Introduction

Knowledge . . . is inexhaustible. Once produced . . . knowledge can be used repeatedly—it will not disappear. In fact, it only increases! Digital knowledge can be copied and never missed. It can be given away but still kept. Digital knowledge can be distributed instantly. It is non-linear; it defies the theory of economy of scale. Knowledge is the key element of wealth in the information age.
(Fast, William R., 2002, Knowledge Strategies)

[Government] organizations are increasingly implementing knowledge management (KM) strategies to maximize the benefits of what they know to help improve the efficiency and effectiveness of their business operation. KM is a collaborative and integrative approach to creating, capturing, organizing, accessing, using, and reusing intellectual assets—to get the right information to the right people at the right time to support management and decision-making.
(Office of the Inspector General, U.S. Dept. of State, 2003, Knowledge Management at the Department of State, Monthly Activities Report [July])

The term *public sector* refers to the functioning agencies and units at the federal, state, county, municipal, and local levels of government. The sector includes all agencies, government corporations, the military, and departments, agencies, and miscellaneous units that perform some form of public service. They range in size from the largest federal department down to the smallest special district, such as a mosquito abatement district or a community library district. For this text, the public sector does not include those organizations considered to be *nonprofit organizations* (NPOs), although many similar management principles apply to both NPOs and government. All business enterprises, regardless of their form, their structure, or the focus of their activities, constitute the profit-centered portion of the economy, and are part of the *private sector.* As such, they are not a major concern in this text.

Private- and public-sector managers use the same business tools; usually, however, organizational improvement programs and management techniques are first developed, tested, and proved effective in private-sector organizations.

Typically, only later are these innovations adopted in government. This text is about how government managers and administrators are adopting the public-sector-developed concepts and practices known as *knowledge management.*

Knowledge management incorporates ideas and processes from many different sources and technologies; a wide variety of disciplines, techniques, and processes contribute to the art and science of managing knowledge in organizations. One government observer found references to more than twenty different disciplines and information and communication technologies in this evolving management tool:

- Artificial intelligence (AI),
- Business process improvement (including process modeling, ABC costing, process simulation, functional economic analysis, etc.),
- Change management,
- Cognitive science,
- Complexity theory,
- Computer-supported collaborative work (GroupWare),
- Computer science and engineering,
- Computer user interface design,
- Data administration/standardization,
- Data mining,
- Decision support systems,
- Document management,
- Electronic publishing,
- Expert systems,
- Library and information science,
- Organizational science,
- Performance support systems and appraisal,
- Relational and object databases,
- Semantic networks,
- Text search and retrieval,
- And more.

Butler, Feller, Pope, Barry, and Murphy (2003, 83) also described KM as a multidisciplinary domain of interest, with origins in philosophy, economics, organization theory, information systems, marketing, management strategy, innovation research, and organizational learning. Elements of these disciplines have been brought together to result in a management philosophy and set of tools and processes founded on four basic tenets: (1) knowledge is created in the minds of people; (2) knowledge can be captured, put on paper, entered into a computer system, put to work, or simply remembered; (3) following a funda-

mental characteristic of the human mind, knowledge is classified, combined, modified, and reorganized. Technology makes it easier to recapture knowledge by making it possible to search using key words or phrases; and (4) knowledge is shared; as it is shared, it is recycled, modified, and enlarged.

Common Challenges, Responsibilities, and Trends

Public-sector managers and administrations face many challenges and new responsibilities in the twenty-first century. Just a few of the more salient of these challenges are defending the homeland against terrorist actions, preventing the spread of infectious diseases, maintaining a reliable stream of social security income, continuing to support the transition from welfare to work, ensuring that our education systems meet the needs of students both young and old, and repairing an aging and in many cases decaying physical infrastructure (U.S. GAO 2004). Further exacerbating the effects of these and other challenges are a number of social and economic trends that hinder the ability of governments to carry out their appointed tasks. Among the key trends impacting the way government must act today and in the future are:

- A global reaction and response to the threat of terrorism and other physical threats to our personal and national security.
- The globalization of society that will continue to increase the interdependence of businesses and industries, national and regional economies, markets for products and services, civil societies, and national governments.
- The shift to market-oriented, knowledge-based public services, and the continued pressures for privatization of government services.
- A demographic mega-shift taking place in many industrialized societies, including more legal and illegal migration, an aging and more diverse population in the United States and elsewhere, and zero or negative population growth.
- Continued rapid advances in science and technology—and the blending of the two, as in biotechnology—and the opportunities and challenges these advances represent—including the potential for adverse public reaction to such advances.
- The many challenges and opportunities facing governments for maintaining and improving the quality of life for their citizens, families, communities, and nations in general, including getting control of rising healthcare costs.
- The challenges government managers and administrators face with the changing and increasingly diverse nature of government structures (such

as collaborations across jurisdictions) and tools, including e-government.
- A continuing demand that governments do more with less, and for greater accountability for the actions of government. This global trend is driving a movement for improving the performance of governments. This movement goes by many names, such as "reinventing government" and "management transformation." A primary feature of the movement is public- and private-sector partnerships.

Globally, governments have been forced to become more adept at grappling with these and other challenges. At the federal level, this trend is manifested by the impact such administrative mandates as the Government Performance and Results Act (GPRA), the Legislative Branch Appropriations Act (LBAA), and others are having on government agency and department operations and structures. GPRA, for example, has mandated a management shift that emphasizes results-oriented performance (strategic) planning, measurement, and reporting. A five-part framework directs agency progress under the LBAA: leadership, strategic human capital management, performance measurement, organizational alignment, and communications. The goal of these performance initiatives is to eventually link all future resources to results.

Throughout the federal government—and increasingly at the state and local levels as well—a far-reaching dialogue is under way in which new answers are being framed for such questions as what should constitute government in the information economy, what governments should do, and what should be left to the private sector or managed through collaborative public-/private-sector partnerships. Driving this dialogue is the need for government agencies to continue to transform their organizational cultures from the traditional hierarchical, bureaucratic models to open, flat, and worker-empowered organizations where change is welcomed. For this transformation to occur, a number of shifts in the way government operates must take place. These include shifts from:

- Processes to results,
- Stovepipes to matrices (matrixes),
- Hierarchical to flatter and more horizontal structures,
- An inward focus to a customer and stakeholder focus,
- Micromanagement to employee empowerment,
- Reactive behavior to proactive approaches,
- Avoiding new technologies to embracing and leveraging them,
- Hoarding knowledge to sharing knowledge,
- Avoiding risk to managing risk, and
- Protecting turf to forming partnerships and collaborative teamwork.

The overriding goal of these shifts in focus is to achieve a fundamental transformation in government departments, agencies, and units. In order to make that transformation happen, the GAO recommends that the first priority of a government agency is to strengthen its capacity to perform its mission by carrying out the following six tasks:

1. Demonstrate top leadership commitment to the organizational transformation,
2. Involve key constituents and other stakeholders in developing their required strategic plans and organizational transformations,
3. Use the strategic plan as the foundation for aligning activities, core process, and resources to support mission-related outcomes,
4. Establish a communications strategy to foster transformation, create shared expectations, and build involvement,
5. Develop annual goals and a system for measuring performance, and
6. Strategically manage its human capital to support the accomplishment of the agency's objectives.

Why Another Book on Knowledge Management?

If there is one thing about knowledge management that everyone can agree on, it is the fact that its proponents have been more than prolific in talking and writing about it. Early in the new century, a university colleague found that more than 300 books had already been published on the subject. Other than some minor details, most of those authors agreed on the basic principles and fundamental structures of this emerging discipline. They also agreed that managing the knowledge they had was as, or more, important for a business as managing all their other assets. Considered in this light, another book on knowledge management may be like preaching to the converted.

However, this is not intended to be "just another book on knowledge management." Most of the books on KM are concerned with the way it is or should be used in business. KM in government (or, more formally, in the public sector) has been all but ignored. For that reason, this book is *only* concerned with KM in the public sector. It looks at KM in federal, state, and local government.

Structure of the Book

This book is organized into four major sections. The first—Foundations of Knowledge Management—establishes the bonds and interconnectedness of learning, knowledge, and innovation as fundamental organizational transfor-

mation concepts. After a brief historical overview of the evolution of a stream of management initiatives, knowledge management is introduced as a logical result of this progression. The next chapter introduces readers to some of the fundamental constructs found in the growing body of literature for this new discipline in the context of a self-regulating and -organizing social system. These concepts are incorporated into a model that illustrates the entire knowledge management system from raw data to organizational payoffs.

Part 2—Transforming Government with KM—expands on each of the major constructs introduced in the components of KM model introduced in chapter 1. In the five chapters included in this section readers will be shown how information technology and personal work processes transform data to information, and information into knowledge; how KM transforms silo mentalities into knowledge-valuing cultures; how selected KM processes are able to transform organizational isolates into valued participants; how KM contributes to fostering innovation in government; and how learning and innovation contribute to transforming a traditional government bureaucracy into a learning organization.

Part 3—KM Systems in the Public Sector—begins with a brief review of the argument that public-sector management (and, hence, knowledge management) is different than private-sector management. These arguments tend to focus on the lack of the profit motive as the major contributor to these differences (if any). The section also compares the role of the chief information officer (CIO) with a newer position, that of the public-sector chief knowledge officer (CKO).

Part 4—Stories of Public-Sector KM in Action—provides readers with a number of example case studies that illustrate how KM has been implemented in a variety of different government organizations. The last section in the book provides a review of a chain of intellectual activity that is shaping the drive to make knowledge management a full-fledged academic discipline. The consensus is that although early KM initiatives focused on IT applications, more recent manifestations of KM emphasize the social and behavioral aspects of the KM concept. In some circles, this is referred to as "second generation" or "new knowledge management" (McElroy 2003).

Acknowledgments

Few if any books on management in either the public or private sectors are ever written without drawing upon the contributions of the many researchers, practitioners, administrators, and academics that have passed along the same road previously. Certainly, this book owes a large debt of gratitude to the many pioneers in this new management discipline, and to the many pub-

lic servants—military and civilian, federal, state, and local—who have shared their knowledge, time, expertise, and passion for the use and promise of knowledge management. I thank you all and wish you continued success as you labor to make the governments of tomorrow better than those that came before. Although I willingly recognize the help and guidance received, I take full responsibility for any errors of commission or omission that may appear in the final manuscript.

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This book is dedicated first to the members of my family for their support—past, present, and future—and to my colleagues and friends at universities in the United States and Riga, Latvia. I wish them well as they continue on the search for truth and understanding in this new century, eagerly facing ever-new challenges, and secure in the knowledge that educating the young men and women of the world is surely one of the noblest of professions.