

MINISTRY OF COMMUNICATIONS, SCIENCE AND TECHNOLOGY

DEPARTMENT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY

Concept paper

PC PROJECT IN LESOTHO

Cooperation between
The Ministry of Communications, Science and Technology
and
Technology Observatory (Canton of Geneva, Switzerland)

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1 BACKGROUND AND JUSTIFICATION

1.1 Project History/Origin

The Director of Science and Technology, through her representation of Lesotho on the United Nations Conference for Trade and Development (UNCTAD) Science and Technology Commission, formed a partnership with UNCTAD whose aim was to source assistance in developing the country in the field of Science and Technology and ICT.

On the 20th to 26th February 2005 a Mission from Geneva visited the Ministry of Communications Science and Technology (MCST). The Mission was made-up of the following people:

- **Dr. Jean-Marie Leclerc:** Director General of Canton of Geneva Centre for Information Technology (CTI).
- **Dr. Dominique Hausser:** Scientific and Methodological Counsellor, Technology Observatory (TO), Canton of Geneva.
- **Dr. Mongi Hamdi:** Chief, Science and Technology Section, Division on Investment, Technology & Enterprise Development for UNCTAD.

The aim of the mission was to conduct a cursory inspection of Information and Communication Technologies (ICT) development in the country and to discuss possible areas of corporation.

This mission concluded that Technological Observatory would support the Ministry of Communications, Science and Technology by:

- Coaching by Dr Dominique Hausser who will come to Lesotho to formulate a strategic action plan and concretise the project.
- Training of three people. The people to go for internship training in Geneva would be identified by Dr. Dominique Hausser's visit; re-assessed of the exact nature of training would be conducted, because of the changed role that these people are going to play in the project.
- Infrastructural Support (100 PCs to be given for distribution to various specific projects or structures)

The Minister of MCST would visit Geneva to attend the UNCTAD Science and Technology Commission and visit to Geneva Centre of Technology of Information (CTI) in order to get a better understanding of CTI and TO. The visit would also include visits to other relevant organisation in the Sector.

1.2 Current Situation

Dr. Dominique Hausser arrived in the country on the 8th May 2005, to depart on the 20th May 2005. The purpose of the mission is:

- To develop a clear programme of collaboration by developing a Strategic Action Plan for the programme support.
- To concretise the organisational arrangements and management structures of the programme.
- To re-evaluate the training programme identified earlier.

1.3 Policy Fit

The Government of Lesotho has developed ICT Policy as a tool to enable Lesotho to achieve its development goals as articulated in the Lesotho Vision 2020 Policy Document and the Poverty Reduction Strategy Paper. Cabinet approved the ICT Policy document in April 2005 as a working document.

With particular reference to infrastructure improvements, the ICT Policy notes that without the relevant infrastructure it becomes impossible to deliver telecommunications, broadcasting, computing, and information services such as the Internet, digital television, distance learning, etc. At present, Lesotho's physical infrastructure remains underdeveloped and limited in coverage despite the restructuring of the sector, which resulted in the privatization of the fixed line operator in 2001.

Lesotho also lacks the adequate Human resources capacity to attend to ICT development in the country. As a relatively new sector in the country, very few people are educated in this area. The situation has resulted in very low level of ICT literacy.

1.4 Stakeholder Analysis

The partners that have been identified in this project are divided into 3 three levels.

1.4.1 At Bilateral Cooperation Level

These being MCST and TO in concretising the project, commitment should be ensured from the two main partners.

1.4.2 Coordinating Level

The Ministries, which will be involved in the actual implementation, will be called on to participate in the Inter Ministerial ICT Coordination Committee. Their full cooperation will be required as some of the resources that will be requested will be from them. This includes (financial, HR...).

These Ministries are:

- Ministry of Communications, Science and Technology (MCST)
- Ministry of Finance and Development Planning (MoF)
- Ministry of Education and Training (MoE)
- Ministry of Health and Social Welfare (MoHSW)

1.4.3 *Management Level*

The management of the project is run by the ICT department of MCST with the assistance of the S&T department.

1.4.4 *Implementing Level*

This refers to the actual implementing agencies, or institutions in the project, these are the actual beneficiaries of the project:

- High Schools (to be selected by MoE, which will have to define the criteria of selection)
- Tertiary Institutions (Lesotho College of Education [LCE], Lerotholi Polytechnic[LP])
- Health Centres (one Government establishment in each of the 10 districts)
- Post Offices (10 post offices to be selected by MCST)

2 HIERARCHY OF OBJECTIVES

2.1 Project Goal

The goal of this project is to improve access to ICTs in Lesotho.

2.2 Project Purpose

The purpose of the project is to facilitate access to Information and Communication Technology to the Basotho nation. This project will be one of the first concrete actions deployed by the ICT department to achieve the objectives defined in the ICT policy document and to concretise the implementation plan.

2.2.1 Provision of PCs

Originally, 100 PCs were promised to MCST, this figure has doubled and includes the following:

- 200 PCs PIII VE 500-600, RAM 128 MB or probably 256 MB, hard disk (8.4 GB or more), Network card, Graphic card
- 20 PCs (same configuration) as spare part
- 200 Monitors 17" various models
- 200 Keyboards
- 200 Mouse (to be confirmed by TO)
- 10 Printers HP 4L and/or 5L
- 40 Hub (10 with 16 connections and 30 with 8 connections)
- 25 Sound cards (one PC in each identified structure)
- Networking Cable (to be confirmed by TO)
- Linux integrated free environment (LIFE) Package v1.0
(<http://isf.cern.ch/isf/?q=node/view/16>)

2.2.2 Training

There is a need of training the team of the Technical Division of the ICT department. Assistance is requested from TO with regard to the help of 2 people who understand well the LIFE package and are also good with hardware to provide training to the Technical Division Personnel and the computer staff and teachers of the Tertiary Training Structure. This training will be focused on the installation of LIFE and the needed configuration by the end users. An emphasis will be put on how to create new templates according to the needs of end users.

A basic training is needed for one person of each of the structure receiving PCs in order to be able to assure a basic maintenance. This will concern about 50 persons. The training programme will be ready before the end of September 2005 in order to have the persons trained before the PCs' deployment. This training will be given by local trainers assisted by the staff of the Technical Division. The training will be focused on basic

maintenance of the infrastructures and software used by the end users and give the people a basis to assist the end users.

2.2.3 Coaching

This involves mentoring that will be provided by Dr. Dominique Hausser during the entire life of the project. The support will be adapted according to the evolution of the project (mission in Lesotho or/and at distance support).

2.3 Project Outputs

The main outputs of the project include:

- Establishment of a strong Technical Division of ICT Department
- Information libraries available in High Schools
- Teachers that are ICT literate
(through introduction of courses at Lesotho College of Education)
- ICTs used by teachers for transfer of knowledge to students at high school level
- ICT literate high school students
- ICT access points available at community level through Post Offices Telecentres
- Computers available at Health centres for clinical, epidemiological and administrative purposes.

2.4 The Logical Framework

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means Of Verification (MOV)	Important Assumptions
Goal: Increased Access to ICTs and Information	200 PCs Distributed by Dec. 2005 ICT training in High Schools Automated records in Health Centres ICT literacy courses at LCE	MCST report MoE reports MoHSW reports MoE reports	PC's arrive in Nov. 1 st , 2005 Configuration complete by Dec. 2005 ICT Teachers available Has staff ICT literate All teachers are trained
Purpose: Effects of project on beneficiaries that lead to the goal.	Indicators that verify beneficiaries change	Source of data to verify status of objective level.	External factors necessary for implementation
Computers in Schools (60 PCs) Students ICT literate Improved methods of teaching Availability of wider source of Information	No. Students able to use PCs No. Teachers using ICTs for training students No. Of users of Information libraries	MoE	Availability of PC's Availability of Teachers Availability of maintenance support Availability of utilities ICT curriculum Developed
Computers in Health Centres (5*10=50 PCs) Proper patient record keeping Improved administrative procedures (inventory, financial management).	Patient database Clinical records Epidemiological records Up-to-date financial records Up-to-date inventory lists, more coordinated supply of medicines	MoHSW reports	Health centre staff are ICT literate Patient database management system developed Financial management system developed
Computers at Tertiary Training Institutions LCE, LP (30*2=60 PCs) Increase ICT literacy at tertiary level Improve capacity user Provide maintenance support Provide up-to date information libraries for assignments/research	No. Students with ICT qualifications No. of People able to provide ICT support No. of Teachers able to teach ICT No. Of Teachers using ICTs for training purposes. No. Of users of Information libraries.	MoE	Training or trainers provided ICT curriculum Developed

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Computers at Les. Post Services Telecentres (3*10=30 PCs) Provide ICT access points in rural communities Improve range of services available in rural communities	No. of Telecentres through LPS at District Level. No. of users at community level No. of services available in rural communities	MCST - LPS	LPS staff ICT literate
Outputs: Final product of output that leads to the attainment of the objective.	Indicators to verify accomplishment of output in quality, quantity, time etc.	Source of data to verify outputs.	External factors necessary for the accomplishment of output.
Technical Division established Information libraries in High schools Teachers that are ICT literate ICTs used by teachers for transfer of knowledge at high school level ICT access points available at community Improved Health centres Administrative processes.	Improved technical support for government Increased quantity of information, research sources available Improved quality of Teachers Improved quality of Training Increased e-readiness Improved record keeping Efficient management practices	MCST - ICT MoE MoE MoE MCST - LPS MoHSW	Maintenance of PC up to date Download of Up to date information
Activities: Actions that can be undertaken to attain outputs.	Resources Required	Source of data to verify activities.	External factors necessary.
Project Documentation finalized and signed by MCST & GOL	Dev. Of Project Proposal	MCST / TO	All info necessary for development of Project plan.
Workshop/Meeting with stakeholders	Finances	MCST - ICT	All stakeholders attend
Formulation of (inter Ministerial) Supervisory Committee	TOR	MCST Coordinating	Political support & Commitment
Appointment of full-time project manager	Finances	MCST Report	Availability of HR & finances
Training of Trainers	Identification of courses Finance to cover costs Financial support on Project	MoE	Trainers available in Schools
Training of Maintenance crew and appointment as the technical division of ICT	Identification of courses Finance to cover costs Financial support on Project	MCST – ICT Technical Division	HR availability

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Set-up of PC Configuration and maintenance workshop which will operate as the technical division of ICT	Facilities/space Acquisition of Maintenance equipment Appointment of Maintenance HR Financial support for running facility Vehicle	MCST - ICT Technical Division	Availability of Maintenance equipment
Transportation of PC's to Identified beneficiaries	Identification of Partners (Schools / HSAs) Transport vehicles to Areas Security of areas ensured Availability of basic utilities ensured Acquisition of other resources ensured	Project manager (MCST)	Quality of PC ascertained after Configuration
Monitoring and evaluation	Supervisory committee & Project manager Conducts initial research on installation Conducts research after, on quarterly bases TO Monitors Annually	MCST report to TO TO reports	

3 PROJECT DESCRIPTION AND RESOURCE REQUIREMENTS

3.1 Resources Requirements

All stakeholders will have to precisely define their needs at all levels in:

- Human Resources
- Equipment
- Finance

This process will be achieved before the end of October 2005. The project manager is in charge to collect and consolidate all the information and to present them to the Inter Ministerial ICT Coordinating Committee.

3.2 Description of Management Structure

- **Monitoring Committee:** the Inter Ministerial ICT Coordination Committee will be the main supervisory and monitoring agency.
- **Coordination Agency** is the department of ICT in the Ministry of Communications Science and Technology which include the Technical Division.
- **Implementing Agency** will be the various institutions identified as the main beneficiaries of the PC's.

3.2.1 *Inter Ministerial ICT Coordination Committee*

The committee is composed by a representative of:

- MCST-ICT department (chair person)
- MCST-S&T department
- MCST-Planning unit
- MoF
- One representative of Ministries involved in the project
- Project Manager (to assist the committee)
- Technical Division Manager (to assist the committee)

3.2.1.1 **Terms of references**

- To advise the Project Manager in questions raised all along the project
- To ensure that the defined objectives are reached.
- To advise on the pre final version of the Work Plan
- To finalise the choice of places and the purpose of use of the PCs.
- To debrief on the project.

Meetings can be organised on request of the project manager or one member of the Inter Ministerial ICT Coordinating Committee supported by the chair person.

3.2.2 *Project Manager in the Coordination Agency*

Senior Business Analyst is in charge of the project.

The terms of reference are:

- To supervise the implementation and the maintenance of all digital infrastructures
- To coordinate and supervise the collection and distribution of knowledge, information and data useful for the administration and other public services (in other word to build an information system).
- To achieve these objectives, she will have to accomplish the following general tasks:
 - a. To define the detailed tasks including needed resources in terms of personal, infrastructure, financial aspects (for completing the initial investment and for the maintenance).
 - b. To define the location of the PCs and for which purposes they will be used.
 - c. To assist the establishment of the Technical Division of the ICT Department
- In a first step, to organise the collection and distribution of data to the places where the PCs are located in relation with the purposes of use and the needs of the end users.
- To define the needed profiles to be installed according to the needs, in order to be able to prepare them during the finalisation of version 1.0 of LIFE.
- To organise the Information System of the Lesotho administration in starting using the Geographic Information System (GIS) developed by MoE, adding a layer with information on the project.

3.2.3 *Manager of the Technical Division of ICT Department (MCST)*

The profile of the Manager: ideally, should be a computer engineer, with some experience in management.

This structure will become the one in charge of deploying and maintaining the ICT of the ministries and other public structures.

The Manager will be in charge:

- To establish the Technical Division (recruiting staff, finding the location, acquiring the necessary material).
- To set up the PCs with the decided software and the convenient configuration according to the use of the PCs.
- To deploy the PCs where they should be.
- To assure the maintenance of the informatics infrastructure (hardware, software), which means also to have updated information on the deployed infrastructure.

3.3 Implementation Schedule

Implementations schedule below only shows the main activities, but as identified on the log frame, subcomponents exist which will have to be fitted in so that the main activity is completed in the specified time.

3.3.1 Activities/Time Schedule

Activities	M	J	J	A	S	O	N	D	J
Project Documentation finalised and accepted by MCST	x								
Formulation of Inter Ministerial Committee		x							
Identifying the Technical Division Manager				x					
Workshop/Meeting with stakeholders					x				
Set-up of the Technical Division (including equipment requirement)					x				
Reception of a probably beta version of LIFE for start of training					x				
Detailed work plan including deployment of PCs & other material						x			
Training of Maintenance crew and appointment on Project					x	x	x		
Training of trainers and responsible of infrastructures on site						x	x		
Receipt of PCs (Acquisition at port and TAX exemption)							x		
Configuration of PCs							x	x	
Transportation of PC's to Tertiary Institutions							x	x	
Schools							x	x	
LPS Telecentres							x	x	
Health centres							x	x	
Budget 2006-2007: Inclusion of maintenance and development of needed resources for the defined projects									x

4 MONITORING AND EVALUATION

The monitoring and the evaluation will be completed by the Project Manager.

The success of the project will be confirmed if the targets defined in paragraph 3.2 are reached.

5 REFERENCES

- **Hausser D.** Mission in Lesotho report, Technological Observatory, Geneva, **14 March 2005.**
- **Ministry of Communications, Science and Technology:** Lesotho Information and Communications Technology Policy **April 2005;** <http://www.Lesotho.gov.ls>.
- **Ministry of Communications, Science and Technology:** Lesotho Information and Communications Technology Policy Implementation Plan; **draft, May 2005.**