

**Terms of Reference (ToR)
of Consultancy Services**

**for
Technical Support (IT Expert) Engineer for ICT System in DoR, MIS-IT**

Background

In order to accomplish the functions of Department of Roads (DoR) in a more efficient manner and having the information for better planning, decision making and ultimately providing better services to the road traffic of Nepal, DoR is implementing Information & Communications Technology (ICT) systems in the central office as well as in all of its constituent offices such as Branches, Regional Directorates, Divisions, Projects etc.

DOR started the implementation of ICT systems in its central office as well as in its constituent offices within Nepal under Institutional Strengthening Component of RMDP. Computer hardware (servers, desktops, printers, etc.), networking installation were established under this project and the additional activities to enhance the system have been in continuity through RSDP.

Computer hardware and networks installed and commissioned in DoR and its constituent offices need to be properly operated under strict DoR ICT policy guidelines, and need to be maintained so that there will be a minimum down time. It also needs to be upgraded whenever such requirements arise.

After successful completion of the works at first stage, the Department has been able to achieve national recognition as pioneer in establishing e-procurement, and other managerial application software for the management of Finance, Contract, Asset and many other department activities.

To establish a system is not all the work done, its sustainability is more important to have continued output from the system. Developing any application is not as difficult as it is to keep it running and keep it useful for the organization. Many systems get developed but very few survive to be of any use to the organization eventually. For the successful implementation of computerization process in an organization, requires strong organizational commitment and demands full support from top-level management. Mobilization of working level manpower in the systems with great amount of motivation may also be a great challenge for the DOR management.

ROLES AND RESPONSIBILITY OF MIS-IT UNIT

The MIS Unit is headed by the DoR staff (SDE level Engineer). The MIS-IT Unit is mainly supposed to function as a management centre for all the database and software / hardware related issues of the whole Department. This has to be catered in an efficient manner so that the problems are resolved in time. The department has been open to hire the services from outsources for the specific ICT related services instead of employing them in the regular service. This idea has been adopted after considering the fact of retention of those human resources for long time. The MIS Unit is to manage these services for better and sustainable functioning of ICT. The main functions of MIS Unit include;

- Management of the hardware and software for smooth operation of all the services provided by the MIS/IT Unit.
- Maintenance Management of all the hardware and software.
- Plan for the replacement of the equipment and propose for the procurement.

- Formulate and propose improvement plans in order to update and upgrade the ICT System to meet the demand of time.
- Outsource specific ICT related works for the smooth operation.
- Procurement and Contract Management/Administration of the contracts meant for MIS-IT Unit.
- Outsourcing for the regular update of acquired road related data into DoR's database.
- Management of warranty and post warranty phase of the current IT related hardware and software contract.
- Perform advisory role to the DoR management team and other units as required Outsourcing for regular maintenance of hardware / software and network of the DoR.
- Develop activities/programs for the embedment of the ICT system in the working culture of the DoR Staffs

It is also a prime task of any Public Organization to support the state in the establishment of Good Governance in the country through its various activities. The DoR, being a public organization, must therefore introduce such activities through essence of Good Governance.

Objectives

The objective of this ToR is to solicit the services of individual **IT Expert (Engineer)** to support the management of operation and maintenance of the Information and Communication Systems at DoR and its constituent offices effectively. The consultant will also be responsible to support and operate the contract management of Hardware and software related contract within the Department.

Scope of Work

The Department of Roads intends to operate the system in a sustainable manner to enhance work efficiency as high as possible to support the state in achieving Good Governance. DoR has developed various softwares on various time for establishment of MIS System of DoR. Various software's like FMIS (Financial Information Management System), E-Procurement, DoR Website, Bridge Management System, Mobile based Data collection System, SSRN (Statistics of Strategic Road Network), GRMS (Grievance Redress System) and many more. Also DoR has plans for in-house development of other software's. So the IT Engineer shall have knowledge of Various Programming Languages like PHP, DotNet, Java etc. IT Engineer shall design, develop, test & support s/w projects in C#, Sharepoint, PHP/Mysql, PHP/Oracle, HTML, PL/SQL, JQuery etc. Certification in PHP web development, graphics and software programming would be an advantage.

To achieve the objectives, the Department expect from the Consultant to perform the following activities by working under the MIS/IT unit of DoR.

Responsibilities and Duties

1. Support the MIS/IT Unit to perform its responsibilities in managing various systems operation & maintenance.
2. Plan and advice the Department in establishment of appropriate Information and Communication System for the entire Department.
3. Assist in Application Development and Operation for the different activities of the Department.
4. Develop the requirement of new applications.
5. Develop the requirement of Hardware for the smooth operation of the Applications Software.

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6. Establish replacement plan for Hardware and Software.
7. Develop Maintenance strategies for the entire system.
8. Formulate Training Programs for the stake holders for the effective implementation of the system.
9. Develop Monitoring tools for the operation of the system within DoR.
10. Develop activities/programs for the embedment of the system in the working culture of the DoR Staffs
11. Advise DoR on best use of MIS/ICT system from different prospective.
12. Recommend to the client, previous activities of MIS/ICT as well as forth coming activities
13. Develop application from scratch or by adapting existing software to meet business requirements.
14. Find Bug's and make changes in currently running and other software's and make changes as and when required.
15. Directly interact with DoR Staffs and other Agencies as required and understand requirements.
16. Deploy application onto a server and registering it with different search engines.
17. Testing the application and identifying any technical problems and hitches
18. Determining any functionality that the site must support and developing PHP content based on practical approved layout
19. Maintain and manage clear plus complete documentation.
20. Guide business decisions from technical perspective like performance, reliability, scalability and security.
21. Write all clean object-oriented PHP as well as efficient SQL

Minimum Qualifications

The minimum qualifications required for the consultant sought under this ToR are as follows:

1. Having Basic Academic Qualification (Bachelor) in Computer/IT Engineering and Post Graduate in Management/IT/Computer Engineering with knowledge of Information System Design, and Project Management.
2. Must have minimum of 5 Years of work experiences in IT related field.
3. Must possess knowledge of Public Procurement and Contract Management.
4. Strong knowledge of OOP, PHP, Database, web standards-based HTML, CSS, Javascript.
5. Excellent knowledge in Ajax coding, jQuery etc
6. Excellent interpersonal and communication skills
7. Ability to adapt and pick up new techniques and technology
8. Must be able to stay on top of advancing internet and computer technology and its effects to the business environment

Report

The consultant shall work Under the MIS-IT unit and report through monthly progress report detailing the progress achieved for the report period within the first week of next month (Nepalese calendar month). It shall also include the proposed service activities for the forthcoming month.

Duration

The duration of service of the **IT Expert (Engineer)** will be up to **15 June 2015**, and is extendable as per the requirements of DoR on mutual understanding.

Facilities to be provided by the Client: The consultant will be provided with working area and office facilities including computer, telephone under MIS/IT unit. The consultant shall also be provided access to the IT information system and hardware within the Department.

Consultant's obligation: The consultant's work schedule shall be as per the Government working schedule. Consultant shall be fully responsible to the MIS/IT unit and shall report to the Unit chief, MIS/IT unit. Consultant shall be required to follow the confidentiality policy of the DoR and shall not disclose any information to outsiders without approval from the management.

