TOWARDS A MANAGEMENT INFORMATION SYSTEM FOR PUBLIC ADMINISTRATION IN UGANDA

BY

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DECLARATION

I declare that this study Towards Management Information System in Public Administration in Uganda, except where specifically indicated to the contrary in the text, is my own work both in conception and execution. All the information that was used have been and duly acknowledged in the text and in the references

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DEDICATION

This work is dedicated to my wife Victoria Ndibalekera Matovu; and my children Doreen Louisa Nampewo, Philip Kiwana and Gordon Blaze Balaaka; my father the late Samuel Mutekanga Matovu, and my mother Victoria Nanteza Matovu, and finally, my late sister, Deborah, Nakacwa Matovu Oseku, whose close relation to me proved the critical driving force that finally enabled me to bring this exercise to its logical conclusion.

LIST OF ACRONYMS

AI: Artificial Intelligence

ANN: Artificial Neural Network

CBO: Community Based Organisation

CCA: Clinger-Cohen Act

CD-ROM: Compact Disc Read Only Memory

CIO: Chief Information Officer

COMESA: Common Market for Eastern and Southern Africa

CSRP: Civil Service Reform Program

DSC: District Service Commission

DSS: Decision Support System

EASLIS: East African School of Library and Information Science

ECOWAS: Economic Community of West Africa

E-Government: Electronic Government

EIS: Executive Information System

FAO: Food and Agricultural Organisation

GDSS: Group Decision Support System

GNP: Gross National Product

HMIS: Health Management Information System

IAC: Information Analysis and Consolidation

ICT: Information and Communication Technology

IFMS: Integrated Financial Management System

ITIU: Industrial and Technological Information Unit

IRS: Information Reporting System

ISN: Information Sharing Network

JIS: Judicial Information System

KCC: Kampala City Council

KOL: Knowledge On-line

LAN: Local Area Network

LC: Local Council

LOGICS: Local Government Information and Communication System

MFPED: Ministry of Finance Planning and Economic Development

MOH: Ministry of Health

MPS: Ministry of Public Service

MWHC: Ministry of Works Housing and Communication

MIS: Management Information System

MISR: Makerere Institute of Social Research

MOB: Management by Objective

NASPAA: National Association of Schools of Public Affairs and Administration

NGO: Non-Governmental Organisation

NIE: New Institutional Economics

NPM: New Public Management

NPR: National Performance Review

NRM: National Resistance Movement

OAS: Office Automation System

OLAP: Online Analytical Processing

PAC: Public Accounts Committee

PEAP: Poverty Eradication Action Programme

PC: Personal Computer

PCS: Process Control System

POSDCORB: Planning, Organising, Staffing, Directing, Coordinating, Reporting and Budgeting

PSC: Public Service Commission

PSRRC: Public Service Reform and Reorganisation Program

ROM: Result Oriented Management

RSDC: Road Sector Development Program

SAP: Structural Adjustment Program

SADC: Southern African Development Community

SDI: Selective Dissemination of Information

TPS: Transaction Processing System

TQM: Total Quality Management

UBOS: Uganda Bureau of Statistics

UMFPED: Uganda, Ministry of Finance Planning and Economic Development

UMA: Uganda Manufacturers Association

UMACIS: Uganda Manufacturers Association Consultancy and Information Service

UMH: Uganda, Ministry of Health

UMLG: Uganda, Ministry of Local Government

UMPS: Uganda, Ministry of Public Service

UMWHC: Uganda, Ministry of Works Housing and Communication

UNCC: Uganda National Chamber of Commerce

UPS: Uninterrupted Power Supply

UTIS: Uganda Technical Information Service

WK: Workstation

WWW: World Wide Web

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GLOSSARY

Archives: semi-active literature, or literature not likely to be on demand regularly

Artificial Intelligence: a system designed to enable a computer to reason like humans during decision making

Automated Information Systems: An information system based on use of computers and computer related technologies, such as photocopiers and fax machines.

Centralised database: databases of an organization located at one site and under the management of one group of people.

Communication Network: a group of devices connected to one or more communication channels.

Computer-based Information System: an information system specifically designed to run on computers.

Database Management System: A collection of software programs, that stores data in a uniform and consistent way; organize the data in a uniform and cinstent way; and allows access to the data in a uniform and consistent way.

Decision Support Systems: an information system established to support decision making at tactical levels of management

Electronic Government: government, whose activities that take place by digital processes over a computer network, usually the internet, between the government and members of the public, and entities of the private sector, especially regulated entities.

End-user: people who use an information system or the information it produces

Executive Information System: information system designed to meet the information needs of top-level management, consisting of graphics, charts and tables.

Expert Systems: an information system designed to enable a computer to reason like humans when dealing with a problem with several dimensions

Gray literature: literature published by organization not fully in the business of publishing.

External Environment: factors that are alien to an organization but which are able to influence changes in that organization which may be positive or negative

Fuzzy Logic: logically consistent ways of reasoning that can cope with uncertain or partial information characteristic of human thinking and many expert systems.

Group Decision Support Systems: a computer based information system where several people working in isolation are able to participate as a team in a discussion

Informal Information System: flow of information depending on the word of mouth

Information proficiency: having a more than average understanding of the importance of **data** and information and how it may be to managed properly

Information Repackaging: presenting data in a format that makes it easier to use

Information Reporting System: a computer-based information system established to keep management abreast of the changes taking place in the external environment

Information System: a system that converts data into information.

Internet: a global network of hundreds of thousands of local networks.

Knowledge Base: a collection of databases constructed to support the information needs of a given user group

Knowledge management: a system for management of the expertise in an organization; i.e. collecting categorizing and disseminating knowledge.

Manual Information System: an information system that operates without the support of computer technology.

MIS infrastructure: the external environment impacting on the working of an MIS system, i.e. government policies, the economy, etc.

Reference literature: abstracts, handbooks, directories, catalogues and other materials that can be used as primary data to supplement interviews and field observation

Phenomenon: the central ideas, event, happenings, incidents about which a set of actions or interactions are directed at managing, handling, or to which a set of actions are related

Primary data: data presented in a form in which it was officially published by its originator

Public Administration: institutions involved in rendering service to the general population, and whose remuneration is drawn from the national treasury

Qualitative Research: research method based on collecting data through critical interviews and observation

Quantitative Research: a research method based on establishing quantities in the changes of a given environment, which are used to derive inferences

Technical Literature: Reports of research, studies, and theoretical, and philosophical papers, characteristics of professional and disciplinary writing

Teleconferencing: or electronic conferencing: systems that permit many participants to engage in two-way communications without having to travel to a common site.

Theory: a collection of assumptions, definitions and propositions which explain a group of observed facts or phenomena in a field or discipline

Transaction Processing System: system that processes organizations routine or basic transactions such as ordering billing and paying.

ABSTRACT

A study based in Uganda, examining and evaluating the theoretical and practical challenges in establishing a management information system (MIS) for public administration. The study focused on the information system at the Ministry of Health (MOH), and Ministry of Finance Planning and Economic Development (MFPED) in the case of Central Government; and that of local administration of five districts, namely, Arua, Bushenyi, Kampala, Masaka, and Mbale.

The study involved administration of a survey questionnaire to 530 respondents as well as conducting face to face interviews with 53 respondents. This was on top of the review of the literature that included journal publications, monographs, institutional reports, and conference proceedings. Data collected was analysed using SPSS, Excel, and Epinfo software programs and was later interpreted accordingly.

The findings of the study reveal that introduction of new public management, in particular, result oriented management trigger off the desire for the introduction of MIS public administration. Initial efforts towards MIS in public administration proved faulty due to lack of coordination. The effort also resulted in MIS programmes which are limited in scope as they are designed mainly for planning purposes. The steps towards review of the MIS program in 2002 aimed at establishing an integrated MIS program. The leading information needs of public administration were identified as financial management, capacity building, national policy, central government policy, economic conditions and HIV/AIDS. Despite the claim of having an MIS, the information system in place is said to be considerably lacking in the ability to supply adequate, well processed, timely, and easy to use data. The system was found to be lacking in the supply of grey literature, and value added data. Websites suffer from inadequate scope and limited currency. In-house databases by the established information system are non-existent. The system suffers from the lack of a LAN system, meaning non-availability of online access for most people. It also suffers from undeveloped CD-ROM, and flash disk technology, meaning that information from databases is only accessible in printed form

or on diskettes. The MIS programme also suffers from excessive donor dependence, resulting in the development of incompatible systems. Local governments in particular suffer from inadequate computer stock. Public administration, as a whole, suffers from inadequate computer accessories, a problem aggravated by lack of a LAN system to support resource sharing. It also suffers from inadequate computer literacy by both information resource personnel, and public administrators which then results in the under-utilisation of computer resources. To most respondents, the productivity of the MIS program is less that **30** percent of its potential.

There is a need to; a) strengthen training in information management, including information gathering, knowledge management, indexing and abstracting service, information analysis and consolidation, and information repackaging; b) establish sectoral information analysis centres with legal deposit rights on government and non-government publications, to assume management of the national websites and online databases; ***c)*** create a Ministry of Information and Communication Technology to elevate the information resource to a ministerial status; d) effect greater investment in group decision support systems as opposed to decision support systems; e) invest in information sharing networks as opposed executive information systems; f) emphasise information reporting and communication as opposed to production of decision models; g) increase government active participation in MIS programs demonstrated through independent budget lines in the national budget and lastly there is a need to integrate the various information systems into a public administration management information network (PAMIN).

In conclusion, MIS for public administration is the only way to activate the critical role of information in public administration. Bearing in mind that MIS is computer based, and that the ICT industry is ever changing, the Uganda Government is faced with an uphill task of making MIS a success.

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