Chapter 1
Foresights and Practice in Technology Development for E–Government Applications:
A Global Compendium of Approaches

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ABSTRACT

Although a lot has been achieved with regards to technology development for e-government applications, there are still no global technological conceptual frameworks and models that define e-government platform design and implementation the world over. This has partly been attributed to the differing local contexts and organisational cultures in the public services departments (even within the same government). Because of this scenario, there is need to review the different technology design endeavours geared towards achieving process automation and application integration in the different government departments to achieve meaningful and robust e-Government development. This lead chapter intends to review the different approaches that have been done on the technology front of e-Government (especially design of interoperability frameworks and ontology platforms) in different parts of the world and outlines the future works that e-Government researchers and practitioners need to concentrate on. This chapter sets the tone for the remaining chapters of this book, which discuss various aspects of e-Government implementation from the technological front (deployment, design, and customization of e-Government solutions). The chapter posits that with the current pace of technological advancements and efforts by the OASIS forum and other interested parties, it is not difficult to notice that global technological models of e-Government are to be realized in the foreseeable future.

E-GOVERNMENT CONCEPTUALIZATION

It cannot be overemphasized that many private organizations have long recognized information as a key resource for enriching business competitiveness and sustainability. Information is an enzyme that guides appropriate requisite evidence-based decision making which ensures that there is reduced wastage of business resources employed towards achieving a set business objective. In order for the full value of information to be amassed, it is important that it is, as much as possible, integrated into the different organisational business processes at all levels of the organisation hierarchy. This integration of information in different organisational business value chains can be achieved with requisite use of Information and Communication Technologies (ICTs). Although private organizations have lead the crusade towards mainstreaming information in their business activities, many public organizations and government departments are now following suit and slowly charging up. Through e-Government, government departments are now emphasizing on requisite usage of ICTs in their back-end and front-end business processes to achieve effectiveness and efficiencies and therefore amass the many benefits that come with e-Government implementation. Contemporary e-Government services aim towards satisfying the needs of citizens and businesses by providing seamless flow of information across government organizations (Borras, 2004). The seamless flow of information cannot be achieved with carefully-thought technology solutions. Against this background, this book intends to bring out the different e-Government technology design approaches and strategies from both renowned and emerging e-Government practicners and researchers.

Designing global e-Government technology platforms and applications is not a simple undertaking because of the multi-dimensionality nature of e-Government and because a robust e-Government technology model should consider the different political, cultural, and socio-economic contexts (Carbo & Williams, 2004). It cannot be denied that the task of designing requisite e-Government solutions is further hardened by technology designs' over-dependence on semantics and software syntax which defines how technology interacts and how different technology systems can interchange data. Given this difficulty in realizing the full potential of technology for designing dynamic e-Government solutions, several interventions for e-Government technology platforms have adopted open international standards together with XML and XSL as core standards for data integration (Borras, 2004). In this regard, Borras (2004) has outlined the ongoing work at an international level by the OASIS e-Government Technical Committee that aims to develop technology standards for interoperability with a goal of supporting the establishment of e-Government solutions worldwide.

This chapter intends to provide an overview of what technology principles and design guidelines currently exist and discuss how different e-Government solutions have been designed especially in the developing world economies. By doing that, it is anticipated that core technology focuses will be discussed in a bid to bring about a compendium of best practices in as far as e-Government design and implementation is concerned.

BACKGROUND

The wider recognition of information as a strategic resource to organizations has led to what are called 'Knowledge-Based-Economies (KBEs)'. KBEs are basically economical setups which have bought-into the idea that the different knowledge types (tacit and explicit) need to be amassed appropriately and integrated into the different organisational business processes. The emergence of knowledge economies entails that knowledge is the major sources of competitive advantage distinct to the old economic models which rec-

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