), with offices at _____, and _____, with offices at

_____ (hereinafter "Discloser").

WHEREAS Discloser possesses certain ideas and information relating to _____ that is confidential and proprietary to the Discloser (hereinafter "Confidential Information"); and WHEREAS the Recipient is willing to receive disclosure of the

Confidential Information pursuant to the terms of this agreement for the purpose of _____; NOW THEREFORE, in consideration for the mutual undertakings of the Discloser and the Recipient under this agreement, the parties agree to the below terms as follows:

1.   <u>Disclosure</u>. The Discloser agrees to disclose, and the Receiver agrees to receive the Confidential Information.

2.   <u>Confidentiality.</u>

2.1 No Use. The Recipient agrees not to use the Confidential Information in any way or manufacture or test any product embodying Confidential Information, except for the purpose authorized by the Discloser.

2.2 No Disclosure. The Recipient agrees to use its best efforts to prevent and protect the Confidential Information, or any part thereof, from disclosure to any person other than the Recipient's employees that have a need for disclosure in connection with the Recipient's authorized use of the Confidential Information.

2.3 Protection of Secrecy. The Recipient agrees to take all steps reasonably necessary to protect the secrecy of the Confidential Information and to prevent the Confidential Information from falling into the public domain or into the possession of unauthorized persons.

3.   Limits on Confidential Information. Confidential Information shall not be deemed proprietary, and the Recipient shall have no obligation with respect to such information where the information:

(a) Was known to the Recipient prior to receiving any of the Confidential Information from the Discloser;

(b) Has become publicly known through no wrongful act of the Recipient;

(c) Was received by the Recipient without breach of this agreement from a third party without restriction as to the use and disclosure of the information;

(d) Was independently developed by the Recipient without use of the Confidential Information; or

(e) Was ordered to be publicly released by the requirement of a government agency.

4.   Ownership of Confidential Information. The Recipient agrees that all Confidential Information shall remain the property of Discloser and that the Discloser may use such Confidential Information for any purpose without obligation to Recipient. Nothing contained herein shall be construed as granting or implying to the Recipient any transfer of rights, any patents, or any other intellectual property pertaining to the Confidential Information.

5.   Term and Termination. The obligations of this agreement shall be continuing until the Confidential Information disclosed to the Recipient is no longer confidential.

6.   Survival of Rights and Obligations. This agreement shall be binding upon, inure to the benefit of, and be enforceable by (a) the Discloser, its successors and assignees; and (b) the Recipient, its successors and assignees.

IN WITNESS WHEREOF, the parties have executed this agreement effective as of the date first written above.

Discloser (Name of the Discloser)   **Recipient (Name of the Recipient)**

Signed_____.____   **Signed**_____.
Print Name_____.   **Print Name**_____.

Title
_____
  Date:

Title_____.
  Date:

LIST OF ANNEXES

Annexure 1: Letter of invitation

Annexure 2: Formats for Technical Proposal

Annexure 3: Formats for Financial Proposal

Annexure 4: Sample Contract

Annexure 5: Terms of Reference (ToR)

Annexure 6: Change management form

Annexure 7: Checklist for project deliveries

Annexure 8: Non Disclose Agreement