

MIS IMPLEMENTATION PLAN

The implementation of information technology is a complex task and needs a detailed and careful planning for successful implementation. A long-range MIS plan provides direction for the development of the systems, and provides a basis for achieving the specific targets or tasks against a time frame.

This chapter focuses on formulating a detailed plan for implementing MIS. Plan is prepared for UPID providing strategy of implementation, milestones to be achieved, detailed step-by-step action plan for each milestones and project schedule.

7.1 MIS Implementation Action Plan

The following aspects were considered while devising the MIS implementation action plan for UPID:

7.1.1 Planning the implementation

The main activities of implementation to be carried out sequentially are:

?? Evaluation

?? Acquisition and Installation

?? Testing

?? Maintenance and Control

On the other hand, activities of different independent components should be undertaken in parallel to reduce implementation time.

The major implementation tasks consist of:

?? Planning the implementation activities

?? Organising the personnel for implementation

?? Acquiring and laying out facilities and offices

?? Developing procedures for installation and testing

?? Developing the training program for operating personnel

?? Acquiring required hardware and system software

?? Designing GUI, Database and Reports

?? Obtaining data and constructing the master files

- ?? Testing of the entire system
- ?? Completing cutover to the MIS
- ?? Documenting the system
- ?? Providing system maintenance

7.2 Milestones

Key milestones for MIS implementation plan are listed below.

- ?? Site selection/Data centre
- ?? Providing facilities at office
- ?? Project staffing
- ?? Initial training program
- ?? Change management
- ?? Business Process Study and Strategy Formulation
- ?? Setting up communication network
- ?? Development/customisation and Acceptance testing of software solution
- ?? Hardware acquisition
- ?? Other Software* acquisition
- ?? RDBMS, GIS, CAD and Modelling S/W acquisition
- ?? Hardware installation
- ?? Other Software installation
- ?? RDBMS, GIS, CAD and Modelling S/W installation
- ?? Training
- ?? Application system implementation
- ?? Data Collection, Data Conversion & Migration and Data Entry

* Other software includes software for Messaging, Hindi fonts etc.

7.3 Stages of Implementation

To achieve the milestone through action plan we need to carry out implementation activities in the following stages:

7.3.1 Stage 1 – Site preparation

- ?? Site selection/Data centre
- ?? Providing facilities at office. (like cabling, furniture etc.)

7.3.2 Stage 2 – Organisation staffing and training

- ?? Project staffing
- ?? Initial training program

7.3.3 Stage 3 – Change Management and Business Process Study

- ?? Change management
- ?? Business Process Study and Strategy Formulation

7.3.4 Stage 4 – Setting up communication network

- ?? Installation of Wide Area Network (WAN)
- ?? Installation of Local Area Network (LAN)

7.3.5 Stage 5 – Acquisition

- ?? Development/customisation and Acceptance testing of software solution
- ?? Hardware acquisition
- ?? Other software acquisition
- ?? RDBMS, GIS, CAD and Modelling S/W acquisition

7.3.6 Stage 6 – Installation

- ?? Hardware installation
- ?? Other Software installation
- ?? RDBMS, GIS, CAD and Modelling S/W installation

7.3.7 Stage 7 - Implementation

- ?? Training
- ?? Application system implementation
- ?? Data Collection, Data Conversion & Migration and Data Entry

7.4 Action steps for milestones

Action steps state how implementation is to be carried out. As mentioned earlier, some of the activities can be taken up in parallel to other activities to reduce implementation time.

It is recommended that activities follow the sequence mentioned below:

7.4.1 Site preparation

The first stage is Site preparation and layout of equipments/facilities at office without which no MIS activities can proceed. This is an entry criteria for all subsequent stage. Site selection should be followed by providing resources.

7.4.1.1 Site selection/Data centre

- ?? Prepare specifications for Data Centre
- ?? Identify suitable location for setting up information technology department
- ?? Acquire the location
- ?? Develop Data Centre as per the specifications.

7.4.1.2 Providing resources

- ?? Data for infrastructure development.
- ?? Identify the resources required (like cabling, furniture etc.)
- ?? Procure the resources
- ?? Install the resources

7.4.2 Organisation staffing and Training

Organisation staffing should follow site preparation. Adequate trained staff is required for managing Information System. These resources will assist in all future MIS implementation related activities.

7.4.2.1 Project staffing

- ?? Identify roles and responsibilities for information technology personnel.
- ?? Identify persons for information technology
- ?? Assign roles to persons identified

7.4.2.2 Initial training program

- ?? Prepare training plan

- ?? Training need to be identified based on persons past experience, roles and work assigned
- ?? Suitable vendor should be identified for providing initial training to individuals
- ?? Conduct training sessions
- ?? Measure effectiveness of training

7.4.3 Change management and Business Process Study

- ?? Initiate change management
- ?? Initiate Business Process Study and Strategy Formulation and its implementation

7.4.4 Setting up communication network

Section 7.4.4.1 and 7.4.4.2 describe action steps for setting up the communication network for UPID. This will form the backbone for further information technology implementation.

This activity should only be started once individuals are identified for project and various works/activities are assigned to them.

7.4.4.1 Installation of Wide Area Network (WAN)

- ?? Identify locations for WAN
- ?? Plan WAN Architecture
- ?? Plan phases and schedule for WAN Implementation
- ?? Prepare Request for proposal (RFP) for installation of WAN
- ?? Invite bids from vendors
- ?? Evaluate and place order with vendors
- ?? Prepare site for installation of WAN equipment
- ?? Install WAN
- ?? Test and commission WAN

7.4.4.2 Installation of Local Area Network (LAN)

- ?? Identify locations for LAN
- ?? Acquire building plan and site plans
- ?? Plan LAN Architecture

- ?? Plan phases and schedule for LAN Implementation
- ?? Prepare RFP for installation of LAN
- ?? Invite bids from vendors
- ?? Evaluate and place order with vendors
- ?? Prepare site for installation of LAN equipments
- ?? Install LAN
- ?? Test and commission LAN

7.4.5 Acquisition

The acquisition/procurement process must precede the implementation schedule by the estimated lead-time required before the milestone of the implementation schedule.

7.4.5.1 Development/customisation and acceptance testing of software solution

- ?? Identify the requirement of packaged system/customised solution

Depending on the application system requirement of UPID, action plan for acquisition of two option are given below:

a. Requirement of a packaged solution involves the following action steps:

- ?? Package requirement
 - Prepare RFP
 - Invite bids
 - Evaluate bids
 - Select application package
 - Initiate the project
 - Place order for application package
 - Analyse the gap
 - Customise
 - Receive delivery of application package

- ?? System/ Integration and Acceptance testing

- ?? Data Collection, Data Conversion & Migration (refer section 7.4.7.3)

b. Requirement of a customised solution involves the following action steps:

?? Vendor selection

- Prepare RFP
- Invite bids
- Evaluate bids
- Select vendor and place order

?? Requirements analysis

- Project plan preparation
- Requirements definition and analysis
- Preparation of software requirement specifications (SRS)
- SRS acceptance

?? Design

- High level design
- Low level design
- Design acceptance

?? Construction

- Coding as per SRS and Design
- Unit testing

?? Data Collection, Data Conversion & Migration (refer section 7.4.7.3)

?? Testing

- System/Integration testing
- Acceptance testing

7.4.5.2 Hardware acquisition including preinstalled software

?? Select H/W configuration

?? Prepare RFP

?? Invite bids from hardware vendors (for servers, PCs etc. for messaging and MIS)

?? Select hardware vendor and the models

- ?? Place order with hardware vendors
- ?? Prepare site for H/W
- ?? Complete cabling for H/W
- ?? Take delivery of H/W.

7.4.5.3 Other Software acquisition

- ?? Identify software requirements.
- ?? Prepare RFP
- ?? Invite bids from software vendors
- ?? Evaluate and place order with vendors
- ?? Place order with software vendors
- ?? Take delivery of software

7.4.5.4 RDBMS, GIS, CAD and Modelling S/W acquisition

- ?? RDBMS, GIS, CAD and Modelling S/W
- ?? Prepare RFP
- ?? Invite bids from vendors
- ?? Evaluate and place order with vendors
- ?? Receive RDBMS, GIS, CAD and Modelling S/W

7.4.6 Installation

Installation should follow acquisition of Hardware, Packaged/Customised solution, Messaging solution, Other Software, RDBMS, GIS, CAD and Modelling S/W.

7.4.6.1 Hardware installation

- ?? Install H/W (base computer configuration).
- ?? Install operating system and system software
- ?? Establish connectivity between H/W
- ?? Conduct hardware tests
- ?? Augment hardware configuration

7.4.6.2 Other Software installation

- ?? Install software (Packaged/Customised, Messaging Solution and Other software) on server and PCs
- ?? Conduct software tests to ensure successful installation

7.4.6.3 RDBMS installation

- ?? Install RDBMS on H/W
- ?? Test for successful installation

7.4.6.4 GIS installation

- ?? Install GIS on H/W
- ?? Test for successful installation

7.4.6.5 CAD and Modelling S/W installation

- ?? Install CAD and Modelling software on H/W
- ?? Test for successful installation

7.4.7 Implementation

This phase deals with implementation of Management Information System. All activities related to testing (system testing and integration testing) of application system, data creation, training to staff and data migration would be put into action at this stage.

7.4.7.1 Training

Training of software concepts will be outsourced to training vendor. The vendor who has developed it, shall provide application software training.

- ?? Identify training needs for these personnel (Basics computer and Application Software)
- ?? Prepare RFP
- ?? Invite bids from vendors
- ?? Select the vendor
- ?? Conduct training through vendor
- ?? Measure effectiveness of training

7.4.7.2 Application system implementation

Action Plan for implementation of packaged/customised solution are listed below:

a. Implementation of a packaged solution involves the following action steps:

- ?? Data migration
- ?? User acceptance support
- ?? Production Go-live
- ?? Roll out
- ?? Conduct parallel runs
- ?? Post implementation support

b. Implementation of a customised solution involves the following action steps:

- ?? Implementation
 - Installation of modified software on the server and PCs
 - User training
 - Assist users in accepting the application software
 - Conduct parallel runs
- ?? Post-implementation
 - Fix bugs (if any)
 - Meet enhancement needs
 - Assist in training users
 - Maintenance and Support

7.4.7.3 Data Collection, Data Conversion & Migration and Data Entry

Data Collection, Data Conversion & Migration and Data Entry activity should start in parallel with acquisition of packaged/customised solution. In case of packaged solution data collection should start after acquisition of packaged solution whereas in case of customised solution data Collection should start after High level design (HLD) is completed. This will reduce wait time during implementation phase.

Action steps associated with Data Collection, Data Conversion & Migration and Data Entry are detailed below:

- ?? Preparation of Data Format
- ?? Data Collection
- ?? Minimum Data Entry/Data Creation required for system to go live
- ?? Data Conversion & Migration
- ?? Prepare RFP for data entry (for data other than minimum data entry)
- ?? Data Entry (for data other than minimum data entry)

7.5 Project Schedule

Project Schedule shown below gives time line by which each milestone and project activity is estimated to be implemented. Time line for each milestone is spread across months showing no. of months required to accomplish the task/activity/milestone.

Project Staffing and Training is an ongoing activity. This will be planned throughout the lifecycle of the project as and when the need for such is felt by UPID.

Bar chart representation of Project Schedule for Phase1 and Phase2 is depicted in Appendix L.

After completion of Phase2 of the Project, next 12 months will be dedicated for Project support.

After completion of Phase3 of the Project, next 6 months will be for handing over MIS system to UPID.

Note: Activity start time assumes that all pre-requisite work (like bidding and evaluation) has been completed and actual work has started.

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