

DRAFT

NORTH EAST LIVELIHOODS PROMOTION SOCIETY (An Autonomous Organisation under the Ministry of DONER, GoI)

(Terms of Reference for Developing a Management Information System)

1. Background

North East (NE) region in India is one of the most isolated regions in the country. It comprises eight states, including Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim. With a total population of 39 million (2001), the region accounts for about 3.90% of India's total population and covers about 7.90% of its total geographical area. The economy of the NE region is still pre-dominantly agrarian with the share of agriculture in total State Domestic Product (SDP) above the national average.

The region has better than average Human Development Indices but the poverty, under-employment and unemployment is widespread in rural and urban areas leading to many social issues and according to some feeding the insurgency.

To address the issue of livelihood Government of India has approached the World Bank for support for a Livelihood Project across four NE States viz. Mizoram, Nagaland, Tripura and Sikkim.

2. Objective of the Assignment

The central purpose of the assignment would be to design the MIS for the project to ensure participation of all key stakeholders, develop application in modular manner and implement a comprehensive computerized "Management Information System" (MIS) product for NERLP, which is cost effective, user friendly and functional and which responds to the needs for improved Project component planning, implementation and management. The objective is to help track and manage project activities in a manner that provides the right information to the right set of people at the right time to enable adaptive project management and decision support.

3. Scope of Work

For all the Key Activities and Deliverables mentioned below the External Agency/Consultant has to consult with the Project Manager (M&E), NERLP and the State/District Team. As the project is in initial stage, it requires a modular approach of software development, in succession, where each module will follow a cycle of Requirement Assessment, designing and development, testing, integration, piloting and final roll out with training.

3.1 User Requirement Assessment and participatory design of the system

- Study thoroughly the Baseline Study Reports pertaining to all the eight (8) project districts and incorporate the Baseline Indicator Values into the MIS within the framework of the PIP's Result Framework available with the NELPS. As this shall form the BASIS of MIS-based and Field evaluation, the Agency must incorporate all the details with necessary elaborations wherever required to reflect the BASELINE status correctly. The agency shall, in this regard sit for consultation/discussion with all the sectoral heads of this office.
- Help improve familiarity with all project activities through project documentation, field visits and discussions with stakeholders.
- The Project will design the books of record and on the basis of the books of record, data entry, process for data collection, verification of data entry, checking the correctness of data entry will be responsibility of the Consultant firm. The Data formats should be the extension of books of record.
- The Consulting firm will detail out the business requirements of the Project for various levels– household, community, block, district and regional level and different tiers of management including but not limited to:
 - Requirement of MIS stakeholders/ users (all who have a role in data acquisition, processing, reporting, or use/ decision making)
 - Requirement of Project Management.

- The Agency will assess the basic additional hardware/ software/ dataset requirements and suggest solution.
 - Detailed functional design of the MIS arrived through participation of key stakeholders
 - System Requirement Study for the proposed NERLP MIS. The design should be based on close participation of key users and be flexible to incorporate changes in activities during future phases of the project/programme
- Consulting firm will be responsible for basic data entry for demonstration during initial project period.
 - Determine basic information flow requirements (into, within and out of the MIS)

3.2 Develop System to Track Project Status: NERLP-MIS

- This will include the development of a software system appropriate to the modern, effective tracking of the project keeping in mind the status of IT networking and other (e.g. power, institutional capacity) issues in the project states.
- The system will need to be accessed both in a networked (office internet server) and off-line (regularly downloaded) mode.
- The system will have the provision of capturing data by **CUT OFF DATE APPROACH** (say opening balance); data at regular intervals (say monthly progress); as well as cumulative data for any period (cumulative of few months).
- The Database needs to be structured intelligently and appropriately to ensure ease of entry, quality management, access control, processing, visualization and reporting. The MIS Development Agency needs to ensure that the MIS built by it can be seamlessly integrated to GIS to be built in future.
- Appropriate security arrangements need to be made (e.g. for data backup and security, access levels, viruses, etc). The systems developed should be such that it can be operated across different operating systems of desktop/net books/on-site handheld data capture device etc (to be decided in consultation with Client) and be interfaced closely with the work of other agencies. The use of various visualizations to help better understand the data is essential (e.g. graphics, project management charts, before/ during/ after comparisons, etc.).
- Data Validation, Data Checks, Inbuilt Process checks, inbuilt study material for the operators.

3.3 Develop Information Management System: PM-MIS

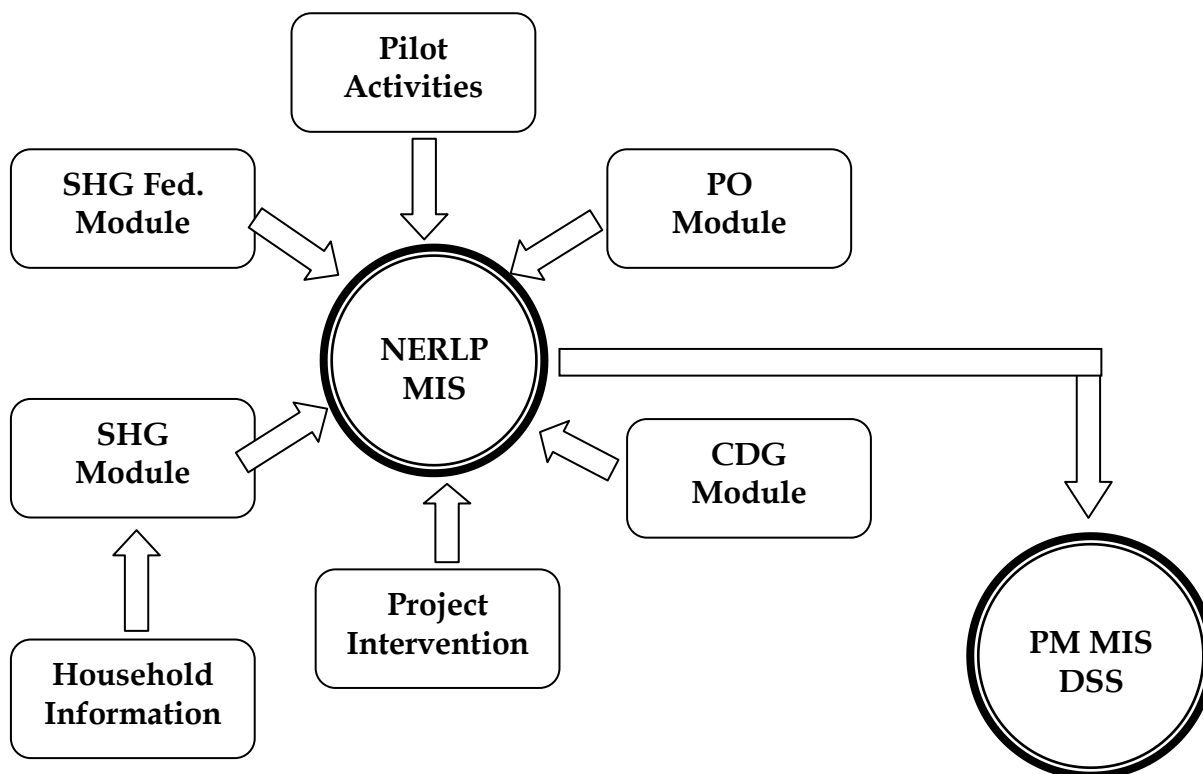
- To ensure that the parameters tracked in NERLP-MIS are captured, conveyed, stored, processed, visualized and reported in an adequate and timely manner to support project status review and adaptive decision making. This will include development of appropriate forms/ ledgers and business processes (e.g. process of entering and using data from various offices – including at District levels – at appropriate intervals, conversion of paper-based to electronic data, integrating into a centralized database at RPMU-level, data quality management, etc.).
- This will require the Agency to work closely with the Client and other project partners (through discussions, participatory stakeholder workshops, iterative designs, etc.) in order to produce data and reports in a format relevant for various kinds of reviews (e.g. ad hoc, weekly, monthly, fortnightly, half-yearly, yearly and status-to-date type reports on project status) at various levels (e.g. State, District and Block Level). The process will include identification of MIS target user groups and determination of what, when and how they can contribute to the MIS and what, when and how they wish to access and use appropriately-designed MIS reports. Essentially, the agency, in league with the project, would be required to design appropriate dashboards for all levels which communicate the figures and trends in a way that could be comprehended by field staff and community members, irrespective of their education levels.
- The Status Reports should include tables, charts, maps, photographs and descriptions/ comments with comparison of current status to Baseline Values and be in easy-to-understand layouts to facilitate status reporting and decision-making to a wide range of MIS stakeholders.
- The PM MIS should be designed and operated as a web enabled application.

3.4 Development of NERLP Internal and External Website

Internal Website: This will include the development of an internal website accessible (with appropriate content and functionality to those with appropriate institutional roles) with access to internal information for NERLP management, including the web-enabled project management and monitoring system and basic documentation and functionality to support internal processes.

External Website: NERLP has already developed an external website www.nerlp.gov.in. This will include further development of an external website/web portal that can be viewed with common web browsers with information about NERLP activity, basic documentation, public domain project status and progress, useful links, tenders, advertisements and support for feedback.

4. Proposed MIS structure



5. Deliverables

5.1 Phased designing and development of MIS

As the project is in initial stage, activities viz. Target group identification, Institution building (SHGs, SHG Federations), Capacity building, Micro-finance, Livelihood activities and other thematic activities, building Community Development Groups, building Producers Federations will start in successions/ phases. Therefore, it requires a modular approach of software development, in succession/ phases, where each module will follow a cycle of User Requirement Assessment, participatory designing, development of particular module, module testing, integration with existing MIS, integration testing, piloting and final roll out with training. The entire MIS development may be phased in 2 parts which are as follows:

Phase – 1

The first phase will include User Requirement Assessment, participatory designing, development, testing, integration, piloting and final roll out with training of the following modules:

- SHG Module: covering functionalities not limited to capture household information, institution building with basic profiling, capacity building, micro-finance activities
- SHG Federation Module: covering functionalities not limited to capture institution building with basic profiling, capacity building, mapping with other CBOs, micro-finance activities, stocks
- Internal website

- External website
- The Project Management MIS (PM-MIS) is to track progress as captured by different modules of NERLP MIS; analytics, alerts, highlights to support the Decision Support System (DSS). It should also capture relevant administrative/ institutional, financial, technical/ physical, procurement, environmental and social data from various offices (district/block etc)

Phase – 2

The second phase will start after successful completion of the Phase – 1 (review of Phase – 1 will be done by the review team of NERLP). The second phase will include User Requirement Assessment, participatory designing, development, testing, integration, piloting and final roll out with training of the following modules:

- Community Development Group Module (CDG Module): covering functionalities not limited to capture institution building with basic profiling, capacity building, mapping with other CBOs, financial and non-financial activities
- Producers' Organization module (PO Module): covering functionalities not limited to capture institution building with basic profiling, capacity building, mapping with other CBOs, financial and non-financial activities, stocks
- Modules related to project intervention viz. activities related to livelihood intervention, social development
- Modules capturing the pilot activities undertaken by the project, if any
- Updation of PM MIS, required due to integration of new modules in Phase – 2
- Updation of Internal website, if needed
- Updation of External website, if needed

5.2 Testing of modules developed

The consultant will discuss, prepare and submit the detailed test plan. The consultant with the support from client will design sets of test data for all levels of testing. The test activity will involve:

- a) Functional testing
- b) System testing
- c) Performance testing and load balance testing
- d) Integration testing
- e) Usability testing
- f) Security testing and recovery testing
- g) Feedback mechanism

After successful testing, the application should be released along with a release document and user manuals for each modules.

5.3 Piloting and deployment of modules developed in phases

Pilot testing of the MIS will be done at blocks, districts, state level; whichever applicable and decided by the project. The piloting of the new MIS will include application installation, performance test and load test at existing/ changed infrastructure, data entry, validation, report generation, data security, access level privileges, month-end and year-end processes. For efficient management of piloting, the consultant should prepare and submit detailed plan and resource requirement note for piloting. Appropriate phasing-in/backup procedures will be designed and employed by the Agency to ensure continuity. The consultant will present the output of the piloting to the review committee formed by NERLP. Any customization need/ fine tuning, which get identified while and after piloting should be incorporated in the final application. Accordingly, the manuals should get updated as per the fine tuning/ customization.

"A report on overall activities and output of the piloting should be prepared and submitted to the project. However, the Project may require additional time (currently 1 month) to address a range of issues including stability of the dynamic transactions modules that could best be understood when live data is entered across a number of SGHs for about 2-3 months."

5.4 Institutional Capacity Building for Implementation

The primary activities of the Agency in this regard will include:

Institutional Arrangements: The Agency will ensure regular and active support for timely data management, reports and analytical outputs. The Agency will also conduct regular online and other processes to determine user satisfaction and solicit suggestions for improvement. For the purpose, the project will form appropriate team/ staff/ positions in the NERLP institutional structure. The agency may suggest such requirements for the project, based on field visits and interviews, which can effectively manage the various MIS-related tasks – such as data entry, computerization, validation, processing, reporting and use, as well as effective systems administration, security, updating and sustainability.

Documentation and Training: The agency will develop training plan based on assessment of skill-gap analysis of Project staff. Requirement for training will be assessed with the focus on end-user services and responsiveness. Consultant should also list out the mode and associated infrastructure needs for successfully delivering these trainings. Develop operations manuals including implementation and rollout plan, training manuals for master trainers along with training plan, process guidelines and aids, FAQs and trouble shootings, etc. The Agency will develop electronic and hardcopy documentation for all aspects of the MIS developed and will provide appropriate training to relevant MIS stakeholders. The Consultant would also provide continuous training and handhold support to the Project Units. Under this head, the Consultant will;

- i) Build Capacity & Provide Handhold support to the Project Staffs at every level on the use of Applications.
- ii) Build Capacity & Provide Handhold Support to the Project MIS team on the technical aspect (technology/system) and on the use of MIS.
- iii) Build Capacity & Provide Handhold support to build the District MIS/ M&E staff as Master of Application.
- iv) Built capacity of MIS/ M&E Staff from each block in Data entry, Data Validations and Randomized Audit of data.

Support for Procurement of MIS-related hardware, software, datasets and communication: The Agency will assist the Client with procurement-related documentation (e.g. specifications, bid documents according to WB guideline) and evaluation support for any additional MIS related hardware, software, datasets and communication (e.g. broadband access) at various NERLP offices etc.

5.5 Maintenance, handholding and technical support to the NERLP

5.5.1 Maintenance support

- i) The consultant will provide 24x7 maintenance support services for consultancy period which will include bug fixing, fine tunings and enhancements in the software application as well as database support with respect to cleaning of databases, rectifying errors and security issues, if any in person or through remote arrangements. A log file on maintenance has to be maintained and periodic report has to be submitted to the client.
- ii) The Consultant will provide constant support in rolling out of the modules and in the use of Decision Support System.
- iii) The Consultant after successful completion of implementing the new MIS will provide maintenance and support for another One Year (i.e. After completion of Phase-1 and Phase-2). A log file has to be maintained capturing issues identified/ reported, solution provided, remarks along with date stamp.

5.5.2 Hand holding support

- i) Periodic data validation along with project staff to identify issues and also to build capacity of the project staffs
- ii) Periodic generation of MIS reports and validating against the data entered.
- iii) Periodic and needs based refreshers training to be provided to project staffs and build capacity on data handling, data validation, report generation and use of reports. Hence, this will increase the use of MIS among the project staffs.
- iv) Periodic and need based refreshers training to MIS team on database management, version management and technical trouble shooting.

5.5.3 Technical support on innovations

Newer interventions/ Pilots will happen in due course of time which needs to be captured in MIS; hence these new requirements during the period of consultancy will be part of TOR.

6. Guiding Principles of MIS Design

In order to minimize complexities and make MIS a useful tool of monitoring, the agency would be expected to adopt the following key principles in the development of MIS for the NERLP.

- The computer-based information sub-system at District Project Management Unit level would answer block and village level needs to improve project management. This sub-system could mainly be a consolidation module as almost all the actual data entry and implementation tracking is expected to be done at the block (PFT) level. The data for Self Help Groups, Federation, YG, PO, CDG etc shall also be entered at PFT level.
- Information needs and indicators to capture information for the project, the format and presentation style of the web page are to be identified in a participatory manner involving the key stakeholders of the project (the client) and the agency
- The system should provide for a two way flow of information, such that those who collect and transmit the information receive the feedback and the information flow synchronizes with the organizational structure
- While the major burden of collecting, reporting and transmitting information is to be borne by the project staff, the MIS design should ensure that it does not impose a high work load at any level in the organization and at the same time there is no information/data "overload" at any level. The design should be intelligent to minimize data entry during routine use (e.g. drawing upon lists, dynamic menus/options, avoiding repetitive and unnecessary entries, etc)
- The system is flexible enough to accommodate internal learning changes in future
- Develop test procedures for the developed MIS software, including procedures for overall modular software testing (acceptance). The MIS should be fully tested (at the district level, block level and the overall MIS level) for all functionality before its acceptance by RPMU. The testing should ensure that the MIS linkages among RPMU, district and block work correctly
- Prepare documentation (A comprehensive technical manual) that will be used for the maintenance of the system. The documentation will also be used as technical reference manual for IT staff and develop user guides to go with the system (covering Block and District)
- Designed to focus on information on empowerment of the poor, income security and quality of service standards, project components and sub components which would include but not be limited to various aspects of institutional strengthening, livelihoods, project monitoring, learning and evaluation, communication, dissemination of information and disclosure, transparency, accountability and governance, finance, procurement etc. The actual list could be determined as an output of the "System Requirements Study" process
- The agency shall have adequate technical and managerial manpower at Guwahati and technical manpower at the Project Districts to attend to implementation assistance as and when required by project staff.
- The MIS should be the extension of the books of record and no additional MIS sheet to be rolled out to collect the information.
- The agency will discuss closely with the client on the types of information that are needed in the internal and external websites. The website should be available in both Hindi and English and should follow the Gol guidelines for Baseline Security requirements and Selection of controls, Information security Standard, and Localization and Language Technology Standard. Regarding the accessibility, it may like to follow the US Government 508 standard and for layout and speed - UK government standards. Appropriate measures should be taken to ensure zero down time as well as minimize vulnerability to hacking/viruses/Trojans, etc. In addition, the Agency will facilitate hosting of these web-services using appropriate arrangements (outsourced or internal) in consultation with the Client (RPMU).

7. Deliverables and Timing

The outputs to be delivered by the agency shall include the following:

Phase	Deliverables	Description/ output	Timing	Payment schedule	Phase payment
Phase – 1	Inception Report- MIS	Inception report detailing schedule of work plan, key staff deployment, methodology, etc.) and Inception Workshop to discuss with Client.	1 st month	5%	35%
	System Requirement Study	All key aspects of design (MIS structure, modules, indicators, report formats, information flow, Internal and external website prototypes and hosting arrangements, additional hardware/software/data/connectivity requirements, institutional arrangements, etc.)			
	Development of Phase – 1 modules	Development stage: <ul style="list-style-type: none"> ○ SHG Module: covering functionalities not limited to capture household information, institution building with basic profiling, capacity building, micro-finance activities ○ SHG Federation Module: covering functionalities not limited to capture institution building with basic profiling, capacity building, mapping with other CBOs, micro-finance activities, stocks ○ Internal website ○ External website ○ PM MIS to track progress as captured by different modules of NERLP MIS 	2 nd , 3 rd and 4 th month	10%	
	Testing and piloting	Software testing, upload base data, project data entry and roll-out for selected modules in selected areas	5 th and 6 th month	5%	
	Documentation, Training & final roll out	MIS documentation (design, use and training manuals, organizational roles etc) Workshops & on-the-job training Full Roll-out Stage: deployment of system in all project areas for full functionality Post Roll-out: handholding support, proactive use surveys, bug fixes & updates till end of Assignment Phase completion Report: Final overview of activities, review of MIS use, user perspectives, issues.	6 th and 7 th month	15%	

Phase	Deliverables	Description/ output	Timing	Payment schedule	Phase payment
Phase – 2	System Requirement Study	All key aspects of design (new modules, indicators, report formats, information flow, etc.)	8 th month*	5%	35%
	Development of Phase – 2 modules	<p>Development stage:</p> <ul style="list-style-type: none"> ○ CDG Module: covering functionalities not limited to capture institution building with basic profiling, capacity building, mapping with other CBOs, financial and non-financial activities ○ PO Module: covering functionalities not limited to capture institution building with basic profiling, capacity building, mapping with other CBOs, financial and non-financial activities, stocks ○ Modules related to project intervention viz. activities related to livelihood intervention, social development ○ Modules capturing the pilot activities undertaken by the project, if any ○ Updation of PM-MIS required due to integration of new modules in Phase-2 ○ Updation of Internal website, if needed ○ Updation of External website, if needed 	8 th , 9 th and 10 th month*	10%	
	Testing and piloting	Software testing, upload base data, project data entry and roll-out for selected modules in selected areas	11 th month	5%	
	Documentation, Training & final roll out	<p>MIS documentation (design, use and training manuals, organizational roles, etc) Workshops & on-the-job training</p> <p>Full Roll-out Stage: seamless integration of new modules with NERLP MIS and PM MIS developed in Phase – 1; deployment of system in all project areas</p> <p>Post Roll-out: handholding support, proactive use surveys, bug fixes & updates till end of Assignment</p> <p>Phase completion report: Final overview of activities, review of MIS use, user perspectives, issues.</p>	11 th and 12 th month	15%	
Maintenance & support	Maintenance, handholding, technical support	Telephonic support as well as onsite visit as and when required Refresher Training to staff	12 months after completion of Phase – 2	5% per quarter*	20%
Final completion	Final report, data, documents, source code	Final assignment completion report Review of work done during all phases Handing over documents, test cases, data and source codes including any other pertinent materials etc	After completion of 12 months of maintenance support	10%	10%

*- Quarterly review will be done on maintenance work and support provided by the Agency

8. Reporting and ownership

- The draft reports / prototypes of the application should be submitted to the Project Director, NERLP, Guwahati for review and feedback and recommendations. The final report/ applications should have the revisions, suggestions and recommendations incorporated.
- All primary data collected in printed and electronic form (05 copies draft, 15 copies final versions) should be submitted to the RPMU. This should include all data, manuals, illustrated training manuals, etc. Workshops should accompany all key draft deliverables to ensure that any comments for improvement can be discussed and agreed in a constructive, interactive manner.
- The reports will be accepted subject to the approval by the Project Director and on the recommendation of the review committee headed by the Project Manager M & E.
- NELPS, Guwahati will be the absolute owner of the software/hardware and will have exclusive copyright. The agency shall not replicate or reproduce or use any software (or part thereof) developed or datasets used for this assignment without prior consent of the owner.

9. Data, Services and Facilities to be provided by the client

- Make available all project documents including PIP, Project AWP, M&E and Results Frame Work, Financial Management Manual, present Data base of Projects, MPR, QPR, etc.
- Office facilities, telephone, internet, computers, training guides, etc required for performing installation and commissioning of computerized and web-enabled MIS.
- Facilitate participation of key State, District, Block and other project staff in the pre-design and final workshops.
- Facilitate interaction and exchange of information among the agency and the State, District, Block and other project supported agencies/staff/consultants.
- The Project Manager (M & E), NERLP will act as a link among the RPMU, the agency and other relevant stakeholders.
- NERLP will ensure timely review of the stages of the consultancy to ensure that the project/assignment is accomplished within the scheduled and agreed time period.

10. Qualifications of the Agency/ Firm and Key Personnel

- The agency/firm should have 5 years of experience in designing, developing, capacity building, data analysis and supporting implementation of a computerized and web-enabled MIS system in WB/Externally Supported/Similar projects.
- The agency or individual agencies (in case of association) must have considerable experience in design and operationalization of MIS system in similar projects with a minimum turnover of INR 50.00 lakh (5 million) for the last three consecutive financial years.
- The agency must have appropriate professional and technical team with high level of competencies to handle tasks and responsibilities.
- The agency preferably should have an ISO 9001 and/or at least CMM Level-4 Certification.

11. List of Key Professional Positions whose CV and experience would be evaluated:

The Agency is expected to provide a team of experts (full-time) with the following skill sets who shall be adequately qualified and experienced in both Development projects and IT related Field to ensure timely delivery of the required outputs.

<u>Name of Position</u>	<u>Key Qualification and Experience</u>
Team Leader	Post Graduate in IT/Computer Science with a minimum of 10 years of experience in systems and software development including at least 6 years of experience in web enabled MIS development of comparable projects
Domain Expert	Masters in Communication/Social Science/Rural Development with a minimum of 5 years of experience in social development field, including at least 3 years of experience of working on facilitating stakeholder discussions and documentation projects in Rural Development Sector
Business Analyst	M.B.A. with minimum of 5 years of experience in capturing business need in various Data warehousing, MIS project.
Web Developer	Graduate in Computer Engineering, Web Design or related area. Minimum 5 years of experience in development of internal and external secure web- based systems for large projects and added experience in creative designing and art would be desirable
Programmers	Full time B. Tech. or MCA with minimum 3 years of experience in software development.

- Notwithstanding the qualifications to deliver the tasks listed above, the agency shall remain fully responsible to deliver the described project output.
- The agency will work with NERLP to develop training and support materials for the MIS after installation support

12. Review Committee to Monitor Agency's Work

A review committee, chaired by the Project Director, NERLP, DoNER, GoI will be formed to monitor the progress and interact with the agency. The review committee shall consist of other dignitaries and officers as selected by the chair person of the review committee. An external review member/ members can be invited by the project as the member of review team. A review will be required after reaching every milestones and before releasing payment to the agency.

13. Time Frame

The period of association of the Consulting Firm/Agency for MIS development and its operationalisation will be twenty four (24) months from the date of signing of contract. Nevertheless, the agency will remain attached to the client for the entire period of the project as mentioned earlier. The agency should clearly reflect in its proposal the proposed deliverables along with the break-up (phasing) of timeline.

14. Who can Apply

Any IT Company/consultancy firm of national repute can submit proposal clearly reflecting on the ToR with approach, strategy, plan, credential and technical capacity to handle the task with high standard of quality.

15. How to Apply

The agency/company/has to submit technical and financial proposals separately to the office of the undersigned within **30** days from the date of publication of advertisement through registered post/courier addressed to "**The Project Director, NERLP, HN-2, Near Nayantara, 6-Mile, GS Road, Guwahati- 781022, Assam**". The proposals are to be submitted (Technical and Financial in separate sealed envelopes to be enclosed in a single sealed envelope) to the undersigned. The envelopes must be superscripted on the top as "**Technical/Financial Proposal for Developing a Web-Enabled Management Information System**". Only few technically competent agencies will be shortlisted for further presentation and final selection by the committee constituted by the competent authority.

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