Preface

The readings that compose this volume are intended to constitute a survey of many of the most important dimensions of managing information technology in the public sector. This work updates and replaces earlier volumes: *Public Information Technology: Policy and Management Issues* (Idea Group, 2003) and *Information Technology and Computer Applications in Public Administration: Issues and Trends* (Idea Group Press, 1999). All contributions to the present volume have been substantially revised and updated, and five entirely new chapters replace outdated topics. Essays in Part I address general policy and administrative issues in this arena while those in Part II are more applied and address information technology skills needed by public managers. Taken together, it is hoped that a contribution is made by these essays toward the knowledge and competencies needed by graduate students of public administration and by practitioners new to this field.

Section I:
Managing Information Technology in the Public Sector

In "Lip Service? How PA Journals and Textbooks View Information Technology," Alana Northrop points out the continued need for a reader on information technology by reviewing the early importance given to computing education by MPA programs and practitioners. Her chapter surveys current textbooks' and general public-administration journals' treatment of information technology, finding scant attention given to the topic. Northrop's chapter concludes by briefly discussing a range of issues with which public administrators should be conversant if they are to successfully utilize information technology in the delivery of public-sector services.

In "The Evolution of Federal Information Technology Management Literature: Does IT Finally Matter?" Stephen Holden finds federal agencies rely extensively on information technology to perform basic missions. His chapter analyzes federal IT management lit-

erature 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 of 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.

In "Politics, Accountability, and Information Management," Bruce Rocheleau provides examples of the politics of managing information in public. He shows how, within the organization, politics is involved in structuring decision making, struggles over purchases of hardware and software, interdepartmental sharing of information, and the flow of communications such as e-mail among employees. The chapter analyzes examples of each of these internal aspects of politics. Rocheleau also discusses evidence concerning whether political appointees or career administrators are more effective as information managers. Externally, this chapter discusses how information management has been used to attempt to achieve greater political accountability through e-reporting and examples of cases where purchasing problems spill over into the realm of external politics such as through attempts to privatize governmental information management function. The attempts to use governmental Web sites as mechanisms to achieve e-governance and greater citizen participation in the political process also make it impossible for information managers to insulate themselves against politics, Rocheleau argues.

In "Reconciling Information Privacy and Information Access in a Globalized Technology Society," George Duncan and Stephen Roehrig find that in reconciling information privacy and information access, agencies must address a host of difficult problems. These include providing access to information while protecting confidentiality, coping with health information databases, and ensuring consistency with international standards. The policies of agencies must interpret and respect the ethical imperatives of democratic accountability, constitutional empowerment, individual autonomy, and information justice. In managing confidentiality and data-access functions, agencies utilize techniques for disclosure limitation through restricted data and administrative procedures and through restricted access.

Chris Demchak and Kurt Fenstermacher, in "Privacy-Sensitive Tracking of Behavior with Public Information Systems: Moving Beyond Names in a Globalizing Mass Society," explore the roles of names and name equivalents in social tracking and control. This is particularly timely and urgent as increased interest in biometrics offers an insidious expansion of unique identifiers of highly personal data. Demchak and Fenstermacher review the extent of privacy-sensitive databases accumulating today in U.S. legacy federal systems and propose an alternative that reduces the likelihood of new security policies violating privacy. The authors conclude with a proposed conceptual change to focusing the social-order mission on the behavior of individuals rather than their identities (behavior identity knowledge model [BIK]).

Next, in "E-Government: An Overview," Shannon Schelin surveys the rapid growth of e-government. Her essay offers an overview of the historical premises, theoretical constructs, and associated typologies of e-government. These typologies posit a framework for understanding e-government, its potential benefits, and its related challenges. In the subsequent essay, "E-Participation Models," Suzanne Beaumaster discusses participation as the cornerstone of governance, now rendered more diverse through the possibilities offered by technology. She asks what kind of participation should we be fostering and what do we hope to gain through participative processes? Her chapter provides a definition and discussion of three

e-participation models: information exchange, general discourse, and deliberative models of electronic participation in the governance process.

Picking up on the e-participation theme, Christopher Reddick in "E-Government and Creating a Citizen-Centric Government: A Study of Federal Government CIOs" examines the relationship between e-government and the creation of a more citizen-centric government. Using a conceptual framework, the author shows a possible relationship among management, resources, security, and privacy issues that would lead to creating a more citizen-centric government. Reddick explores the opinions of chief information officers (CIOs) on e-government issues and effectiveness. He finds that CIOs who have higher management capacity and project management skills are associated with creating a more citizen-centric federal government.

Rounding out Section I, in "The Federal Docket Management System and the Prospect for Digital Democracy in U.S. Rulemaking," Stuart Shulman traces how an interagency group led by the Environmental Protection Agency (EPA) worked to establish a centralized docket system for all U.S. federal rulemaking agencies. The resulting Federal Docket Management System (FDMS) reflects technical, administrative, financial, and political challenges and lessons. Actual progress, Shulman notes, has come with mixed results falling short of original visions. Shulman concludes that in the great American tradition of incrementalism, the FDMS represents a small step toward a number of worthy but perennially elusive goals linked to the prospect for digital democracy.

Section II:
Computer Applications in Public Administration

In this chapter on computer applications ("IT Innovation in Local Government: Theory, Issues, and Strategies"), Charles Hinnant and John O'Looney consider the social and technical factors that lead to technological innovation in general and e-government in particular for U.S. local governments. They discuss local governments' motivations to innovate and their technology characteristics, available resources, and stakeholder support, as well as other factors. Hinnant and O'Looney make the case that local governments should seek to formally assess the need to adopt e-government technologies, develop new funding strategies, and develop a mix of in-house and contracted IT services.

In "Information Technology as a Facilitator of Results-Based Management," James Swiss discusses IT in relation to results-based management, which encourages planning and target setting to make the organization more proactive, an emphasis on outcomes to make the organization better focused on its mission, quick performance feedback to make the organization more responsive, and continuous process improvements to make the organization better able to serve its clients. These changes are possible only with supporting information technology. This chapter discusses ways that IT can support the new management model if properly designed. Swiss discusses design considerations by which top public and nonprofit managers must determine what information would best guide upcoming major decisions and must also decide how they wish to balance system integration vs. costs, disintermediation efficiencies vs. client guidance, internal information accessibility vs. security, and frontline worker empowerment vs. organizational uniformity.

In "Managing IT Employee Retention: Challenges for State Governments," Deborah Armstrong, Margaret Reid, Myria Allen, and Cynthia Riemenschneider review the literature on factors that may reduce the voluntary turnover of public-sector IT professionals. Examples are presented that illustrate what states have been doing to improve their ability to retain their technology workforces. The authors conclude that while public-sector IT employees may not weigh the financial rewards associated with their jobs as heavily as private-sector IT employees might, workplace and job characteristics are important in ways public managers must recognize.

In "Computer Tools for Public-Sector Management," Carl Grafton and Anne Permaloff survey basic elements of the public-sector office, including word processing, spreadsheet, statistics, and database management programs. Web authoring software, presentation software, graphics, project planning and management software, decision analysis, and geographic information systems (GISs) are also surveyed as part of the public-office software suite.

In "Computers and Social Survey Research for Public Administration," Michael Vasu, Ellen Storey Vasu, and Ali Ozturk discuss electronic tools for citizen surveys and the integration of computing into survey research and focus groups used in research and practice in public administration. Their chapter reviews uses of computers in computer-assisted information collection (CASIC), computer-assisted telephone interviewing (CATI), computer-assisted personal interviewing (CAPI), and transferring survey research methods onto the Web. A second portion of the chapter gives special attention to continuous audience response technology (CART), using as an example a citizen survey focused on economic growth issues.

In "Geographic Information System Applications in the Public Sector," Douglas Carr and T. R. Carr trace how geographic information systems emerged in the 1970s to become a significant decision-making tool. Their chapter discusses various GIS applications and highlights issues that public managers should consider when evaluating implementation of a geographic information system to achieve its effective use in the public sector.

Charles Prysby and Nicole Prysby, in "You Have Mail, but Who is Reading It? Issues of E-Mail in the Public Workplace," discuss the increasing use of electronic mail in the workplace. This increase has been accompanied by important legal questions for public organizations. These questions fall into two basic categories: (1) issues of employee privacy regarding e-mail messages and (2) public access to e-mail under applicable freedom-of-information legislation. Privacy concerns have generated demands for greater protection of employee confidentiality, and some states have responded with legislation that covers e-mail in the workplace. Government organizations must treat at least some of their e-mail as part of the public record, making it open to public access, but this also can lead to conflict between public administrators, who may feel that much of their e-mail represents thoughts that were not intended for public disclosure, and external groups, such as the press, who feel that all such information belongs in the public domain. Given the uncertainty and confusion that frequently exist regarding these legal questions, it is essential that public organizations develop and publicize an e-mail policy that both clarifies what privacy expectations employees should have regarding their e-mail and specifies what record-keeping requirements for e-mail should be followed to appropriately retain public records.

In an essay titled "World Wide Web Site Design and Use in U.S. Local Government Public Management," Carmine Scavo and Jody Baumgartner explore the promise and reality of Web applications for U.S. local government. Four types of Web utilizations are analyzed—bulletin-board applications, promotion applications, service-delivery applications, and citizen-

input applications—based on a survey of 145 municipal and county government Web sites originally conducted in 1998 and replicated in 2002 and again in 2006. The authors conclude that local governments have made progress in incorporating many of the features of the Web but have a long way to go in realizing its full promise.

Finally, in "An Information Technology Research Agenda for Public Administration," G. David Garson outlines research questions that frame the dimensions of a research agenda for the study of information technology in public administration. The dimensions selected as being the most theoretically important include the issues of the impact of information technology on governmental accountability, the impact of information technology on the distribution of power, the global governance of information technology, information resource equity and the digital divide, the implications of privatization as an IT business model, the impact of IT on organizational culture, the impact of IT on discretion, centralization and decentralization, restructuring the role of remote work, the implementation success factors, the regulation of social vices mediated by IT, and other regulatory issues.

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