



Chapter XIII

Computer Tools for Public-Sector Management

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Abstract

Almost any public-sector task employing a computer can be accomplished more efficiently with a variety of tools rather than any single one. Basic tools include word processing, spreadsheet, statistics, and database-management programs. Beyond these, Web authoring software, presentation software, graphics, project-planning and -management software, decision analysis, and geographic information systems can be helpful depending upon the job at hand.

Introduction

The use of computer technology in government taps into three sometimes incompatible concepts: government responsiveness to the public, bureaucracy, and technocracy. The tensions between the first two have long been a staple of textbooks and scholarly work in public administration and organization theory (Blau & Meyer, 1971; Borgmann, 1988; Gullick, 1996; Rosenbloom & Kravchuk, 2002). At first, when all computers were mainframes, the technocratic perspective (rule by experts) appeared to bolster Weberian bureaucracies (Elul, 1964; Freeman, 1974). Even today, computers are often used by bureaucrats to perform routine tasks efficiently or analysts to rationalize policy, and most of this chapter is taken up by descriptions of some of the tools available to them. However, today's computers are employed in far more ways and by many more members of all parts of government than they were a few years ago. The bureaucracy is less centralized just by virtue of the widespread access of government personnel to information and their ability to process that information.

Changes wrought by computers may go beyond bureaucratic decentralization. Eugene J. Akers (2006) speculates that government organized along Weberian bureaucratic lines is increasingly out of step with public expectations of a transparent and responsive service-oriented government. Similarly, Carl Grafton and Anne Permaloff (2005) depict what they call Jeffersonian budgeting: understandable government budgets available on the Internet with which the news media and the public can hold public officials accountable. In addition, Christa Slaton and Jeremy Arthur (2004) describe ways to facilitate public participation in government administration using computer technology.

This chapter concerns computer applications and information technology in government other than financial accounting software, which deserves a chapter of its own. Topics covered include Web publishing, spreadsheets, statistics packages, database management, presentation software, project-planning and -management software, decision analysis, graphics for illustrations, and geographic information systems. Since most readers are likely to have substantial word-processing experience, it would be unproductive to devote much space to this topic.

A Variety of Tools

To make the most of their time and talents, computer users in the public sector or virtually any other setting should have access to more than one tool for nearly any task that extends much beyond typing a short memo. Access to a variety of tools is usually more productive than having the latest version of a single one.

Word-Processing and Web Authoring Software

Word-processing programs are designed primarily for generating print and graphic images on paper; Web authoring programs do the same thing for the Internet. Web pages are gener-

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