

Implementing Social Media in Public Sector Organizations

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ABSTRACT

Social media has been widely adopted by organizations in the recent past, and public sector organizations are also showing an increased interest in using this tool to meet their goals. In this paper, we describe three cases of social media adoption by public sector organizations, and the struggles faced in that implementation. We argue through the experience of implementing these systems that the characteristics of non-profit organizations, including the government and community service organizations that interact in the public sector, exacerbate problems of groupware adoption. In particular, public sector organizations involve multiple stakeholders coordinating in a distributed fashion, which leads to barriers to social media adoption to accomplish their goals.

Categories and Subject Descriptors

H.5.3 [Information Interfaces and Presentation]: Group and Organizational Interfaces – *collaborative computing, web-based interaction.*

General Terms

Human Factors

Keywords

Social media, public sector, non-profit organizations, technology adoption

1. INTRODUCTION

Through studying three cases of social media implementation in the public sector, we attempt to address the question of what characteristics of public sector organizations affect how they adopt social media to accomplish their goals.

The term “social media” includes a range of tools and services that all enable direct user interaction in computer mediated environments. Recently, many public sector organizations, including government agencies and NGOs that do community level work, have either tried or are considering trying, social media as a way of interacting with stakeholders in novel ways. Social media usage has often followed a few key paths: first, policy makers see social media as a way of micro-broadcasting news about policies to target stakeholders. Second, policy makers have seen social media as a way to “crowd source” feedback about policy. In this framework, the stakeholders can submit

ideas and content to policy makers, who filter that content for worthwhile information. Third, social media interactions in third party sites like online newspapers and large-scale services like Facebook can be mined for stakeholder opinions. We define these activities as “policy services”, which is an umbrella term for activities that include education, organization, information exchange and communication between public sector organizations and their stakeholders.

Implementing social media to achieve policy service goals is a complicated proposition, with many elements that need to be coordinated. Along with decisions about how to use social media, policy makers must consider whether and how to create their own social media spaces for interacting with constituents including such options as building custom sites, using open source content management systems, or hiring commercial vendors who specialize in social media implementation.

We see the use of social media for policy services as a complex set of decisions, group, organizational and technical artifacts, outreach activities, and alignment between goals and tools.

This paper will use a case study approach to examine social media attempts by several public sector organizations. Case studies will include analytics of site usage, descriptions of the development and production cycle of each site, and analysis of site outcomes. Each of the cases below will include a rich description of the intended audience of the social media site, the stakeholders, proposed interactions, inherent barriers, and other key aspects of the social media implementations. Each case, though fairly different in the topic of the site and in some cases audience, shares similar characteristics with the others in terms of barriers and trends in implementation. The cases include:

To explain the issues involved with implementing social media tools in public sector organizations, we’ll turn to literature on issues of group software adoption in the corporate sector. In particular, we’ll use the work of Grudin [11, 12] to show how the complex interplay between social systems and technical systems makes straightforward design of social media experiences difficult. The is also related to work on Adapted Structuration Theory [8] which posits that understanding the complex interplay added by group processes makes predicting outcomes of technology implementation unclear.

2. Literature Review

In recent years, social media applications have become increasingly central to online interaction, including in organizations [10, 24, 35]. While the use of ICT in organizations has been long studied [1, 21], less work has looked at the role of social computing applications in public sector organizations. These organizations include government entities, as well as “third sector” organizations like non-profits that have missions which intersect with government activities [3]. These public sector

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iConference '12, Feb 07-10 2012, Toronto, ON, Canada
ACM 978-1-4503-0782-6/12/02.

organizations have specific characteristics that may affect their perception, adoption and use of social computing tools.

How ICT interacts with the social systems of organizations has been well studied. Studies of the history of information technology [36] show how new information management devices like filing cabinets and carbon paper co-evolved with the rise of the modern organization. Electronic forms of ICT in the organizational context have also been studied, showing that new forms of organization became possible through ICT use, but also that organizational practice affects how ICT is used [13, 15, 25].

Social media applications are a novel form of ICT. For the purposes of this proposal, social media applications are defined as online systems where users interact with each other supported by a set of technical system features. These systems involve electronically mediated communication often supported by computational tools that extend what types of interactions are possible [23]. These sites also include elements of user-generated content, either in the case of profile information, comments, photos, encyclopedia entries or even extensions of the platform. These systems can include social network sites, wikis, blogs, or content management systems that are bundles of tools that enable social computing.

Public sector organizational structures are different than for-profit organizations. Traditional definitions organizations have seen organizations as collections of groups with some definable shared identity striving for a common goal [18], while more recent definitions have described organizations as complex “grammars” of people and groups interacting together, often with competing goals, or with poorly defined outcomes [2, 5, 30]. However, most for-profit organizations keep a major goal of profit, which can help clear ambiguity and act as a decision point when dealing with uncertainty. This work is interested in public organizations [3], which are defined as not for-profit and not governmental. These public sector organizations are typically exemplified by government agencies, social welfare groups, advocacy groups, arts and cultural groups, professional associations and citizen groups.

While there can be a wide variety of structures within traditional, for-profit organizations [30], there are also several shared characteristics that separate them from non-profit types of organizations [3]. For example, public sector organizations typically have pro-social goals that can be difficult to quantify and evaluate [9]. Given this difficulty, it can consequently be problematic to measure Return on Investment of IT expenditures, including social media. Public sector organizations may be unwilling to make investments in IT, as it’s seen as not being “on message”. Additionally, motivations to contribute to the for-profit organization are seen as extrinsically enforced through pay, though this is an oversimplification of commitment to those types of organizations [6]. Barriers to entry and exit are also seen as more fluid in public sector organizations, as participation is voluntary [4]. This can be challenging for maintaining institutional memory.

Public sector organizations are not completely distinct from for-profit organizations. However, there are several distinct characteristics of organizations that make them worth studying. Adoption and use of social media applications will be affected by the characteristics of public sector organizations. It has been recognized in the literature that task characteristics have an effect on the need for channels in online interaction [20] and that most collaboration systems have gaps that do not adequately address

the complexities of organizational social systems [1]. However, another body of research has pointed out that electronically mediated communication, which typically is supported by computing tools, has features that can enhance communication and coordination, including archives of messages, the ability to broadcast messages, the ability to rate content, and so on [14, 23, 32, 33]. We believe that these “beyond being there” features can be especially important to third sector organizations, given their challenges in organizing.

How ICT is used in organizations can be difficult to predict [27]. In some organizational theory, organizations will take available tools and repurpose them to fit implicit or changing organizational goals, a concept associated with the term bricolage [31]. Social media applications often have high levels of customizability, either in the form of open APIs or through user generated content. Given this capacity, it could be that public sector organizations are innovating in the use of social computing sites in ways not captured by study of firms or academic usage.

A key difference between public sector social media applications and more general use of those tools is that activity on public sites is often intended to transform into other forms of action. For example, contribution on Wikipedia is valuable in its own right, but for a public sector organization like an environmental group, contribution to a wiki may be intended to change people’s beliefs and actions about their use of natural resources. The goal of most public sector organizations is to transform social activity, and this may also change how social computing applications are used in this sector.

3. DESCRIPTION OF CASES

In this section, we’ll describe several efforts to create public sector social media sites in recent years. For each case we describe the design and implementation process, goals of the originating stakeholders, and outcomes of site implementation. Data for this project was collected through experience in the design and implementation of each of the cases decided. As participant-observers, the authors were involved in each stage of implementation, including inception of the idea, meetings with stakeholders, collaboration with software designers, and coordination with organizational stakeholders in the implementation of the systems. Detailed notes from each stage of the process and access to the logs of each site help to inform the description of each case. In each case, various types of participatory design were attempted, with multiple focus groups and data collections from stakeholders and likely users. The software in each case was provided by a commercial partner, and was not eligible for adaptation based on that feedback, so is consistent across the three cases.

3.1 ADVANCEMI

One of the sites being discussed is AdvanceMichigan, a social media implementation designed to collect feedback from a statewide organization that provides direct services in Michigan communities. The goal of the social media was to collect feedback from a very broad set of residents in Michigan, but the site ended up with limited use, and low amounts of interaction. In this paper, we present the overall experience of defining and creating this social media implementation, and discuss implications for how the site was eventually used. We show that AdvanceMichigan did not meet its primary goals of collecting feedback from a broad group of constituents, although there were secondary benefits in terms of organizational knowledge and presentation. While MSUE is planning to return to a traditional method of collecting

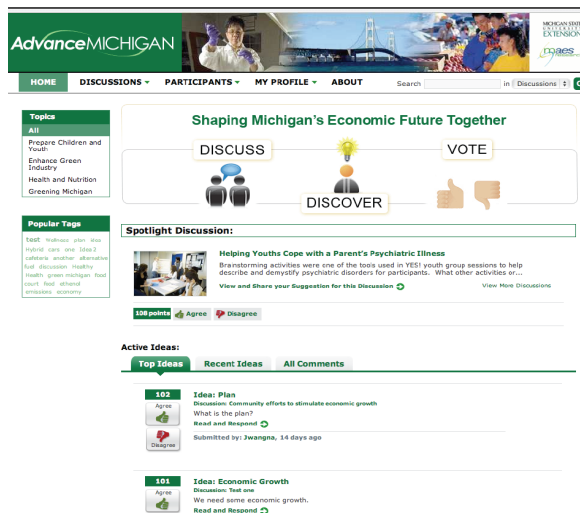


Figure 1: The front page of the AdvanceMichigan site.

feedback from stakeholders, they are still excited about social media, and plan to use social media in other efforts. Discussed more fully at the end of the paper, we identify the following challenges to social media use in policy making:

- Matching audience literacy and preferences with social media
- Organizational capacity in terms of re-defining audiences and motivation to participate
- Difficulty in designing software for flexible social mechanisms
- Establishment of time frames for system adoption
- Matching task appropriateness for social media use

AdvanceMichigan was a social media implementation designed to “crowdsource” feedback from stakeholders of a statewide policy and service agency, Michigan State University Cooperative Extension (MSUE). This social media intervention was designed to accomplish a mandated needs assessment that helps define MSUE’s goals.

Michigan State University Cooperative Extension is a branch of Michigan State University, the land grant institution of the state of Michigan, responsible for bringing the knowledge generated by Michigan’s institutions of higher learning directly to the residents of the state. According to their mission statement MSUE “helps people improve their lives through an educational process that applies knowledge to critical issues, needs and opportunities.” Established in 1912, MSUE has local offices in all 83 counties in Michigan, providing multiple types of services tailored to the needs of individual communities.

While funding for their activities comes from many sources, the federal funding of MSUE comes with a requirement to conduct a “needs assessment” every 5 years. This needs assessment is designed to align the activities of MSUE with the perceived needs of their constituents, namely the residents of Michigan. In previous years, this assessment has been accomplished through traditional surveys, and in 2005 10,000 residents of Michigan participated in the data collection. MSUE uses this assessment to evaluate their performance, allocate funding priorities for subsequent years, and identify areas in which they need to increase or decrease their activities. By their estimate, about 10% of the people they asked to participate in the survey did so. One

of the necessary conditions for success in terms of the needs assessment included broad feedback from a diverse set of Michigan residents.

MSUE decided for their 2010 needs assessment to attempt an interaction environment based on social media, rather than using surveys as they had done previously. Their goals for using social media could be roughly divided into primary and secondary categories. The primary goals were to collect enough information from a diverse enough sample of Michigan residents that they could fulfill their needs assessment. While no desired number of users was established (though matching the 10,000 from the previous needs assessment was seen as desirable), having participation from across the state was seen as a necessary condition. They also wanted to open the feedback opportunity to a broader audience than they had in the past, where typically they had relied on lists of people who had accessed MSUE services. They specifically wanted people who had not had previous experience with the organization. Secondary goals were to make people more aware of the services offered by MSUE, to experiment with new technologies in the way they interact with constituencies, and to create new ways for stakeholders to interact with MSUE.

The initial decision to use social media was made in January of 2010. Since the federal reporting window was in the fall, it was decided that the site would only run through the end of June 2010, in order to allow time to analyze data. After the site topic had been established, the software vendor went through the design process. The site went live in May of 2010, leaving a total of two months for potential users to make contributions. After multiple iterations of design feedback, the AdvanceMichigan site was launched, as appearing in Figure 1. Initial topics and posts were populated by student workers, and in early May a public outreach campaign was conducted to bring people to the site.

The public outreach campaign had several aspects. The launch of the site was divided into two phases: a soft launch for MSUE employees would start discussions and see content, and a hard launch where current stakeholders and new audiences would be invited to discuss topics on the site. In the first phase, Extension members, of whom there were 1500 spread across the organization, were asked to create topics and hold initial discussions. This was done so that there would be content on the site when stakeholders came to participate, which would both shape how participation should happen and make clear there were other people also engaged with the project.

Extension officers in each of the counties were also asked to use their contact lists to invite community members to come to the site. Press releases were used to attract local print media. Social media channels like Twitter hashtags and Facebook pages were used to attract attention from audiences already using those services, and consequently more likely to use other social media. We identified several key, and subsequent activities as goals of outreach, all linking to meeting the overall goals of the site. First, the general public had to become aware of the opportunity to participate on the site, including that the site exists, what it exists for, and how to reach it. Second, users had to actually go to the site to see the content that was available. Third, users needed to create an account on the site, as there was no anonymous interaction available in the system software. Fourth, the goal was to get registered users to make a comment or vote on the content of others on the site. Each of these steps represents increasing commitment on the part of the users, with users making evaluations of their desire to participate at each step.

On the site itself, there were multiple possible types of interaction. Users could submit “Ideas”, which were propositions about MSUE priorities. Users could discuss Ideas through a threaded discussion attached to each item. Also, users could vote content up or down, meaning that each idea and comment had a score based on the ratings of other users. All users had to register to participate on the site, both to get necessary demographic information for the needs assessment, and because the site software wouldn’t support anonymous contributions.

In the end, 900 people signed up for AdvanceMichigan and made 561 comments on the site, well below the initial targets of MSUE. These participants were predominantly members of MSUE, and the most active members had been asked by supervisors to participate. In addition, MSUE offered multiple incentives to staff members to participate, including prizes for high levels of participation. This level of contribution was not seen as sufficient to meet the reporting guidelines for the MSUE needs assessment, and a new data collection is being planned. Perhaps because users logged in with their names, there was little to no angry content, though that had been a concern during the design process.

3.2 Michigan Energy Efficiency Network

The Michigan Energy Efficiency Network (MichEEN) was created for the State of Michigan in an effort to organize state-wide collaboration surrounding a variety of energy initiatives. The goals of the site are to act as an information source and collaboration center regarding energy conservation for employees of Michigan cities, municipalities, and townships. Energy is a major cost for most local units of government, and the production and use of energy is a major environmental issue. The outcome for the site was intended to be an overall reduction in energy use by local units of government, who often manage large physical plants that consume energy, through sharing best practices and information regarding energy conservation.

Although the site is relatively new and still in the process of growing its user base, there are currently low amounts of interaction. Here we show that the MichEEN is having difficulty gaining traction and that there are fundamental barriers to overcome before the site will flourish.

The MichEEN was commissioned because approximately 50 municipalities around the State of Michigan had either received an Energy Efficiency Community Block Grant or had joined the Green Communities Challenge. These programs were based on local communities receiving grant money to achieve energy efficiency through new construction and development of conservation-related programs. Initially, the State had concerns because many of the communities who received block grants did not have plans to distribute the funds. The MichEEN was designed to be able to bring together people from around Michigan to discuss local energy efficiency projects, obtain support in finding the best energy efficiency project for their area, and to collaborate on projects across municipalities. The State of Michigan provided a representative to serve as both project manager and community manager for the MichEEN. The agency within the Michigan government most closely associated with this project, and the major stakeholder, was the Department of Energy, Labor, and Economic Growth, though that unit was re-formulated when the new government administration took power in January 2011.

Development for the MichEEN began July 2010. The social media strategy and website development process both had to be complete by early October. The State required that soft launch began prior to the gubernatorial election. Soft launch began in

mid-October. The development team was able to seed website content, finalize website policies and procedures, and invite key members of Michigan’s energy community to participate on the website. Forum topics, groups, and calendar events were initially seeded by student workers and the development team. Recognized members of the energy community were invited to write guest blogs on the website to help distribute information. The development team also created a blog call “The Practical MichEENist”. The Practical MichEENist provided regular updates on the best way for users to use the MichEEN. Grand launch, which was on November 22, 2010, opened the site up to individuals around the state who worked in energy related positions. The launch was assisted by a state-wide marketing and publicity push from a Lansing, Michigan based marketing firm. Additionally, there was a new media marketing push down through Facebook and Twitter. The development team was contracted to assist with community management through December 31, 2010. On January 1, 2011, the website became solely managed by the State of Michigan.

The State of Michigan’s goals for social media were to distribute credible information efficiently and encourage cooperation among the municipalities. To ensure credibility, the decision was made to not allow vendors to participate on the site. Although the State was hesitant to place a numerical goal for participants on the website, it was indicated numerous times that there was an expectation of approximately 2000 people. However, it was acknowledge that the community would need a substantial amount of time to grow.

3.3 Great Place Network

The Great Place Network (GPN) was a social media site created to promote information sharing around regional economic planning, or “placemaking”. Placemaking was an idea most recently associated with Richard Florida, and promotes the idea that geographic areas with similarities that supersede political boundaries should engage in collective economic agreements and planning. The site was designed to help Michigan local units of government learn more about those processes, engage in discussions internally and externally, and share best practices with other regions in the state. These goals were intermediary goals to creating an improved Michigan economy, especially with a focus on creating jobs.

The Great Place Network was funded by the Michigan State University Cooperative Extension (MSUE) and the Land Policy Institute (LPI). MSUE has been described above. The LPI is a university group that promotes education about policy-related issues. They do activities such as provide data on planning issues for Michigan cities, train local stakeholders in urban planning and public policy, and provide resources based on planning literature to Michigan communities. LPI had a broader effort called the Prosperity Initiative in coordination with MSUE, and they were looking at social media as a new way of engaging communities in the state. In the early planning, the idea was that MSUE would provide offline network capacity, using their offices in local units of government to reach key participants in the targeted areas. LPI would provide content expertise on regional policy planning, as well as contacts with widespread subject experts in other areas. The Social Media Research Lab would provide information about user adoption, and feedback on content strategies to help encourage user participation.

GPN development began in January 2010, however it was delayed for three months (Feb – May) due to differences between key stakeholders in their understanding of goals for the website.

Development resumed in late May 2010. During the spring of 2010, LPI and MSUE decided to focus on two regions in Michigan: Grand Rapids and the Great Lakes Bay Region, which includes the cities of Midland, Saginaw, and Bay City. Though many areas in Michigan were interested in regional development, the thought behind focusing on two was to be able to focus limited resources in areas that were already engaged in some regional planning activities, where MSUE and LPI already had existing networks of contacts, and who had expressed an interest in participation. During June 2010, focus groups were conducted in both of these regions, with participants including members of local governments, NGOs and some members of the business community.

Local participants were generally enthusiastic about the effort, but listed several potential roadblocks to adoption in their areas. In the Grand Rapids area, participants in two focus groups indicated strong local homophily, indicating that they preferred efforts that were started within the region. When asked which communities they currently looked to for best practices in planning issues, they didn't list any Michigan communities, but rather cities like Omaha Nebraska. To resolve these issues, the design team approached policy makers in Omaha to request their participation in public areas of the site, and approached Grand Rapids organizations who might act as local champions and sponsors of site participation. In the Great Lakes Bay Region, focus group participants were not clear how the site would benefit them more than their current channels of information. There was a strong reluctance to include "yet another online community" to what they perceived as an already overloaded information environment. To resolve this, the design team worked to link Facebook and LinkedIn accounts (which they indicated they used heavily) to the new site, to reduce the burden on the users. Participants also indicated little interest in what other regions in Michigan were doing, focusing instead on the issues of coordinating activities of three mid-sized cities that comprised their region. To respond to this concern, the site designers made efforts to include well-developed scaffolds within the site for internal regional dialogs. Members of all stakeholders for the project were present at all focus groups, and a total of 62 people participated in two groups per region. Once the information of the focus groups had been analyzed, design criteria were constructed and given to the software provider.

Launch was originally scheduled for October 2010, however, the decision was made to wait for after the Michigan gubernatorial election in November. The site officially launched in late November 2010. The plan was to launch to the two initial target groups, Grand Rapids and the Great Lakes Bay Region, and grow the site to new regions as those groups posted content and showed the viability of the overall model.

Promotions and public relations were originally to be executed by MSUE. However, due to limited resources, these tasks were never fully realized. Although organizations in both of the target regions indicated that they would be willing to utilize the website after it was created, both declined after the site launched. A new push to drive membership was planned for February 2011. The plan included reaching out to organizations around the state that would be interested in place making, starting a guest blogger of the week, and placing advertisements around the City of Grand Rapids. The organizations the site design team spoke with felt that their current email distribution lists were a sufficient form of communication for their group. Although they supported the concept driving Great Place Network, the site did not integrate enough with their current technology to be utilized. The parties responsible for the Grand Rapid promotional campaign (MSUE)

and the blogger of the week (LPI) did not consistently meet objectives for content on the site.

There are currently 240 members on the website. There are 70 blog posts on the site, however all of these posts were done by members of the development team, mostly student workers. The website contains twelve topic based groups. The Michigan Connection is the largest group with 20 members. This is also the group with the strongest non-GPN Team presence. There is one form that is titled, "Where to go from here?" There were six replies. However, this is the only content in the group.

External social media sites such as YouTube, Facebook, and Twitter, were used to publicize Great Place Network. The Facebook page has 118 "likes", however, there has been no activity since April 11, 2011. The Twitter account for the project has 718 followers and is following 1,422. The last Tweet was on June 8, 2011. While the Twitter page received the greatest amount of attention and interaction, it was unsuccessful in converting followers into Great Place Network users.

In Spring of 2011, the MSUE and LPI teams decided that they would be unable to convince local stakeholders to participate in the effort with the current efforts. In a meeting with their executives, three options for the future of the site were discussed. First, was to continue the site with current resources, and hope for a change in stakeholder interaction. Second, commit more financial resources, and approach new areas and develop a more aggressive publicity campaign. Third, change the direction of the site entirely, and abandon the placemaking topic. Given the significant financial investment in the software of the site, and the lack of participating from the local partners, the site owners decided to pursue the third strategy, and re-frame the site as a discussion forum for MSUE members who were engaged in economic development issues broadly. As of writing, this change has not been enacted, however.

4. SOCIAL MEDIA IN THE PUBLIC SECTOR

In the examples above, almost two million dollars total was spent trying to create social media that would enable public sector organizations to accomplish specific goals. In none of these cases were overall targets for engagement realized, although MichEEN is early in development and may see growth, and the Great Place Network may be repurposed in the near future.

Previous literature has covered successful adoption of information and communication technologies in organizations, and in this work with public sector organizations we see both similarities and differences in that literature. DeSanctis and Poole proposed Adaptive Structuration Theory [8], which argues that understanding technology use in organizations requires a complex interplay between human and technical systems.

In the efforts described above, we see a type of "meta-organization" that is being created by combining efforts of multiple organizations in the creation and use of social media activities. Previous work described above showed how social pressures within an organization can hinder adoption of technologies, and these social pressures become even more salient when multiple organizations are being asked to engage in collective action. Even though private firms need to coordinate with suppliers and competitors, public sector organizations are even more dependent on coordinated action, for several reasons. First, these organizations often have shared stakeholders (like residents in local areas) for whom they are trying to coordinate

activities. Second, the scale of outcomes often sought by public sector organizations (reconstructing a failing economy or radically reducing energy use by government) require a scale of coordination that no single organization is likely to be able to achieve. Third, limited resources often endemic in public sector organizations create economies of scale. However, these pressures to engage in collective action are mitigated by the political pressures identified by Grudin [11], wherein different units within an organization may derail adoption if that adoption could deprive them of social power. We saw this in the case of the Great Place Network and AdvanceMI, where local stakeholders did not adopt the technology, at least partially because

4.1 The user conversion cycle

Potential users fall into discrete categories, with the hope of the site own being that they move into categories that include more active engagement. The following categories emerged through discussions of implementation at various stages of all projects.

Potential Audience - The group of potential users who are currently unaware of the existence of the site. This intended audience would be interested in the site, but don't know it exists.

Aware potentials - This is the group of potential users who now know the site exists, but have not decided yet to incur the cost of visiting the site. It could be they are not clear what they have to gain from such a visit, or that the cost of visiting the site seems too high for the benefit they perceive.

Eyeballs - Users who have visited the site at least once. This group has been called by different names, including audience, "lurkers" [19], guest users, and readers [22]. For long term site, these anonymous users can range from one time visitors, to people who persistently consume the content of the site for years without creating an account or contributing content [17].

Accounts - Users who have taken the additional step from viewing the site to making an account on the site. While not all sites require membership for contribution, all of the sites above were interested in having people create accounts. This seems typical for public sector organizations, as account holders are less likely to make "flaming" contributions in discussion forums, and the information in accounts make users visible to site owners, and consequently can be important for measuring success and understanding the users of the site.

Contributors - Users who have made at least one contribution on the site. Becoming a contributor can involve a strong learning curve, as users must detect what type of contribution is valued for the site, and then manipulate the environment to be able to make that contribution. Usable technology can help reduce the cost of learning the tools, but users still consider costs like creating worthwhile content that will be valued by other members.

Active Contributors - Users who make multiple contributions to a user-generated content site. A consistent finding in research on user-generated content sites is that a small number of members of a site contribute the majority of the content, which is alternatively referred to as the "long tail of participation" or the "power law distribution of participation". However,

Site leaders - Users who take a role beyond contributing to the content of the site, including helping define policies, mentor new users, and perform administrative tasks necessary to the smooth operation of most social media sites. On Wikipedia, for example, site leaders help mediate conflict between users, set policies for the site, and perform important editing tasks [16, 34]. The public

sector agencies all mentioned wanting to attract users like this in order to mitigate the long-term costs of operating social media sites.

4.2 Consideration of long-term costs

As with any ICT implementation, the majority of the cost is in the operation of the site, even though start up costs are significant. In the projects listed above, start up costs included money for the software, for the services of the Social Media Research Lab, and for members of the organizations, usually in terms of their hours. Given the way most grants are written, it's easier to find this type of money than it is for money for longer-term operations. While AdvanceMI did include some money for incentives for participation, and MichEEN built in money for a professional marketing campaign, it's often hard to justify the expense that enables to move through the first stages of the model described above.

One issue for long-term management in the public sector is the question of ownership over time. Which agency is going to own the site, and what's the role of the other organizations being asked to participate? With MichEEN, it was clear that the state of Michigan owned the site, but a change in administration caused the managing department to be re-structured, and the site leader moved to other work. While that site managed to recover its management plan, the Great Place Network still is in limbo as organization executives look at moving it forward. When marketing the Great Place Network to local organizations, one of their concerns was that the site would disappear after they had contributed their resources to a site that might disappear without them being able to do anything about it. Long-term planning not only affects the user stage model described above, but can also contribute to the organizational issues surrounding social media success.

4.3 Technology matters

In the Technology Acceptance Model [7, 29], dimensions that include "Perceived Ease of Use" and "Perceived Usefulness" are key criteria in determining whether a individual will decide to adopt a technology. In the cases described above, there were both issues of individuals (i.e. the audience that was the end target) and groups/organizations (i.e. the local organizations who were supposed to tap into local networks in each case) adoption of technology on both of these dimensions.

Perceived usefulness is not, for these organizations, an absolute value, but a value relative to current tools they have in place. The question became not whether this software platform was useful but rather if it was more useful than alternatives like email lists or face-to-face meetings. Perceived usefulness is a measure of anticipated benefit in adopting a technology, and is weighed against the costs of adoption, including switching costs. In these cases, no organization was able to perceive enough value to incur costs.

One way to reduce costs for adoption is to have easily usable technology, affecting the adopter's "Perceived Ease of Use". The commercial platform for all of the projects listed above was standard for that industry, and comparable to open source platforms like Drupal and Wordpress. We saw a couple of trends at the individual level, however. First, users mentioned that they wanted things to be "Facebook simple", and even low barriers to participation became seen as frustrating by end users. It appeared as though Facebook had set a new bar for "Ease of Use" which would be difficult for smaller projects to adopt, especially when

the technology has not been developed as recently. Second, the current set of social media offerings that are being developed have created an impression of feature richness. Sites now offer multiple rich features for interaction, and tools like blogs and discussion forums are no longer cutting edge in social media. The rich ecology of social media tools also seems to affect user perceptions of tool value, since if a tool does not offer multiple tools for interaction, it's seen as difficult to use.

It's unclear that even if the tool were "Facebook easy" if adoption would have had a different trajectory. Easy to use software may help convert eyeballs into contributors, but it will not likely bring eyeballs to the site in the first place. In these cases, political issues with the local organizations prevented the propagation of the site. Grudin [11, 12] talks about several key issues in whether groups within an organization will adopt technology. One is whether adoption of the technology would disrupt the political power of the group within the organization. In the cases described above, the local organizations could have worried about whether their political power in the community would be disrupted by their support of these sites. This leads to counter-intuitive possibility that working with local organizations when developing public sector social media could endanger the overall project.

Although TAM doesn't talk about aesthetic design, per se, an attractive site could turn the single time visitor into a multiple visit user. Several of the focus group participants spoke of making the site "look sexy" and "business ready", indicating that aesthetics were a consideration.

Users seek cues about the value of a site as they decide to move to new stages of participation, and a compelling design could be of high value. Another cue to consider is the role of timestamps in social media. On the platform used, there was an embedded calendar that could not be turned off, and all posts were listed with a timestamp. Several users mentioned that seeing old posts on the site sent a strong negative signal about the value of the site. A plan for consistently fresh content can help mitigate that effect, but the overall lesson is that potential users are constantly seeking cues about the value of a site as they decide to move to new categories of participation.

4.4 Blending "external" social media has unclear results

In many cases, the sites were able to create active Twitter pages, though it was difficult to convert those Twitter users into users who entered other stages on the main sites. Twitter and Facebook users could be considered as "Aware Potentials" in that they are aware the site exists (as most messages included links to the site), but were not ready to convert to Eyeballs for the sites themselves. This could again be a cost-benefit issue, as users who were receiving content on the mainstream social media feeds were receiving satisfactory content without needing to incur the costs of switching media channels. In this case, it could be that using sites like Twitter and Facebook to reach broad audiences could be counter-productive as those sites provide information without driving traffic to the main social media system. All of the projects above had broad missions where disseminating information through Twitter and Facebook was acceptable, but they also counted on traffic to their main site to determine successful outcomes.

Public sector organizations are left with a quandary. Twitter and Facebook are heavily used channels where many "Aware Potentials" already consume information, so it seems like the

organizations should employ those channels. However, given they are commercially owned, and that posters have little control over the tools and affordances of the sites, Twitter and Facebook may be uncomfortable fits for public sector organizations. In the cases described here, the "external" social media often saw more activity than the sites that were made. That can be problematic for several reasons. First, activity on those sites does not translate to measurable success outcomes for the overall sites. Second, the "external" social media sites were created for free with a part-time undergraduate supplying content. To have that effort outshine an expensive, home-made social media systems could be counter-productive.

5. CONCLUSION

This paper has presented three cases where public sector organizations designed and implemented social media projects intending to engage their constituents in important, broad-reaching topics. In each case, topic experts worked with audience experts and social media experts, and did the data collection on user requirements often recommended for ICT implementations in organizations. In all cases, the social media activities failed to accomplish the original goals of implementing organizations. While it's impossible to point to one failure point for an individual project, much less for this collection of projects, consistent themes emerge. Political pressures between stakeholders led to key failures in bringing likely users into the system. Benefits for users were not clearly articulated or made visible by the system. The software was not perceived as being useable by intended audiences, or at least not as an improvement over other channels that already existed. Implementing organizations did not plan adequately for the effort of converting users after the site had been created.

Public sector organizations share many of the characteristics of private firms, and thus adopt many of the issues in groupware acceptance faced by those profit-motivated organizations. In addition, they take on burdens from distributed organizational structure, dependence of intrinsic motivations, and the scope of the problems being addressed. For social media to be effectively used for public sector purposes, we need to move beyond a simple mapping of for-profit organizational use of social media and consider these particular characteristics as well. Social media has been shown to be an effective way to both distribute and harness massive collective action and intelligence, but to consistently apply these benefits in the public sector, we need more analysis of both successes and failures to begin to uncover the social and technical

Additionally, participation in social media sites is only a proxy for deeper, more lasting types of engagement. In all cases described above, the stakeholders are not interested in social media interaction for its own sake, but rather as a stepping-stone to things like conserving energy and creating jobs. Public sector organizations often have grand-scale goals, and if social media is to play a role in accomplishing those goals more research and attempts at implementations such as those described here are necessary.

6. ACKNOWLEDGMENTS

We would like to thank the practitioners we worked with on this project, in both the government of the State of Michigan, and the Michigan State University Cooperative Extension. We also thank our colleagues Pamela Whitten, Robert LaRose, Charles Steinfield, and Kurt DeMaagd for their work on this project. We would also like to thank our partners at Ingate Networks.

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