Chapter 2.12

# Technical and Functional Quality in the Development of T-Government Services

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## ABSTRACT

This chapter examines the reasons why individuals would choose electronic self-service delivery methods over more traditional methods of service delivery for government services. The chapter tests the concepts of technical quality (what is delivered) and functional quality (how the service is being delivered) in the development of t-government services. The study investigates, from the business-side and consumer-side, the factors related to decision making when people consider and evaluate the usage of an online TV government delivery mechanism. The approach taken was based on a combination of attitudinal technology adoption models and the service quality concept, with data gathered via two quantitative surveys. Accessibility, usability, and functionality of the systems are the most critical variables that service providers need to consider. The chapter identifies some guiding lines in the design of the new services broadcast by digital television and the most important indicators to be used in order to guarantee an adequate interface to the citizens. The results are significant to the public service manager who needs to consider both barriers and benefits of adoption if they are to develop plans to increase the take-up of their electronic services.

## INTRODUCTION

The transition process from analogue to digital systems and the development of Third Generation standards in mobile communications let new actors enter the market, offering an increasing number of value-added services.

New opportunities are emerging also for the government and institutional sphere, with the aim of moving from a vertical and rigid administra-

tion to a system characterized by the central role of the service and a deeper informative exchange among the different units.

The importance of digital technology to provide e-services to citizens is crucial in the policy of the "Information Society"[1] at a local, regional, national, and continental level. In Europe, the action plan called "eEurope 2005"[2] aims to increase productivity, modernize public services, and guarantee to the whole community the opportunity to participate in a global Information Society, promoting new offer based on broadband infrastructures.

To realize this purpose, it is important that the offer of government services occurs according to a multi-platform scheme, that is making available to the population new devices, such as digital television and mobile systems, which are becoming innovative and complementary solutions to the PC.

Purpose of this chapter is to examine the reasons why individuals would choose electronic self-service delivery methods over more traditional methods of service delivery for government services. The chapter tests from the business perspective and consumer perspective the concepts of technical quality (what is delivered) and functional quality (how the service is being delivered) in the development of t-government services. The approach taken was based on a combination of attitudinal technology adoption models and the service quality concept, with data gathered via two quantitative surveys. Specific objectives of this chapter are to explore accessibility, usability, and functionality of the systems that service providers need to consider with the development of t-government services.

The chapter identifies some guiding lines in the design of the new services broadcast by digital television and the most important indicators to be used in order to guarantee an adequate interface to the citizens. Results are significant to the public service manager who needs to consider both benefits and barriers of adoption if they are

to develop plans to increase the take-up of their electronic services.

The chapter is organized into three main parts. In the first section, we review existing relevant literature related to t-government and e-government services; in the second section, we highlight the expectations of the operators who will have an active role in the provision of applications, solutions, and contents (*supply-side*); finally, we analyse the main barriers and drivers influencing the consumer adoption of t-government services (*demand-side*).

## THEORETICAL BACKGROUND

In this section, we present an exploratory framework that is drawn from the literature of information technology (IT) applications in public administration (Asgarkhani, 2005; Danziger & Kraemer, 1986; Kraemer, Dutton, & Northrop, 1981; Lee, Xin, Trimi, & Silvana, 2005; Norris & Thompson, 1991).

Over the past few years, an increasing amount of both popular and scholarly attention has been focused on electronic government or e-government. The term *e-government* refers to the group of techniques for the use of methods and tools of ICT world, aimed to make easier the relationships between the public administration and the citizen (Kannabiran, 2005; Koh, Ryan, & Prybutok, 2005; Marasso, 2003).

Previous studies (Bruno, 2002; Gronlund, 2001; Marasso, 2003; Norris & Moon, 2005; Traunmuller & Lenk, 2002) consider PC as the main device to access e-government services and few and more recent literature (Daloisi, 2004; Davis, 2005; Delogu, 2004; Seffah, Donyaee, & Kline, 2004) considers digital TV and mobile as new devices to provide e-government services. The geographical, demographic, social, and cultural gap, associated with the limited skills and knowledge to manipulate the PC,[3] bring to the awareness that the network will be a precious

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