Chapter III

The Dimensions of Business Process Change in Electronic Government

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Abstract

Governments at all levels and across all branches have been urged to become leaner and smarter, providing better and faster service at lower cost. Such fundamental change, however, inevitably impacts the business processes governments work by. So far, though, business process change has mostly been studied in the private sector. Electronic government (e-government, e-gov) appears as a potent enabler when reinventing the way government is doing business. According to Layne and Lee (2001), four stages of development can be distinguished in electronic government. This chapter maps the dimensions of business process change into the developmental stages of electronic government, providing a roadmap for business process change through electronic government.
Introduction

When government began using telegraphs and telephones in the 19th century, the old messenger-based processes and organizational formats did not immediately disappear. They were gradually and then increasingly rapidly and radically replaced by new formats and processes that greatly enhanced the immediacy of government action and reaction. Similar patterns it appears underlie the changes in the context of electronic government.

If so, it follows that for the inevitable change to occur with minimal friction the implications of emerging computer-mediated networks for existing business processes in government need to be well understood. Surprisingly, literature dedicated to this particular subject is in short supply. The various literature on information technology-enabled business process change in the private sector (cf., for example, (Champy, 1995; Grover, Teng, Segars & Fiedler, 1998; Gunasekaran & Nath, 1997; Hammer, 1996; Hammer & Champy, 1993; Kettinger & Grover, 1995; Kettinger, Teng & Guha, 1997)) has only recently been studied for its applicability and relevance to electronic government (Scholl, 2003). Despite certain obvious differences (Huang, d’Ambra & Bhalla, 2002; Mohan & Holstein, 1990), there are many similarities in technology-induced organizational and business-process change between public and private sector (cf., for example, (Rubin, 1986)). This literature has developed four key ideas: (1) any business can be re-thought and redesigned from the bottom rather than only incrementally improved (Hammer & Champy, 1993; Kettinger & Grover, 1995), (2) information and communication technology (ICT) might play a major enabling role in such fundamental change processes (Gunasekaran & Nath, 1997; Hammer & Champy, 1993), (3) the development, deployment, and use of information systems and business process change (BPC) have to be treated as two sides of the same coin (Kettinger et al., 1997), and (4) the organizational-culture context and the human interests involved in the change process greatly matter (cf., (Orlikowski, 1992; Orlikowski & Gash, 1994; Pardo & Scholl, 2002)).

As Layne and Lee propose, electronic government can analytically be grouped into four stages of development: In the (early) cataloguing stage, government establishes an online presence of presentation including downloadable forms (Layne & Lee, 2001). This stage has empirically been documented by a number of studies (cf., (Chen & Gant, 2001a, 2001b; Gant & Gant, 2002; Gefen, Warkentin, Pavlou & Rose, 2002)). In the transaction stage, services are made available for online use and databases are readied for the support of such transactions (cf., also, (Gant & Gant, 2002; Huang & Chao, 2001)). In the vertical integration stage local, state, and federal systems in all three branches of government (legislative, executive, and judicial) serving similar functions are linked together. Finally, in the horizontal integration phase, systems of all levels and branches, and across functions are linked in a one-stop fashion (Layne & Lee, 2001). The Layne and Lee model bears a certain resemblance with the original IT-growth model presented by Gibson and Nolan, and also with its revised and more frequently cited version by Nolan (Gibson & Nolan, 1974; Nolan, 1979), which will be further detailed in the next section.

While the first Layne and Lee stage does not yet require any business process change, more fundamental and substantial changes become the norm in subsequent stages. Adaptations and redesigns of existing information systems, along with the incorporation of completely new systems become a necessity. This in turn requires significant and
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