

Terms of reference for the development of Nepal Law (Software) for the IOS and Android plus web based software

Assignment title	Development of Nepal Law (Software)
A. Duty station	<i>Kathmandu</i>
B. Reporting to	<i>MoLPA / A2J Project</i>
C. Responsible staff	<i>Output Leader</i>
D. Duration of assignment	<i>90 business days (Approx.)</i>
E. Expected starting/completion date	<i>Mid of January 2019</i>
F. Service provider	<i>1 firm / company</i>
G. Purpose and use	<i>Promote easy access of Nepali Law in authenticity.</i>

1. Background

A2J Project Nepal aims to support systematic changes in the national legislative, policy and institutional frameworks and structures to contribute in strengthening peace, development and human rights in Nepal. It primarily seeks to ensure that women and vulnerable groups are benefited from a protective and affirmative legal framework and the recent improvements in the field of administration of justice. Moreover, the programme will further act to strengthen communication, coordination and cooperation among justice sector institutions. To this end, the programme focusses on three primary areas to achieve its goals: *First*, it supports the rule of law institutions to be responsive towards demand for justice service delivery; that is improving the supply side aspects of the justice sector. *Second*, it strives to augment the demand for justice related service delivery by developing institutional capacities of justice sector institutions by improving coordination and, also supporting women and vulnerable groups to access the rule of law institutions, and thereby assert and enjoy human rights as well as social protection entitlements. *Third*, it supports the criminal justice system, civil society, and the media to work together to ensure increased accountability for justice service delivery.

Similarly, the project is also working with non-formal justice sector to reinforce the formal efforts made by the government agencies to improve the administration of justice. This entails reforming the quasi-judicial mandates (of quasi-judicial bodies) and promoting a stronger interface between 'non-formal' and 'formal' justice systems.

In this regard, the Programme aims to support the key national implementing partners, namely, Supreme Court, Ministry of Law, Justice and Parliamentary Affairs, Office of Attorney General, Nepal Bar Association and Civil Society Organizations/stakeholders, etc. to effectively and efficiently implement the functions and activities that ultimately support achieving the desired results and goals of the Programme.

2. Assignment and its significance

As per its constitutional and legal mandates, in the course of justice administration, particularly in the parts of criminal investigation, prosecution, case preparation, evidence matching and protection, and presentation before the court, as well as recently resumed detention monitoring role.

The Nepal law is an application developed with mandate to properly document, record, archive the laws forwarded from the law agencies for dissemination of law information on behalf the government of Nepal and concerned government agencies. The systems keep track of the laws, their progress and all required updates related to Nepal law.

This support will help in:

- effective dissemination of the laws among everyone;
- securing and protecting the important laws and reforms in digital modes;
- time management (reduce/minimal time requirement) in retrieving and presenting the laws and necessary documents as required, thus save remarkable time and effort;
- enhancing the capacity, efficiency and effectiveness in service delivery regarding laws of the government;

Hence, therefore, the Programme is seeking the technical service of an experienced professional IT firm/company in the relevant sector/s to accomplish this assignment for the mentioned period of time, as specified in point 7 below.

3. Objective

The primary objective of this assignment is to develop and implement software (Nepal Law) to manage and document the related laws for the MoLPA and its subordinate offices.

Thus the immediate objectives of the assignment are as follows:

- i) Develop the mentioned law based software systems;
- ii) Develop the user friendly, secure and strong centralized database software;
- iii) Develop the full nationwide implementation plan of the software;
- iv) Provide back up for smooth implementation of the assigned task.
- v) Other tasks as required by the MoLPA in relation to smooth installment and implementation of the software as required.

4. Scope of work

The scope of this assignment is to develop and implement the appropriate database system/software to manage and document the laws for the MoLPA and its subsequent offices based on the feasibility study.

Some major, but not limited, assignments under the scope of work are as follows:

- i) Design the mentioned systems/software (Nepal Law) for the MoLPA and its subordinate offices.

- ii) Design data entry mechanism, integrating case management work flow.

1.1. Scope of work:

Development

- The system should have a common and integrated platform to accept the laws and related information.
- The system should also have features of multiple options for searching and reporting based on various criteria's and filters.
- Categories of instructions for necessary actions must be maintained and must be configurable by the System Administrator.
- The system should support Nepal as well and English Language.
- The Database should be designed in such way that it is fully normalized and index based so that searching /data fetching and data posting time shall be minimized.

1.2. Data Migration:

- The consulting agency should migrate all data from excel with necessary modifications if required. The consulting agency shall ensure that the integrity of the existing system is not compromised during such migration.
- The consulting agency should convert font like Preeti, Kantipur, Sangirlla to Unicode
- Data migration should be done from MYSQL, EXCEL etc. into new software database.

1.3. Support:

- The company should install the new system in Server hosted in GIDC in co-ordination with IT Section.
- All the necessary setup like operating system/ Database/ Application/ Network configuration should be done by the company.
- The company should provide support for one Year after implementation of the system.
- The company should provide training to the staff of Ministry of Law, Justice and Parliamentary Affairs (MoLJPA) and Law Books Management Board (LBMB).

1. Scope of the Services

The consultant shall undertake to perform the services with the highest standards of professional and ethical competence and integrity. The Consulting project manager is required to:

- Consult to MoLJPA Staff on the most appropriate policy and system architecture and central system requirement gathering. Also, Consult MoLJPA staff for all related task

during the requirement gathering, system analysis, designing, development and deployment.

- Visit MoLIPA and consult with the staffs for finding the detail requirement and manual/ existing system application procedure covering all functionalities development. MoLIPA, LBMB, Nepal Law Commission. The scope of work is not only limited as mentioned above however, various customizations are needed to be updated in the system.
- The software should also made compatible to upload Acts and Regulation enacted by Provincial Parliament and Local Authorities.
- More Requirements will be covered during the Requirement Analysis Stage.

2. Technical Specification

The technical specification of the proposed system should confirm the listed standards and specification requirement.

3.1. Application Software:

The software should be developed in reliable programming languages and programming standard must be generic data acquisition, access coding using application technology. The programming language should be selected so that it can easily communicate with printer for printing

3.2. Programming Language

The bidder should use languages like JAVA, PHP, Development is desirable or any other language. The chosen programming language must have readily available compiler and host environments for common operating system like Centos Linux, Red hat Linux operating system and windows operating system.

3.3. Software Interface Language

The application software for will support both Nepali and English Languages, words and characters. The application should use Nepali Language for Interface, instructions and messages. English Language should be used where Nepali language is not possible. The system should have provision to use both Nepali and English Date values in standard format. There should be a module to change date from Nepali to English Date format and vice versa.

3.4. Input Data Language

The System Database consists of data values both in Nepali and English language. So, the forms and related interfaces should be designed to input, store and process both Nepali and English languages. For Nepali language input data values, Nepali Unicode should be used.

3.5. Parameter Driven

The Application should be highly configurable; there should be minimal hard coded options. The developed application should be parameter driven. The options, choices, popup for various data should be configurable using software option and database configuration.

3.6. Compatibility with Operating System

The developed system should be compatible and could be hosted and compatible to any widely-used operating system. The Linux, UNIX, Windows system is more preferable and should avoid any vendor specific system. The bidder should provide the detail hardware specification required to install the system.

3.7. Client System

The developed system should be compatible and run in Linux and windows machine in client side.

3.8. Browser/Android and IOS app

The developed system should be run at client end using most popular browsers and all mobile devices. The system should be compatible to at least following browsers. Mozilla Firefox, Internet Explorer, Google Chrome, Opera, Safari.

3.9. Multi-Tasking

The developed system should support multi-tasking.

3.10. Development Tools

The bidder will be responsible for development software and tools required to develop the proposed task. The license, API and any requirement should be fulfilled by bidder themselves. There should not be any cost in the implementation of the system.

3.11. Database Software and Design

The database should be selected so that it can handle very large amount data. Some of languages are ORACLE, POSTGRESQL, DB2, and Microsoft Windows Database Server. The database must be in 3-Tier or N-Tier architecture.

The database should contain the following features

- Good design/planning
- Normalization
- Good naming standards
- Proper documentation

- Domain values should be properly handled
- Maintain proper data integrity
- Maintain recovery, concurrency control and other
- Maintain integrity
- Stored procedures to access data
- Proper testing
- Automatic Backup
- Recovery pattern/schedule

3.12. Open Standard

The developed system should be open standard where possible. It should not be vendor specific and depend on some vendor specific technology. There should not be implementation of any vendor specific component, software, middleware, firmware to avoid the vendor locking situation. The proposed architecture, database, programming language and any technology used to develop and implement system should use 'Open Standard' whenever such standards are available and applicable to meet the specification.

3.13. Compliance with standard and government framework

The GoN has recently published set of standards for development and implementation of ICT systems. The bidder should adopt, comply and adhere with the recommended standards for data, design, architecture, security architecture etc. The main system, subsystem, component, design, document and any part that is implemented and used for this task should comply with following guideline documents where applicable.

- Government Enterprise Architecture (GEA) framework.
- The main system, subsystem, component, design, document and any part that is implemented and used should comply with Nepal Government Interoperability Framework (NeGIF).
- Adopt the coding standards given in Nepal Analysis Standard Code for Information Interchange (NASCII)

3.14. Multi User Environment

The developed application should be multi user web based application. The application should support multiple user login and work on the system concurrently.

3.15. Data Searching

The system should be designed and developed in such a way that the application loading and searching time is very less.

3.16. Data Migration

System should migrate data from excel into the new system.

3. Documentation

The Consulting project manager is required to:

- All Source code and Documentation ownership will be transferred to OPMCM
- Consultant should consult to OPMCM Staff on the most appropriate business process, policy and system architecture and central system requirement gathering. Also, Consult OPMCM staff for all related task during the requirement gathering, system analysis, designing, development and deployment based on the gathered requirement project manager should develop.

4. Training and Capacity Building

The consultant shall conduct extensive training for three level of employee

1. Training for System Users- How to Operate system in their daily business process
2. Training for Trainers - How to train a system users, System Installation and Configuration

The assignment also includes the duties and responsibilities to identify, collect and produce the cases and documents, as necessary, in consultation with the MoLIPA officials, to entry into the database system. This assignment will contribute to develop and implement the web-based online database software with case tracking, monitoring and referral system and, present it in informative, resourceful and user friendly. The proposed software is also to be linked up with the existing law management system, record management system and website.

Therefore, the consulting firm is also required to review and update the existing software/system and perform the related tasks for updating, networking and data and record migration into the server based at the GIDC with ensuring full safety and security.

5. Duties and responsibilities of the consultant

The duties and responsibilities of the consultant will be, but not limited to, as follows:

- Conduct, as necessary, consultation and discussion with the relevant officials to ensure own works and timelines under this terms of reference
- Assess and ascertain that relevant arrangements and issues are reflected in the work plan of this assignment;
- Design and develop the attractive and user friendly structure, layout and composition of the mobile application /software, with particular focus on the proposal submitted in this regard with incorporating the valid suggestions and feedbacks received in/through consultations;

- Develop, install and ensure all data and application security, anti-hacking system with advance back-up system;
- Ensure the effective, user-friendly and secure data/information depositary and retrieval system;
- Provide orientation and/or training to the concerned officials and its selected subordinate offices in districts on the usage of the application, posting and editing of the inputs, trouble shooting, general maintenance and data security, etc.;
- Prepare and submit the user-friendly software manual with all source codes, trouble shooting and security related options
- Extend the after-job-service for 12 months as agreed duration of time for any technical / back up support as required;
- Any other task as required to undertake this assignment for the MoLJPA.

5. Qualification and Experience Required for the Proposed Personnel

The following key personnel are required during the project period:

SN	Expertise	Qualification	Minimum Experience
1	Team Leader	Master's degree in IT or Management related subject	The team leader shall have minimum 5 years of general experience in management of IT projects.
2	System Analyst	Master's degree in IT or equivalent	The System Analyst shall have at least 5 years' experience in System Analysis, Design and Development.
3	IOS Android Web Programmer	Bachelor's degree in IT or equivalent	The Programmer shall have minimum 2 years Web based System Development
4	Graphic Designer	Bachelor's degree in IT or equivalent	The Graphic Designer shall have minimum 2 years' experience in graphic design
5	Database Designer	Bachelor's degree in IT or equivalent	The Database Designer shall have minimum 2 years of general experience in RDBMS.

6. Consultant's Personnel

The input of the consultant's key personnel has been envisaged.

SN	Expertise	Jobs to be Done
1	Team Leader	Supervise the project team to ensure quality and prompt services to the project. Plan, execute and finalize the project.

SN	Expertise	Jobs to be Done
2	System Analyst	Requirement gathering, Preparation of SRS and SDS as part of system analysis and design.
3	IOS Android Web Programmer	Coding, Debugging and pre/post System Testing as part of system implementation.
4	Graphic Designer	Design a suitable user friendly web interface for both end user as well as system administrators.
5	Database Designer	Design of relational database and document archive.

Note: The above chart shows the total input of each personnel over the contract period should not be more than 3 month. The actual input may vary as per requirements without exceeding the total input of each key personnel.

6. Methodology

6.1 Process: The consultant will make necessary consultations with officials of the MoLIPA and invite their perspectives before developing the preliminary design, and then, present the preliminary and final designs. Following the feedback, the consultant shall develop the final implementable design and submit by the given timeline.

6.2 Level of engagement: The MoLIPA will be regularly consulted before having the consultation with /approaching the key stakeholders.

6.3 Presentation: The consultant shall present the design in English language before the Programme Team as the requirement to move forward with the ownership and quality ensured.

6.4 Schedule: The consultant will develop and implement the fully functional software and related training/orientations as required by this TOR:

Activities with timeline under the consultancy work¹

S.N.	Activities	Timeframe (Days)
1	Preparatory Works <ul style="list-style-type: none"> - Outline/planning report submission - Key stakeholders' consultation - Collect and compile all necessary documents/materials - Assess and review technical status and compatibility 	

¹ Vendor should purpose the time frame for the each work

2	Preliminary design and presentation works <ul style="list-style-type: none"> - Prepare and submit the first (preliminary) designs (at least 2 designs for choice) and finalize the design - Prepare and present the draft preliminary design to the concerned authorities - Discuss, receive and accommodate the suggestions and feedback from the stakeholders - Revise the preliminary design as necessary 	
3	Software/design testing and application <ul style="list-style-type: none"> - Upload the software demo design in the system - Entry the sample data and information (at least 100 laws) - Apply and test the software adaptability and performance testing at the MoLPA and other its provincial offices. - Present the demo design and performance to the authorities for suggestions and feedback - Accommodate suggestions and feedbacks and revise the software/design 	
4.	Software implementation and networking <ul style="list-style-type: none"> - Produce, submit and present the final design - Upload the final design - Review and update the existing software/system and reconfirm all links, connection and compatibility with the existing software / system - Connect with the data back up and security system 	
5.	Users' Training/Orientation to MoLPA and LBMB officials <ul style="list-style-type: none"> - Prepare user's manual - Implement the users' training/orientation activities and selected officials. 	
6	Post implementation work <ul style="list-style-type: none"> - Check and ensure in implementation status of software, its applicability and usage, and back up support - Check and ensure full-fledge implementation of the software - Install, update and ensure all security features in place and effectively running - Prepare and submit the software manual with all source codes, trouble shooting and security related options and with the assignment completion report 	

7. Key deliverables

The key deliverable of this assignment is develop and implement the user-friendly secured law software/system for the MoLPA with necessary documents are uploaded/posted and conduct the trainings/orientations to Officials as required by this TOR.

8. Reporting requirements (as applicable)

The consultant is required to submit both preliminary and final design in English language to the MoLIPA.

9. Required qualifications

the Applicant Organization/ company must be experience of:

- At least 3 years relevant experiences, i.e. in software development and implementation, networking, etc.;
- Proven experience of software development, implementation, troubleshooting and maintenance, networking and inter-linking across different offices at different locations (need valid certification);
- Practical knowledge of software support, safety and security system as well as related training/orientation to the users;
- Knowledge of the government integrated data/system administration system as well as data protection, safety, security and other essential mechanisms relating to database development, implementation and security system.
- Prior similar experience with government bodies is preferred.
- Knowledge and experience of legal sector is added benefit.

Other requirement: the applicant organization must be registered with VAT as per laws of Nepal.

10. Follow up and product sharing

The MoLIPA will make necessary follow up and arrangement for sharing of the product.

11. Overall governance and management of the assignment

The Programme will take care of the overall governance and the timely delivery of the assignment.

12. Mode of payment

The selected organization will be paid in three installments. The first installment of 30 percent to the total amount will be paid upon the presentation of demo of software along with report development and 40 % after submission of software and upon of the successful operation of 30 days of launching of software and completion of trainings of relevant officials final 30% will be paid. That also requires preparation and submission of the final software, relevant report with source codes/manual and completion of mentioned training/orientation to the concerned staff and selected subordinate offices with satisfactory result.

13. Confidentiality and data ownership

All data and information received for the purpose of this assignment are to be treated confidentially and are only to be used in connection with the execution of these Terms of Reference. All intellectual property rights arising from the execution of these Terms of Reference are assigned to MoLIPA. The contents of written materials obtained and used in this assignment may not be disclosed to any third parties without the expressed written authorization.

14. Technical Evaluation Criteria

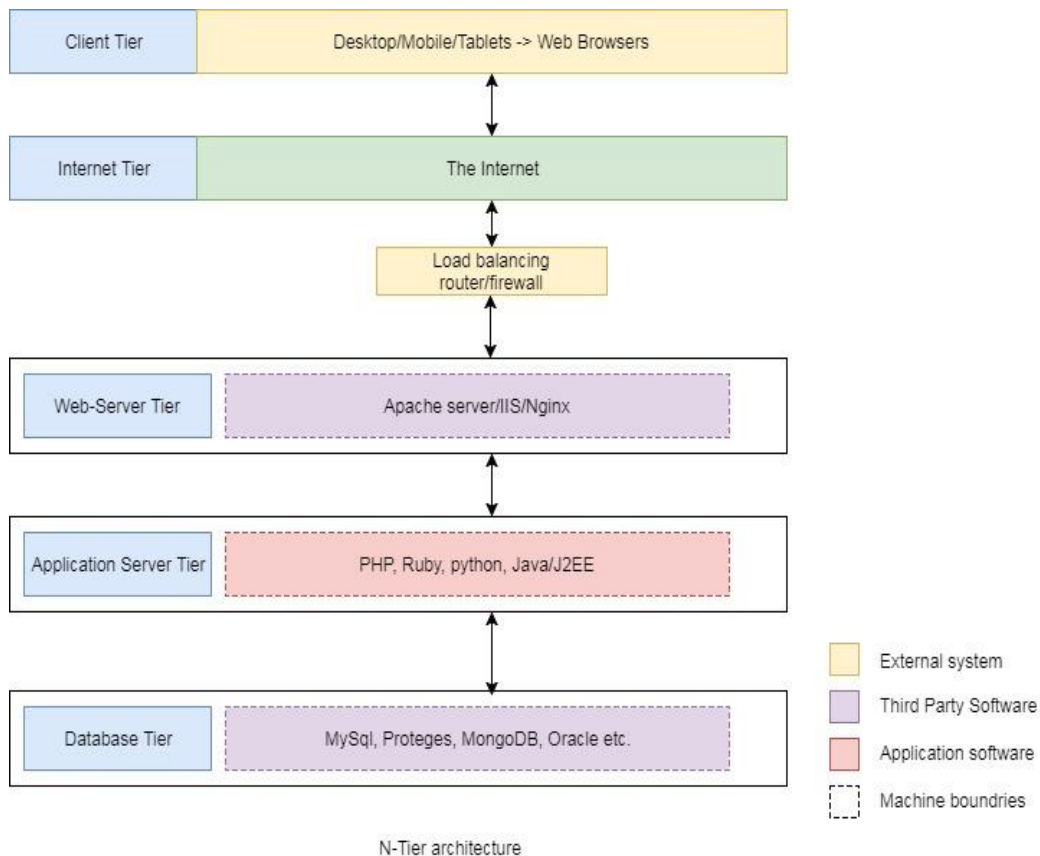
Summary of Technical Proposal Evaluation Forms			Score Weight	Points Obtainable	Company / Other Entity				
					A	B	C	D	E
1.	Expertise of Firm / Organization submitting Proposal (Form 1)		40%	400					
2.	Proposed Work Plan and Approach (Form 2)		20%	200					
3.	Personnel (Form 3)		40%	400					
		Total		1000					

Section 2: Design Architecture for Nepal Law Software

Specifications and tools required for development

Technical specifications for the system to be developed are as follows:

Architecture	N-Tier Architecture
Application type	Web based/Android/IOS
Development Tool	As Approved by Ministry of Law Justice and Parliamentary Affairs
Development Language	As Approved by Ministry of Law Justice and Parliamentary Affairs
Database	DBMS
SQL	SQL
System Backup	Scheduled backup management plan for both application and database server on external media with assurance of its streamlined governance mechanism. The minimum Backup Plan to be inducted after the System Deployment.
Disaster Recovery	Minimum requirement of Disaster Recovery provision is to ensure Data Recovery (DR) assurance.



Basic process of Android Connection to MYSQL Database

Mobile Application – API – System Application (Main Application)

Mobile Application makes any request to the main system elaborate API (Web service). API Connation Acts as a mediator between the application and main system.

Note: System must be made in **Government Enterprise Architecture** and it must follow the basic requirement made by Government of Nepal.

Methodology and software development process:

A software development methodology or system development methodology in software engineering is a framework that is used to structure, plan, and control the process of developing an information system

Agile software development methodology is a process for developing software (like other **software development methodologies – Waterfall model, V-Model, Iterative model** etc.). However, **agile methodology** differs significantly from other methodologies. In English, Agile means ‘ability to move quickly and easily’ and responding swiftly to change – this is a key aspect of agile software development as well.

Key points using agile methodology:

- Active user involvement is imperative.
- The team must be empowered to make decisions.
- Requirements evolve but the timescale is *fixed*.
- Capture requirements at a high level; lightweight & visual.
- Develop small, incremental releases and iterate.
- Focus on frequent delivery of products.
- *Complete* each feature before moving on to the next.
- Apply the 80/20 rule.
- Testing is integrated throughout the project lifecycle – test early and often.
- A collaborative & cooperative approach between all stakeholders is essential.

The development of the systems shall follow the agile methodology

Process involved:

Step 1:

User will download the application from the proper application store i.e play store for android and app store for IOS. They will install with necessary permissions allowed. Currently, no login is required which may be added in future.

Step 2:

After successful installation of application user can see the Home Screen of the application. User can choose their preferred language either English or Nepali. After making the appropriate selection of language user will see the list of categories and other options in their selected language.

User can change their language selection as need using the setting option.

Step 3:

Users can go into any categories listed in the application as pleased for example Prevailing Law, Law archives, News and Activities etc. As clicking on specific category will dive deeper into the category giving end user with more specific information.

Users can always keep track of their current nested categories as such path is displayed appropriately. It helps to navigate in the information currently viewed.

There is a powerful search feature in each categories which helps user to reach their desired information easily if the list is very long. It saves time looking for all entries in the list manually.

Step 4:

Apart from going into specific categories and searching users can easily move backward of each category to find general category of laws by simply pressing back key button on their mobile. So, in this way user can easily use the application.

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Singha Durbar, Kathmandu.

The End.