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Managing Statistical Development and Information Technology for Statistical System of Mongolia

In the rapidly changing world and in the globalizing era, the global focus on statistics is increasing. The National Governments realized that the right use of better statistics is essential for good polices and development outcomes. This recognition requires more accurate and timely statistics supported by new information technology environment.

Mongolia is divided into 21 administrative units which called aimag and the capital city Ulaanbaatar. Each aimag is divided into smaller administrative units called soum and the capital city divided into 9 districts.

The National Statistical System of Mongolia consists from the National Statistical Office of Mongolia (NSO), Statistical Divisions at each 21 aimags, Statistical Department of the Capital city and its 9 districts' statistical divisions. The National Statistical Office of Mongolia is a public administrative institution in charge of official statistical activities with overall management and coordination at the national level and directly accountable to the Mongolian Parliament and reports its activities.

Management issues of using ICT for NSO:

- 1. NSO 's strategy for using ICT to gain and sustain competitive advantage for producing official statistics*

National Statistical Office has a strategic program for its development. The Program of Official Statistics Development for 2006-2010 has approved by Mongolian Parliament resolution in 2006. Objective of the Official Statistics is determined in this program following way:

Principal objective of the official statistics is to develop national standards, which meet public needs and are based on the internationally accepted methodologies and provide users with a high-quality statistical information service by introducing up-to-date information technologies into statistical activities.

In the light of the objective of official statistics, the sub-objectives of the developments of macro-economy, economy, demography and social statistics and statistical methodologies and analysis, information and communication technologies, human resource management, and foreign relations and cooperation in the field of statistics shall be implemented.

Sub-objectives for statistical information and communication technology are to introduce low operational-cost and efficient information and communication technologies and techniques in every stage of statistical data processing and to upgrade techniques and technologies of central and regional statistical offices and to eradicate the gap in technique and technology development level between central and regional statistical offices.

Our management of Statistical Development and Information Technology policy for Statistical System of Mongolia is to implement objectives of this Strategic program.

2. Current situation of ICT use in statistical system of the country

There is LAN functioning in central office that includes all workstations used by statisticians. LAN servers are running MS Windows Server 2003 and MS SQL Server 2005. All the computers are being organized in one segment, which does not provide enough level of protection. The NSO connected to Internet via local ISP MagicNet via 128 KBps fiber optics channel. The connection is being fire walled by Cisco hardware.

NSO has an E-office system running in intranet server for its internal office's intelligence. The data exchanges between regions and central office is being organized either through physical media or through FTP server, which requires additional tuning and securing.

Statistical data collection and processing is one of the most crucial parts of the statistical information system.

At the primary administrative unit level the necessary IT equipments is not yet available. Data collection at the primary level is paper-based. Forwarding data to the aimag from bag and soum can be slow and inefficient; typically hand delivery and an unreliable telephone system. Data entry at the aimag level is done by professional staff. Locally developed PC-based software applications are being used to process statistical data at district, aimag and local levels. This is creating efficiencies and increasing penetration of computer technology.

Currently, data transferring process is usually carried out the following ways :

1. from bags to soums by car or motorcycle
2. from soums to aimag by post and telephone call as well and
3. from Capital city, districts and aimags to NSO by email.

Information has disseminating to the users through the mass media, printed materials, and different type of publications, CD, email and internet WEB sites.

NSO has developed the corporate Web site (<http://www.nso.mn>) which serves as an important media to disseminate statistical publications and reports. Meanwhile information placed on website is static and does not provide users with ability to perform more in depth analysis of available data. The website is divided into two access zones – one for public users and another for registered users. The registered users get access to the all recent publications and materials produced by the NSO. The dynamic version of NSO website based on NET ASP is under construction.

3. *Action plan for development of ICT environment to improve statistical system intelligence*

We highly recognized importance of using ICT in statistical activities and started to implement action plan to enable “Ensuring statistical data transparency and expanding data availability”. Objective of this plan is to improve Information technology environment at the

National Statistical System, which will function for effective collecting, processing, analyzing, storage and disseminating of statistical data based on demand of users at various levels.

The key goal is to improve the data dissemination strategy for general public assuring the accessibility, transparency and timeliness. It is a vital issue of data dissemination strategy that statistical data should be transparent and accessible to the public in due time. The NSO faces with a need to introduce developments of information technology and disseminate efficiently statistical information and data using internal and internet networks to meet the objective of producing official statistics based on the demand of users in order to keep pace with new developments in IT.

NSO is planning to create a corporate network in order to most effectively link the central office with the numerous regional offices and address the historical IT disparity between the two.

The corporate network should provide NSO with a unified information space able to carry out all information flows and services necessary for the organization of electronic management and work processes.

After the physical infrastructure establishing a corporate network is in place, NSO will be able to develop a common corporate data space, by which to manage all data in NSO. The main purpose of development of the corporate data space is to organize existing data flows in an optimal way in order to allow NSO employees regardless of their location, to share data and knowledge between each other and to gain access to the all information resources available in the corporate WAN. The main goals are decentralization of the electronic data entry process; development of a common central data storage; and automation of the processes of data collection, processing and dissemination to the public.

Under this goal, we will also establish a Data Center providing information services reached international standards for domestic and foreign users and ensure data transparency.

4. Effective and efficient ICT management:

We are expecting the following results from effectiveness of ICT investment activities for the NSO:

- Improved statistical data quality
- Reduced data collection and processing time.
- Use of a standard software packages for statistical data analysis
- A central integrated statistical database for data dissemination
- NSO corporate data network extended to all regional offices.

A comprehensive plan for addressing the needs of personnel will make the transition to a common technical and information platform smoother and will result in a sustainable and more efficient corporate system.

Administrative initiative is essential to quickly introduce electronic culture. The development of the complex system should not be chaotic. The whole process of moving toward a new system must be planned in detail, and employees must feel that everything is under control. All steps must be supported by appropriate orders and directives, which are obligatory for everybody. NSO administration must provide clear and precise decisions on the questions related to electronic signature, user access levels, content of data warehouse and other critical issues.

5. The linkage between Government support for technology use and NSO's strategy:

The concept for Information Technology environment development of National Statistical System is based on National Information Communication Technology Development Strategy of Mongolia for 2010.

The Government of Mongolia is implementing “E-Mongolia” National Programme. National Information and Communication Technology infrastructure is constructing under this programme activities. National ICT infrastructure supported by the Government will be in great use of Statistical data collecting, processing and disseminating purpose.

Specialized training programs for graduates specialized in ICT and specialized training for ICT engineers are organized in frame of Professional Development Program. But the internal training courses are very seldom and possibility for participation of all subject area are limited. In this regard the available trainings are not well suited to the need of ICT in NSO.

Currently, ICT use initial trainings and workshops are frequently conducted for the staffs in aimag, soum, district and city's offices by NSO.

6. Major obstacles in the use of ICT in NSO

- To introduce effective and efficient technologies and techniques in every stage of statistical data processing through the whole statistical system
- There is a big gap between techniques and equipment levels in central and regional statistical offices
- Shortage of Government funding for purchase of IT equipments and its up to date upgrades
- Insufficient Government funding for Operation system and statistical software packages and its licenses
- Lack of staff knowledge and skill for using technological progresses at the low level administrative unit / as called soum and bag/ level and could not provide regular and integrated training system to provide principle as statistical data should be reliable
- Lack of certified professionals in ICT
- More capacity building trainings for IT professionals to create an integrated statistical database and provide statistics to users by online service
- IT personnel training on networking, data management and software development. NSO will require high-level professionals in order to establish the LAN and develop a common information space.

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Ulaanbaatar