Chapter 1
Web 2.0 Technologies and Democratic Governance

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In this book, we refer to Web 2.0 as a second generation of the World Wide Web used to describe social media on the Internet—a variety of Web-based platforms, applications, and technologies which exploit the Internet's connectivity to support the networking of people and content. These include social media applications such as blogs, photo and file sharing systems (e.g. Flickr, SlideShare, YouTube) and social networking sites (e.g. Friendster, Facebook, MySpace, SecondLife). Recent innovations in Web 2.0 technologies such as Ajax, XML, Open API, Microformats, and Flash/Flex have enabled the development and use of social media and networking through which individuals can actively create, organize, edit, publish, combine, share, comment, collaborate, and rate Web content. The chapters in this edited volume provide insights into how social media and related applications can be used to enhance the management of public service delivery, to enable online citizen-government interaction and participatory democracy, and to promote accountability.

Technologies in the Web 2.0 domain are appearing rapidly and taking an inventory can be challenging indeed (Dadashzadel 2010). Web 2.0 applications are rapidly transforming citizen–citizen and citizen–government interactions in a manner not seen before. A recent study sponsored by IBM Center for the Business of Government revealed that over the past several years alone, the percentage of US citizens involved in social networking, virtual community activities, and other special interest sites has doubled to over 30 % of the general population (Chang and Kannan 2008). For those in their teens and twenties, this percentage is much

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higher, indicating an ever-increasing trend in the use of the online environment for social networking, exchanging information, creating and building up content, and conducting transactions. Recent developments in the Middle East, especially in Egypt where reliance on social media applications such as Twitter and Facebook served as organizing tools that helped to topple a 30-year-old regime provides further evidence of the growing importance of Web 2.0 applications in the area of democratic accountability.

In recognition of these trends, governments are already taking a close look at Web 2.0 and online communities in order to leverage them for designing products and services and for providing citizen services. The Web 2.0 initiatives—podcasts and virtual worlds—of the Centers for Disease Control (CDC), NASA's internal social networks and virtual worlds, and the US intelligence community's Intellipedia are just a few of the recent efforts launched within the federal government. Given these realities, it is important to find a way to leverage Web 2.0 in the government to strengthen government–citizen relationship and to enable intra- and intergovernmental use in order to improve the policy and public management processes. For this to happen, government organizations need to align their Web 2.0 strategies with their organizational strategic goals for effective outcomes. This calls for clear sets of policy goals and development of Web 2.0 strategies that initiate new interactive ways of policy making, improve data and information management, and stimulate the development and use of knowledge for effective public management. Additionally, it calls for an information strategy aimed at coordinating technology, people, and information exchange in order to add value to the information used in governance and the management of public service delivery. Therefore, an edited book that helps to understand the nature of Web 2.0 applications, their political policy, and managerial implications, as well as how best governments can leverage the applications for effective governance is much needed.

This book, *Web 2.0 Technologies and Democratic Governance,* brings together international scholars to provide the theoretical and practical contexts for understanding the nature of Web 2.0 technologies and their impact on political, public policy, and management processes, and to explore how best Web 2.0 applications can be leveraged and aligned with the strategic goals of government organizations to add value and ensure effective governance. Drawing from experiences from countries around the globe, the book provides the theoretical context of the potential for Web 2.0 applications to transform government services, as well as practical examples of leading public sector institutions that have attempted to use Web 2.0 applications to enhance government operations, policy making, and administration.

1.1 The Context of Web 2.0 for Democratic Governance

Some scholars argue that with Web 2.0 there is a real potential of creating transformational change with a greater degree of transparency, accountability, and collaboration, which will in turn enhance civic engagement (Bertot et al. 2010).

Table 1.1 Essential differences between Government 1.0 and 2.0

Dimensions	Government 1.0	Government 2.0
Operations	Hierarchical	Networked
	Red Tape	Collaborative
	Rule Bound	Flexible
Service delivery	Single mode of delivery	Personalized
	Monopoly	Choice-based
	Single channel choice	Multi-channel
Performance	Inputs	Outcomes
	Line item resourced	Feedback Loop
Information	One-direction flow	Multi-direction flow
Decision Making	Top-down	Participative
		Collaborative
		Open Government

Sources Compiled from ideas from Deloitte (2008); Chun et al. 2010

However, others argue that the long history of studying the institutional context of IT adoption in the public sector indicates that organizations often impede any real reform (Mergel et al. 2009). These institutional pathologies are difficult to overcome, and meaningful change is hard to reach. Essentially, public sector officials and agencies may not want to share information because they fear loss of control which prevents transformative change. Kraemer and King (2003) in the study of technological innovation in government argued that Information Technology (IT) will not lead to new administrative structures, as it is just another path for service delivery. This book examines whether Web 2.0 is different, and does it represent long-lasting change?

In Table 1.1 we compare Government 1.0 with Government 2.0 showing the essential differences between the two typologies. This table shows that with Government 1.0 information is flowing from the top down in the organization with information eventually reaching citizens. Under Government 1.0 there is limited feedback from citizens (Chun et al. 2010). Some of the essential differences between the applications of Web 1.0 and 2.0 are that instead of content on a website being controlled by the administrator, in Web 2.0 users are producers or generators of content (Chang and Kannan 2008). Essentially, users can organize their information in their own way. The basic idea behind Web 2.0 is that the old generations of technologies were unidirectional and citizens were passive receivers of information (Meijer and Thaens 2010). Web 2.0 has created information in a multidirectional format. Web 2.0 gives users greater control over information and its use within a community, something especially important for promoting civic engagement. Much of the e-government research to date has focused on using e-government technology to automate government public service delivery (Norris and Reddick 2012). Web 2.0 technologies can be used to disseminate information and knowledge, thereby integrating information to enhance knowledge management (Dixon 2010).

Denhardt and Denhardt (2000) describe three models of public administration, which are Old Public Administration (OPA), New Public Management (NPM), and

New Public Service (NPS). These three models can be applied to the application of Web 2.0 in government. The traditional model of public administration is OPA, which focuses on bureaucracy, efficiency, and rules. NPS has very close similarities to Web 2.0 in that it offers citizens greater opportunity for civic engagement—a hallmark of NPS. The NPS research shows that governments need to move from merely being responsive (customer-driven) in NPM, to being collaborative with citizens as partners (not clients) in NPS (Vigoda 2002). Some authors have argued that one way to conceptualize e-government is to note that the traditional bureaucracy and new public management are antagonists to one another (Persson and Goldkuhl 2010). By contrast, e-government can be seen as a synthesis of the two opposing strategies, bringing together their best features. Essentially, e-government is able to combine some of the characteristics of OPA and NPM. Brainard and McNutt (2010) discuss the theories of OPA, NPM, and NPS, with NPS being enhanced by the use of e-government and social media to expand civic engagement. Therefore, Web 2.0 can be used as a way for governments to practice NPS.

However, existing research shows that Facebook and other social media technologies cannot be viewed as a way of increasing civic engagement, because they do not change the existing power relations in public organizations (Hand and Ching 2011). In examining three models of citizen interaction with government, Chadwick and May (2003) show that e-government can fall under the participative model, rather than the managerial and consultative models. We can extend this by saying that the Web 2.0 would fit well into the participative model, with its emphasis on user generated content. Social media is also said to be a way of reducing corruption because it provides for greater transparency in government operations (Bertot et al. 2010), an attribute that is increasingly important to enhance trust and confidence in public institutions.

As many of the chapters in this book show, governments employ social media for three reasons: (1) democratic participation, (2) co-production, and (3) crowdsourcing solutions (Bertot et al. 2012). Essentially, they use Web 2.0 for both the political and managerial functions of government. However, we should be cautioned as Millard (2010) states, Web 2.0 should be more aptly called Web. 1.5, since much of the potential for democratic governance has not been fully realized. Web 2.0 technology currently provides some of the new features of collaboration, transparency, and accountability, but there is much room for improvement in its application in government as will be discussed in this book.

1.2 Chapter Overviews

There are three sections in the book *Web 2.0 Technologies and Democratic Governance*. Section I examines government policy and the uses of Web 2.0 for public service delivery. Chapter 2 by Jaeger, Bertot, and Shilton examines social media use and information policy at the federal level in the US One important conclusion that they draw in their case study of federal use of social media was that

government usage seemed to favor those already having access to this technology. This suggests that the "digital divide" is an important issue that governments need to address with the implementation of Web 2.0. Chapter 3 by Webb discusses the policies of federal agencies on microblogging, such as Twitter. This author found that agencies typically have policies on social media in particular, but very few agencies had policies regarding microblogging. The results of her paper suggest that oftentimes policy making lags behind the advancement of IT in the public sector. In Chap. 4, Perez, Bolivar, and Hernandez demonstrate the importance of understanding Web 2.0 as a way of reforming public service delivery. This chapter examines the movement from Government 1.0 to Government 2.0 in an analysis of Spanish government websites. In Chap. 5, Gardini, Mattei, and Orelli examine public service delivery and Web 2.0 technology with case studies of four European countries—United Kingdom, France, Germany, and Italy. They are trying to determine whether Web 2.0 has changed public service delivery for these countries. Their results showed that there was much variability in how Web 2.0 has impacted public service delivery. For instance, there is a more user-centered approach to Web 2.0 in the UK, compared with Germany and Italy; where the latter two countries seemed to be using this technology more for efficient public service delivery. In Chap. 6 Anthopoulos and Tougountzoglou examine the concepts of digital cities and how these governments incorporate Web 2.0 into their operations to enhance citizen participation. The digital city can use various collaborative and crowdsourcing tools to enhance citizen participation.

The second section of this book examines Web 2.0 as a tool for mobilization, protests, and governance. In Chap. 7 Agarwal, Lim, and Wigand examine the women's right-to-drive campaign in Saudi Arabia and the impact of social media use on this issue. The findings from this chapter indicate that social media provides citizens with a new voice to be heard, and therefore, encourages greater participation. Social media has a potential to bridge dialog between government and citizens. In Chap. 8, in an examination of Dutch student protests, DeKool found that through Web monitoring, the Ministry of Education was able to determine the reaction of students to a change in education policy. This case shows that governments can use Web 2.0 technology to advert surprises with the implementation of public policies. In Chap. 9 Veljković, Bogdanović-Dinić, and Stoimenov discuss the concept of Web 2.0 in relationship to open government. Open government espouses the three pillars of transparency, collaboration, and participation. These authors believe that with Web 2.0 technologies governments have unprecedented opportunities to engage citizens as partners in public service delivery. In Chap. 10 Mascaro, Novak, and Goggins provide a comparison of the two important political interest groups in the US and their use of Facebook. Their results showed that both groups used social media differently, implying that to understand Web 2.0, one must acknowledge that different groups use it for different forms of political participation. In Chap. 11 Ahn examines whether Web 2.0 is any different from e-government. As Ahn argues, unlike Web 1.0, governments will find it increasingly difficult to control the information that they provide to the public with the use of Web 2.0. This will have an impact on public service delivery, since Web 2.0 will challenge traditional ways of serving the public.

The last section of this book examines the effects of Web 2.0 on political campaigns and participatory democracy. In Chap. 12 Towner notes one of the most important elements of Web 2.0 is for the way political campaigns and elections are run. With Web 2.0 there is a two-way communication between the political candidates and the citizens; this challenges the traditional way that media dominates campaign coverage. As a result, campaigns must invest more time and money into social media to directly reach citizens. Effing, van Hillegersberg, and Huibers in Chap. 13 outline a social media participation model as a way of understanding political participation. This is an important model since much of the research that examines social media and campaigns and elections has very little theoretical understanding of how Web 2.0 impacts political participation. In Chap. 14 Criado, Martinez-Fuentes, and Silvan in an analysis of Twitter in Spanish local elections in 2011 showed that the majority of campaigns for these races simply used Twitter to broadcast information; there were much less responses by candidates to citizens' comments. Therefore, from this case study it appears that Twitter was used more as a one-way communication flow. Chapter 15 by Sandoval-Almazan and Gil-Garcia in an examination of the use of Twitter to increase citizen interactions with the government in Mexico, found that governments are increasingly using Twitter, but there is no overall strategy for its use. Therefore, it is difficult to have meaningful interactions with citizens without an effective strategy. In Chap. 16 Roy examines the use of Web 2.0 in examining Westminster governments. Roy's chapter argues that although social media has the potential to create more citizen interaction and openness in government, only if the underlying institutions of governance support its use will there be meaningful change. Therefore, Roy makes the argument, like many others in the IT and public administration literature, that change from technology does not come without change in the underlying institutional arrangements. In Chap. 17, Papaloi, Staiou, and Gouscos examine the use of social media on parliamentary websites and it impact on e-participation. The findings of this final chapter indicate that there should be a social media readiness framework to determine factors that promote readiness for governments.

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