



MoLG Capacity Building Software Requirement Specifications

**CHF-Pal
Al-Bireh,
Palestine**

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MAY 12, 2010



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Revision History

Revision	Date	By	Comments
Version 1.0	12/5/2010	Dr. Yahya Al-Salqan	After feedback
Draft 0.9	27/2/2010	Dr. Yahya Al-Salqan	Changed to final format after feedback
Draft 0.8	14/2/2010	Dr. Yahya Al-Salqan	Submitted to CHF for feedback
Draft 0.5	10/1/2010	Dr. Yahya Al-Salqan	Based on MoLG visits
Draft 0.1	10/12/2009	Dr. Yahya Al-Salqan	Inception

1 INTRODUCTION

1.1 BACKGROUND

CHF International is an international development and humanitarian aid organization operating in 30 countries around the world, and in the West Bank and Gaza since 1994.

CHF International (CHF) was awarded by the United States Agency for International Development (USAID) a grant for the implementation of the Local Democratic Reform (LDR) program.

The main goal of the LDR Program is to support the Palestinian Authority's efforts toward the development of an enabling environment and operational framework for an effective, empowered and democratic local governance system in West Bank and Gaza. Moreover, it aims at responding to the immediate needs of Local Government Units (LGUs) to govern more effectively and to meet citizen and service delivery requirements in a responsive manner and participatory governing approach.

The MoLG has signed a Memorandum of Understanding to support the ongoing efforts to enhance the capacity of the Ministry of Local Government (MoLG) to effectively assume a leading role in the development and implementation of visions, policies, regulations and institutional frameworks for a democratic local governance system in the WBG. On the other hand, it plays an important role in strengthening the local government institutions and leaderships to become more effective in a transparent, democratic and accountable manner: assess and prioritize needs; implement integrated strategic planning and performance monitoring processes; and deliver and manage infrastructure construction and basic service delivery.

One of the CHF goals is to develop the capacity of MoLG to better process and provide services to the community through developing the current IT situation at the Ministry.

In order to facilitate better and more effective assistance to MoLG in the Information and Communication Technology (ICT), a comprehensive consultation effort has been contracted to better understand the current ICT status, evaluate the previous work and effort and come up with recommendation and detailed specification of the recommended systems and solutions.

The Deliverables of this consultation assignment will be

- 1) IT Assessment & Recommendations Report.
- 2) MIS Systems Requirements and Specifications Report.
- 3) IT Strategic plan for three years.

This report is part of the second and final deliverable report of this consultation assignment.

According to the IT Assessment and Recommendation report and the IT Strategic Plan that were delivered, the Capacity Building and Training MIS system is a needed system and one of the identified systems as a priority one recommendation.

This document is the Software Requirement Specification (SRS) document that details the requirement of the Capacity Building and Training MIS system envisioned to be procured and developed for the MoLG.

1.2 PURPOSE

The objective of this report is to document the results of the systematic analysis that took place at MoLG headquarters and District offices and to provide MIS specifications with regard to the 'Capacity Building and Training' at MoLG. This report has been written taking into considerations the previous MIS report mentioned above.

This document serves as a functional requirement specifications document to the MoLG intended Capacity Building and Training system. It aims at providing correct, unambiguous, complete, consistent, verifiable, modifiable, and traceable technical requirements.

The MoLG Capacity Building and Training (CBT) MIS aims at automating the CBT operations in the MoLG headquarter in a Web environment. It should be a modern and complete CBT system that incorporates both HR related functionalities and HR capacity building as well.

The intended MIS system shall be flexible so the implementation of the Capacity Building Department structure and functionalities can be easily attained. The system should maintain a modern database that stores and integrates with the relevant HR MIS.

The system shall be easy to use and a realization of the process currently applicable in MoLG Capacity Building Departments.

The intended audiences of this document are the CHF and MoLG staff.

1.3 SCOPE

The intended MoLG CBT MIS system shall reflect the MoLG Capacity Building processes through automating the CBT workflows and processes and minimizing the manual filing and record keeping operations at the MoLG BTC directorate and training center.

By the BTC MIS system, the MoLG shall be able to automate its processes and to become closer to fully automated processes. This indeed replaces the manual and labor intensive process currently used at the CBT MoLG.

1.4 TERMINOLOGY

The words *shall* and *must* identify the mandatory (essential) requirements in this document. The words *should* and *may* identify optional (conditional) requirements.

One is required for finishing the project; the other is desired, but not necessary.

1.5 DEFINITIONS AND GLOSSARY

1.5.1 DEFINITIONS

Database A modern relational database used for storing data.

Org Chart The Organizational Structure implemented and endorsed by the Cabinet for organizing and providing job description of the MoLG staff.

1.5.2 GLOSSARY

CBT Capacity Building and Training

GCC Governmental Computer Center

HQ	MoLG Headquarters
HR	Human Resource
IP	Internet Protocol based
IT	Information Technology
LAN	Local Area Network
MIS	Management Information System
MoF	Ministry of Finance
MoLG	the Ministry of Local Governments
NA	Not Available
TBD	To Be Discussed

1.6 REFERENCES

- [1] The UNDP/PAPP MoLG Analysis and Design for MoLG MIS System, 2005
- [2] The MoLG Organizational Structure, 2005
- [3] The New MoLG Organizational Structure, 2009
- [4] The Palestinian National Authority Civil Service Law
- [5] ToR of this assignment
- [6] SRS document for the HR system

1.7 OVERVIEW

The rest of the document includes a detailed software requirements specification for the intended CBT System project at MoLG.

This document is organized as follows:

- **Sections 1: Introduction (This section):** Provides an overview of this document and the project.
- **Section 2: General Description:** Describes the general factors that affect the CBT-MIS project and its requirements. It does not state specific requirements. Instead, it provides a background for those requirements which are defined in details in Section 3, and make them easier to understand.
- **Section 3: Specific Requirements:** Contains all the CBT-MIS requirements to enable designers to design the system and testers to test that the system satisfies these requirements and for the MoLG to know what they are expecting. It is the core of this report.

2 GENERAL DESCRIPTION

This section includes general description of the CBT-MIS project and comprises the following subsections: CBT-MIS project perspective, CBT-MIS project functions, CBT-MIS project user characteristics, and assumptions and dependencies.

2.1 CBT-MIS PROJECT PERSPECTIVE

Currently, the MoLG HR department hosts the employees' records in a newly procured HR system. This database is operated by employees at MoLG HQ. All the HR functionalities and processes are operated by the HR staff. The MoLG HR departments at the District offices are interfacing with the HR department in the HQ and the system as it is described shall be able to automate all the HR related functions. The MoLG HQ keeps a record of all HR related issues for all its employees (including the District offices' staff). The HQ also corresponds with all HR related issues with the GPC for all HR and payroll issues.

The HR system during the assessment phase of this consultation effort was under implementation so it was difficult to assess the adherence of the implemented HR system to the Requirement Specifications that was put in place as system requirements.

In addition, during the assessment, the capacity building and training programs now at the MoLG are not linked to the HR system processes and it is not part of the human capital development planning and evaluation. This document is trying to address the CBT MIS features that should be fully linked with the HR system.

The intended system shall provide e-services to MoLG staff where for example any employee can view his/her profile online at anytime from anywhere and can submit a training request and follow its status (pending, approved, etc).

The system shall reflect the MoLG current and future training plans with possible changes and enhancements.

2.2 GENERAL REQUIREMENTS

2.2.1 CBT MIS ELEMENTS

The CBT MIS is composed of the following elements/modules and functionalities that manage all CBT related processes in MoLG:

- 1. Training and Capacity Building** – This is an important component in the system that encompasses the training needs, training courses attended, results of the training, and managing the training center currently in Jericho or any other location. The system shall be able to track all internal and external training received by the employees and hosts all the training needs.
- 2. Training Plans** – This is to provide training needs and to design a training plan for MoLG staff and LGUs.
- 3. Employee Evaluation and Promotion** – this is to keep track of all the evaluation process and results and promotion applications and process with link with the training plans.

2.3 USERS CHARACTERISTICS

The CBT-MIS system users can be classified as follows:

1. Technical users for system administration and policy definitions

2. CBT department users that process the CBT related functionalities and processes
3. District offices HR and administrative staff
4. MoLG management staff
5. All MoLG staff

2.4 DEPENDENCIES

The HR-MIS system is the major dependency for the CBT MIS system. Since the HR system is already in place, therefore, there are no obstacles to implement the system. However, full utilization of the system requires an emphasis on training especially if the e-services are to be utilized fully.

2.5 ASSUMPTIONS

The CBT-MIS is based on the following assumptions:

1. The implemented HR-MIS is based on best practices of human resource management and capacity building.
2. The implemented HR-MIS system provides a dynamic workflow definition and processes.
3. The implemented HR-MIS system provides certification and training profile for each employee.
4. The implemented HR-MIS system shall be Web based.
5. The CBT-MIS system shall be integrated with the HR MIS.
6. The CBT-MIS system shall utilize a relational database.
7. The CBT-MIS shall meet the requirements specified in this report as minimum requirements.

3 SPECIFIC REQUIREMENTS

3.1 HR SYSTEM MAIN FEATURES AND FUNCTIONALITIES NEEDED FOR CBT

HR system must have but not limited to the following functionalities and features that will be used for the purpose of the CBT MIS:

1. The ability to manage the HR profiling including the staff certification and training needs in a structured manner;
2. The ability to customize the system for specific organization policies; different policies are customized in the system, HR managers or any authorized system user is able to define and manage system controls to define their parameters and organization rules requirements (e.g. Labor Law to be implemented in the system, training needs, certification requirements, etc);
3. Manage and define organization processes and their approval processes; the system has a user friendly user interface to define organization process for each type of transaction that requires approval from different levels of authorized persons in the organization;
4. Allow system user interface security and data security; the system manages both user interface modules access through the easy to use access control module based on the Role Based Access Control (RBAC) methodology; in addition to the user interface

- access control the system can manage data security which means the end user can see only the data he/she is authorized on;
5. Ability to monitor and follow-up Requests transactions; system provides capability to follow-up, monitor each (training request, training needs, etc) to see the request approval current status, who is the employee working on, when he/she received/executed the request;
 6. Ability to keep transactions history for each modification on employee training profile; the system saves and keeps changes and modifications on employee profile for auditing and changes tracking purposes;
 7. Each transaction must have the user-id, timestamp; the system provides capability to know who insert, update, delete data and when for auditing purposes;
 8. The system does not perform physical delete; the system treats transaction deletion as marking the record as deleted instead of physical deletion for the purpose of quick recovery in case of human or system errors;
 9. System user interface is in Arabic but shall be able to get English reports;
 10. The system provides efficient payroll related information. The system provides user interfaces to manage payroll related information such as (system Allowances/Deductions properties, Exemptions, Ranks (civil law) details management (rank properties, rank grades, grade steps and salaries) and if training and certification has any effect on the allowances/ranks;
 11. The system is parameterized and zero hard coded; for efficient and easy management of organization rules on going changes the system defines these organization rules as system parameters and refer to these parameters instead of hard coding these rules in the software code;
 12. The system has reporting tool to design new reports in a user friendly manner with a need for a technical staff;
 13. The system is a web based without the need for redevelopment;
 14. The system Supports rich user interface;
 15. The system has standard reports; the system provides a set of CBT reports;
 16. The system has reports management module; the system has capability to manage and modify system reports in an easy way without the need for technical. Changes might be changing report title, header/footer, logo, and rearrange report displayed columns; and
 17. The system provides end user capability to sort retrieved data in an easy and user friendly way.

3.2 CAPACITY BUILDING, TRAINING, AND DEVELOPMENT

1. The system must Support and manage the automation of the CBT planning process by defining every job detail and specification and its required qualifications, skills, experience, gender, job location and other job training needs and essentials;
2. Using the system, the Ministry must have the ability to manage both the knowledge and skills of each employee and the knowledge potential available in the organization;
3. Using the system, the ministry's employee and management must have the ability to assert control over the career path. The system must empower the management to establish:
 - Employee's training courses, qualifications, and education
 - Skill profiles
 - Ranks, grades and steps training and skills requirements for full transparency of the career path
4. The system must include the training management module that manages training planning, budgeting, training courses scheduling and execution management;

5. The system shall be able to generate all the reports of each training course with all the attendees (from MoLG and LGUs). The LGUs data is pertaining the training courses delivered by MoLG and attended by LGUs staff;
6. Training module must provide capability to manage the training donors' profiles;
7. The system shall be able to manage training courses types, number of trainees per course and type, and suggest candidates per course;
8. The system shall be able to manage the training centers (vendors);
9. The system shall maintain Trainers profile that include the courses they can train and their training evaluation;
10. The system shall be able to manage training course evaluation;
11. The system shall be able to store trainees' skills before and after training courses attended;
12. The system shall be able to manage the trainees' evaluation after receiving the training;
13. The system should manage training course costs (detailed);
14. The system shall maintain the training Courses prerequisites;
15. The system must be able to store the training centers (training providers) profiles with their qualifications and training cost; and
16. The system must support the management with the needed reports on this module.

3.3 CBT PLANNING

1. The system shall be able to generate the departmental annual training plan from the staff training needs;
2. The system shall allow the staff to edit the training needs and certification requirement;
3. The system shall be able to include training and certification needs for a specific job/specific department/ or all employees;
4. The system shall be able to provide manage LGUs training needs;
5. The system shall be able to generate the training plan for LGUs based on LGUs needs and MoLG requirements;
6. The system may allow LGUs to enter their training needs; and
7. The system can generate specific LGU training needs and plans.

3.4 EMPLOYEE EVALUATION AND PROMOTION

The system must have a full module to cover the Evaluation process and results; the following highlights this module functionalities:

1. The system must define evaluation elements pertaining to training and certification with their grades and calculations;
2. The system must define the evaluation elements pertaining the training and certification per Jobs;
3. The system must define the Training Evaluations Committees;
4. The system must be able to carry out the permanent employee's training evaluation process;
5. The system must be able to carry out the under testing employees training evaluation process;
6. The system must be able to store the Evaluation Committees results;
7. The system shall be able to reflect the training Evaluation results;
8. The system shall be able to manage the training evaluation forms;
9. The system shall manage the promotion process pertaining the training and certification needs, goals, and meet objectives;
10. The system must manage all the promotion forms pertaining the training needs with all their corresponding workflow;

11. The system shall allow the employee to apply for promotion online based on achieved training and certification objectives; and
12. The system must support the management with the needed reports on this module.
- 13.

3.5 KNOWLEDGE MANAGEMENT

1. All the system modules must be integrated and provide the MoLG of the decision support system;
2. The CBT must be fully integrated with the HR MIS system;
3. The system shall be able to generate the reports listed in the reports section as minimum required reports. The system shall also provide the ability to generate new reports with ease of use; and
4. The system shall be able to generate statistical reports.

3.6 LAWS AND RULES

1. Defining job titles and career paths; the system allows HR managers or any authorized system user to define jobs and job profiles in the system, and enables them to define career paths through customizable ranks, grades and steps definition with all training needs to reach the objectives; and
2. Customizing the system for specific MoLG policies; different policies could be customized in the system, HR managers or any authorized system user can define and manage system controls to define their parameters and business rules requirements (e.g. point of the training and certification in the evaluation process).

3.7 INTEGRATION WITH OTHER APPLICATIONS

1. The System must be able to be integrated with the current HR system at MoLG;
2. The system shall be integrated with MoLG modern portal system; and
3. The system must be able to be integrated with the archiving system where all the related forms and reports of any employee shall be stored in his/her file in the archiving system.

3.8 MANAGEMENT OF THE TRAINING CENTER

1. The system shall be able to manage the training center calendar;
2. The system shall be able to manage training room's schedule;
3. The system shall be able to manage trainees' schedule;
4. The system shall be able to manage trainers' schedule;
5. The system shall be able to manage the lodging and hotel requirements;
6. The system shall be able to manage the lodging providers (hotels) agreements and rates;
7. The system shall be able to manage lodging and hostel rooms if available;
8. The system shall be able to manage the training center belongings and stock; and
9. The system shall be able to generate the Training Center Needs based on the training plans.

3.9 CBT E-SERVICES

1. The system must allow employees to submit a training request online;
2. The system must allow employees to view their training profile online;
3. The system shall allow employees to view available training courses online;

4. The system shall allow employees to view the training calendar including training center online;
5. The system shall allow employees to submit promotion request based on training plan completion online; and
6. The system shall provide general information and MoLG-wide announcements.

3.10 LIST OF REPORTS FOR MoLG

The following are just a partial list of the current reports that MoLG needs. The system must fulfill and be able to generate these reports and any other HR or CBT related reports.

1. List of training needs by position;
2. List of training needs by employee;
3. List of training needs by department;
4. List of training needs by LGU;
5. List of training needs by position at LGU;
6. List of employees by directorate/district office that needs to get the training;
7. List of employees by educational/certification qualification;
8. Grades and certification statistics;
9. List of employees training needs by job location;
10. List of employees that have to be classified;
11. List of employees that have to be appraised;
12. List of employee appraisals;
13. Employees certifications for GPC;
14. Employee training information;
15. Employee certification information;
16. Employee experiences record;
17. Annual / Semi Annual/ Quarter/Monthly Annual training plan per department/ per position/ per LGU;
18. List of training providers and their specialties;
19. List of training providers and their ranks;
20. List of trainers with their evaluation;
21. Training center schedule from date-to-date;
22. Training center schedule for specific training course;
23. Employees who attended specific training course;
24. Training course attendess distribution (MoLG staff, LGUs staff).

3.11 NON FUNCTIONAL CBT-MIS TECHNICAL REQUIREMENTS

3.11.1 USER INTERFACE

1. Provide Arabic Graphical User Interface;
2. Web enabled user sign-on and access (for the web component of the system);
3. Provide English/Arabic Reporting capability;
4. To be complete, intuitive and logically structured;
5. To be simple, accessible and easy to use;
6. The Interface shall be window-based as an existing environment at the MoLG & Its Districts Offices and shall use common function terminology and notations; and
7. The ability to automatically move from dialogue box/field to another with minimum keystrokes, ease and accuracy.

3.11.1.1 EASE OF USE

1. Ease of use and navigation by inexperienced users. The navigation should be done by mouse clicks and by using tabs;
2. Menus, screens, and fields should be clear and readable, and visible by normal users;
3. Navigation between menus and screens should be logical and flawless;

4. Display error messages which adequately describe the cause of errors and options available to continue; and
5. A user should enter minimum data into the system (default data option and drop down menus).

3.11.2 DOCUMENTATION

1. Documentation of all application software must include full descriptions of all input forms, tables, files, inquires, and error messages;
2. Provide on-line help in Arabic;
3. Provide help facilities at screen and field level;
4. Software shall be augmented by full easy-to-use documentation such as installation guides, and user manuals;
5. The system documentation shall include;
6. Installation / set-up Manuals;
7. Users Manuals; and
8. Systems Administration Manual.

3.11.3 DATA ENTRY AND INPUT DESCRIPTION

1. Capability to have data entry fields automatically default to specific values;
2. Provide data validation at input stage to ensure accuracy and integrity (using dialogue boxes and proper messages)..

3.11.4 WEB ENABLEMENT

1. Provide security for database records posted on-line;
2. Intranet access to be restricted to web functionality and the group of users;
3. Provide secure online access to the application by utilizing the SSL protocol.

3.11.5 TESTING STRATEGY

1. All the application modules as per the Functional Requirements Specifications will be tested for User Acceptance;
2. The key requirements for testing process to be carried out by MoLG; and
3. The following test types are expected to be carried out by the application consultant and supervised by the MoLG & Its Districts Offices representatives, which include: Data and Database Integrity Testing, Application Function Testing, Business Model Testing, User Interface Testing, Performance Testing, Volume and Stress Testing, Security / Access Control Testing, Recovery Testing, Configuration Testing, Installation Testing, Data Migration, Integration, Audit, Archive, Web Functionality and Reporting Capabilities.

3.11.6 SECURITY

1. Access to system, functions, screens reports, fields and data are limited by a users access level;
2. Update access date based on the current date.

3.11.7 POWERFUL USER MANAGEMENT AND ACCESS RIGHTS

1. Set up individualized security profiles for user and group access;
2. Assign user passwords and change them periodically without changing security code profile;
3. Create an unlimited number of user profiles and user groups;
4. Define access rights by group, user, or both;
5. Gain access to users by the type of operation; insert, modify, delete, list, print operations and by transaction type;
6. Protect key information with sophisticated, multi-level security, with powerful security options to allow the administrator control over which groups have access to data at any level;
7. Get login/logout reports for any user (login/logout activity log);

8. Enable the system administrator to easily follow audit trails to identify who made which changes by date, time, and type of change;
9. Limit number of unsuccessful log-on attempts;
10. Automatic log off after a predefined period of inactive use; and
11. Maintain a log of unauthorized attempts to access system. Security log should be accessible at any time through a report request or on-line inquiry.

3.11.8 AUDIT

3.11.8.1 DETERMINE TRANSACTIONS LOGGED FOR AUDITING

1. This process determines those transactions that will be logged for audit. Not every activity or event, which occurs on the system needs to be logged. The audit log will record details such as user ID, date, time of system access update or security breach;
2. The key requirements for this process are;
3. Log the users who are accessing the system;
4. Log the parts of the application that are being accessed;
5. Log the fields that are being modified;
6. Log the results of these modifications;
7. Log attempted breaches of access; and
8. Log attempted breaches of modification rights.

3.11.8.2 STORE AUDIT LOG

1. Ensure an audit trail is kept for all transactions and (that all audit transactions logged are kept on the server for at least 12 months).

3.11.8.3 PRODUCE SYSTEM AUDIT REPORTS

1. Produce system audit reports.

3.11.9 ARCHIVE

3.11.9.1 MEET MoLG BACKUP REQUIREMENT

1. The MoLG will be in charge for the management of its data once system is developed. This includes implementing the procedures of taking hot and cold backups by the ITS team. MoLG should take charge of this level of support and maintenance to govern its data ownership. This includes maintaining proper security, auditing and archiving processes at the MoLG by the consultant. A key requirement for this process is: Compliance with International Standards.

3.11.10 PROVIDE APPROPRIATE INTERFACE AND MANAGEMENT CAPABILITIES

1. This process provides the facility to manage and maintain an archive. This includes the timely archive and retrieval data. The key requirements for this process are:
 1. Provide an efficient archival capability
 2. Provide an efficient data retrieval capability

3.11.11 MIS TECHNICAL ENVIRONMENT AND COMPONENTS

3.11.11.1 ENVIRONMENT OF THE MIS SOFTWARE

1. Solution should be based on open system technology;
2. The system must have the ability to change/modify business logic on-line from the system with out changing the source code;
3. It should utilize a Relational Database Management System;
4. The capability to access a data dictionary that provides a description of the fields (name, length, format, information stored, field relationships);
5. Availability of fourth generation language development tools to be used for customization and/or building new applications; and
6. Provide interfaces capabilities with either proprietary or third party spreadsheet and word processing packages.

3.11.12 ARCHITECTURE DESIGN OF THE MIS SYSTEM

It is required to be based on appropriate network computing technology. The following requirements must be taken into consideration:

1. The system should be based on Centralized System Architecture where users at all locations would be using the main databases located at the servers at the MoLG;
2. The system should support the distribution of new application software versions and releases from central location to distributed locations; and
3. The system should provide an automatic function that ensures all distributed users have the current version and release of the application software installed.

3.11.13 EXTERNAL INTERFACES

1. Support the following spread sheets applications: MS Excel;
2. Support the following word processors;
3. MS Word for Windows XP;
4. Rich Text Format RTF; and
5. Acrobat Portable Document PDF.

3.11.14 MIS APPLICATION

The MIS Application must be developed to programming and interface standards. The application is the functional interface where the user manipulates the data held by the system. The key application requirements are:

1. The application will be an “n” tier architecture;
2. The end user application will be developed in a Windows environment;
3. The application is required to have a Graphical User Interface (GUI);
4. The application is a multi-user system;
5. Needs the ability to generate or create appropriate error logs when they occur;
6. All software must be appropriately licensed; and
7. Application must have an on-line and batch capability.

3.11.15 HARDWARE

The system hardware must have the storage and processing capability to support the desired processes. Hardware is the physical side of the system. This includes workstations, servers and network equipment. It is assumed that the hardware currently installed at the MoLG & Its Districts Offices can be leveraged in relation to the information system. The key hardware requirements are:

1. The consultant to recommend the hardware specifications for the CBT-MIS and it is envisioned that the server hosting the HR shall be sufficient; and
2. The hardware must have sufficient capacity (disk space, memory, and processor performance) to meet the functional requirements of the MIS system.

3.11.16 DATA

The MIS should have one integrated database, both logically and physically. Data relates to the incoming data (either from interfaces or typed in), data held by the MIS and outgoing data (such as reports, files to third parties).

3.11.17 BACKUP AND RECOVERY

The MoLG must be able to backup all required data and restore service within an appropriate time frame. In any modern system, the ability to backup and recover data is a mandatory requirement. Inappropriate backup and recovery methods or systems will lead to reduce on-line window time and/or increased recovery time.

The key backup and recovery requirements are:

1. The ability to perform full and incremental backups;

2. To efficiently backup to and restore from tape;
3. A provision for data compression;
4. Backup verification;
5. Ability to batch on schedules; and
6. Flexibility in backup job initiation time to allow for extended on-line, batch or other maintenance activity.

3.11.18 TRAINING

1. MIS provider shall provide training plan to train the system users' types: technical, managerial, all employee staff, CBT directorate staff at HQ, and CBT/HR staff at the district offices; and
2. Train the trainer shall also be needed so MoLG can do training in their own.

3.11.19 AVAILABILITY

MIS must be able to cater to access needs of the users. As much as possible, availability should be based on user needs and not technical or system needs.

The key availability requirements are:

1. The system is required to be available to on-line users from 7 AM to 4 PM, Saturday to Thursday;
2. The system has to be sufficiently flexible to allow e-services, extended 24/7 hours of on-line operations.

3.11.20 NETWORK AND REMOTE ACCESS

The network must provide sufficient performance and access points. The network is an integral part of any modern application. The key network and remote access requirements are:

1. The network is switched Ethernet network running TCP/IP for local and remote users;
2. The Consultant should propose the technical infrastructure proposed for carrying out the development, testing and production environment for MIS project and implementing the application product. The consultant should suggest the minimum number of and specify the environments in the course of implementing the MIS system and recommend the database sizing for the purpose of installation, Training, and going live. The network currently deployed is specified in this report. Should the consultant require different bandwidth and networking requirements, these requirements shall be stipulated.

3.11.21 HARDWARE AND SOFTWARE SPECIFICATION

The Consultant shall submit in the technical proposal the specifications for the hardware for completing the assignment based on realistic assessment. The Hardware component should identify include: Servers, LAN, UPS, and Firewall, Air conditioners and WAN as well SAN equipment. The Software component should identify the needed Software and relevant Versions.

3.11.22 GENERAL TECHNICAL REQUIREMENTS AND CONDITIONS

The MIS software system should include the following:

1. MIS Application source code and its relevant documentation that would explain the coding done by the consultant;
2. The MIS Application that will be installed to be on executable file and/or with clear instructions of installation of the software and integrating it with the database and the Web;
3. A full licensing for the source code and any third party software or components that are included or merged within the software required, including the license for the database engines license;

4. A set of well-documented user manuals for operating the software system mentioned in item 1 above as well as training materials. Documentation shall be as follows:
5. Documentation shall follow international standards for this application;
6. User manuals shall be self-explanatory for average non-IT professionals;
7. Hardcopy manuals for using the software systems mentioned in item 1 above shall be produced and submitted to MoLG;
8. Training manuals shall be submitted for all training courses and workshops and include both trainer and trainee manuals;
9. Each hardcopy manual shall be bound in a professional easy to use style with durable covers;
10. Each hardcopy manual shall be submitted in 10 copies;
11. User and training manuals shall be submitted in electronic format on clearly labeled CDs. Materials on CDs shall be organized in an easy to search hypertext format that can be used for web information storage and retrieval;
12. Trained staff at the MoLG for operating and administering the software system mentioned in item 1 above;
13. Proposed software should not be licensed on the number of active project/ employees in the database or other licensing schema (i.e., license per user or license per CPU, etc.). The consultants should propose the best licensing scheme for the MIS project taking into consideration the MoLG will host the source code; and
14. The system should be full parameterized and less hardcode.

3.12 DATA MIGRATION AND CONVERSION REQUIREMENTS

3.12.1 DATA MIGRATION / CONVERSION

The data must be converted and loaded in such a way as to preserve the valuable information and interrelationships and to ensure good data quality through Data Target integrity and validity by:

1. Creating an import definition to upload source information from another database to MIS application data tables. The data in this current system shall be converted without the need of re-entry;
2. Running a sample import and review the results using summarized output;
3. Analyzing and anticipating some of the data dependencies and special considerations for importing; and
4. Data have to be migrated from the mentioned systems' databases into MIS. There will be considerable data cleansing time required prior to the interfaces and uploading of the data.

3.12.2 CONVERSION STRATEGY

Before planning the appropriate conversion / migration, some forms of a mapping effort should take place by the consultant to cross reference the information required by MIS to the anticipated sources of the data.

3.13 STATISTICS AND MANAGEMENT INFORMATION REPORTING

3.13.1 MAINTAIN THE APPROPRIATE REPORTING TOOLS

1. Allow on-line access to the system data through a user-friendly enquiry and reporting tool;
2. Allow formatted reports to be produced by the system;
3. Allow optional reports to be produced based on ad-hoc reporting tools that can process queries by users;
4. Allow data to be extracted into third party reporting tools for statistical analysis and manipulation (including MS Excel); and
5. Apply statistical techniques to the data (e.g. count, average and percentages).

3.13.2 DEFINE AND MAINTAIN THE REPORTING TOOL USER INTERFACE

1. Provide a user-friendly interface for the reporting tools and to find the required stored report;

3.13.3 DEFINE, MAINTAIN AND SCHEDULE MANAGEMENT AND STATISTICS REPORTS

1. Permit the maintenance of a schedule, or trigger events for regular Statistical and Management information Reports;
2. Allow reports to be formatted in a predetermined layout and style.