

An Overview of E-Government 3.0 Implementation

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INTRODUCTION

National governments have recognized the benefits of implementing information and communication technologies (ICT) from the early stages of its development. The main purpose of governments is making and enforcing collective decisions through institutions that take on the responsibility for administering public policies while exercising executive, political and sovereign power (Carpenter & Dunung, 2011). As the proper function of any government is based on interaction between all of the participants of the society, one of the main challenges for every government is promoting seamless communication between government institutions through administration services and stakeholders of a society including businesses and citizens.

Application of ICT in government institutions reduced operating costs and improved efficiency of government operations, while the development of Internet initiated a paradigm shift in organising and conducting interactions in inter-organisational collaborations. Facilitating execution of government services and transforming them into a new digital medium has led to the development of electronic government (or simply e-government). In broader meaning e-government is defined as the capacity to transform public administration through the use of ICT and especially through the use of Internet. Since its first introduction e-government has gone through several development stages evolving to new concepts sometimes called e-government 2.0 or even more elaborate concepts of e-government 3.0.

BACKGROUND

Term e-government (abbreviated from electronic government but also known as e-gov, digital government, online government or connected government), first emerged in the 1990s when many buzzwords starting with prefix “e-“ were coined during the Internet boom. E-government usually refers to the application of ICT and methods of electronic commerce in governmental and public institutions that cater for needs of citizens and entrepreneurs (Holden *et al.*, 2009). In this view term e-government represents a novel medium for communication of government and public institutions with other entities of a society.

More general definition by West (2005) states that e-government is organizational form of government that integrates flows and interdependencies between government, entrepreneurs, citizens and public institutions through ICT. In this sense e-government is treated as a complete comprehensive business system that incorporates all the elements that can be found in any business organization with specific tasks and functions. As e-government includes various types of activities, and not only communication with citizens and entrepreneurs, it can be viewed as a specific type of e-business. As in e-business one of the goals of e-government is to increase efficiency, shorten response times and make additional value for its users – citizens and entrepreneurs – by introducing changes in its organization supported by ICT.

Early stages of the development of e-government stem from the office automation incentives and the first introduction of IT in government in 1970s (Kraemer *et al.*, 1978). Main goals of first implementations of IT were the improvement of back office operations and establishment of automated data processing and reporting. It was not until the development of Internet and particularly the World Wide Web that the focus of ICT innovations in governments was moved towards front office and the users of public services – citizens and entrepreneurs. This type of e-government is sometimes referred to as e-government 1.0. The development and maturity of e-government 1.0 is characterized by several distinct stages.

First stage of e-government 1.0 had the goal of publishing information about public services through the use of dedicated Web sites with the only goal of informing the public about the services they provided, while the consumption of services was done only through direct contact. Web presence was added as a new medium of communicating relevant information along with public announcement through media (television, radio and newspapers). Users were able to communicate with government bodies directly or through written communication (mail) or telephone services.

Second stage of e-government 1.0 development was characterized by government portals. With the further development of ICT capabilities public service web sites started providing additional and more elaborate information that was not publicly available in other media. The process of integrating this additional content from related services was initiated in the form of government portals. As the use of e-mail become more widely accepted as a new medium for users to contact public servants it enabled an efficient two-way communication between public administration workers and their end users. Communication through the digital medium presented a strong incentive for the digitalisation of all relevant content (formal documents and forms).

The third stage in the development of e-government 1.0 is strongly influenced by the digitalisation of information. The legalisation of digital content, digital signatures and digital documents was taken into account while creating online services. The documents and application forms for different public services were made available through government portals for down-

load. Drawing from existing successful e-commerce implementations new online services are deployed that allowed two-way exchange of digital content. In this way users are able to send their documents via e-mail or web site instead of delivering them in physical form. Additional media of government communication is also enabled through mobile communications.

The following stage in the development of e-government was determined by the development of Web 2.0. Web 2.0 denotes a trend that made a shift in the way Internet users perceive and use Web content. Most of the developments of Internet and Web services have been technical in nature until Web 2.0. Since 2004 a new trend incurred that represents a sociological change of the paradigm by excluding the middleman between Internet users. Online public services also had to adopt this new logic in order to promote better user participation. Allowing better user participation transformed e-government 1.0 into a new concept often called e-government 2.0. The users of online public services under the e-government 2.0 concept are being transformed into true e-citizens. E-government 2.0 therefore assumes greater role of the public in forming policies, promoting higher level of openness and transparency, better efficiency of government services and improved user access to public services. In order to achieve these goals focus was moved to the back office once more, through reengineering of administrative processes and internal organisation of government services. The biggest challenge during this stage of e-government development is to insure interoperability within different government ICT systems and services while adopting service oriented architecture (SOA).

Currently new tendencies are present in current concepts of e-government usually denoted by the term e-government 3.0. Achieving greater level of integration through the use of semantic web and public information infrastructure a new level of quality of services is in the focus of this new concept. Some of the goals of e-government 3.0 are the integration of all of the communication media with citizens and entrepreneurs, establishing pervasive e-government, anticipate user needs, establishing e-infrastructure that will allow for advanced automation of services and their autonomy. The main challenge for e-government 3.0 is to achieve basic prerequisites for e-Democracy.

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