

# Technology and Transformation in Government

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## INTRODUCTION

Information technology and public administration are an odd couple. Students of information technology have long neglected arduous issues of public sector reform and public policymaking (Borins, Kernaghan, Brown, Bontis, & Thompson, 2007; Orlikowski & Barley, 2001). Likewise, public administration scholars have rarely paid attention to information technology beyond treating it pragmatically (Gruening, 2001), at the periphery of governments' core activities of policy making and policy implementation. This situation of disciplinary negligence, however, has changed since the advent of the admittedly voguish term electronic government ("e-government"). E-government refers to a practice in which governments throughout the world embrace information and communication technologies in order to transform the machinery of governance (Bekkers & Homburg, 2007; Borins et al., 2007; Chadwick & May, 2003; Dunleavy, Margetts, Bastow, & Tinkler, 2006; Heeks, 2006).

The relation between technology and transformation is not as straightforward as might appear at first sight (Williams & Edge, 1996), for at least two reasons. First, the clamor for transformation and reform was first heard in the beginning of the 1990s (Osborne & Gaebler, 1992) without technology playing a role. Rather, the focus was on organizational and managerial changes, in particular focusing on establishing customer orientation and use of market-type mechanisms (Guy Peters, 1996; Hood, 1991; Pollitt, van Thiel, & Homburg, 2007), that later blended with the emergence of new technologies. Second, e-government practices throughout the world display a huge variety of forms, shapes and effects that are not easily attributed to technology alone. In the national policies of the United Kingdom and the United States, for instance, the focus is on achieving one-stop service shops that enable transactions with citizens on the basis of clearly defined "service themes" (Chadwick & May, 2003). At municipal levels in Sweden, on the other hand, e-government takes the form of electronic interactions between municipal commissioners and citizens, in such a way that citizens can watch video broadcasts of city council meetings, and can submit questions to commissioners during the half-way break (Grönlund, 2003).

The above discussion makes clear that the use of ICTs in government has moved from being a peripheral concern,

to a topic that concerns the core activities of government, policy making and policy implementation, and that e-government is intrinsically linked to transformation and reform of governments. It does not, however, make clear how to circumscribe and define "e-government," and what obstacles and dilemmas can be witnessed in practice. The remainder of this chapter addresses these issues.

## BACKGROUND

Electronic government (or e-government) has emerged as a powerful catchphrase to indicate situations in which ICTs are associated with bureaucratic renewal and institutional innovation in general (Homburg & Bekkers, 2005). The term New Public Management appeared in the 1980s in Anglo-American discussions about how to reform rather traditional bureaucratic structures and practices. One of the dominant observations related to bureaucratic renewal and New Public Management was that it truly was management ideology: In talk, writing and discussions, there was a powerful and almost compelling rhetoric of administrative reform, yet in practice the clamor for reform suffered from a lack of useful and practical instruments with which actual change could be accomplished. Since the advent of Web technology, many reform adepts have embraced information and communication technology, and have used the concept of e-government as a "tool" to actually implement changes in and around governments. In *The Economist* of June 24, 2000, it is stated that the once fashionable idea of reinventing government, is now finally being made possible by the Internet (Symonds, 2000).

Central to the reform ideas at the corner stones of New Public Management and the emergence of communication technologies is the focus on client (or citizen) orientation. Not surprisingly, many definitions of e-government emphasize electronic service delivery as a main objective for e-government (for a review, see Yildiz, 2007), thus portraying e-government as "e-commerce for governments" (Wimmer, Traunmüller, & Lenk, 2001). There are, however, various arguments for declaring such a definition too narrow in focus (Bekkers & Homburg, 2005b).

First, e-commerce concerns itself with transactions between suppliers and customers. If we extrapolate that to ICTs

in relation to government, we see that the notion of “customer” is far more problematic. Citizens can be customers, in the sense that they are beneficiaries of public services, but at the same time they are co-creators of the policies (in the case of Bollnäs mentioned above), and, more importantly, they are sometimes involuntarily involved in transactions with governments (e.g., in the case of electronic tax services and electronically administered fines for speeding).

Second, the objectives of e-government applications address, in many cases, more values than efficiency of service delivery and customer orientation alone. E-government implementations can also serve other purposes like increasing transparency of the government apparatus (Homburg, 2008; LaPorte, de Jong, & Demchak, 2000), bridging the gap between citizens and administration (Bekkers & Homburg, 2005a), or addressing (and preferably decreasing) the democratic deficit.

Third, many public electronic one-shop facilities necessitate data sharing and standardization of practices among multiple, relative autonomous agencies in order to provide integrated services. From a technological point of view, it is understood that data sharing is severely hampered by lack of consistency of data and, in general, a lack of data standardization. In the information systems literature, various Strategic Information Systems Planning (SISP) methodologies have been proposed that can be put to use to alleviate this situation. In specific e-government initiatives, however, data sharing is not so much hampered by more or less operational inconsistencies, but rather by checks-and-balances (e.g., between executive and judicial branches in penal law enforcement) and disagreement over professional values (of social workers and medical professionals in cases of child protection services).

Fourth, it may be tempting to assume that e-government is a more or less direct translation of a global, unequivocal and consistent wave of administrative reform, New Public Management. A closer look at the phenomenon New Public Management reveals, on the other hand, that the trajectories of reform are different in various institutional contexts (Pollitt et al., 2007). New Public Management takes many forms and shapes in Singapore as opposed to Denmark, Spain, or Guatemala, to name a few institutional contexts, and so does e-government. This issue is furthermore addressed in the subsequent section.

In recognition of the arguments set out above, e-government is defined not as e-commerce for government, but rather as a redesign of information relations of a public agency with stakeholders in its environment (Bekkers & Homburg, 2005b; Homburg, 2008). Redesign, in this definition, can apply to front offices, that is, to relations between governments and citizens (in either of the roles of customer, voter, “citoyen” and subordinate of policy) but also to back offices, indicating a redesign of information relations between various agencies, or even branches of government. The various

issues and obstacles of redesign are presented and discussed in the following section.

## REDESIGN OF INFORMATION RELATIONSHIPS: RESULTS AND ISSUES

A first issue concerns the type of front office services (at the government-society interface) that are offered in the actual practice of e-government: information services, contact services, transaction services and participation services. Chadwick and May have convincingly argued that explaining the kinds of front office services offered (i.e., whether authorities offer information services, or electronic participation services, or several of these kinds of services at the same time), is not so much a technological issue of “maturity” but is the result of an underlying normative frame of reference (Chadwick & May, 2003). Hence, understanding e-government is not a question of understanding technology, but rather grasping the concept of democracy (Barber, 1997).

In practice of national e-government initiatives at the federal level in the United States (Chadwick & May, 2003) and national levels of policy making in the United Kingdom (Bekkers & Homburg, 2007; Chadwick & May, 2003), the Netherlands, Denmark and Australia (Bekkers & Homburg, 2007), e-government policies focus on information services and especially on transaction services, especially at the expense of participation services.

A second issue with the redesign of information relationships is if and how the *appearance* of service counters (i.e., the *front office*) relates to the back office organizational (departmental or interorganizational) structures. Alfred Tat-Kei Ho (2002) analyzed Web portals of 55 of the most populous cities in the United States. He concluded that most cities had, over time, transformed their Web presence from an administrative-oriented portal design (reflecting bureaucratic logic of a variety of functionally differentiated departments) to user-oriented portals. Furthermore, responses by city Web masters indicated that many city officials had abandoned a departmental mentality in Web management. Donald Norris, on the other hand, noticed that most municipal Web sites offer information services, but few transaction services. Moreover, Norris concluded on the basis of survey data of American local authorities that services that horizontally or vertically span various authorities, are notably lacking (Norris, 2005). Obviously, e-government is being used to break down departmental barriers, but collapsing interorganizational boundaries still results in many problems.

A third issue, which is related to the issue of collapsing interorganizational boundaries mentioned above, is the re-organization of information relations in the back office. Sharing information across organizational boundaries is far

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