

INFORMATION COMMUNICATION TECHNOLOGY PLAN

2011 - 2012



National Building Research Organisation
99/1, Jawatta Road
Colombo 05

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TABLE OF CONTENTS

1.0 INTRODUCTION.....	3
1.1 BACKGROUND	3
1.2 Current ICT Architecture:	3
1.3 VISION.....	3
1.4 GOALS	3
2.0 ICT MANAGEMENT WITHIN NBRO	4
3.0 LIFE CYCLE MANAGEMENT OF DATA/INFORMATION COLLECTED/PRODUCED BY NBRO .	6
4.0 DATA ADMINISTRATION	7
5.0 PROCEUREMENT OF NECESSARY ICT RELATED SOFTWARE AND EQUIPMENT	8
6.0 ESTABLISHING COMMUNICATION INTERFACE	8
7.0 CAPACITY DEVELOPMENT.....	9

1.0 INTRODUCTION

1.1 BACKGROUND

The Government of Sri Lanka introduced the e-Sri Lanka and e-Government concept for adopting information communication technology (ICT) to improve the efficiency and effectiveness of government institutions and to make the government services easily accessible by the citizens of this country. As a result, policy and procedures for ICT usage in the government institutions were tabled in December 2009. Implementation of the Government's ICT policy within the National Building research Organisation (NBRO) and in the other institutions under the Ministry of Disaster Management was commenced in October 2010. Consequently, NBRO's ICT plan was documented to depict how NBRO adopts ICT to deliver her services more efficiently and effectively to the nation.

1.2 Current ICT Architecture:

Before the year 2000, NBRO had a separate ICT division, namely the Computer Division, to implement and maintain the ICT oriented activities within NBRO. While catering mainly for the Landslide Hazard Mapping Project (LHMP) of NBRO, the Computer Division, by conducting training programmes, supported the staff of other divisions to improve their computer literacy in word processing, spread sheet applications, database management, and computer aided drafting. The computer cluster at that division was heavily utilized by the NBRO staff for their ICT needs. The staff of the Computer Division supported NBRO staff in troubleshooting any software or hardware related problems. Between the years 2000 – 2002, under the Sri Lanka Urban Multi Disaster Mitigation Project (SLUMDMP), the computer division had been facilitated by the Asian Disaster Preparedness Centre (ADPC) in Thailand with a dedicated ISDN infrastructure for accessing the Internet. After the computer division was dissolved in the year 2001, each division of NBRO developed its own ICT cluster to cater the divisional ICT needs. At present, about 90% of the staff have the access to computers and have at least the basic ICT skills. Within the current ICT architecture, these separate ICT clusters have been networked and provided with internet access via ADSL. Commercial office software is commonly used by almost all the divisions of NBRO and technical divisions additionally use GIS, scientific and engineering software pertaining to the divisional expertise. Open source software is not presently used by NBRO.

1.3 VISION

"ICT for creating disaster free safe shelter"

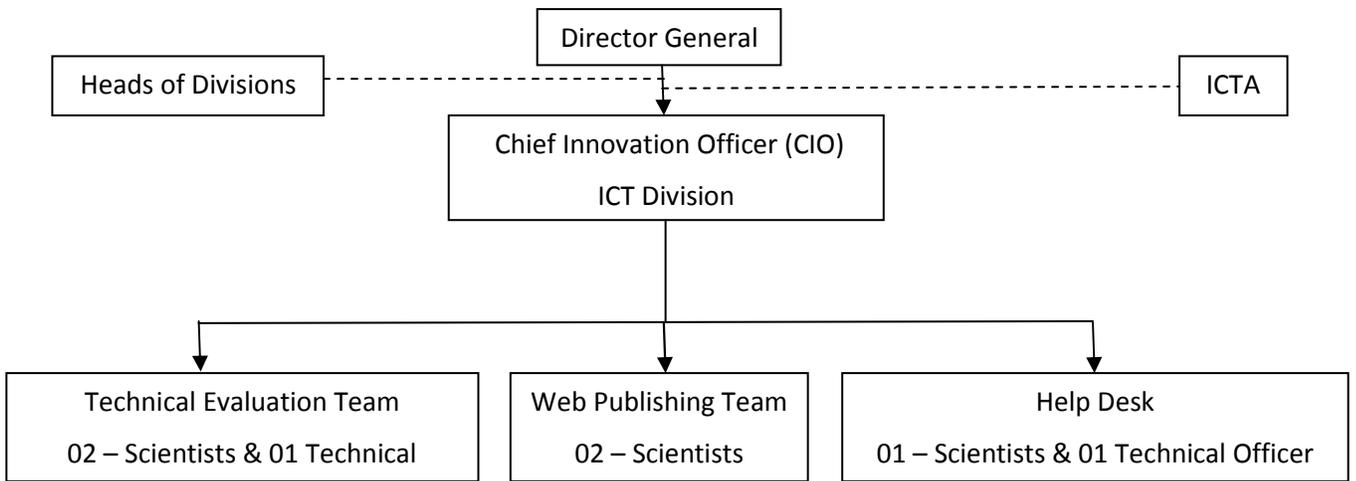
1.4 GOALS

In her mission of proficiently contributing to the development of our country, NBRO, as a leading research and development institution, has a goal of using ICT at its maximum to empower her scientific and administrative data management infrastructure and provide citizens, clients, and the employees with timely, convenient access to appropriate information and services.

2.0 ICT MANAGEMENT WITHIN NBRO

Facilitating the ICT management within NBRO and to ensure the sustainability of the Government policy, a virtual ICT division will initially be established at NBRO under the direct purview of the Director General. Establishment of a permanent ICT division will be considered later by the management based on the need. The ICT division is charged with delivering quality and innovative information technology solutions that provide NBRO staff as well as her clients with solid technical capabilities that ensure the integrity of NBRO's information, service efficiency and convenient access to appropriate information and services.

The virtual ICT unit will be lead by a senior scientist who will be the chief innovation officer (CIO) for NBRO. The ICT activities will be carried out by three teams namely, the technical evaluation team, web publishing team and the help desk. The organization structure of the proposed ICT division is as follow.



The CIO is responsible for promotion and development of ICT within the organization. He or she is the focal point for ICTA's re-engineering Government programme. CIO will liaise on with ICTA in this regard for at least every 3 months or as and when necessary.

The technical evaluation team is responsible for scrutinizing the available ICT facilities, their productivity, and additional ICT requirements of all the divisions in NBRO and suggesting improvements to ensure efficient communication and quality service to clients and as well as the staff of NBRO. The technical evaluation team will support the CIO in coordinating and managing any outsourced ICT projects by NBRO. The same team will act as the Technical Evaluation Committee (TEC) for procurement of any ICT equipments.

The web publishing team will be responsible for updating the web contents and maintaining the LAN for inter-divisional communications. The web publishing team is also responsible for Information life cycle management of NBRO. The web publishing team should closely work with other divisions for preparation of standard formats for future collection and storage of data for efficient retrieval and to avoid duplication of data collection. The same team with the support of relevant divisional staff should structure the already available data into the above prepared standard formats. This will be carried out, after careful inspection, updating, and ensuring the integrity of such data.

ICT help desk provides NBRO staff with the operational support relevant to software, hardware and network services. The help desk will attend to each and every ICT related problems encountered by the staff of NBRO and take prompt actions to solve the problem. Whenever the problem cannot be solved within one hour, the HOD or the CIO should seek the possibility of providing the respective staff member with a spare computer with required software to avoid any delay in his or her work.

The ICT unit is responsible for formulating and implementing NBRO's ICT plan which will be reviewed at least once a year by a committee which is broadly representative of all the HODD of NBRO and key representatives of the ICT unit. The Committee will be charged to determine not only if the plan's objectives were met during the previous year, but also what changes are required to reflect the dynamic nature and the uses of ICT.

The objectives of the plan may not have been met because the costs were greater than projected, there were critical staff vacancies, or needs changed. All of these are reason for corrective action. The committee should also solicit information about changes outside the institution which may impact on NBRO's ICT Plan.

List of officers appointed for the virtual ICT Division and their assigned teams are listed in the following table.

Name	Position	Division	Team
1. Kumari M. Weerasinghe	Scientist	LSSD	CIO
2. G.R.P. Perera	Scientist	LSSD	Web Publishing Team
3. R.M.S.K. Ratnayake	Scientist	LSSD	Help Desk
4. Jude Prasanna	Scientist	HSD	Technical Evaluation Team
5. Dinesh Hemachandra	Scientist	LSSD	Web Publishing Team / Technical Evaluation Team
6. H.R. Maduranga	Scientist	GED	Technical Evaluation Team
7. Amali Jayasinghe	Scientist	ED	Web Publishing Team
8. Asanka Wickramasinghe	QS	PMD	Technical Evaluation Team
9. D.M.L. Bandara	DEO	LSSD	Help Desk

TOR for the officers appointed to different teams of the virtual ICT unit:

Chief Innovation Officer

1. Promotion and development of ICT within the organization.
2. Draft and update when necessary the ICT plan
3. Implementing the ICT plan
4. Guiding the staff assigned for each team of the ICT unit to carry out their tasks
5. Once a year, appointing a committee which is broadly representative of all the HODD of NBRO and key representatives of the ICT unit and review the ICT plan
6. With the appointed committee, solicit information about changes outside the institution which may impact on NBRO's ICT Plan.

7. Evaluation of existing ICT facilities and take necessary action for improvements
8. Evaluation of available ICT skills and take necessary action for skill development
9. Maintaining and updating the official website

Technical Evaluation Team

1. Scrutinizing the available ICT facilities, their productivity, and additional ICT requirements of all the divisions
2. Suggesting improvements for upgrading ICT facilities to ensure efficient communication and quality service to clients and as well as the staff of NBRO.
3. Support the CIO in coordinating and managing any outsourced ICT projects by NBRO.
4. Act as the Technical Evaluation Committee (TEC) for procurement of any ICT equipments.

Web Publishing Team

1. updating the web contents
2. Maintaining the LAN for inter-divisional communications.
3. Information life cycle management of NBRO.
4. Closely work with other divisions for preparation of standard formats for future collection and storage of data
5. Careful inspection, updating, and ensuring the integrity of already collected data and structure them into the above prepared standard formats.

ICT help desk

1. provide NBRO staff with the operational support relevant to software, hardware and network services.
2. Attend to each and every ICT related problems encountered by the staff of NBRO and take prompt actions to solve the problem.
3. Whenever the problem cannot be solved within one hour, with the consultation of the HOD and/or the CIO seek the possibility of providing with a spare computer with required software to avoid any delay in work.

3.0 LIFE CYCLE MANAGEMENT OF DATA/INFORMATION COLLECTED/PRODUCED BY NBRO

All the technical divisions of NBRO daily collects scientific and non scientific data, analyse the collected data to produce information useful to the general public and/or the scientific/technical community for decision making. In addition Human Resource Management Division and the Finance division also maintain data bases that are important for management of the organisation. Therefore, it is important to ensure the life cycle management of this data and information. The following activities are suggested to achieve this objective.

The multi disciplinary nature of the organisational activities requires tailor made ICT applications to deliver the services. Therefore, understanding the nature of different activities, existing methodologies of capturing and disseminating information, and existing ICT capabilities need to be scrutinized for automating the institutional functions and to make ICT oriented business methods a reality.

Scrutinizing the available data/information within the organisation and preparation of standard formats for future collection and storage of data for efficient retrieval and avoid duplication of data collection.

Structuring of the already available data into the above prepared standard formats will be carried out, after careful inspection, updating, and ensuring the integrity of such data.

Data capturing and information dissemination will be done using any of the three languages. It is required to use uni cords for capturing and dissemination of data in Sinhala and Tamil languages to ensure smooth transition among different platforms.

The government requirement is that, information created and stored by the organization, Stored and archived, as per National Archives Act No. 48 of 1973 and representation of dates, time and time zone using ISO 8601 standard. Therefore, an awareness programme needed to be carried out to make the staff aware of the organizations' electronic record-keeping requirements.

Ensuring that NBRO has the intellectual property (IP) rights of information systems developed
Establish strategic partnerships between the stakeholder institutions and NBRO.

Evaluating the functional commonality between NBRO and research organisations, establishing online inter-institutional communication can be leveraged to maximize the productivity of NBRO employees and improve customer services. Establishing online communication between NBRO & other research institutions also will be carried out for facilitating research.

4.0 DATA ADMINISTRATION

NBRO will prepare guidelines for data administration ensuring the confidentiality, quality and integrity of data and establishing necessary infrastructure for availability of data to those who are authorised to access.

Establishing a mechanism for delivering possible information and services through many channels including web, mobile, voice, e mail, Lanka Gate and Country Portal (www.srilanka.lk and www.lk) IPTV and social media.

Structuring the information that can be delivered by using telephone short code 1919 and also by mobile telephone based information (through SMS)

Structure the services that can be enabled on 24/7 basis

Any party who is carrying out ICT related activities (development, net working, system support, maintenance) at NBRO should enter into a contractual agreement with NBRO for non disclosure of information owned by NBRO.

Data backing up facility in a location outside the NBRO will also be arranged.

Information security policy to secure information from hacking or any other illegal activity should be in place and implemented. Taking adequate measures in the information systems to safe guard the privacy of citizens is also necessary.

5.0 PROCUREMENT OF NECESSARY ICT RELATED SOFTWARE AND EQUIPMENT

The proposed technical evaluation team should scrutinize the available capacity of hardware and software within NBRO and recommend additional software and hardware to be purchased based on the need for smooth implementation of e Government policy within NBRO.

Software

Office and GIS software are commonly used for NBRO's functional requirements. Other specific scientific and engineering software are used by the technical divisions to carry out activities pertaining to divisional expertise. New and replacement software is sourced on the basis of aptness for purpose and value for money. Even though the present preference is to use the commercial software, use of open source collaborative software is needed to be gradually introduced to overcome the increased cost of vendors' license. Whenever commercial software is used vendor-based maintenance contract arrangements should be financed to receive quality support and timely updates. Possibility of obtaining site licences and contractual agreements to be solicited.

Hardware

NBRO uses commodity hardware sourced via competitive tender on the open market. Industry standard life cycle management is used. Hardware support is provided by the vendor based on a mixture of warranty and support contract arrangements which should also be financed by NBRO.

NBRO will allocate 5% of the general budget each year for financing the ICT requirements of the institution.

ICTA will be invited to represent in Technical Evaluation Committees (TEC) of major ICT projects.

6.0 ESTABLISHING COMMUNICATION INTERFACE

NBRO has already appointed a content management team (CMT) which is in the process of developing her trilingual website compliant to the "Web Standards and guidelines" published by ICTA. The website is supported by open standard based content management system.

Organizational domain name is in accordance with the Nomenclature guidelines for gov.lk.

NBRO's official website is interactive and responsive to web based requests.

Content manager has been trained by ICTA and is responsible for keeping the content regularly updated

If for any reason NBRO require to place commercial advertisements on NBRO's official website it should be done under the approval of the Director General

The official website will be audited from time to time to ensure information security.

The official website of the organization compliant to W3C web content accessibility guidelines
Contact information of the organization is given

Copyright and Disclaimer notices are available in the web.

All official electronic communications should be carried out using the official email addresses.

nbro@sltnet.lk is the presently used common email address for public communication purposes. This email address will be converted to the format info@nbro.gov.lk once the official website is finalized. This account is frequently checked by the web publishing team and the mail directed to the relevant officers with minimum delay.

The following nomenclature is used for the email addresses assigned for the staff officers who are transferable: designation@nbro.gov.lk

For the officers who are permanent the email address will be in the format of Lastname.initials@nbro.gov.lk

With consultation of ICTA, NBRO will carry out necessary improvements to the available internet facility to avoid presently experienced interruptions and inability to connect.

7.0 CAPACITY DEVELOPMENT

NBRO will initially implement the e Government policy with ICTA's support, while ensuring the staff has acquired necessary skills to carry out his or her services using ICT.

About 90% of the staff have the access to computers and have at least the basic ICT skills. Most of the executive and middle level technical staff is knowledgeable for working with their career related scientific and engineering software.

Considering the future needs to ensure the continuation of e Government policy within the organization, NBRO will allocate additional funds for training as follows.

- a. Facilitate 3 scientists from 3 different disciplines to pursue Post Graduate Diploma in ICT at UCSC.
- b. Train 2 scientists and 1 MLT for networking and network administration
- c. Train 2 scientists and 1 MLT for computer hardware engineering
- d. Conducting in-house training programmes for the staff members, who are in need, on advanced capabilities of office software.

NBRO will consider providing additional IT training in other areas based on the need.