Engaging the Public in Open Government: Social Media Technology and Policy for Government Transparency

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Abstract

Social media technologies hold great promise in their ability to transform governance by increasing a government's transparency and its interaction with citizens. The interactive and instant capabilities and the increasingly pervasive nature of social media technologies can create new ways of democratic participation, pressures for new institutional structures, and processes and frameworks for open and transparent government on an unprecedented scale. These potentials are profound, but come with challenges in the areas of policy development, governing and governance, process design, and conceptions of democratic engagement. This document provides a selected overview of key issues, questions, and best practice government initiatives regarding social media technologies. Focusing primarily on Federal government efforts, this paper examines national efforts as an example of the ways in which governments are using social media to create transparency, potential benefits of these efforts, challenges such efforts encounter, and realism of the expectations of these efforts.

Social Media Technology and Government

The use of information technology to transform government is not a new notion. In the U.S., the federal government engaged in two broad initiatives under the Clinton and George W. Bush administrations to reinvent government services through innovative applications of information technology. Under President Clinton, then Vice President Gore lead the Reinventing Government initiative to create a service-oriented and effective government through technology that also created cost savings and efficiencies (National Performance Review, 1993a; 1993b).

Under George W. Bush, the Office of Management and Budget engaged in a number of efforts guided by the E-Government Act of 2002. By creating the Office of E-government and Information Technology (http://www.whitehouse.gov/omb/e-gov/), the Bush Administration sought to streamline government operations and create more effective services and processes through information technology-based E-government initiatives.

The efforts of the two previous administrations focused on efficient and effective government – essentially seeking to foster citizen services through more effective processes and technology. The efforts did not seek to engage in participatory democracy; create new models of governing and governance; enable communities (physical or virtual) to become part of the

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government solution and implementation process; or otherwise devise solutions to challenges through a combination of data, technology, and participatory tools.

As President, Mr. Obama's Administration has pursued a range of open government initiatives guided by three principles of transparency, participatory, and collaborative (http://www.whitehouse.gov/the_press_office/TransparencyandOpenGovernment/). To further foster openness, the Obama Administration issued the Open Government Directive (http://www.whitehouse.gov/sites/default/files/omb/assets/memoranda_2010/m10-06.pdf) that required agencies to issue and implement open government plans, among other key initiatives.

The technological, social, and policy context in 2010 is one that invites new models for bridging technology, people, and government to devise enhanced participation in the way government works, creates policies, and promotes and enacts solutions. Though government agencies are increasingly using social media technologies to conduct their business and seek input, there are a number of grassroots efforts outside of government (i.e., SeeClickFix) that intersect with government at many different points. Still in its formative stages, a preliminary way of considering the social media technology context in which government operates along several dimensions (Linders, Wilson, & Bertot, 2010):

- Democratic participation and engagement, through which social media technologies are used to involve the public in government decision processes to foster participatory dialog and policy development and implementation.
- Co-production, through which governments and the public jointly develop, design, and deliver government services to improve service quality, deliver, and responsiveness.
- Crowdsourcing solutions and innovations, through which governments seek innovation through public knowledge and talent to develop innovative solutions to large-scale societal issues. To facilitate crowdsourcing, the government shares data and other inputs so that the public has a foundational base on which to innovate.
- Transparency and accountability, through which government is open and transparent regarding its operations to build trust and foster accountability.

Though not mutually exclusive, these dimensions offer great promise and challenges in redefining government-community connections and interactions. The ensuing sections expand on these dimensions and identify issues regarding governance and governing, transparency, and policy as offered through social media technologies.

Social Media and Public Engagement
Engaging the public in government policies and functions can take on a range of forms – from simply making government information and services available to soliciting feedback on proposed regulations to seeking a sustained dialog in search of solutions for grand challenges regarding environmental, health, and other critical areas.

Government Information and Services
Federal agencies are developing and expanding their presence via social media technologies. A number of agencies are using social media such as Facebook, Twitter, Flickr, and YouTube for diverse purposes, reflecting agency mission and goals. Table 1 provides a

sampling of federal agencies with YouTube pages. These pages include lectures and tutorials, descriptions of agency services, public service announcements, how to use agency content, and recent events.

YouTube Channel	Agency
http://www.youtube.com/USGovernment	General Services Agency
http://www.youtube.com/user/whitehouse	White House
http://www.youtube.com/user/NASAtelevision	National Aeronautics and Space Administration
http://www.youtube.com/user/CDCStreamingHealth	Centers for Disease Control
http://www.youtube.com/user/statevideo	U.S. State Department
http://www.youtube.com/user/USGOVHHS	Health and Human Services
http://www.youtube.com/user/uscensusbureau	Census Bureau

Table 1. A Selective Look at Federal Agency Use of YouTube

Additionally, there are agencies – or agency collaborations – that are taking noteworthy approaches to creating new ways of accessing and disseminating government information, services, and resources via social media. These include:

- **The Veterans Administration (VA)** has established a presence to interact with Veterans on Facebook (http://www.Facebook.com/VeteransAffairs/), YouTube (http://www.youtube.com/user/DeptVetAffairs), Flickr (http://www.flickr.com/photos/44636446@N04/), and Twitter (http://www.twitter.com/DeptVetAffairs/).
- **The National Oceanic and Atmospheric Administration (NOAA)** has created its Ocean Explorer site (http://oceanexplorer.noaa.gov/) to allow users to explore and learn about the ocean. NOAA created the ocean explorer channel in You Tube to bring greater accessibility to the vast content of the Explorer site (http://www.youtube.com/oceanexplorergov).
- **The General Services Administration (GSA)**, particularly through its USA.gov site, is using various social media technologies, including Facebook (http://www.Facebook.com/USAgov) and YouTube (http://www.youtube.com/USGovernment), to help people learn about and access government services.
- **Disabilities.gov** not only takes advantage of a range of social media technologies, but tries to integrate resources and benefits across a range of critical need areas such as employment, transportation, education, and health.
- **Federal Register** site (http://www.federalregister.gov/) – created by the National Archives and Records Administration (NARA) – to make the *Federal Register* more interactive and accessible.

These uses demonstrate that agencies are creatively using social media to disseminate government information, services, and resources. The arrival of Youtube and other platforms are clearly permitting (and legitimizing) previously unheard of levels of direct interaction between the government agencies and the citizens they serve. Moreover, much learning is being

supported through emergent communities of practice such as that evidenced in
http://govsocmed.pbworks.com/.

Public Engagement
       There are a number of efforts through which the Federal government is seeking democratic participation and public engagement, including:

- **Regulations.gov** was created as an outreach of the eRulemaking Program led by EPA, which migrated over 150 agencies, bureaus, and commissions to the Federal Docket Management System (FDMS).
- **Ideascale.** As part of the Open Government initiatives mandated by the Obama Administration, many agencies sought input into their open government plans and other agency initiatives using Ideascale, a tool that allows people to submit ideas and to vote and comment on ideas that have been submitted by others. (The Social Security implementation, for example, is at https://opensocialsecurity.ideascale.com/; the implementation by The Health and Human Services Agency is at https://hhs.ideascale.com/.)
- **Peer to Patent.** In an already well documented collaborative venture with an open source network of engineers and scientists, corporations, and higher education, the U.S. Patent and Trademark Office opened the patent examination process for online public participation. With the consent of the inventor, the Peer-to-Patent: Community Patent Review pilot, developed by the New York Law School Institute for Information Law and Policy in cooperation with the USPTO, enables the public to submit prior art and commentary relevant to the claims of pending patent applications in Computer Architecture, Software, and Information Security (TC2100) (see http://www.peertopatent.org/).
- **Blogs.** Many agencies (such as the Office of Science and Technology Policy (OSTP)) have blogs on a range of topics. The OSTP blog (http://www.whitehouse.gov/administration/eop/ostp/blog) has not been used just for OSTP to push out topical issues, but also to engage the public in numerous discussions regarding open government, transparency, and more. The Transportation Security Administration (TSA) has used a blog, http://blog.tsa.gov/, to defuse critiques and engage with a sometimes critical readership.
- **Apps and mobile resources.** The Transportation Security Administration (TSA) and other agencies have developed a range of apps for mobile devices to promote participation on mobile devices, provide real-time location-specific information, and more. TSA, for example, has its MyTSA app for the iPhone and the White House also has an app for Whitehouse.gov. The Environmental Protection Agency, and General Services Administration (http://m.epa.gov; http://m.usa.gov) have developed mobile platform websites to enable more interactivity with the public.

       Though this paper focuses on primarily on Federal agency use of social media technologies, it is important to acknowledge that much development of these technologies has been led by a range of companies, non-profits, and also local governments:

- IBM's Many Eyes (http://manyeyes.alphaworks.ibm.com/manyeyes/) provides ways in which to integrate and look across a range of data – particularly government data – for a number of uses at local, state, and national levels of granularity.
- Swivel (http://www.swivel.com/) is another tool designed to incorporate and visualize different types of data.
- Neighborhood Knowledge LA (NKLA - http://nkla.sppsr.ucla.edu/) project, a collaboration between UCLA and neighborhood groups. They used the Center for Neighborhood Technology's "Neighborhood Early Warning System," which looks at seven indicators of neighborhood decline, such as code violations and/or property taxes in arrears. Agencies that might have previously treated symptoms of decay in isolation can now see where blocks stand and decide on actions and priorities. The site is available in English and Spanish languages.
- "SeeClickFix" (http://www.SeeClickFix.com). This enables individuals within communities to report issues (e.g., potholes, broken traffic lights, downed power lines, and more) to government agencies that need attention. Another variant on this is a similar "FixMyStreet" (UK-based) service, which also enables the public to report local road and other problems to government entities.
- The District of Columbia used an innovative approach in its "Apps for Democracy" contest in 2008. Design firms and individuals were invited to use one or more of the numerous data feeds in the "Citywide Data Warehouse" to drive applications that would increase transparency or enable public use of the data. In short order, 47 usable applications were created, ranging from do-it-yourself walking historical tours using an iPhone to a "We the People" transparency & accountability wiki to help the public track D.C. spending.
- SunLight Labs, part of the non-profit Sunlight Foundation. SunLight Labs advocates for opening of government datasets, develops and hosts web services allowing access to some of this data, and funds and otherwise promotes projects and contests that help people explore, visualize, and interact with these data.

These efforts demonstrate the increasing pervasiveness, use, and application of social media technologies in a government context.

New Democratic Models of Governance and Governing

Social media technologies, and their increasing integration into government and community affairs, can be a significant change agent in shaping future democratic models. In particular, social media technologies have the potential to dramatically alter how the public and government interact, develop solutions, and deliver services. Moreover, there exists the potential to rethink traditional boundaries between individuals, the public, communities, and levels of government:

- **Local reporting**. There are many occasions, as evidenced by the aforementioned SeeClickFix tool, in which citizens want to engage or report issues that affect their neighborhood, community, region, or county. They may want to notify others regarding some issue, foster action from like-minded people, or bring the issue to a higher decision-making authority (e.g., local, state, or Federal government officials) in a wide range of areas – roads, traffic, accidents, power outages, and more. New media such as Twitter,

Facebook and similar technologies make this possible with unprecedented speed and efficiency.

- **Local problem solving**. The economic downturn has impacted communities in a number of ways and resulted in fewer government services – or the ability of governments to provide services. By using social media technologies, communities and governments can come together to create solutions and models of service provision.
- **New spheres of authority**. By bringing the public – or selected communities within the public – together via social media technologies, one can envision a redefinition of traditional authoritative boundaries bounded by geography and representative government.
- **Redefinition of government processes and operations**. Social media technologies take away the traditional boundaries of time and space for government processes. Participation in government traditionally involves the physical attendance of the public at hearings, panels, or other input-seeking activities. These have substantial participatory barriers that social media technologies reduce.
- **Shift in objectives of participation**. The democratic process has as one of its main goals the coming to consensus on issues, legislation, and/or regulation. Social media technologies can shift this goal through increasing deliberation and a presentation of views rather than consensus-building. Furthermore the practical ability it provides to make visible significant oppositional minorities undoubtedly changes governance and challenges government legitimacy.

In short, social media technologies can have a significant impact on government-public-community interactions.

But these impacts, though many positive, also present significant challenges, such as:

- **Redefining government boundaries**. In a democratic process that can redraw the relationship between governments and communities, it becomes less clear where government leaves off and communities begin. There is a need to consider what functions remain under the purview of government (e.g., road repair, the power grid) and what is better suited to communities for resolution and action.
- **Incorporating participation into governing**. It is too early to understand how agencies and governments are incorporating social media technology-driven participation into the act of governing. It is one thing to solicit participation and feedback, and another to actually incorporate such public participation into government regulations, legislation, and services. There need to be processes and mechanisms by which comments, feedback, and other forms of participation are: 1) incorporated into the government organization and not lost; 2) vetted; and 3) acted upon in some way – either turned into action that provide the change sought by the public, or return feedback as to why action was not taken.
- **Need for new policy structures, processes, frameworks and structures**. Though there are a range of reasons why policies (executed through legislation, administrative code, directives, Circulars, Executive Orders, and other mechanisms) exist, in the Federal information and technology space policies exist primarily to provide safety, trust, security, ownership rights, social inclusion, participation, and record keeping. Within these

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broader topics are critical areas related to privacy, e-participation and democratization, access, and engagement. However, the rapid development of information and communication technologies and the rapid evolution of e-government have far outpaced the ability of the information policy to adapt to these changes (Jaeger & Bertot, 2010). For example, not only do existing laws and policies related to equal access for persons with disabilities have difficulty accounting for new Web-enabled mobile devices, there are still legal controversies over whether websites of corporations even need to be accessible under the law (Jaeger, in press). Within this information policy environment, it is not surprising that existing policies inadequately address social media technology use by federal agencies. There is a need to comprehensively harmonize Federal policies to accommodate social media technologies and a range of technological advances.

- **Risks of polarization.** As technology offers consumers will more options for accessing news and information, they will gravitate toward sources that offer the mix of articles and the type of discussion that they like best. Sunstein (2002) and others caution that as people have more choices in information sources and tools to select and filter from them, they may increasingly gravitate toward information that they find agreeable and avoid information that is disagreeable. Interaction with and exposure to diverse perspectives may increase a democracy's ability to come together to find common ground on important issues and lead to better problem solving, and help people to accept the legitimacy of disagreeable decisions in the political sphere, rather than concocting conspiracy theories to explain why their own preferences did not prevail. Thus, a reasonable public policy goal is to promote diverse public participation and to expose people to viewpoints other than their own. This becomes more critical as trends in technology increase people's capabilities to indulge in preferences for selective exposure.

Table 2 provides examples of policy instruments related to the issues raised by government usage of social media discussed in this paper. This can be further understood by considering the April 7, 2010, the Office of Management and Budget (OMB) memorandum issued on Social Media, Web-Based Interactive Technologies, and the Paperwork Reduction Act (PRA). It sought to clarify agency use of social media technologies in light of the PRA requirements. Nowhere in the newly issued memo does it address the requirements of the PRA and OMB Circular A-130 to provide equitable and alternate access to Internet-based information content and maintain inventories of information dissemination products (which would include wikis, YouTube channels, blogs, and more).

Policy Objectives related to Social Media	Selected Relevant Policy Instruments
Access and Social Inclusion	• Americans with Disabilities Act • Executive Order 13166 – Improving Access to Services for Persons with Limited English Proficiency • Individuals with Disabilities Education Act • Section 504 of the Rehabilitation Act • Section 508 of the Rehabilitation Act • Telecommunications Act of 1996
Privacy, Security, Accuracy, and Archiving	• Children's Online Privacy Protection Act (COPPA) • Federal Information Security Management Act (FISMA) • Information Quality Act

	• OMB Memo M-03-22 • OMB Memo M-04-04 • OMB Memo M-05-04
Policy and Governance	• E-government Act of 2002 • OMB Circular A-130 • Paperwork Reduction Act • Various Copyright (Title 17 <u>USC</u>) and Patent & Trademark (Title 35 <u>USC</u>) legislation

Table 2: Selected Policy Objectives and Policy Instruments related to Social Media

Creating the tools and frameworks for facilitating agency use of social media technologies is one critical side of the coin. The other side is incorporating the findings, comments, and other results of social media technology use and transforming governance. The former requires a range of technology and policy solutions. The later requires process, interpretation, management, and policy implementation skills to incorporate the content derived from engaging constituents and stakeholders into agency operations, strategy, services, and resources. Moreover, since social media technologies are transformational in their ability to integrate across a range of data, findings, and participatory efforts and thus provide governments with instant feedback and new views of their workflow; and yet, the governing process under which agencies operate is deliberative and evolves over time.

Access and Social Inclusion

An important hurdle to widespread use of social media technology for open government is ensuring that these technologies are inclusive. Social media technologies currently present a substantial paradox. On the one hand, never before have governments and constituents had such an ability to create new government services and resources, integrate a range of information and data, and devise entirely new ways to think about and provide government services. On the other hand, moving to increasingly technology-reliant approaches for governing can lead to exclusionary practices. The ability to use social media technologies is predicated on a) access to the technologies (which necessitates a device and high speed Internet access); b) the development of technology, programs, and Internet that offer equal access to all users; and c) information and civics literacy necessary to understand the transparency information.

The Internet has greatly reduced the cost of collecting, distributing, and accessing government information, services, and resources, creating new abilities to bring governments and people together (Bertot, Jaeger, & Grimes, 2010; Relly & Sabharwal, 2009). The vast majority of government information is born digital, and many users want electronic access to it. Moreover, users expect that government services will be available electronically and that government agencies will be accessible via social media technologies. In short, many users expect government to be where they are and in a user-centered format, not the other way around (Jaeger & Bertot, 2010).

However, nearly 40% of homes lack Internet access, and that percentage jumps to 62% in rural communities; among homes with Internet access, 45% lack broadband access, while 10% continue to rely on dial-up Internet service (Horrigan, 2008, 2009). However, many current users of lower speed connections would not be able to switch due to issues of cost (Horrigan, 2009). In some communities, Internet access is limited to low speed access or is not available at all

because the areas are so rural or are so high poverty that telecommunications companies do not feel it profitable to provide service (Gabel, 2007).

Though minorities are among the fastest growing adopters of broadband services, there are substantial disparities when age, income, and education are considered (Gant et al., 2010). These gaps are highly pronounced among users who predominantly speak a language other than English, as little e-government content is available in non-English formats; for example, 32% of Latinos who do not speak English use the Internet, but 78% of Latinos who speak English use the Internet (Fox & Livingston, 2007). Even for technology-savvy users, civic engagement can be limited by difficulties in searching for and locating the desired information, lack of technological literacy, lack of familiarity with the structure of government, lack of education about e-government, language barriers, and attitudes toward technology and government (Jaeger & Bertot, 2010).

In addition to basic access, there are an estimated 58 million persons with disabilities in the U.S.; as age increases, so too does the chance of the development of a disability. Thus there are access issues that spread across the age and disability spectrums. Only 30.2% of people with disabilities use a computer at home and only 30.8% use the Internet at any location; each of these percentages is less than half of the equivalent percentages for the rest of the population (Dobransky & Hargittai, 2006). There are also issues with language, geographic location, technology and broadband costs, and a range of factors that can contribute to access challenges. Usability.gov does provide agencies with guidance on developing usable and accessible websites.

This lack of technology and Internet access, along with challenges to using information technologies, creates the need for a community-based public access venue that ensures access to technology and can provide assistance in using technologies. This intermediated access role is often played by the public library, with 99% of public libraries offering public access to the Internet and computer, as well as most public libraries providing a wide range of e-government support (American Library Association, 2009, 2010; Bertot et al., 2006; Gant et al., 2010). Of the 169 million visitors to public libraries, 45% use the Internet as part of their visits (Becker et al, 2010). A key reason for this usage is e-government. Among patrons using e-government in libraries, 52.4% do not own a computer, 42.4% lack access both at home and at work, 40% are there because access is free, and 38.1% rely on the assistance of librarians (Gibson, Bertot, & McClure, 2009).

One way in which to build trust and familiarity with e-government initiatives in the realm of social media is to partner with trusted community organizations. A range of government services involve partnerships that cut across governments, agencies, and sectors (private and non-profits). It is through these partnerships that comprehensive approaches are derived to provide individuals with government services. Examples include:

- National Library of Medicine (NIH) partnerships with hospitals, libraries, and medical schools, and universities to provide access to electronic health information and general health information.
- The U.S. Citizenship and Immigration Service (USCIS) works with public libraries and other organizations to support immigration and citizen services. For example, USCIS has

worked with the Hartford Public Library to help create its American Place
(http://www.hplct.org/tap/TAP.htm); Austin Public Library's (Texas) New Immigrants
Project (http://www.austinlibrary.com/newip/); Hennepin County's (Minnesota)
Immigration and Citizenship Information site
(http://www.hclib.org/pub/search/Immigration.cfm); and the Queens Borough Public
Library's (New York) Citizenship and Immigrant Services
(http://www.queenslibrary.org/index.aspx?section_id=5&page_id=42).

- The U.S. State Department collaborates with a number of public libraries to serve as
  Passport Centers (e.g., Buena Park Library District,
  http://www.buenapark.lib.ca.us/passports.htm; Cayuga County Public Library,
  http://cuyahogalibrary.org/PASSPORTS.ASPX).

It is through these partnerships that the reach of government data, technology, and services to
benefit communities and constituents is extended.

Management: Privacy, Security, Accuracy, and Archiving
There are a range of privacy, security, and accuracy issues regarding social media
technologies, spanning personally identifiable information, security of government data and
information, and accuracy of publicly available data. These areas intersect and require substantial
attention – particularly as new ways of combining previously unavailable and/or separately
maintained data are devised through new tools and technologies. Some specific issues include:

- Ensuring that no personally identifiable information is released;
- Securing user information;
- Ensuring that mashups and other forms of data integration – an increasing activity due to
  data availability via data.gov – do not lead to user profile development that invades
  privacy or otherwise compromises individuals, national security, or agency data security;
- Assessing the extent to which certain data combinations are valid and reliable. Simply
  because one can combine publicly available data does not mean that it is appropriate to
  do so due to key differences in periodicity, units of analysis, and other factors. Moreover,
  there is a danger of policy and decision making based on inappropriately combined data;
- Providing a current and continuously updated data.gov registry;
- Ensuring that government data are consistently available. It has been reported that files
  originally in data.gov have been removed, and agencies continuously modify the
  availability of their data. There needs to be a mechanism for ensuring availability, access,
  and inventory; and
- Ensuring that third-party social media technology providers (e.g., Twitter, Facebook,
  YouTube) adhere to government privacy and security policies and requirements.

The nature and strength of social media technologies is in their ability to create
immediate dialog through an interactive forum. This also means that there decreasingly exists a
permanent and final "document," upon which nearly all records management and archiving
efforts are built. Moreover, by use of third party applications and software that reside on non-
governmental information systems, data ownership, records schedules, and archiving are
significant issues. The General Services Administration (GSA) has entered into a number of
agreements with social media technology providers such as Facebook, Twitter, and YouTube to

work through some of the underlying aspects of these issues. However, it will be up to agencies, working in collaboration with the NARA, to ensure the permanency of the public record regarding social media technologies. This will be particularly significant as the policy making and public comment process migrates increasingly to online venues.

Another little discussed issue is the impact of direct constituent and government interactions on the comprehensive collection and dissemination of government information. For over 150 years, the Federal Depository Library Program (FDLP), with its network of nearly 150 full, partial, and regional Depositories, with the Government Printing Office servicing as the lead and coordinating agency, has served as the primary means for providing community access to government information, as per Title 44 USC. Digitization is transforming the FDLP structure and the nature of government interactions with constituents. As social media technologies are increasingly deployed by government agencies, responsibility for codifying, disseminating, and providing access to official government information remains an unanswered question (Shuler, Jaeger, & Bertot, 2010).

Call to Action

Propose something along the lines of the Presidential Management Fellows program for TMSP, a 1 or 2 year paid program to rotate experts from academia (post docs, faculty on sabbatical) through to facilitate knowledge transfer. Ideally, folks from academia would leave with awareness of issues and policy and would be able to contribute.

With the vast amounts of time and financial investment going into government uses of social media, it behooves governments to support systematic research funding that will help ensure that these efforts will result in outcomes that are beneficial to the government and to the public. Key research investments include:

- Development of and support for research about a comprehensive policy framework to better understand the use of social media within the broader policy contexts and requirements related to government information and services, e-government, and the Internet. This framework should also clearly demonstrate individual agency responsibilities related to social media under the law and related policies.
- Evaluation of best practices in the use of social media to deliver government information and services. As the examples above demonstrate, the depth and quality of government use of social media varies considerably. Government agencies could benefit from guidance and model efforts to learn from in their own development efforts and in their collaborative efforts with other partners.
- Research exploring the types of services that people actually want from government through social media and the types of services they do not want to use through social media. Understanding user needs, behaviors, and expectations will be critical to the development of social media-embedded government services and resources.
- Assessment of the social needs of the people in relation to social media and government. Such research needs to create a clear portrait of the populations with limited access to and use of government through social media and the ways in which these gaps can be

addressed. This research will also need to evaluate the best ways to reach diverse user populations through social media.

- Research examining the incentives that will encourage usage of government through social media. For populations that have the access but currently choose not to connect to government through social media, research can identify ways in which such attitudes can be changed to a more positive perspective on social media and government.
- The creation of government-university partnerships that enable the cross-fertilization of technology innovation, policy, social perspectives, and practices. One such approach collaborative would be the creation of research fellows akin to Presidential Scholars that support doctoral education at universities tied to professional practice within government.

As more social media content is implemented by governments, there is a need to create and support research efforts to better understand the impacts of social media technologies on government and the public, particularly as technologies increasingly serve as agents of government-public interactions.

Conclusions and Future Research Directions

The transformative capabilities that social media technologies can bring to governance and government are substantial. Such potential will increase through collaboration between government, researchers, business and non-profit sectors, and community organizations. Table 3 (given the size of Table 3, should it be a sidebar?) presents questions for further exploration, research, and collaboration that brings together the scholarly and practitioner communities.

Area of Inquiry	Key and Selected Research Questions	Selected Literature
Social Media Use	- What tools and approaches best promote exchange between governments and users? - What mix of technologies, data, and information promote, support, and foster user engagement? - What technologies provide the best ways in which to display content to users for informed participation? - How can designers promote exposure to diverse viewpoints? What are individual preferences for opinion diversity in information access? - How can agencies best incorporate social media technology produced feedback into policy and decision-making? - How do governments create sustainable social media technology strategies and efforts?	Blaser, B., Weinberger, D., & Trippi, J. (2009). Digital government through social networks: How citizens can aggregate their money and votes to define digital government. In *Proceedings of the 10th Annual International Conference on Digital Government Research: Social Networks: Making Connections between Citizens, Data and Government.* Hindman, M. (2007). "Open-source politics" reconsidered: Emerging patterns in online political participation. In V. Mayer-Schönberger & D. Lazer (Eds.), *Governance and Information Technology: From Electronic Government to Information Government* (pp. 183-207). Cambridge, MA: The MIT Press. Maciel, C., Roque, L., & Garcia, A. C. (2009). Democratic citizenship community: A social network to promote e-deliberative process. In *Proceedings of the 10th Annual international Conference on Digital Government Research: Social Networks: Making Connections between Citizens, Data and Government* Munson, S, & Resnick, P. (2010). Presenting diverse political opinions: How and how much. *CHI 2010.*

New Democratic Models	• What do we mean by the term transforming democracy? • What possible scenarios both positive and negative can be envisaged? • What are the opportunities and limits on transformations that are compatible with the US constitution, the precedents in the field of administrative law, political norms and traditions? • What are the limits or parts of our system that should be prioritized? • What transformations could solve problems with our existing structures, and where are the biggest benefits to be had?	Bertot, J. C., Jaeger, P. T., & Grimes, J. M. (2010). Using ICTs to create a culture of transparency?: E-government and social media as openness and anti-corruption tools for societies. *Government Information Quarterly, 27*, 264-271. Bertot, J. C., Jaeger, P. T., & Grimes, J. M. (in press). Crowd-sourcing transparency: ICTs, social media, and government transparency initiatives. *International Digital Government Research Conference (DGO 2010)*. Tomkins, A. J., PytlikZilllig, L. M., Herian, M. N., Abdel-Monem, T., & Hamm, J. A. (2010). Public input for municipal policymaking: engagement methods and their impact on trust and confidence. In *Proceedings of the 11th Annual international Digital Government Research Conference on Public Administration online: Challenges and Opportuniti*es (Puebla, Mexico, May 17 - 20, 2010).
Governing and Governance	• How do we build social and political trust? • Who/what makes decisions on what authority? • What collaborative governance processes and structures do social media technologies enable? • What policy structures and frameworks are necessary to govern government use of and interaction with social media technologies? • In what ways can the federal government harmonize across a range of policy instruments to comprehensively account for the evolving policy context of social media technologies? • How will social media technology change how policy is developed? • Will social media technology privilege certain types of policy substance over others? • Will social media technology result in new policies that rely on the existence of social media to be viable? • What policy barriers to using social media technologies exist, and how do we resolve those policy impediments? • How do we create policies that	Chang A., & Kannan P. K. (2008). *Leveraging Web 2.0 in government*. IBM Center for The Business of Government. Ganapati, S. (2010). *Using geographic information systems to increase citizen engagement*. Washington, DC: IBM Center for the Business of Government. Jaeger, P. T., Paquette, S., & Simmons, S. N. (2010). Information policy in national political campaigns: A comparison of the 2008 campaigns for President of the United States and Prime Minister of Canada. *Journal of Information Technology & Politics, 7*, 1-16. Johnson, D. R., Crawford, S. P., & Palfrey, J. G. Jr.. (2004) The accountable Net: Peer production of Internet governance. *Virginia Journal of Law and Technology, 9*(9). Osimo, D. (2008). *Web 2.0 in government: Why and how?* Institute for Prospective Technological Studies. Wyld, D. (2008). *The blogging revolution: Government in the age of Web 2.0*. IBM Center for The Business of Government.

	encourage the use of social media technologies? • How can agencies and governments incorporate the results of social media technology use into agency strategies, goals, objectives, services, and resources? • What review and analysis processes should agencies develop to assess social media-based participatory feedback and solicitations into agency workflows?	
Access and Social Inclusion	• What tools and approaches best promote universal access to social media technologies? • How do we ensure that the social media technologies are inclusive, rather than exclusive? • Are there social media technologies that can facilitate access to persons with disabilities? • What mechanisms (e.g., partnerships, collaborations) can promote access to and participation in social media technologies to all members of society? • How can agencies leverage partnerships to extend social media applications and use within communities across the country? • What types of partnerships best promote use of and interaction with government through social media technologies? • How can agencies and organizations develop mutually beneficial partnerships? • What organizational, management, and operational structures are necessary to create successful partnerships?	Crawford, S. P. (2009). Transporting communications. *Boston University Law Review, 89,* 871-908. Jaeger, P. T., & Bertot, J. C. (in press). Transparency and technological change: Ensuring equal and sustained public access to government information. *Government Information Quarterly.* Shelley, M. C., II, Thrane, L. E., & Shulman, S. W. (2006). Lost in cyberspace: barriers to bridging the digital divide in e-politics. *International Journal of Internet and Enterprise Management, 4*(3), 228--243. Skirbunt, T., Martinez, L., & Meskell, D. (2009). Government outreach to the U.S. Spanish-speaking community uses social media. *In Proceedings of the 10th Annual international Conference on Digital Government Research: Social Networks: Making Connections between Citizens, Data and Government.*
Management: Privacy, Security, Accuracy, and Archiving	• How will agencies ensure the privacy of individuals, particularly when data may not be owned by government agencies? • What data and information locators tools are necessary to facilitate access to and location of	Hesse, B., & Shneiderman, B. (2007). Ehealth research from the user's perspective. *American Journal of Preventive Medicine 32*, 5S, S97-S103.

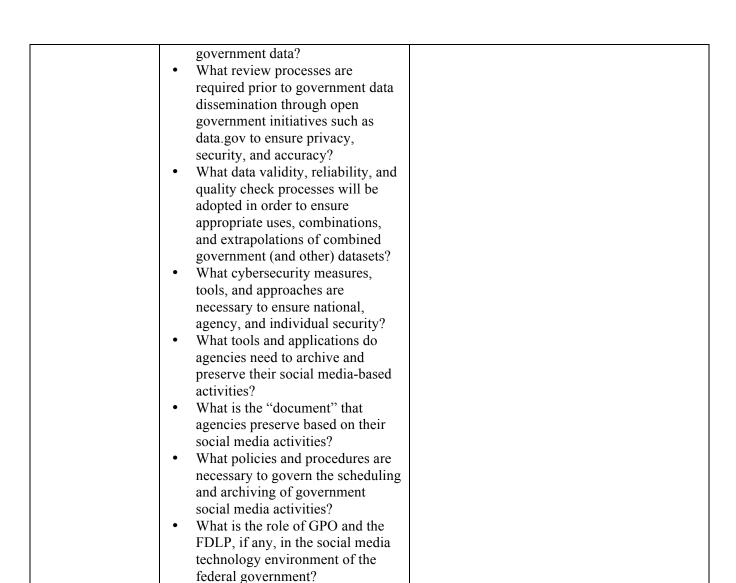|		
	government data?	
	• What review processes are required prior to government data dissemination through open government initiatives such as data.gov to ensure privacy, security, and accuracy?	
	• What data validity, reliability, and quality check processes will be adopted in order to ensure appropriate uses, combinations, and extrapolations of combined government (and other) datasets?	
	• What cybersecurity measures, tools, and approaches are necessary to ensure national, agency, and individual security?	
	• What tools and applications do agencies need to archive and preserve their social media-based activities?	
	• What is the "document" that agencies preserve based on their social media activities?	
	• What policies and procedures are necessary to govern the scheduling and archiving of government social media activities?	
	• What is the role of GPO and the FDLP, if any, in the social media technology environment of the federal government?	

Table 3: Selected Key Research Questions Regarding Federal Government Use of Social Media

The list of questions in Table 3 is not meant to be comprehensive, but to demonstrate the wide range of major questions of research and practice raised by transparency and open government initiatives using social media technologies. If these social media efforts are to result in significant positive impacts on transparency and open government, building them is not enough. Without understanding the changes they force could leave government and governance straining to understand the profound changes they bring. These technologies permit flashmobs to form around issues faster than any bureaucracy can meaningfully respond. Researching and evaluating these initiatives is essential to encourage usage, to continually improve the tools and policies governing their use, and to develop governance processes that incorporate social media participation in its many forms.

As the Federal government – along with the state and local governments around the country – pursues the development of social media initiatives, there is a pressing need for research that focuses on the intersection of social media technology, policy, society, and governance. Though there are efforts that focus on each of these areas separately, combining the

three contributes uniquely and significantly to the understandings of the impacts of social media initiatives on open government, on e-government, and on governance in general.

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