

*Czech University of Life Sciences Prague*  
Faculty of Economics and Management  
Department of System Engineering

**Diploma thesis assignment**

**Thesis title**

**Analysis and design of online public service in Addis Ababa, Ethiopia**

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**Summary**

This thesis deals with the barriers of e-government in Ethiopia. The main goal of this thesis is to identify the problems associated with Passport application/registration and tries to provide an appropriate solution. The thesis discusses the current situation of e-government in Ethiopia and analyzes the extent of coverage of such services in the country. Once the drawbacks are found out, the author proposes an online service portal. This portal will be based on the literature, personal experience and sample surveys conducted.

In the practical part, a web application was created using HTML5, CSS3 and PHP. The application includes details information about the user (passport applicant), such as full name, date of birth, address and other attributes. This data is inserted into a SQL database, which will feed the data to the web application.

**Keywords:** Analysis, e-government in Addis Ababa, Ethiopia, online services, web application, e-services

## **Introduction**

Before discussing about e-government, it is important to know what government is and what its responsibilities towards its people are. A government can be defined as a group of people with the authority to govern a country or state.

E-government, short for electronic government system, is a broad concept/term for web-based services related to agencies of state and federal governments. E-government involves the use of information technology and the Internet to support government operations and service. The interaction may be in the form of obtaining information, filings, or making payments and a host of other activities via the World Wide Web (Sharma & Gupta, 2003, Sharma, 2004, Sharma 2006)

E-Government is one of the most important instruments for modernization and reform as governments deal with the continuing pressure of increasing their performance and adapting to the pressure of the new information society. (Morven McLean, 2004)

E-governance is using information and communication technologies at various levels of the government and the public sector for enhancing governance (Bedi, Singh and Srivastava, 2001; Holmes, 2001; Okot-Uma, 2000). According to Keohane and Nye (2000), "Governance implies the processes and institutions, both formal and informal, that guide and confine the collective activities of a group. Government is an entity that acts with authority and creates formal obligations. Governance need not necessarily be conducted exclusively by governments. Private firms, associations of firms, nongovernmental organizations (NGOs), and associations of NGOs all engage in it, often in association with governmental bodies, to create governance; sometimes without governmental authority." Thus, it is understandable that e-governance need not be limited to the public sector and can be applied in the private sector as well.

The UNESCO definition ([www.unesco.org](http://www.unesco.org)) is: "E-governance is the public sector's use of information and communication technologies with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective. E-governance involves new styles of leadership, new ways of debating and deciding policy and investment, new ways of accessing education, new ways of listening to citizens and new ways of organizing and delivering

information and services. E-governance is generally considered as a wider concept than e-government, since it can bring about a change in the way citizens relate to governments and to each other. E-governance can bring forth new concepts of citizenship, both in terms of citizen needs and responsibilities. Its objective is to engage, enable and empower the citizen.”

E-Government has been employed by developing countries to be an empowering agent toward quickening methods, conveying a large amount of services to public and organizations, expanding transparency and responsibility while decreasing the costs. Ethiopia being among the world’s developing nations, its government has built E-Government Directorate under the Ministry of IT (Technology, 2005). Ethiopia, based on the 2008 UN E-Readiness index report, is ranking 172 from 192 countries scoring a total 0.1857 and distributed to 0.1739 in web measure index. Although, the status is far below the world average, the trends in striding towards these averages are encouraging.

## **Objectives**

The main goal is to analyze and design a new online public service for Addis Ababa.

Partial goals are:

- To characterize the current state of online public services and e-government readiness in Addis Ababa, Ethiopia and main urban areas,
- To analyze to analyze the weaknesses of the current immigration system in Ethiopian Ministry of Foreign Affairs (Ethiopian Immigration Authority) Addis Ababa and;
- To analyze and design a new online public service.

## **Methodology**

The methodology is based on the analysis of the literature survey and own experience. The practical part will be designing e-service for Ethiopian Ministry of Foreign Affairs (Ethiopian Immigration Authority) which will include services like the appointment for passport application, renewal, and collection. The e-service will be designed using software engineering tools such as UML and web design software like HTML, CSS, PHP, and MySQL. Based on the literature review, analysis of opportunities and barriers for new online public services and analysis results collected through the survey, recommendations and conclusions will be formulated.

## **Results and Discussion**

The practical part provided description of the whole development process of e-passport registration application with all obstacles that occurred. It captured the whole process with description of tools and utilities used. The design of the application was also conducted by the developer, which prolonged the development process. Even with a single developer, the application was created approximately within five weeks thanks to application of various technologies.

The research achieved the objectives set by analyzing the weaknesses of the current immigration system in Ethiopian Ministry of Foreign Affairs (Ethiopian Immigration Authority) Addis Ababa. In addition, the author made a design of a new online public passport registration form which provides an efficient interface to utilize e-immigration services on the same portal. As part of partial goals the author characterized the current state of online public services and e-government readiness which is done through survey and based on the secondary resources.

Ethiopian government lacks infrastructure and skills. The government doesn't invest sufficient amount of money in this field. There are other priorities such as construction development which can be seen by eyes like bridges and roads and huge buildings. The government doesn't show any interest in online services and the reason can be said that the bureaucrats don't want the system to get better. They don't want to facilitate the process as people/clients want to it be or as it is required. Bureaucracy is a major problem that could benefit the bureaucrats while impeding the governing system. While most of the developed world has managed to solve or at least reduce this threat, developing countries such as Ethiopia have not yet implemented the system accordingly. The government should have clear intentions in mind as to introducing more facilitated services. The government must invest more money in this field. The government must educate people and employees. In the first phase, the government should train its employees. Even though employing the trainers will be costly for the government, it should hire them and give them complete freedom to design these services. These services provide continuous support and one of the keys for these services are transparency and reliability.

## **Conclusion**

The main goal of the diploma thesis was to analyze the weaknesses of the current immigration system in Ethiopian Ministry of Foreign Affairs (Ethiopian Immigration Authority) Addis Ababa and to design online public service.

The passport registration system (e-government system) designed as a web service could benefit the public in a variety of ways, some of which are discussed below. The major advantage is the time it saves citizens and customers of the ministry of Immigration agency. The fact that this system can be accessed from anywhere in the world via the internet makes it far easier for people from the furthest locations to make use of the service without travelling long distances there by saving them the hustle and money they would have spent. In the view of the government itself, once then system is implemented, it could economical since it cuts down the number of employees required to process these tasks. The current trend is that some rent seekers stay in line in the morning to sell their place for an expensive price to those who need it badly. This has been an opportunity created by the long waiting queues. The Author believes that the system which is designed will ultimately abolish these embezzlements.

Although the internet connectivity in the country has been increasing from time to time, it is far beyond reaching a 100% accessibility rate. Considering this, the author of this thesis understands that the web service could not be accessed from very village in Ethiopia. But being able to access the system from rural towns, by itself, is a major advantage to the users as compared to having to travel to the capital probably three to four times until the whole process is complete.

Author, strongly believes that, this research will help to improve e-government services in Ethiopia and author would like to focus another poor area of e-government services by another research.