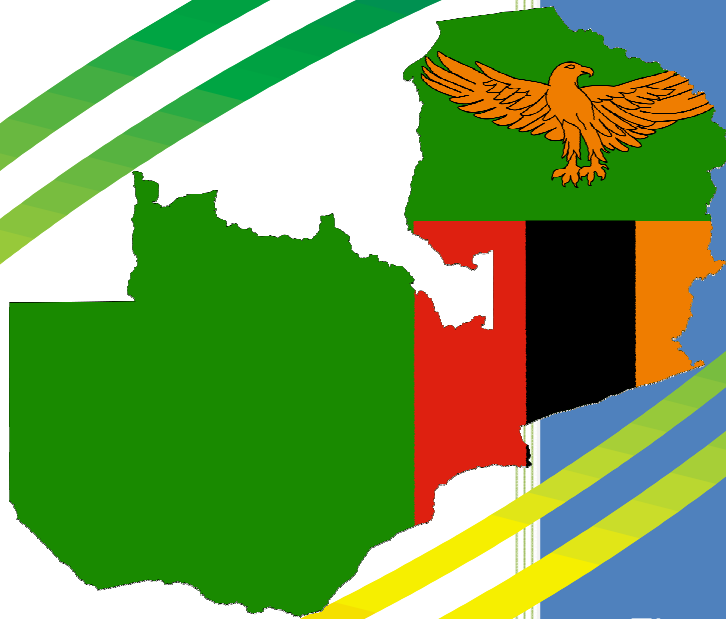


# PSMD

## THE ROAD MAP TO IMPLEMENTATION OF E-GOVERNMENT IN ZAMBIA



Electronic Public Service  
Management (e-PSM) in the  
Public Service Management  
Division

Office of the President

# The Road-Map to Implementation of e-Government in Zambia

## “Electronic Public Service Management (e-PSM)”

The information gathered in this book, *The Road-Map to Implementation of e-Government in Zambia “Electronic Public Service Management (e-PSM)”* is based on the outcome of the meetings held on 10<sup>th</sup> September 2010, 24<sup>th</sup> May 2011 and 16<sup>th</sup> July 2012 at the Public Service Management Division, Office of the President. Participants of the meeting included representatives from The Administration Department, The Human Resource Development (HRD Department), The Human Resources Information and Planning Department, The Technical Service Department, The Recruitment and Placement Department, The Payroll Management and Establishment Department, The University of Zambia (UNZA), and the Zambia Research and Development Centre (ZRDC). This was granted by the Permanent Secretary, Public Service Management Division, Cabinet Office, P O Box 30587, Lusaka, Zambia, Tel: 211 251243, 211 256674, E-mail: George.T.Kawatu@cabinet.gov.zm

**Alfonso Banda,**  
Director, Department of Human Resource Development.  
PSMD  
Tel: 252839, Cell: 0977508239  
Email: [chiotha.alfonso@yahoo.com](mailto:chiotha.alfonso@yahoo.com)

**Joyce Nyama**  
Assistant Director, Recruitment and Placement  
Department  
PSMD  
Tel: 0977833265  
Email: [joycenyama@yahoo.co.uk](mailto:joycenyama@yahoo.co.uk)

**Aaron Mwandia**  
Senior Systems Specialist, Technical Service Department  
PSMD  
Tel: 0979-020058/0966720058  
Email: [thewapa@gmail.com](mailto:thewapa@gmail.com)

**Mrs. Emelia Bwalya**  
Senior Performance Systems Officer,  
Human Resources Information and Planning Department  
PSMD  
Tel: 0977 743646  
Email: [esharon2003@yahoo.com](mailto:esharon2003@yahoo.com)

**Eric Tembo**  
Administration officer, Administration Department  
Tel: 252098, Cell: 0975819935  
Email: [erictembo2005@yahoo.com](mailto:erictembo2005@yahoo.com)

**Dominic Banda**  
Email: [domban@yahoo.com](mailto:domban@yahoo.com)

**Margaret N. Zulu**  
Email: [margienzulu@gmail.com](mailto:margienzulu@gmail.com)

**Malama Mbonge**  
Email: [malama1515@yahoo.com](mailto:malama1515@yahoo.com)

**Mona Ghandi**  
Associate Researcher, The University of Zambia  
Senior Software Engineer and Developer,  
The Zambia Research and Development Centre  
Tel: 0979998877  
Email: [ghandisy@yahoo.com](mailto:ghandisy@yahoo.com)

**Silumbe Richard, PhD**  
Lecturer, The University of Zambia  
Director, Research and Development  
The Zambia Research and Development Centre  
Tel: 0979303567  
Email: [rsilumbe@zrdc.org](mailto:rsilumbe@zrdc.org)

## CONTENTS

INTRODUCTION.....	4
<b>CHAPTER I – <i>The Public Service Management Division</i></b>	
1. The PSMD.....	6
2. The Administration Department.....	8
3. The Technical Service Department.....	9
4. The Recruitment and Placement Department.....	11
5. The Human Resource Development (HRD Department).....	13
6. The Payroll Management and establishment Department.....	13
7. The Human Resources Information and Planning Department.....	14
8. The PSMD Readiness for e-PSM.....	14
<b>CHAPTER II – <i>The Electronic Public Service Management Portal</i></b>	
9. The e-PSM Portal.....	16
10. System Architecture.....	17
11. Application Architecture.....	19
12. System Operation.....	19
<b>CHAPTER III – <i>The Training Programme</i></b>	
13. Electronic Public Service Management Training Programme.....	23
14. Specialized e-PSM training (departmental user training).....	24
15. Technology Transfer based Training (administrator training).....	24
<b>CHAPTER IV – <i>Miscellaneous</i></b>	
16. Recommendations.....	25

## INTRODUCTION

This book, *The Road-Map to Implementation of e-Government in Zambia “Electronic Public Service Management (e-PSM)”* describes the implementation and operation of the electronic public service management portal, and the skills training needed to achieve a fully ICT enabled Public Service Management Division (PSMD). It is aimed at contributing to the ongoing efforts in the implementation of e-Government in Zambia.

The concept of e-Government is defined as including the use of ICT (Information and Communications Technologies), to facilitate daily administration of services and improve the satisfaction level of citizens. E-government focuses on the utilization of ICTs to deliver government services.

Electronic Public Service Management (e-PSM) is part of the on-going efforts to the implementation of e-Government in Zambia. The implementation of e-PSM is a process of integrating all public service processes into a system known as e-PSM portal. The e-PSM portal is a web-based/SMS-based tool that will integrate access to currently stand-alone systems in the PSMD into a one central contact point for public service processes.

This gives an opportunity to delegate the data entry to the civil servants, through the usage of public service marketplaces such as (e-recruitment, e-registration, e-learning, and online employee-self-service), hence offering more self-service to the civil servants.

In this book, we present an incite of the steps and strategies in the development, implementation and operation of the e-PSM portal, an integrated system that will provide optimization of public service processes, and enable the PSMD staff and civil servants to access all facets of public service work. These include employee-self-service (ESS) in the field of public service administration, e-learning in the field of continuing education, e-recruitment in the field of placement and recruitment, skill management, performance management, public service relations, compensation and benefits.

Since the adoption of ICTs in government departments, civil servants (i.e. government workers) have not fully realized its importance as a tool for development. Hence, ICTs have not been exploited to the full capacity that would pave way to e-Governance initiatives in Zambia.

Therefore, in this book, we also highlight the training programme necessary to ensure that PSMD staff understand the benefits of the new system and are actually prepared to use it. The Electronic Public Service Management Training Programme is a special course aimed at training staff (technical and non-technical staff) in the Public Service Management Division, to equip them with an in-depth understanding of how ICTs can be effectively used as tool to facilitate daily administration of services and knowledge management in the public service, to close knowledge gaps.

In Chapter I, we will describe the current environment in the Public Service Management Division. In chapter II, we will describe the Electronic Public Service Management (e-PSM) portal and its functionality. In chapter III, we will present the training programme necessary for both the technical and non-technical staff, to achieve a successful implementation and effective use of e-PSM portal. Finally, recommendations will be presented in chapter IV.

## **CHAPTER I – *The Public Service Management Division***

### **1. The Public Service Management Division (PSMD)**

The Public Service Management Division (PSMD) is a cardinal wing of the government, and falls under the Office of the President. It has about six departments: The Administration, The Human Resource Development (HRD Department), The Human Resources Information and Planning Department, The Technical Service Department, The Recruitment and Placement Department, and The Payroll Management and Establishment Department. This government division focuses on management of civil servants and public service activities.

In 1993, the Government, embarked on the implementation of the Public Service Reform Programme (PSRP). One of the prime objectives of the reforms is to enhance the capacity of the public service to effectively and efficiently provide quality services to the people of Zambia. This brought about the development and institutionalisation of Strategic Plans and Performance Management Systems, which are now guiding ministries and departments in their operations and delivery of services.

In the continued reform process, the Government has also completed the restructuring of all central Government ministries. This has brought about the designing and implementing of a computerised Payroll Management and Establishment Control System (PMEC), and designing and adopting of the Medium Term Expenditure Framework (MTEF).

Despite these milestones, the quality of public services did not reach the desirable level. Hence, in 2005, the Government, in consultation with cooperating partners, decided to re-organise the PSRP into three priority areas as components of the PSRP. These are Public Service Management (PSM), Public Expenditure Management and Financial Accountability (PEMFA) and Decentralisation, commonly referred to as the three pillars of the PSRP.

The PSM component is, therefore, a key ingredient of the overall PSRP and focuses on the effective management of civil servants in order to improve their performance and that of ministries and institutions for which they work. The PSM, which was launched on November 22, 2006, has four sub-components, namely, Rightsizing, Pay Reform, Service Delivery Improvement (SDI) and Payroll Management and Establishment Control (PMEC).

The Rightsizing sub-component aims at ensuring that all Government ministries and institutions have staffing complements which are appropriate to their agreed mandates and affordable in relation to their MTEF ceilings.

The Pay Reform sub-component ensures that employee remuneration is related to the job and performance; the public service is able to attract and retain essential technical, professional and managerial staff; pay arrangements support and reinforce improved service delivery; and increases in pay levels are consistent with the resource envelope.

The SDI sub-component ensures that all ministries and institutions are managing performance effectively within an agreed framework of planned objectives and standards and are taking action to improve their capacity to deliver better services. The PMEC sub-component ensures that personnel emoluments and establishments for the public service are effectively managed and maintained at approved levels.

However, to meet the need for improved speed of service, there is an obvious need for better, faster, and smarter public service solutions. Alongside a requirement for a broadening of the expertise portfolio of civil servants to cover flexible working practices, high performance work systems, and broad accessibility issues, there is also a demand for increased flexibility of systems, providing more services online, streamlining administration, and supporting the process-driven work systems environment.

The PSMD has for a long time been locked into transactional activities (administration) and traditional activities (such as record management, recruitment, selection, and training) which take up the majority of time. The PSMD departments are so bogged down in such activities that they have no time for higher value-added services such as knowledge management, culture management, performance management and strategic redirection.

Therefore, with the development and implementation of the electronic public service management (e-PSM) portal, all transactional activities will be faster and effective in the public service. This will greatly save time to perform other important activities like knowledge management and performance management in the PSMD.

## **2. The Administration Department**

The PSMD's Administration has currently about 24 staff. Its operation encompasses mainly day-to-day transactional activities such as communication and record management. The department is not computerized, meaning that there are no computers available to support any process.

Currently, the government has thousands of civil servants. Civil servants who change a department – who need an attestation – who have a question concerning their payroll – who want to ask something about their taxes – who have changed their address – who have been ill – who want to go into early retirement – who want to work over-time. All these needs of the civil servants are expressed in a lot of questions that have to be answered. If only a half percent of the civil servants have such a question per week – many requests per week would have to be handled. Lots of the questions mean an investigation in files and produce extraordinary work. Other administrative tasks, such as the consulting are one of the most time-consuming tasks.

Traditionally, this department has been using paper-and-file approaches in managing its businesses and this has proved disadvantageous in as far as accountability is concerned.



Delays in administration and duplication of service numbers are the most common challenges in this manually handled process.

Therefore, with the changing landscape where the majority of PSMD's transactions with civil servants, ministries and private partners take place at local level, it is imperative that much effort be devoted towards putting in place mechanisms which allow maximum collaboration and participatory governing. This will potentially transform the generation and delivery of public services.

Thus, with the development and implementation of e-PSM portal (an integrated online systems), many questions like "how can I change my banking account number?" or "I need a copy of my last payroll!" will be handled by the civil servants directly.

### **3. The Technical Service Department**

The Technical Service department is one of the six departments in PSMD which contribute to the attainment of PSMD's mission and goal.

The main objectives for TS department are: To provide a clear human resources policy framework and monitor its implementation in order to ensure effective human resources management in the public services; To facilitate separation of employees and disposal of disciplinary cases in the public service of order to promote effective human resources management; To co-ordinate labour matters in the public service in order to contribute to industrial harmony in the public service; And to coordinate the implementation, monitoring and evaluation of pay reforms in order to provide guidance on pay and other incentives in the public service.

Within the Technical Service department, there are four units each with specific functions.

***The Separation unit*** is responsible for: Processing separation packages for employees separated from the public service under the reforms; verifying excess leave and other terminal benefits of employees before authorization; liaising with the public service pensions fund and the national pension scheme authority over pension claims; maintaining updated database of separated employees; and liaising with the ministry of justice on cases of litigation arising from separation.

***The Operations unit*** is responsible for: Processing all types of retirements; processing deceased and compensatory cases; processing resignations and unpaid leave; and processing all disciplinary cases.

***The Policy and Research unit*** is responsible for: Initiating the formulation and implementation of policies on industrial relation, conditions of service and separation of employees; coordinating research activities on industrial relations and conditions of service; initiating the review of administrative circulars and other public service regulations and ensure their accurate interpretation; analyzing and providing advice to government on the harmonization of salaries and conditions of service for public service and grant aided institutions; and coordinating the implementation, monitoring and evaluation of pay reforms.

***The Industrial Relations unit*** is responsible for: Providing effective technical support and advice to the joint negotiating committee; interpreting terms and conditions of service; coordinating industrial relations matter in the public service; processing all complaints and grievance matters; and maintaining an electronic database of all administrative circulars.

#### **4. The Recruitment and Placement Department**

Among the objectives of the recruitment and placement department are: To provide a clear human resource policy framework and monitor its implementation in order to ensure effective human resources management in the public service; and to improve and implement recruitment and placement processes in order to ensure equal opportunities for entry and placement of human resources in the public service.

This is done through: Facilitation of Appointments, Promotions, Confirmation, Transfer, Secondments, Attachments and Regrading; provisions of advice and guidance on human resources policies and guidelines; facilitations of improvement and implementation of recruitment, selection and placement processes; and facilitation of the monitoring and evaluation of output or outcomes as regards to Recruitment and Placements Process.

***Policy and Legal Framework:*** The department refers to the following policies and pieces of legislation in its operations: Service Commission Policies and Procedures for employment in the Public Service; Service Condition Regulation; Terms and Conditions of Service for the Public Service; Acts (Employment Act Cap 268 of the laws of Zambia; Industrial and Labour Relations Act Cap 269 of the laws of Zambia; Pensions Act No.35 of 1996 and the Zambian Constitution); Various Acts of Autonomous Bodies are consulted as the situation dictates, among them – Anti – Corruption Commission Act; Drug and Narcotic Act; Road Development Agency Act; and the Judicial Service Act; Code of Ethics for the Public Service; Circulars issued from time to time by the Public Service Management Division and Cabinet Office; and Manual of Recruitment and Placement Guideline in the Public Service.

***Organization culture:*** The department emphasizes the following core values: Professionalism; Integrity; Honesty; Confidentiality; Punctuality; Timely completion of assignments; and Teamwork

***Style of management:*** The style of management is largely consultative. Although all members of the department can be classified as being in management, the actual management of the department is at the levels of Director and Assistant Director. These are responsible for Planning, Organizing, Directing, Coordinating and Controlling the Programmes and resources of the department.

***Structure of the department:*** The Department maintains a flat type of interactive structure where all levels can submit work directly to the Director. The levels are: Director (1); Assistant Director (2); Chief Human Resource Management Officer (4); Senior Human Resources Management Officer (8); Total Establishment (15)

***Systems:*** The department has guidelines regarding its processes to aid officers process their work. Formats/Templates are available to provide a general guidance in processing various cases. Each officer is assigned particular Ministries/Institutions as a Desk Officer to ensure order and smooth operations of the department. A record of cases from inception to completion is manually maintained centrally for easy follow ups and monitoring. Cases processed pass through the Permanent Secretary for approval before submitting to the Public Service Commission for directives. All Division 1 Cases, Contracts and Secondments are submitted to the Secretary to the Cabinet for special clearance before they are sent to the Public Service Commission for directives. Public Service Management Division then conveys the directives to the respective Ministries, Institutions and Individuals as the case maybe.

## **5. The Human Resource Development (HRD Department)**

The Human Resource Development department is responsible for: Policy development and review; facilitating Training Needs Analysis by Government Ministries/Institutions; facilitating development of training and development plans by Government Ministries/Institutions; monitoring and evaluating training and development activities; Processing applications for study; Coordinating scholarships for capacity development, which includes disseminating scholarship opportunities and processing applications for scholarships; and maintaining a database on training and development

Most of the functions and processes are manual in this department except for the database, which has also been installed in all Government Ministries/Institutions. In terms of ICT infrastructure, all the offices have a desktop. In addition, there is a laptop for every two officers. The Department also has Internet services provided by ZAMTEL. Most officers have some knowledge in IT although only one is competently qualified to be called an IT person.

Therefore, the e-PSM portal will enable the Human Resource Development department be able to offer services on-line. These will include processing of applications for study and announcing opportunities for scholarships.

## **6. The Payroll Management and Establishment Department**

The payroll management and establishment department is responsible for all payroll processing and personnel administration. It is comprised of 5 sections: organization management, personnel administration, payroll processing, and technical support/IT. All members staff have computers and are connected to the internet through a LAN.

## **7. The Human Resources Information and Planning Department**

The human resource information and planning department is responsible for processing cases. The Planning section: maintains the human resource database, trains officers, conducts appraisals, and provides M&E services. The IT section: maintains database for record management. Generally the LAN is currently performing poorly.

## **8. The PSMD Readiness for e-PSM**

Readiness for e-PSM is not only a PSMD issue. Once a vision and priority for e-PSM are established, it is important to assess how prepared the civil service is for e-PSM. Assessing e-PSM readiness requires examination of the PSMD itself—institutional frameworks, Public Service, existing budgetary resources, inter-department communication flows, etc. National infrastructure, economic health, education, information policies and other issues are also factors of civil service's readiness.

The other most important factor in e-readiness is the PSMD's willingness to share information with the public and across government agencies/departments and different levels within them. Smooth, rapid information-sharing enables PSMD to take a more functional approach to services, as opposed to the usual department-by-department approach. A PSMD's information policies are a key readiness consideration.

Although readiness depends on e-PSM priorities, there are certain factors that demand consideration:

- ***Telecommunications infrastructure:*** Telecommunications equipment and computers, while not the focus of e-PSM, must be addressed in the e-PSM plan. The level of telecommunications infrastructure needed will depend on the e-PSM projects pursued. Significant investment in ICT infrastructure may be needed for certain e-PSM applications.

- ***Current Connectivity and ICT usage by PSMD:*** Understanding current ICT usage indicates the PSMD's readiness to manage information and e-PSM projects as well as whether the ICT framework meets national standards. In addition, it may help allow e-PSM efforts to build on previous computerization projects that have been successful.
  
- ***Human capital within PSMD:*** Sufficient numbers of skilled, ICT literate personnel (including managers with experience in procuring, evaluating and implementing ICT solutions) are essential. Change management issues must also be addressed as new work practices are introduced.
  
- ***E-business climate:*** Current environment for e-business, including the legal framework and information security, is a key criterion for assessing readiness. Establishing protections and legal reforms will be needed to ensure, among other things, the privacy, security and legal recognition of electronic interactions and electronic signatures.
  
- ***Officials' readiness for change:*** The corporate culture within PSMD is an important aspect of e-readiness. The level of resistance to change and level of involvement by officials in setting policies and practices will greatly impact how fast or smooth the implementation of e-PSM will be.

## **CHAPTER II – *The Electronic Public Service Management Portal***

### **9. The e-PSM Portal**

The e-PSM portal is a web-based/SMS-based tool that will integrate access to currently stand-alone systems in the PSMD into a one central contact point for public service processes. The central module of the e-PSM will provide functionality and interface to facilitate the usage of public service marketplaces such as e-registration, e-recruitment, e-learning and skill management, and to offer more self-service to the civil servant.

The development and implementation of e-PSM portal will change things in the PSMD. It will create an opportunity to delegate the data entry to civil servants. Transactional and Traditional tasks will now be largely carried out through the e-PSM system. As a result, the introduction of e-enabled delivery of public service such as online recruitment and training systems will save more time and resources in particular.

The use of e-PSM portal to support operational processes will increase the amount of information available to civil servants by providing online access to civil service policy and practice handbooks. Strategic processes will be streamlined through online notification of events such as holiday or sickness, online applications for leave, and online selection of options such as training course registration and benefit systems. Web-based/SMS-based operational activities focusing on civil servants will facilitate collaboration between individuals through discussion groups, and communities of practice, as well as giving civil servants the opportunity to carry out their work at remote locations through this e-working facility.

Finally, at the strategic level, e-PSM portal will help civil servants be constantly ready for change, encouraging online training and learning activities, as well as 360° feedback systems and internal vacancy application systems. The e-PSM portal will manage online processes (public service interaction, information searches, work scheduling) and



community services (balancing work and home life by allowing civil servants to deal with certain personal tasks at work).

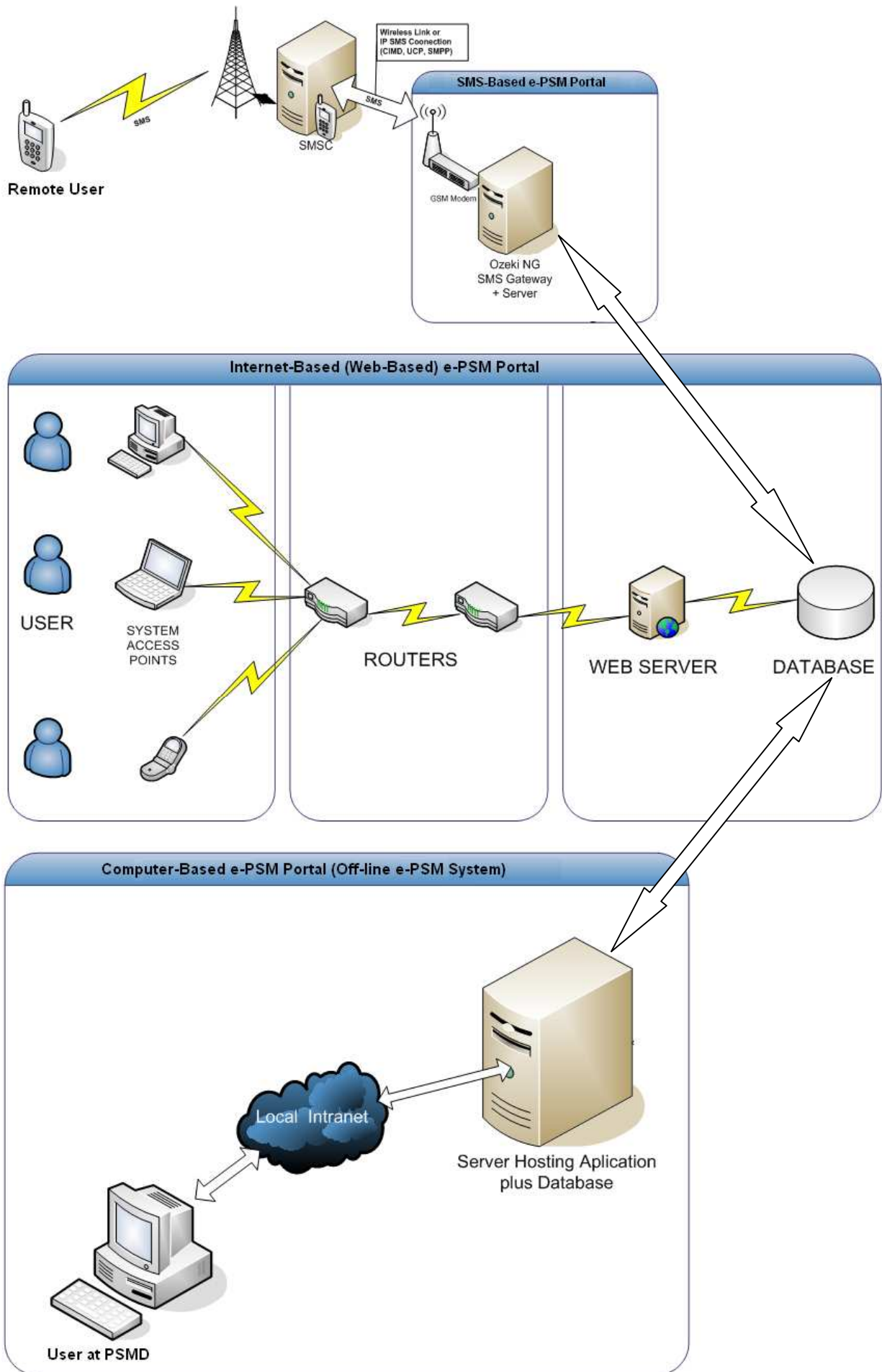
## **10. System Architecture**

The e-PSM portal will have a 3-level system architecture comprising 3 system modules: Computer-Based Public Service Management (CB-PSM) System, Internet-Based Public Service Management (IB-PSM) System and SMS-Based Public Service Management (SMSB-PSM) System. This will enable the e-PSM portal be accessed by civil servants anytime, anywhere and at all levels of the society. Civil servants in far off places will be able to access the portal remotely.

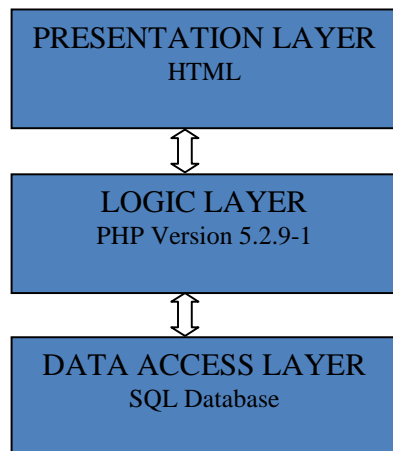
The CB-PSM is the first level module of the e-PSM portal that will be installed on computers within the PSMD premises, and be able to work only within the PSMD's local intranet. This is an offline system that will not depend on the availability of internet connectivity. It will also act as an internal backup system. The IB-PSM is the second level module of the e-PSM portal that will provide web-based access to the system and enable civil servants access PSM services online.

The SMSB-PSM is the third level module of the e-PSM portal that will provide SMS-based access to the system and enable civil servants access PSM services via a mobile phone. Providing public services through the SMS channel will significantly reduce time and cost; introduce a cheaper, easier and faster information-accessing channel; improve transparency, and communication in the civil service; make the services and procedures easier for the civil servants; improve the ministerial image; engage more people and increase participation; and promote e-Democracy.

This e-PSM system will require three servers (three computer hardware dedicated to host server software) with one of them being the master server hosting the main SQL database and software interface modules, and one main CISCO router.



## 11. Application Architecture



The CB-PSM will be developed using Java programming language. Servlets installed on server side will act as server interface while JSPs installed on client side will provide the interface to the users. This will provide offline connectivity via server to the main SQL Database.

The IB-PSM will be consisted of the presentation layer (web pages), Logic layer and data access layer which are the front end, middle tier and back end respectively.

The arrows show the flow of data between layers. The arrows indicate that data will be able to flow in either direction between layers. This simply implies that the user interfaces will be able to supply the logic layer with data and in response receive data (acknowledgement) back from the logic layer. The same will also happen between the logic layer and the data access layer. The SMSB-PSM will be developed using Java programming language. Ozeki SMS gateway will act as a bridging middleware for mobile WAP clients to interact with the SQL Database through the SMS gateway.

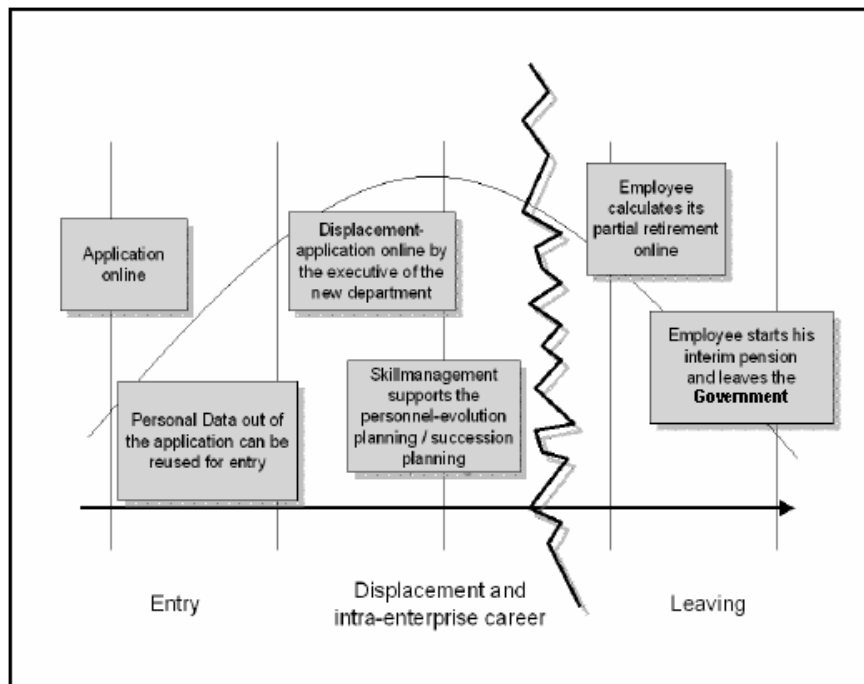
## 12. System Operation

The new system will integrate all PSMD stand alone systems into a centralized web-based/SMS-based application called e-PSM portal. The e-PSM portal will interconnect all old host-based stand-alone public service systems with a web-based/SMS-based interface. This will support the PSMD in the fields of public service administration, recruitment (candidate) management, and public service development.

This software will be designed to offer one central contact point for public service tasks in contrast to the heterogeneous host-based environment currently existing. The e-PSM portal will enable many questions like “how can I change my banking account number?”

or “I need a copy of my last payroll!” be handled by the civil servant directly. As a result more freedom will be achieved for each civil servant.

The philosophy of electronic public service management is to cover the whole life-cycle of a civil servant beginning with the candidature and ending with the withdrawal



The e-PSM portal will handle all processes in the life-cycle of the civil servant, starting with the entry-process – that will ideally be done online by the applicant – then the data out of the electronic application is taken over. The system will then handle ongoing processes such as dislocation-application and skill management. Each of these steps will be directly processed by the e-PSM portal itself – this will delegate data or work to other systems. The life-cycle of a civil servant will end up with its pension when s/he leaves the public service.

The self-service of e-PSM portal will offer the user full access to his personal standing data. The civil servant will print attestations or can see personal information. The self-service will generally be splitted into a section for the management staff and a section for

civil servants. Management staff can login to their manager-self-service – use functionalities like initiating a workflow or interact with management staff at PSMD. Therefore, both the management staff and civil servants will be able to get reports easily through the portal.

The central module of e-PSM portal will provide functionalities such as e-recruitment, e-registration, e-learning and skill management. Other modules of the e-PSM will include: ***The Public Service Information System*** – this module will handle job management, performance management, and succession planning. ***Payroll*** – this module will provide an interface with the main payroll database in the PSMD to enable civil servant view their pay-slips and benefits online. ***Employ Self Service*** – this module will empower civil servants to maintain their personal details, do on-line leave applications, view payslip & tax certificates in a paperless environment. ***Job Evaluation*** – this module will enable the PSMD to accurately evaluate positions in the public service.

Skill management will be viewed out of the perspective of the civil servant or applicant who can document his skills (make his skills transparent) and out of the perspective of the management staff who will use the e-PSM portal to get an overview of the skills of civil servants. This will mean, for the civil servant, an enhanced visibility of his/her skills in the government. From the PSMD's view, this will result in an overview of the structure of skills e.g. in a ministry, and out of this, concrete recommendations on training-measures can be made by the PSMD. The other useful aspect for the recruitment and placement department is the possibilities to get an overview over the pool of unsolicited applications.

The e-PSM portal will enable PSMD get a consistent concept for their knowledge management. The portal will incorporate techniques to acquire knowledge, to organize knowledge and to make knowledge transparent. One of the techniques will be (Knowledge Discovery in Database) KDD respective Data Mining as a step of the KDD-process.

The main benefits of e-PSM will be an increase of quality and pace, because the existing administrative processes are slow and inefficient, and are conditional upon mainly paper-based processes, e.g. the tendency of standing data and applications. The direct access of the network-enabled civil servant will avoid double-entries for example at the tendency of standing data, travel expense accounting and applications for leave. With e-recruitment, the PSMD will get an additional possibility besides the normal application by paper to recruit people through the portal in an online application process.

## **CHAPTER III – *The Training Programme***

### **13. Electronic Public Service Management Training Programme (Technical and Non-Technical Staff)**

Since the adoption of ICTs in government departments, civil servants (i.e. government workers) have not fully realized its importance as a tool for development. Hence, ICTs have not been exploited to the full capacity that would pave way to e-Governance initiatives in Zambia.

The Electronic Public Service Management Training Programme is a special course aimed at training staff (technical and non-technical staff) in the Public Service Management Division, to equip them with an in-depth understanding of how ICTs can be effectively used as tool to facilitate daily administration of services and knowledge management in the public service, to close knowledge gaps.

Knowledge Management is about changing people’s paradigm from “my knowledge is power” to “knowledge sharing is power”. Therefore, this course will introduce the use of ICT for knowledge management in getting people to innovate, to collaborate, and to make good decisions efficiently. It will also enable PSMD use ICT as a tool for knowledge management in bringing about increased institutional capacity to develop, share, combine and consolidate knowledge.

#### ***Course Outline***

- I. Introduction to Electronic Public Service Management
- II. Online government service delivery
- III. Online public service management system
- IV. Web-Based/SMS-Based Organizing
- V. Social Network Mapping Software
- VI. E-Recruitment: online registration
- VII. Employee Self-Service public portal

- VIII. E-Learning Strategies for Government departments
- IX. Approaches to Knowledge Management
- X. The Organizational School
- XI. Managing Common Knowledge
- XII. Managing Knowledge Workers (civil servants)
- XIII. Barriers to Knowledge Management
- XIV. Knowledge Management Processes
- XV. Knowledge Management Systems

#### **14. Specialized e-PSM training (departmental user training)**

This is a skills training programme on basic ICT skills and how to use the e-PSM portal. This course will be based on the e-PSM manual, and will aid the use of e-PSM portal at PSMD. The manual will highlight user interfaces and how to access various system modules based on user categories and the department.

#### **15. Technology Transfer based Training (administrator training)**

The Technology Transfer based training program will ensure that the e-PSM software and system technology are understood by the technical staff at PSMD so that they are able to rectify most of the operational problems without relying heavily on interventions of the external IT specialists. This training will also ensure that the PSMD staff effectively and efficiently use the e-PSM system that will be developed and installed on their computers.



## CHAPTER IV – *Miscellaneous*

### 16. Recommendations

#### 1. Planning and Managing e-PSM Project

Effective management is vital for the success of e-PSM, as it is for all PSMD operations. Being able to deliver a project on time and within budget, coordinate effectively among government departments and oversee private sector partners all depends on capable management.

***Consider establishing e-PSM teams within PSMD.*** An e-PSM initiative will typically involve large commitments of resources, planning and personnel. It is very difficult to manage without defined teams to supervise the e-PSM process from start to finish. For example, e-PSM activities within a department should be institutionalized to ensure long-term stability and support of the new paradigm. Such teams must be provided enough budget, human resource and administrative support to carry out their duties.

***Ensure the project management team has sufficient authority.*** Without authority from top government leaders, the officials responsible for e-PSM implementation cannot ensure plans are carried out. Formal legal authority to oversee e-PSM implementation is also needed. Consider creating a central e-PSM team within PSMD.

The management team needs representation from each department for e-PSM implementation. This will keep open lines of communication and reporting, enable information sharing, knowledge sharing and facilitate the establishment of common technology infrastructure, and common policies, standards, and security systems across departmental boundaries.

***Develop a work plan to implement the priority e-PSM project.*** A detailed work plan will help steer the officials responsible for implementing e-PSM. The work plan should focus on at least six key elements:

- **Content Development:** including development of applications, open standards, local language interfaces, user guides and e-learning materials.
- **Competency Building:** human resources and training programs must be implemented at all levels.
- **Connectivity:** local networks and Internet connections in the PSMD.
- **Cyber laws:** to provide a legal framework that supports the objectives of e-PSM policies and projects.
- **Public Service Interfaces:** a proper mix of delivery channels is needed to ensure that e-PSM is accessible by the civil servants.
- **Capital:** the e-PSM project plan must identify revenue streams like subscriptions or budgets that will help achieve financial equilibrium

## 2. Effective use of e-PSM

The use of e-PSM to improve the PSMD efficiency and transparency depends on how well we tackle important areas such as:

### *a. Improvement of Information Management*

The introduction of e-PSM and the construction of web pages is seen as an objective on its own. However, the success of these endeavors depends largely on the capacity of PSMD departments to manage the information under their control. This requires standardization of concepts and procedures, as well as the creation of secure Storage systems, Back-ups and Redundancy. Digital data may prove highly volatile and entrusting archives to hard disks might be the securest way to their loss if preventive measures are not taken.

### *b. Improvement of Services to Civil Servants*

E-PSM is civil servant centered. Obviously, putting a computer on somebody's desk is not enough to shift the focus of PSMD to the civil servant. To achieve this, one has to change the existing organizational culture. Civil servants should realize that their work is

indeed a service to the public. Improvement of attitude requires a cultural change that can only happen if the leadership fully understands and supports the need for attitudinal and behavior change.

*c. Improvement of Education Level*

The technology used in the processing, storage and publication of data and in the transactions with the civil servants is a secondary issue; it is the capacity to interact between the civil servants and PSMD that will guarantee the quality of services.

Working in a period where the world has shrunk to a village and ICT are increasingly permeating the different aspects of life makes it necessary that civil servants acquire the knowledge and skills to fully benefit from these technologies. For that reason, it is necessary to invest in raising the ICT skills of civil servants. The use of e-PSM is heavily dependent on literacy and related skills of reading information.

*d. Adequate Technological Solutions*

Currently, different options exist as to the various aspects related to ICT and it is likely that in the near future new options will emerge. It is up to the PSMD to find the different combinations that respond adequately to the geographical, cultural and educational diversity existing in Zambia. The efficiency of e-PSM usage depends on increased teledensity and mobile penetration and the scale-up of initiatives such as the development of e-government and e-schools.

### **3. SMS-Based Public Service Management module**

The SMS-Based Public Service Management system module for the e-PSM portal is an important technology as it enables civil servants from remote places to be able to stay in contact with the e-PSM system via their mobile phones.

The Zambia Research and Development Centre carried out a study on the acceptance of SMS-based e-government services in Zambia. This study showed that whether or not

citizens adopt SMS-based e-government services is influenced by the fifteen beliefs about using SMS-based e-government services: *perceived ease of use; perceived efficiency in time and distance; perceived value for money; perceived convenience; perceived availability of device and infrastructure; perceived usefulness; perceived responsiveness; perceived relevance, quality and reliability of the information; trust in the SMS technology; perceived risk to user privacy; perceived reliability of the mobile network and the SMS-based system; trust in the government and perceived quality of public services; perceived risk to money; perceived compatibility; and self-efficacy in using SMS.*

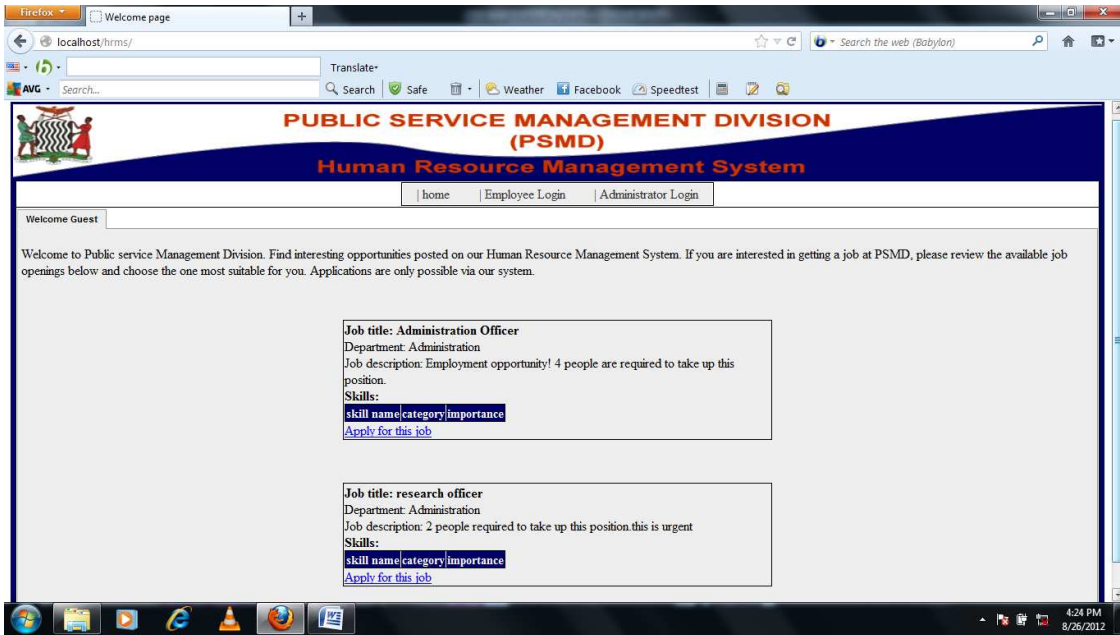
Among the factors; *perceived ease of use, perceived efficiency in time and distance, value for money, perceived convenience, and perceived availability of device and infrastructure* are the most important in influencing the use of SMS-based e-government services. The advantages of SMS are: it is simple, easy to use, extensive in coverage, reliable in delivering the message, low in cost, and can reach citizens anywhere anytime including areas with no Internet access. And in Zambia people prefer to communicate using the SMS-based channel (87% of the population) rather than Internet (11% of the population) because this technology channel is more familiar, simple and easy to use, supports their native language, uses a readily available device and infrastructure and is low cost.

Common factors which discourage citizens adoption of available SMS-based e-government services include: *perceived usefulness, perceived responsiveness, perceived relevance, quality and reliability of the information, trust in the SMS technology, perceived risk to user privacy; perceived reliability of the mobile network and the SMS-based system, trust in the government and perceived quality of public services, perceived risk to money, perceived compatibility, and self-efficacy on using SMS.*

Therefore, in order to minimize resistance to the services, PSMD should address all of these factors. For example, to increase *perceived usefulness* of an SMS-based e-government service, PSMD should make sure that the service meets citizens' needs; to increase *perceived responsiveness* of a *Listen SMS* service, PSMD should setup an

automatic reply system and assign a group of staff to manage incoming SMS messages; to increase *trust in the SMS technology*, PSMD should use encryption with each message; and to minimize *perceived risk to user privacy* and *perceived risk to money*, the PSMD should publish a privacy statement, assure the confidence and security of the senders.

# 1. E-PSM Portal Prototype



Firefox - administration  
localhost/hrms/administrator\_home.php?data=notifications

Translate  
AVG Search... Search Safe Weather Facebook Speedtest

**PUBLIC SERVICE MANAGEMENT DIVISION (PSMD)**  
**Human Resource Management System**

Departments Administrators Manage Payroll Reports TimeSheets Notifications KMS Account Home Back Logout

notifications

**SUBJECT: I'm seek today**  
I will not come for work  
Posted by: etembo, Administration Officer, 2012-06-01 09:00:05  
Department: Administration [Delete](#)

**SUBJECT: ICU**  
residential  
Posted by: admin, System administrator, 2012-05-23 10:39:30  
Department: Administration [Delete](#)

**SUBJECT: classes**  
there will be classes this morning  
Posted by: admin, System administrator, 2011-11-10 15:58:12  
Department: Administration [Delete](#)

**SUBJECT: meeting 20th september**  
hello nigers there will be a meeting tomorrow  
Posted by: etembo, Administration Officer, 2011-09-30 16:49:02

4:26 PM 8/26/2012

Firefox - administration  
localhost/hrms/administrator\_home.php?data=departments

Translate  
AVG Search... Search Safe Weather Facebook Speedtest

**PUBLIC SERVICE MANAGEMENT DIVISION (PSMD)**  
**Human Resource Management System**

Departments Administrators Manage Payroll Reports TimeSheets Notifications KMS Account Home Back Logout

departments

View departments  
Add department  
Manage leave days

[View Details](#) [Delete](#)

Name	Head office	Telephone	E-mail	Select
Administration	Cabinet Office	0211252732	admin@psmd.gov.zm	<input type="radio"/>
Technical Service	Cabinet Office	0211252743	techservice@psmd.gov.zm	<input type="radio"/>
Recruitment and Placement	Cabinet Office	0211252752	recruit@psmd.gov.zm	<input type="radio"/>
Human Resource Development	Cabinet Office	0211252753	hrd@psmd.gov.zm	<input type="radio"/>
Payroll Management and Establishment	Cabinet Office	0211252756	payroll@psmd.gov.zm	<input type="radio"/>
Human Resources Information and Planning	Cabinet Office	0211252760	planning@psmd.gov.zm	<input type="radio"/>

©Copyright 2011

localhost/hrms/administrator\_home.php?data=departments

4:28 PM 8/26/2012

Firefox - Staff report  
localhost/hrms/employee\_report.php

**PUBLIC SERVICE MANAGEMENT DIVISION (PSMD)**  
**Human Resource Management System**

Departments Administrators Manage Payroll Reports TimeSheets Notifications KMS Account Home Back

Report on employees in company

Department	Status	Job title	Skill category	Payroll type	Contracts	Salary range	Age range
ALL	ALL	ALL	ALL	ALL	ALL	From To	From To Between

**LIST OF EMPLOYEES**

Name	Surname	Sex	Department	Job title	Date of employment	Status	Contract type	Contract start	Contract end
Eric	Tembo	male	Administration	Administration Officer	2011-09-09	WORKING	5 years	2016-09-	
Alfonso	Banda	male	Human Resource Development	Director	2011-09-09	WORKING	5 years	2016-09-	

**TOTAL NUMBER OF EMPLOYEES: 2**

**SKILL POOL**

Name	Category	Description	Count
eHRM	HRM	electronic Human Resource Management	1
CCNA	Networking	cisco certified Network Associate	1

[PRINT VIEW](#)

4:29 PM 8/26/2012

Firefox - administration  
localhost/hrms/administrator\_home.php?data=leavedays

**PUBLIC SERVICE MANAGEMENT DIVISION (PSMD)**  
**Human Resource Management System**

Departments Administrators Manage Payroll Reports TimeSheets Notifications KMS Account Home Back Logout

leavedays

Specify number of leave days incremented every month: 25

©Copyright 2011

localhost/hrms/admin\_view\_employee\_timesheets.php

4:32 PM 8/26/2012



Firefox - employee account  
localhost/hrms/employee\_home.php?data=inf

PUBLIC SERVICE MANAGEMENT DIVISION (PSMD)  
Human Resource Management System

Welcome etembo, status: WORKING

Employee details

First name	
Last name	
Job title	Administration Officer
Department	Administration
Social security number	
Leave days	0
Date of birth	1981-02-11
NRC	123456/13/1
Telephone number	0975819935
Gender	Male
Marital status	Married
Spouse name	Magret
Number of children/dependants	2
Physical address	rhodespark,jusaka
Date employed	2011-09-09
Contract start date	2011-09-09
Contract type	5 years
Contract end date	2016-09-09

School attended	Qualification attained	Start date	End date
rhosed	cert	1992-01-01	1993-09-30
mwaba	cert	1993-01-01	1994-09-30
chango	cert	1994-01-01	1995-09-30

name	category	competence
CCNA	Networking	EXPERT
eHRM	HRM	ASSOCIATE

ID	Description
None.	

Description	Taxable	Amount	Date
No allowances.			

4:34 PM 8/26/2012

Firefox - employee account  
localhost/hrms/employee\_home.php?data=leav

PUBLIC SERVICE MANAGEMENT DIVISION (PSMD)  
Human Resource Management System

Apply for leave

Notification

Reasons

Address whilst on leave

Start date

End date

submit

©Copyright 2011

4:34 PM 8/26/2012

Firefox - employee account  
 localhost/hrms/employee\_home.php?data=job

Translate  
 Search Safe Weather Facebook Speedtest

**PUBLIC SERVICE MANAGEMENT DIVISION (PSMD)**  
**Human Resource Management System**

Employee Account Applications TimeSheets Home KMS Back Logout

Job description

Description	
Job title	Administration Officer
Job description	secretariat
Minimum salary	K2 500 000.00
Number of places	5

Skills			
skill name	category	importance	description

©Copyright 2011

localhost/hrms/employee\_home.php?data=skul

4:38 PM  
8/26/2012

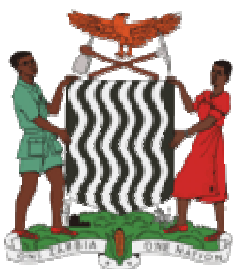
## ABOUT THE AUTHORS

***Silumbe Richard, PhD:*** He is the Director of research activities at the Zambia Research and Development Centre (ZRDC), and lecturer at the University of Zambia, Department of Computer Studies. He has also participated in collaborative research undertakings with Motorola Research Centre in Moscow, Mobile Multimedia Research Centre and Samsung-ICU research Centre in Seoul.

***Mr. Mona Ghandi:*** He is a researcher in the field of e-Government implementation strategies at the Department of Computer Studies, the University of Zambia, and also working for the Zambia Research and Development Centre.

***Mr. Lubunda Prosper:*** He is a researcher in the field of e-Government implementation strategies at the Department of Computer Studies, the University of Zambia, and also working for the Intelligence Service of the Republic of Zambia.

***Mr. Mulenga Mwenge:*** He is a lecturer at the University of Zambia, Department of Computer Studies. He has also participated in the development of the international e-Learning network application/portal for the Mulungushi University in Kabwe.



CC: The Permanent Secretary, Management Development  
Division, Independence Avenue, P.O Box 30208, Lusaka.  
Email: [ps.mdd@cabinet.gov.zm](mailto:ps.mdd@cabinet.gov.zm)