

## Chapter 8

# Scalability and Sustainability of M–Government Projects Implementation in Developing Countries

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### ABSTRACT

*Mobile technology has played a crucial role in facilitating democratic change in many of the developing countries. Many countries have attempted to implement Mobile Government (m-government), which is a form of electronic government, using mobile and other latest technologies such as social media as the most fundamental infrastructure for implementing such changes. However, m-government projects' scalability and sustainability are amongst the key issues relating to the use of Information and Communication Technologies (ICT). This chapter attempts to discuss the scalability and sustainability of m-government projects in the context of developing countries. The aim is to provide a broader understanding of the inherent issues surrounding scalability and sustainability of m-government projects: in general terms and also in relation to mobile phone-based projects for governments' service delivery. In order to understand these issues, definitions of these two concepts are provided and various e-government maturity models are discussed. This is then followed by an overview of the challenges of scaling up and sustaining the m-government projects in developing countries, and lastly, an elaboration of how sustainability and scalability can be achieved is also presented.*

### INTRODUCTION

The high penetration rate of mobile telephony in the developing countries has raised some hope in terms of government service deliveries. Most of the developing countries who missed telephony

revolution, due to lack of infrastructure and required investments, have now participated in the mobile revolution directly.

Governments in the majority of developing countries have poor reputations with respect to service delivery which in many cases involves

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repetitive and manual operations at government offices (Bassara *et al.*, 2005). Low throughput coupled with traditional communication channels are expensive and require intensive human processing. Also, the lack of a single point of contact with the government has been identified as the one of the key challenges facing service provision of traditional governments processes (Mansoor & Rohan, 2010).

In order to overcome the limitations of traditional government and to improve the quality of service delivery, many of these governments, including the South African government, have started moving towards new ways of implementing government services, for example service processes, service flows, approaches to service delivery and service delivery philosophies (Valentina, 2004). The South African government proposes a transition to e-government in order to enhance access to and delivery of government services to the citizens, businesses, employees and other government departments twenty-four hours a day and seven days a week through a single government portal using modern Information and Communication Technologies (ICTs) (Blessing *et al.*, 2007).

Challenges, such as limitation to fixed line Internet access by many citizens, faced by the government in implementing E-government to ensure delivery of services, have led some governments to shift their attention to m-government as the ultimate target of E-government (Sharma and Gupta 2004). This is due to the development in mobile technology and the mobility of people with respect to the use of mobile devices and technologies that surround it (Sharma & Gupta, 2004). In addition to this, Song (2005) advocates going beyond E-government and recognizes the potential of E-government for the transformation of government services.

This chapter attempts to discuss the scalability and sustainability of m-government projects in the developing countries. The aim of this chapter is to provide a broad understanding of the issues around

scalability and sustainability of m-government projects in general and mobile phones based projects for service deliveries in particular. In order to understand these issues, definitions of these two concepts will be provided; these definitions are followed by an overview of the challenges of scaling up and sustaining m-government projects in developing countries and lastly an elaboration of how sustainability and scalability can be achieved will be provided.

### **E-GOVERNMENT: A DEVELOPING COUNTRIES PERSPECTIVE**

Governments in developing countries have considered e-government as the means of delivering government services to citizens. Generally, e-government is defined as the provision of government services through the use of Information and Communication Technology (ICT) Infrastructure (Sprecher, 2000). It is about using tools and systems made possible by ICT infrastructure to provide better public services to citizens and businesses. It is widely used in most developed countries (e.g. most England, France, Germany, Canada and USA) and has also been implemented in some developing countries (e.g. South Africa, Kenya, and Mauritius) (Coordinating, 2001). Majority of the citizens in developed countries have access to most of the service provided by the governments via e-government. This is due to the fact that access to Internet connectivity is not a barrier and most citizens can afford it. This has made e-government implementation and usage a success in developed countries. Therefore, service delivery by governments of those countries is enhanced which consequently improves standard of living of the people in those countries.

However, in developing countries it is a challenge to provide ICT infrastructure in remote or rural areas where majority of the citizens need access to government services. Hence, implementation of e-government, which is dependent on

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