



## Chapter II

# The Evolution of Federal Information Technology Management Literature: Does IT Finally Matter?

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### Abstract

*Federal agencies rely extensively on information technology to perform basic missions. Arguably, public administration should be driving the theory, policy, and practice for managing these increasingly important resources. While there has been some maturation in the literature for managing IT in federal agencies in the last several years, academics from the field of information systems and practitioners have contributed more recently to the theory and practice of IT management at the federal level than public administration. This chapter analyzes federal IT-management literature over time and compares federal IT-management literature to a normative model of management maturity focusing on the strategic objectives for IT and related management approaches. Public administration's minimal contribution to federal IT-management literature raises profound questions about whether federal agencies are performing commensurate with public expectations as the theory and practice of IT management may be moving into a new, post-information-age era.*

## Introduction

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Given the growing importance of effective IT management to the basic functioning of most public programs, the sophistication of the policy, theory, and practice in this area should be evolving quickly. Unfortunately, that is not so (Fountain, 2001; Holden, 1996; Holden & Hernon, 1996). As a result, it is quite possible that the current generation of public-administration scholars and practitioners may be ill equipped to face the challenges of the information age in which we find ourselves trying to govern.

A mere gap in IT-management theory might not be fatal, but in reality, the implications for the practice of public administration, and therefore governance, are quite grim. Press accounts of the interoperability challenges first responders faced during the World Trade Center attacks on 9/11 offer just one example of how integral public-sector IT has become to the safety and economic well-being of the country. While the billions of dollars currently spent by the federal government on IT make up an insignificant portion of the budget, IT underpins almost the whole budget directly or indirectly. Just ponder the implications to the government's cash flow if the Internal Revenue Service (IRS) could not collect taxes or the Social Security Administration could not post employee earnings.

This chapter compares the federal IT-management literature with a normative model of management maturity, examining the strategic objectives for IT and the related management approaches. The academic disciplines that contribute to an understanding of the management of IT in the federal government include business administration, state and local government management, information sciences, and public administration. Although the analysis of the literature does include government publications, it does not discuss the pertinent public law or government-wide policy (see instead Beachboard & McClure, 1996; Holden, 1994; Plocher, 1996).

Like public administration more generally, IT management draws on several different sources. Unlike other management topics in public administration, though, the literature covering IT management lacks breadth and maturity. Even more alarming, Kraemer and Dedrick's (1997) review of the public-administration literature for managing IT found that research on public-sector computing was declining when federal agencies were relying more heavily on IT. The following quotation summarizes the state of the literature at the turn of the 21<sup>st</sup> century:

*A century from now, social and policy scientists will look back with amusement and no small amount of condescension at the glacial pace with which social scientists moved to consider fundamental changes in information processing and their implications.* (Fountain, 2001, p. 10)

While the chapter documents some progress in the field in the last several years since a similar review was published (Holden, 2003), it also points to continuing shortcomings. It is particularly troubling that disciplines besides public administration are responsible for the few recent developments in federal IT-management literature. Compared against the management maturity model presented below, there is clearly much work left to do.

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