Preface

Electronic government or e-government projects are a huge undertaking and require serious political commitment, clear vision, and a robust long-term strategy. The successful realization of such projects in practice requires appropriately designed technology infrastructure. Higher failure rate in technology adoption has highlighted that human factors are an important aspect when designing and implementing e-government projects. In order to foster successful usage, technologies need to be consistent with human practices. Failure to design e-government technologies properly can lead to project failure, which can represent a substantial cost for governments and a loss of confidence by users in these systems. Public sector organizations need to deal with a vast number of stakeholders, which makes it especially important that these projects are designed with the user or citizen in mind.

The edited book, *Human-Centered System Design for Electronic Governance* examines the impact of human factors on the development of e-government. The objectives of the book are twofold. First this book provides innovative ideas, suggestions, and recommendations examining the inherent issues, technology design implications, user experiences, and guidelines for technology in government. Second this book provides case studies on best practices employed by organizations in the field of e-government. The aim of the second objective is to provide opportunities for discussion of implications and dissemination of best practices that will be useful, or of interest to academics and practitioners from a range of fields including information systems, human computer interaction, organizational science, public administration, and political science. The book will be helpful for students and researchers working in the domain of information systems. Furthermore, government officials working to devise IT strategy and solutions for e-governance are also potential readers. This book will be helpful for those that want to learn about the design of information systems in the context of e-government, from a human-centric approach.

The book is timely since the focus here is on how e-government has influenced human behavior, something relatively unexplored in the literature. Most of the existing research handbooks examine the adoption of e-government, or various aspects of technological innovations in government; this book focuses specifically on the human element. This book also provides a broad array of chapters examining both developed and developing countries and their experiences. There are many different methods used in this book ranging from case studies, surveys, interviews with public officials, and comprehensive literature reviews. The end results and findings of this book is that human factors are indeed important, especially as governments are spending more money on the development of e-government projects in these tough economic times.

There are three parts to this book. Section 1 deals with user-centric e-government. In this part, there are chapters on the impact of citizens and their impact on the development of e-government. Section 2 of this book examines the human-centered e-government effectiveness and organizations. The chapters
in this part of this book focus on evaluating the use of e-government projects that focus on human factors. Section 3 of this book provides selected case studies on human-centered e-government. In this part, there are case studies of not only successful experiences with e-government, but challenges that governments have faced.

Within the three parts of the book, in Section 1, there is first a chapter by Adapa that examines the adoption of e-government globally focusing on its benefits and barriers. Examining adoption in both developed and developing countries shows that there are vast differences in what determines success. The author here notes that developed countries could set the tone for developing countries. Important challenges in developing countries are issues of leadership and decision-making, which needs to be improved for more successful adoption. Education and training are essential for successful adoption. Therefore, the importance of this chapter is that technology adoption must take into account human factors.

Chapter 2, by Foster and Chen, examines the adoption of social media in local governments in the U.S. Social media is one important tool that governments can use to engage their citizens in public service delivery. As the authors mention, social media applications are an example of human-centered design that benefits local governments and their citizens. Their research is different since social media is so new; there is little literature on social media in local government. According to Foster and Chen, through social media governments can make the governance process more inclusive and transparent, which may stimulate citizen trust in government. The authors of this chapter found that since social media is new for local governments, policies on its use have not kept pace; therefore, governments should spend more time thinking about appropriate policies.

In Chapter 3, Sacco argues that user-centric access to complex information is critical for the development of e-government. This author discusses dynamic taxonomies; which are a data management model to make better sense of information placed online. According to Sacco, some of the applications for e-government are seen through laws and regulations where dynamic taxonomies can provide guided browsing and personalized exploration of a complex set of government regulations and laws. Dynamic taxonomies also provide a way for citizens to better access useful information from government websites. The contribution of this chapter is to show the importance of the semantic web and its application to government.

Saeed and Rohde, in Chapter 4, examine the issue of technology design for nonprofit organizations. This is an important contribution to the book since it deals with a topic that has not received much scholarly attention in e-government research. As these authors point out the composition and operation of nonprofit organizations are very different from public sector organizations. These authors also argue that nonprofits lack funding to take on risky and uncertain technology projects. The findings from this study indicated that lack of funding to support technology infrastructure appeared to be a major challenge for technology adoption.

Chapter 5, by Nathan and Suki, examines the design of e-commerce websites that connect businesses with their customers. The simply but important message from these authors is that “one size does not fit all” in prevalent e-commerce websites. One of the recommendations these authors propose is that designing user-centered websites will humanize the web experience for users. These authors argue that web designers need to constantly learn about the changing business environment, and give customers what they want in terms of features.

The last chapter in Section 1 is Chapter 6, which deals with authentication for electronic voting or e-voting. E-voting is the use of Information and Communications Technologies (ICT) for voting. As Abu-Shanab, Khasawneh, and Alsmadi, the authors of this chapter, state, the main issue for the legitimacy of
the voting is security and privacy. Their chapter discusses the various techniques and methods used to gain a higher level of security and authentication of the voter. The authors argue that biometric methods will increase e-voting systems accuracy and mixed methods are also critical to employ.

Section 2 of this book examines human centered e-government effectiveness and organizations. Chapter 7 Virkar examines the design and implementation of e-governance projects. This chapter discusses the most important benefits of e-government projects such as cost reductions and efficiency gains, quality of service delivery, transparency, anticorruption, and accountability, improvements in decision making, and increased capacity of government. Some of the challenges for e-government projects are the lack of ICT infrastructure, organizational and management, human capital, information, and general management. The author makes the reader aware of the complexity of implementing e-government projects, which really need to account for the human element.

In Chapter 8, by Prentzas, Derekenaris, and Tsakalidis, the authors examine e-government system design in port authorities. They argue that e-government projects involving ports require careful design because of the complex services provided. Automation and efficient data exchange are among the functionalities required for port authorities since they deal with a lot of traffic. Coordination is also important and requires that systems in place must be carefully designed to take into account human factors. The authors of this chapter especially focus on the Intranet and some of the functionalities of this system for the port authority.

In Chapter 9, Alalwan and Thomas argue that e-government projects are very expensive, risky, and difficult to successful accomplish. These authors provide a framework to evaluate the efficiency of e-government systems. Their framework seeks to classify e-government systems into four quadrants. This framework can be used by researchers and practitioners to assess e-government projects in the public sector. The contribution of this paper is to provide more research on the evaluation of e-government projects.

In Chapter 10, Mangaraj and Aparajita discuss the measurement of the effectiveness of e-government systems using a human-centered approach. There is a necessity for the improvement of the design of e-government in order to make it more user-friendly. Effectiveness can be explained by examining the dimensions of price, content, availability, usability, quality, and communicability. These authors argue that their methodology can be used to evaluate the effectiveness of e-government projects.

In Chapter 11, Olembo and Volkamer examine the usability of e-voting systems. The results from this chapter are useful for those designing e-voting systems to focus more on human factors. Direct Recording Electronic (DRE) such as electronic touch screens and traditional voting methods presently have a lot of research; however, research looking at the usability of verifiable e-voting systems needs further study.

In Section 3, there is an examination of human-centered e-government case studies. Chapter 12, by Hinnant, Lee, and Mon, examines a case study on the adoption of ICT in U.S. Court Appointed Special Advocate (CASA) programs that rely heavily on volunteers for neglected children. This chapter examines ICT systems to delivery information online to both volunteers and staff. The results of their case study show that websites and social media sites can be useful to deliver communication between program staff and stakeholders.

In Chapter 13, Cabotaje and Alampay provide a case study of social media and citizen engagement using a case study of the Philippines. There are two case studies presented: one case is on using social media to promote tourism, and the second examines social media for disaster response. The findings of this case study show that social media can be used to harness greater citizen engagement in government.
In Chapter 14, Padovani, Orelli, Agnoletti, and Bucciol examine human-centered health care service delivery. The results of the case study show that the use of ICT can create more efficiency and effectiveness in the delivery of medical care. This technology can be successfully used by clinicians and managers to better management health care delivery.

In Chapter 15, Bolívar, Pérez, Hernández examines the impact of social media implementation on local governments in Spain. Their case study showed that social networks by improving communication with the public create greater transparency and accountability. The key contribution of their study is to show the impact of social media on public service delivery at the local level.

Chapter 16, by Cavallo, examines electronic participation or e-participation in Kenya. E-participation investigates how ICT can be used to improve citizen interaction with government. Their case study uses a game theoretical approach and found that in Kenya e-participation has inherent risks and failures.

Chapter 17, by Santhanamery and Ramayah, provides a case study of e-filing for income taxes in Malaysia. Their major finding is that trust in the e-filing system leads to greater use of these online systems. This paper supports the existing literature that argues that trust and confidence in e-government leads to greater adoption.

In Chapter 18, by Abdelsalam, Reddick Hatem Elkadi, and Gamal, the final chapter in this book examines through a survey of citizens the issues associated with the use of e-government portals. The results showed that demographic factors had an influence on the use of web portals. In addition, there is a digital divide in Egypt with face-to-face communications being the most preferable way to contact government entities.

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