Creating Local ONLINE HUBS

Three Models for Action

A WHITE PAPER BY ADAM THIERER





Creating Local Online Hubs:

Three Models for Action

A White Paper on Recommendation 15 of the Knight Commission on the Information Needs of Communities in a Democracy

> written by Adam Thierer



The Aspen Institute and the John S. and James L. Knight Foundation invite you to join the public dialogue around the Knight Commission's recommendations at www.knightcomm.org or by using Twitter hashtag #knightcomm.

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From Report to Action

Implementing the Recommendations of the Knight Commission on the Information Needs of Communities in a Democracy

In October 2009, the Knight Commission on the Information Needs of Communities in a Democracy released its report, *Informing Communities: Sustaining Democracy in the Digital Age*, with 15 recommendations to better meet community information needs.

Immediately following the release of *Informing Communities*, the Aspen Institute Communications and Society Program and the John S. and James L. Knight Foundation partnered to explore ways to implement the Commission's recommendations.

As a result, the Aspen Institute commissioned a series of white papers with the purpose of moving the Knight Commission recommendations from report into action. The topics of the commissioned papers include:

- Universal Broadband
- · Digital and Media Literacy
- · Public Media
- Government Transparency
- · Online Hubs
- · Civic Engagement
- Local Journalism
- Assessing the Information Health of Communities

The following paper is one of those white papers.

This paper is written from the perspective of the author individually. The ideas and proposals herein are those of the author, and do not necessarily represent the views of the Aspen Institute, the John S. and James L. Knight Foundation, the members of the Knight Commission on the Information Needs of Communities in a Democracy, or any other institution. Unless attributed to a particular person, none of the comments or ideas contained in this report should be taken as embodying the views or carrying the endorsement of any person other than the author.

Creating Local Online Hubs: Three Models for Action

Executive Summary

The Knight Commission on the Information Needs of Communities in a Democracy (Knight Commission) recommended that every local community have at least one high-quality online hub to help meet community information needs. While the Commission recognized that "it is not possible for any one Web site to aggregate all of the online information local residents want and need," it believed that "communities should have at least one well-publicized portal that points to the full array of local information resources." This paper outlines how local online hubs currently work, what their core ingredients are, and what it will take to bring more of them to communities across America.

This analysis makes three simplifying assumptions. First, while newer developments have supplanted the "portal" concept—namely, online search and social media—there is still something to be said for websites that can help to aggregate attention, highlight important civic information and activities and map public information resources. Second, it continues to make sense to focus on geographic communities for the reasons the *Informing Communities* report made clear: they are the physical places where people live and work and also elect their leaders. Third, the government's role in creating high-quality online hubs will likely be quite limited and primarily focused on (a) opening up its own data and processes and (b) some limited funding at the margins for other local initiatives.

Luckily, there are many excellent, high-quality online hubs already in place in many communities. Unsurprisingly, however, those hubs tend to be found mostly in large and mid-sized cities. They can serve as models for online hubs in other communities; the question is how to get them built.

As we look to do so, we should keep in mind the great diversity of local communities and realize that there is no one-size-fits-all, best approach to designing high-quality local online hubs. We should not assume that a hub model that works well in one community will automatically work for another. The more experimentation, the better at this point. Some communities may be served by multiple hubs that specialize in serving various informational needs, while other communities might get all those needs served by one site.

The primary concern going forward should be underserved communities. More thought needs to be put into how to deal with those communities who have nothing in place today. That can be facilitated by the close collaboration of various players. Building effective local hubs will require coordination among local governments

and universities, libraries and other community organizations, local businesses, local media outlets and other patrons and supporters. It is particularly important to find community champions who can help lead these efforts. Many of the examples discussed in this paper began with the efforts of a small handful of inspired, active, civic-minded citizens who were looking to make a difference in their communities using digital technologies.

It is important, however, that we do not set the benchmark for success too high. The effectiveness of online community hubs should not necessarily be measured solely by the number of people visiting those sites on a regular basis. Availability and usability should trump actual site time in terms of effectiveness measures.

To advance the goal of a high-quality online hub in every community, there are certain tasks that various stakeholders will need to undertake. Among these are the following:

- Governments at all levels should ensure that these hubs are given access to all relevant data about the government and other community affairs organized by it.
- Local libraries and other community organizations can help to develop content and resources for local hubs. In fact, local libraries may be one of the best places to start discussions about local information needs and identify stakeholders who can help facilitate local hub creation or improvement.
- Local businesses can support online hubs through direct financial sponsorship; in-kind donations of services, support and technology; or advertising support (in much the same way as they do for local newspapers and broadcast outlets.)
- Local media outlets could partner with one another or others in the community to foster or assist local hubs, or to improve the local information resources offered on their own websites.
- Colleges and universities offer a wealth of capital, human and other resources to map and develop local information resources. Higher education stakeholders could develop a toolbox of technologies and templates for ready-made hubs or a "code toolbox" to make local hub creation easier, incubate successful models or host local hubs.
- Foundations and venture capitalists should support best-of-class programs and applications through matching grants, support efforts such as the Knight News Challenge or directly invest in innovative local community online hubs and programs.
- Governments can provide seed money, targeted grants and access to public facilities to spur the creation of local online hubs where they do not currently exist, taking care not to impose a particular hub vision from outside the community receiving support.

CREATING LOCAL ONLINE HUBS: THREE MODELS FOR ACTION

Adam Thierer

Creating Local Online Hubs: Three Models for Action

"Ensure that every local community has at least one high-quality online hub."

— Recommendation 15, Informing Communities: Sustaining Democracy in the Digital Age

The Knight Commission Recommendation

This white paper will explore scenarios for implementing Recommendation 15 from the report of the Knight Commission on the Information Needs of Communities in a Democracy, *Informing Communities: Sustaining Democracy in the Digital Age*, which calls for "every local community [to have] at least one high-quality online hub." The entirety of Recommendation 15 can be seen in Exhibit 1.

Exhibit 1. Recommendation 15: Ensure that every local community has at least one high-quality online hub.

Given the volume of information on the Internet and the infinite diversity of user interests, it is not possible for any one website to aggregate all of the online information local residents want and need. Just as communities depend on maps of physical space, they should create maps of information flow that enable members of the public to connect to the data and information they want.

Communities should have at least one well-publicized portal that points to the full array of local information resources. These include government data feeds, local forums, community e-mail listservs, local blogs, local media, events calendars, and civic information. The best of these hubs would go beyond the mere aggregation of links and act as an online guidebook. They would enable citizens to map an effective research journey by letting people know what is available and where. The site should leverage the power of new forms of social media to support users in gathering and understanding local information.

Where private initiative is not creating community online hubs, a locally trusted anchor institution might undertake such a project with the assistance of government or foundation funding, or support from those who also support public media.

Although the primary focus will be on how Recommendation 15 might be implemented, the paper will also reference Recommendation 4 from the *Informing Communities* report and suggest how it might be linked to Recommendation 15. Recommendation 4 reads as follows: "Require government at all levels to operate transparently, facilitate easy and low-cost access to public records, and make civic and social data available in standardized formats that support the productive public use of such data."

While other recommendations in the Knight Commission report will engender some controversy, I believe these two can find more widespread support among various political constituencies. A "high-quality online hub" for every community makes a great deal of sense in that it can help ensure citizens have access to information about their government(s) and local communities.

What may remain controversial, however, is the scope of this online hub (in terms of how much it seeks to accomplish or include) as well as how this hub is funded. There are several considerations left unanswered by the Knight Commission report that complicate this analysis. Indeed, while conducting research for this paper, the many experts I consulted kept coming back to three common questions about this local hub recommendation and how to implement it:

- 1) What is a portal, and is the very concept itself passé? As I'll note below, the very term portal has a dated feel to it. Clearly, the old walled garden models of hierarchical web services have given way to a flatter structure, one dominated by search and social networking, not portals or hubs. The fall of the old AOL and Yahoo models is indicative of the death of the old order in this regard.
- 2) What is a community? Is it geographic or interest-based? The *Informing Communities* report generally sticks to a geographic conception of community because, as it points out, "American democracy is organized largely by geography." But many experts and site developers stressed the increasing importance of interest-based communities that cut across geographic borders.
- 3) What is the role of government? While the *Informing Communities* report suggests a potential government role in the absence of sufficient private initiative, most experts I spoke with did not envision that government's role would be extensive. It is also worth noting that most of the local hubs that are already underway are not significantly funded or influenced by governments.

While these issues will continue to be debated, I will make matters simpler here by making the three following assumptions:

- 1) While newer developments have supplanted the portal concept, there is still something to be said for sites that can help to aggregate attention, highlight important civic information and activities and map public information resources.
- 2) It continues to make sense to focus on geographic communities for the reasons the *Informing Communities* report made clear: They are "the physical places where people live and work" and also elect their leaders (Knight Commission, 2009). Moreover, it seems there is no shortage of interest-based communities online today, although one could always find exceptions. On the other hand, some geographic communities still lack a credible online hub.
- 3) The government's role in creating high-quality online hubs will likely be quite limited and primarily focused on (a) opening up its own data and processes and (b) providing some limited funding at the margins for other local initiatives.

To borrow science fiction writer William Gibson's much-repeated aphorism, "The future is already here. It's just not very evenly distributed." That is, there are many excellent, high-quality online hubs already in place in many communities across America. Unsurprisingly, those hubs tend to be found mostly in large- and mid-sized cities. They can serve as models for online hubs in other communities; the question is how to get them built. In thinking about how to do so, I raise as many questions as I answer, but I hope to at least help focus attention on the key issues that communities and various stakeholder must consider as they look to create online hubs. Toward that end, Exhibit 2 offers a list of possible evaluation criteria or metrics that should be considered as part of this process. These questions help to guide the narrative that follows.

Exhibit 2. Possible Evaluation Criteria / Metrics for Online Hubs

- What are the primary informational needs of the community?
- How can community interests and needs be gauged?
- Who should be involved in hub creation? Who are the other local stakeholders who can help?
- How can we connect with potential stakeholders? Or, what has their response been so far?
- Who is primarily responsible for building/managing the site?
- What is the funding mechanism? Is it sustainable?
- How can the site be made more accessible to more constituencies?
- How can the community be made aware of the hub? What sort of marketing and awareness-building efforts might be helpful

Tempering Expectations: If You Build It, They Might Come

I believe it is essential to realize that the success of efforts to create high-quality online hubs is by no means guaranteed since it is impossible to force people to consume information or content they might not want. Indeed, discussions about informing communities often fail to recognize that the key problem we face today is not a lack of informational inputs but a profusion of them. Although the Knight Commission report did not suffer from this illusion, many media policy discussions today—both in policymaking and academic circles—continue to rest on scarcityera assumptions even though we now live in an age of information abundance.

Complicating matters is the fact that determining how much information or interaction is required for a citizenry to be reasonably informed about their communities or governments is not an exact science. As James T. Hamilton of Duke University has aptly noted, "The social sciences currently do not provide good answers on how much news is enough to make democracy's delegated decision making work well" (Hamilton, 2003). No one can know with any degree of certainty what the information needs of citizens and communities are. Nor can we scientifically determine how much civic engagement and community interaction are needed to ensure deliberative democracy thrives.

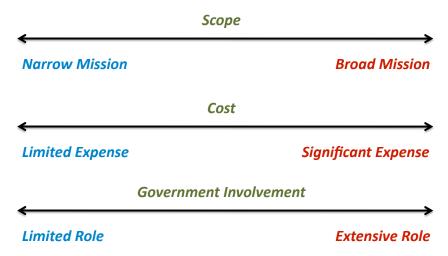
Some will retort that citizens still do not spend enough time absorbed in contemplation about civic affairs, but that is a long-standing lament, and there is no reason to believe this situation has ever been different or will ever change. Writing in 1922, for example, famed journalist Walter Lippmann noted "it is possible to make a rough estimate only of the amount of attention people give each day to informing themselves about public affairs," and he went on to add "the time each day is small when any of us is directly exposed to information from our unseen environment" (Lippmann, 1922). Similar debates have persisted over the extent of civic engagement during various periods of our nation's history. Some say there is less engagement in civic and political matters today, while others worry that debate has become *too vibrant* (at least in terms of the nature and tone of the dialogue).

I recognize these issues are very contentious and well beyond the scope of this paper, but it is of great importance when establishing baseline expectations regarding what constitutes success when designing and implementing high-quality online community hubs. What I am suggesting here is that the *Informing Communities* report may have set the bar a bit too high. We can likely get by with less than some might suggest is needed in terms of how big, or how visible, these hubs are or how much we hope they will accomplish. We should temper our expectations accordingly.

Scope Considerations for Local Online Hubs

How ambitious should these local community hubs be in practice? As illustrated in Exhibit 3, we might consider this question along a number of dimensions, including scope, cost and potential government involvement.





Like other recommendations found in the Informing Communities report, Recommendation 15 is quite aspirational in character and does not provide many details about the scope, cost or potential government role associated with creating local hubs. However, in terms of the "full array of local information resources" discussed in Recommendation 15, the report listed seven potential ingredients for any local online hub. In Exhibit 4, I have grouped those items according to the primary function they each serve and also reordered them from what I regard as the least to the most controversial (if local governments were looking to subsidize or incentivize these ingredients of a local online hub, that is).

Exhibit 4. List of Possible Local Information Resources
That Might Be Part of Local Online Hubs

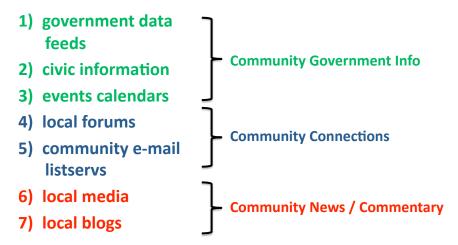


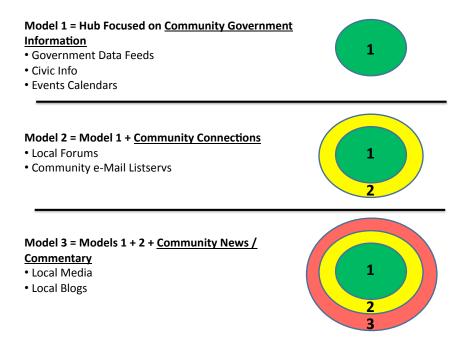
Exhibit 5 offers another way to visualize the potential ingredients of a local hub and categorizes the array of possible local information resources into three types of community information: Community Government Information, Community Connections and Community News and Commentary.

Exhibit 5. Visualization of Possible Local Information Resources
That Might Be Part of Online Hubs



In the following sections, I will discuss the feasibility of including each of these three types of community information as part of any local online hub or portal. Throughout this report, I will refer to three models for local online hubs and use the rough parameters seen in Exhibit 6.

Exhibit 6. Three General Models for Online Hubs



As noted many times below, however, the world is changing rapidly and it is exceedingly difficult to pigeonhole existing portals into such analytical models. If there is one over arching takeaway from the time I have spent studying these local portals it is *that there is no one best model for any given community*. A thousand flowers are currently blooming, and ongoing experimentation will help us determine the benefits and drawbacks of various approaches.

For example, Michele McLellan, a fellow at the Reynolds Journalism Institute at the University of Missouri School of Journalism, and her colleagues have done terrific work in creating a taxonomy of new local news sites. As seen in Exhibit 7, "Michele's List" documents myriad examples of high-quality online hubs across America.

To be clear, online news sites are not necessarily synonymous with online hubs, but her seven-part taxonomy also makes it clear that there is a great deal of diversity even within the realm of local news portals. These models can vary widely in terms of focus and financing. And it may be the case that some of them will serve as models for online local hubs since they might facilitate community connections that support civic engagement. Again, the boundaries of the hub or portal notion can be amorphous.

Exhibit 7. Michele's List: Taxonomy of Local News Sites

- 1. NEW TRADITIONALS: These sites are dominated by original content produced by professional journalists. These sites tend to have more journalists on staff than community or micro-local sites. Many embrace digital connectivity with their users, but traditional journalism is their bread and butter. Most sites are powered with grant funding and searching for viable revenue models, perhaps one that mixes grants, donations, sponsorships, syndication and advertising.
- 2. COMMUNITY: These sites often rely on professional journalists but they tend to be bootstrappers [self-funded entrepreneurs] who also focus on community building—actively seeking user feedback and content, writing in a conversational tone and fostering civic engagement with practices such as voting, calls to action and partnerships with local organizations and activists.
- **3. MICRO LOCAL:** Sometimes called "hyper local," these sites provide highly granular news of a defined neighborhood or town. They may have a tiny staff—one or two people plus interns or citizen contributors—usually supported by highly local advertising.
- 4. NICHE: These sites focus tightly on specific topics—restaurants and entertainment, health and medical news, environmental or political coverage, consumer and shopping information. Revenue may come from advertising, subscriptions or syndicating content.
- **5. MINI SITES:** These sites typically are run by one or two people. They tend to be idiosyncratic in the selection of stories they cover and not highly aggressive in finding revenue.
- 6. LOCAL NEWS SYSTEMS: These are highly local, low cost sites created with a regional or national template, often by a corporation. In taking the temperature of the news ecosystem, it is important to note that corporations are interested in micro local news and the local advertising they may draw.
- 7. AGGREGATORS: These sites curate links and headlines from other sources.

Source: Michele McLellan, Reynolds Journalism Institute, University of Missouri School of Journalism, http://www.rjionline.org/projects/mcellan/stories/community-news-sites/index.php

Nonetheless, in this paper, I will stick to the three broad models for local online hubs that I outlined above. A discussion of each follows.

Three Models for Online Hubs

Model 1. Hubs Focused on Community Government Information (Government Data Feeds, Civic Information and Events Calendars)

The first three categories of local information that the Informing Communities report identified (government data feeds, civic information and events calendars) relate mostly to government information and activities. These are relatively non-controversial and should represent the core goal of any effort to create local online portals, especially if government itself is looking to create or subsidize the portal or an official city or county website.

This is where Recommendation 4 from the *Informing Communities* report becomes relevant. We absolutely should "require government at all levels to operate transparently, facilitate easy and low-cost access to public records, and make civic and social data available in standardized formats that support the productive public use of such data." Transparency is an essential part of keeping local communities informed and enables them to better understand—and hold accountable—their governments and representatives. As Jerry Brito of the Mercatus Center at George Mason University has rightly noted:

To hold government accountable for its actions, citizens must know what those actions are. To that end, they must insist that government act openly and transparently to the greatest extent possible. In the twenty-first century, this entails making its data available online and easy to access. If government data is made available online in useful and flexible formats, citizens will be able to utilize modern Internet tools to shed light on government activities (Brito, 2008).

Indeed, in an age of digital empowerment, citizens have new tools at their disposal to do interesting and important things with the data governments make available. That is perhaps most dramatically illustrated by the District of Columbia's "Apps for Democracy" program (http://appsfordemocracy.org), which has allowed D.C. residents to construct a variety of useful community tools thanks to the city's release of a rich data catalog (http://data.octo.dc.gov). "The magic of open data," says Tim O'Reilly, founder and CEO of O-Reilly Media, "is that the same openness that enables transparency also enables innovation, as developers build applications that reuse government data in unexpected ways" (O'Reilly, 2009). This explains why David G. Robinson, Harlan Yu and Edward W. Felten, of the Center for Information Technology Policy at Princeton University, speak of "a new baseline assumption about the public response to government data: when government puts data online, someone, somewhere will do something valuable and innovative with it" (Robinson, Yu, Felten, 2009).

Exhibit 8. Examples of Sites and Services Made Possible by Access to Government Data

Regulation

- Regulations.gov (public)
- OpenRegs.com (private)

General Spending

- USASpending.gov (public)
- FedSpending.org (private)

Stimulus Spending

- Recovery.gov (public)
- StimulusWatch.org (private)

Legislation/Govt. Activity

- THOMAS (public)
- GovTrack.us (private)
- WashingtonWatch.com (private)
- RealTimeCongress.org (private)

Campaign Spending

- OpenSecrets.org (private)
- MapLight.org (private)
- TransparencyData.com (private)

Court Records

- PACER (public)
- RECAP (private)

Corporate Financial Information

EDGAR (now public; was private)

City Affairs

EveryBlock.com (private)

Exhibit 8 illustrates just a few of the many sites and projects (both public and private) that have been developed thanks to government data becoming more accessible in recent years. For example, Alex Howard and other writers for the O'Reilly Radar website offer a regular accounting of the most exciting things happening in this space. Howard's "Gov 2.0 Week in Review" series of weekly essays (http://radar. oreilly.com/gov2) provides an endless stream of updates about how better transparency and data availability are revolutionizing how government does business and government and citizens interact. The Sunlight Foundation maintains a useful listing of such sites and services (Our Tools and Web Sites at http://sunlightfoundation. com/resources). Jon Gant and Nicol Turner-Lee's white paper, Government Transparency: Six Strategies for More Open and Participatory Government, includes a list of government and privately-sponsored websites promoting government transparency (Gant and Turner-Lee, 2011).

There are real benefits for government, too. "Agencies that increase transparency and accountability find that their efforts result in increased effectiveness, decreased costs, and broader public engagement, making these efforts a win-win for everyone involved," notes the Center for Digital Government (Center for Digital

Government, 2010). Thus, the first order of business for a local government looking to create or improve local online community hubs is to make more information about itself available and allow citizens to interact with it. That information should include digital records of the following:

- · Pending and enacted legislation
- Government projects and spending
- Video (live and archived) of all legislative activities and public meetings

- · Court developments and records as well as crime data
- Public health and safety information
- Information about other government benefits and services, licenses and registrations, forms and fines, events and activities, etc.

Americans are already taking advantage of existing government websites and portals to access such information. According to the Pew Internet and American Life Project's recent "Government Online" survey, 81 percent of Internet users have looked for information or completed a transaction on a government website in the past year (Smith, 2010).

California, Utah, and New York offer three good examples of how state governments can create online hubs that provide citizens the sort of information specified above. The state of California's Data.CA.gov website offers an impressive array of data sets and online applications, and it invites ideas about how existing data sets might be mashed-up with other information or services. The state of Utah also has done some interesting things with its Utah.gov portal, which now provides an estimated 870 online services to citizens and businesses (Fletcher, 2009).

Similarly, New York's State Senate portal (http://nysenate.gov) offers live video of floor deliberations, a constantly updated Twitter feed (http://twitter.com/nysenate) and a variety of other real-time updates, useful informational inputs and multiple sharing methods. Many city portals already offer an extensive array of community informational resources. Some of the best existing mid-sized city online portals include Richmond, Virginia (http://richmondgov.com); Sunnyvale, California (http://sunnyvale.ca.gov); Chandler, Arizona (http://chandleraz.gov); and Winston-Salem, North Carolina (http://cityofws.org). Most of them also offer RSS feeds, Twitter accounts, e-mail, and video feeds (some even hosted on YouTube) offering local citizens timely and easily accessible information about city affairs and developments. Thus, in many ways, these local government sites are already meeting the Knight Commission's charge to "leverage the power of new forms of social media to support users in gathering and understanding local information."

Even small towns are getting in on the act. One example is the local online hub for Manor, Texas, a small community just east of Austin with a population of approximately 6,500. Although it only has a staff of 35 and an IT budget of just more than \$100,000 a year, the town's impressive online efforts (http://www.manorlabs.org) garnered praise from *The Wall Street Journal* as "a hotbed of tech innovation" (Valentino-DeVries, 2010) and earned a Visionary Award from the Center for Digital Government (Opsahl, 2010). More impressively, Manor partnered with Stanford University's Persuasive Technology Lab to design Manor Labs. Jennifer Valentino-DeVries of *The Wall Street Journal* has summarized what makes the Manor Labs site so unique:

[Manor Labs is] a site that uses games and rewards to spur residents to participate in improving government. People who sign up for Manor Labs submit ideas that are voted and commented on by other users. Participants get points for contributing ideas, voting, having ideas implemented and so forth—and the points can be used in Manor's online store to get prizes such as T-shirts, a framed flag and the opportunity to be mayor for a day. Since the site launched in October, Manor has gotten 68 ideas and implemented five of them, including posting recycling and trash schedules online and allowing automatic debits for utility bills. Manor also uses SeeClickFix to help residents report street and water problems in their neighborhood. Through the program, people can open tickets online and send photos to illustrate the problem (Valentino-DeVries, 2010).

Manor's innovative model provides a model for what other small communities could accomplish with local community online portals.

Model 2. Community Connections: Local Forums and Community e-Mail Listservs

Efforts aimed at ensuring greater access to "the raw data of democracy"—government data and civic information—are fairly uncontroversial and should constitute a core element of any local online hub effort, especially if we are talking about government-run websites. More expansive local hubs are likely to include local forums and community e-mail listservs. I group these Model 2 objectives together under the banner "Community Connections" since local forums and community e-mail listservs relate primarily to methods local citizens might use to connect with each other or learn about various programs, events or services in their community.

While some of these forums and listservs may be included as part of a government online hub, it is rare to find many city or county government websites today that include such forums and listservs, or even link out to them. It certainly does not mean those forums and listservs do not exist. For example, virtually every community has online forums and listservs devoted to local schools and related activities. A quick search for virtually any random school name in America quickly reveals community discussion groups or listservs, usually created and maintained by parents of children who attend those schools.

The likely reason local governments do not host much Model 2 content or functionality comes down to the hassle and liability associated with doing so. After all, judgment calls often have to be made about who is allowed to use such sites or what is allowed to be said on them. Should the local government portal include private or religious schools in addition to public ones? Similarly, should every local hobbyist group have its own corner of the local government hub? What about a local forum devoted to issue advocacy (ex: animal rights advocates on one hand, hunters on the other)? Contentious disputes would no doubt arise and the local government might be expected to mediate. "Such services often require a

human moderator to erase off-topic and spam messages and to enforce civility," note Robinson, Yu and Felten. "The First Amendment may make it difficult for government to perform this moderation function, but private sites face no such problem, and competition among sites can deter biased moderation," they correctly argue (Robinson, Yu, Felten, 2009). Most governments would not want to assume responsibility (legal or otherwise) for maintaining or moderating such groups.

It does not mean local governments should entirely rule out running such forums or listservs themselves, it is just to say that (a) there may be legitimate reasons they would not want to do so, and (b) someone else may already be doing a fine job of providing such civic resources. For example, Knight News Challenge winner Front Porch Forum (http://frontporchforum.com) helps communities create a "virtual town hall space" to share and discuss local information and increase community engagement. The site currently serves 25 Vermont towns but plans to expand to 250 more. There are several other examples discussed in the next section. Localocracy (http://www.localocracy.org) is a similar model that currently operates in several Massachusetts communities.

Model 3. Community News and Commentary

Efforts to further expand the local community hub concept to include local blogs or local media will be even more controversial if the hubs are government-owned and subsidized. Yet, the final sentence of Recommendation 15 from the *Informing Communities* report suggests that the contributors believed such a move might be necessary. "Where private initiative is not creating community online hubs, a locally trusted anchor institution might undertake such a project with the assistance of government or foundation funding, or support from those who also support public media," the report states. Of course, all the same concerns and caveats discussed above regarding Model 2 apply here as well for Model 3. Government's role in assisting more expansive hubs will likely need to be more limited and targeted for a variety of reasons.

Moreover, as was the case with community forums and listservs discussed above, other private community online hubs might already offer these services, meaning there is less need for the local government to do so. Consider the situation in Fort Wayne, Indiana, a community of roughly 250,000 people. The privately-owned FortWayne.com web portal is a project of two competing local newspapers, a local broadcast station, the local Chamber of Commerce, the local Convention and Visitors Bureau, and two local sports teams. It provides a great deal of local news and information. The government of Fort Wayne also has its own local portal (http://CityofFortWayne.org), but it focuses on the core Model 1 functions described above. The two Fort Wayne sites complement each other very nicely and serve as an example of how many communities will likely have at least two major portals—one public, one private or community-run—in the future.

Instead of attempting to create new media portals on their own, a more practical and cost-effective strategy would be for local governments to work with foundations and other organizations to provide a small amount of seed money and basic informational inputs to community portals and wikis. For example, in announcing the winners of its 2010 Knight News Challenge, the John S. and James L. Knight Foundation awarded \$350,000 to the Local Wiki project (http://local-wiki.org), which aims to "create community-owned, living information repositories that will provide much-needed context behind the people, places, and events that shape our communities." The Knight Foundation, in its June 16, 2010 news release, expressed its hope that this grant will help Local Wiki:

...create enhanced tools for local wikis, a new form of media that makes it easy for people to learn—and share—their own unique community knowledge. Members will be able to post articles about anything they like, edit others and upload photos and files. This grant will help create the specialized open-source software that makes the wiki possible and help communities develop, launch and sustain local wiki projects.

The Local Wiki team already has a model in place in Davis, California, called the Davis Wiki (http://daviswiki.org), which, as the name implies, is essentially Wikipedia for the city of Davis. It is an amazing compendium of useful, usergenerated information about the community's history, culture, government, schools, activities and much more. The Davis Wiki site offers almost everything the authors of the *Informing Communities* report hoped for when they drew up the seven key ingredients for any local online hub listed in Recommendation 15. As Davis Wiki co-founder Philip Neustrom told the Government Technology Digital Communities website:

We're trying to create a new type of local media built around the idea of mass collaboration.... The way local blogs entered the mainstream a few years ago was a novel concept, and this is kind of the next logical step—having everyone in the community add to one cohesive resource about the community (Wilkinson, 2010).

The Davis Wiki's page for the 2010 City Council elections offered a taste of how exciting this model can be. Thanks to extensive community collaboration, the page offered details about the candidates running for office, their campaign platforms, local ballot measures and statewide propositions, the vote breakdown for candidates and ballot measures, and community commentary on the races. Importantly, the page also linked out to local and regional "professional" media outlets that reported on the local races or endorsed candidates.

In a personal interview, Neustrom told me that partnering with local institutions (libraries, media outlets, universities) can really facilitate this process. However, when the sites are new and unproven, a certain initial distrust is possible, he says. It takes time for some local institutions to warm up to sites and begin

using or assisting them. But Neustrom is confident that will improve over time as more and more hubs are developed and show proof of concept.

The other Knight News Challenge awardees are creating equally innovative programs and services for local communities. As part of its News Challenge, the Knight Foundation awarded \$2.74 million to 12 grantees who will impact the future of news in local communities.

Other local portal models are developing rapidly. For example, the growing Gothamist empire might be a model for local community portals. The popular New York City portal includes community news, blogging, video, culture and nightlife, and much more. The "-ist" portal model is now also being used to offer comparable information services to nine other big cities in the United States (Austinist.com, Bostonist.com, Chicagoist.com, DCist.com, Houstonist.com, LAist.com, Seattlest.com, Phillyist.com, and SFist.com). Alltop.com also offers useful aggregation sites for local news and information for some cities. AOL's "Patch" network (http://patch.com) of hyper-local portals is also generating a great deal of interest, and 500 more of local Patch sites are apparently on the way (Saba, 2010). Thus, while many of these portals serve only larger markets today, that could be changing.

Similarly, TBD.com is a portal that serves the Washington, D.C. area and features the best of local professional media alongside an extensive network of community blogs and citizen-journalist reports. According to *Broadcasting & Cable*, "TBD.com [has] about 50 staffers, including waves of one-man-band reporters, who will cover the market with a mix of original reporting and aggregated content" (Malone, 2010). TBD.com is funded by Allbritton Communications and is led by a team of experienced journalists. It faces stiff competition from existing portals such as DCist.com and WeLoveDC.com. And there are many other new forms of networked journalism and "community-powered reporting" taking place today. However, these case studies serve as prime examples of what the authors of the *Informing Communities* report were referring to when they spoke of networked journalism and noted that "a next stage is emerging with new forms of collaboration between full-time journalists and the general citizenry." It should be noted that networked journalism is just one part—not the totality—of the sort of local online hub the Knight Commission report called for.

Again, the future is already upon us, it just isn't evenly distributed. Currently, most of these portals only cover the largest U.S. cities, but they serve as potential models for mid-size and small city portals in other cities and communities in that they (a) include the basic ingredients of a community hub that the Knight Commission report was shooting for, and (b) offer a variety of useful templates that other communities could use as a starting point for their own efforts.

Of course, community wikis should not be thought of as a complete substitute for local government websites. Nor is it likely that these community wikis and portals could act as a complete substitute for "professional" local media outlets, which employ full-time staff to cover local affairs of importance. At their best, however, these emerging community hubs can help aggregate the best of government, civic, community, and private media websites. We should encourage continued experimentation of this sort to see what new models arise since, as Leonard Downie and Michael Schudson rightly note, "There is unlikely to be any single new economic model for supporting news reporting," in our new mediasphere (Downie and Schudson, 2009).

Linking Hubs to Increase Visibility and Usability

For those local online hubs created by governments, I believe it would be quite useful for hub creators at all levels (local, state and federal) to work together to better coordinate and cross-link their hubs. That would also encourage standardized disclosure policies and potentially create a beneficial 'race-to-the-top' among government portals. It may be the case that the federal government can facilitate this process—especially through the new Open Government initiative—by working with state and local governments to link existing portals (potentially through USA.gov) and then working to make them more user-friendly.

Of course, whether we are talking about public or private portals, it may not make a difference how well linked they are since we live in an era in which search is the dominant information retrieval paradigm, not portals. The Pew survey cited above also found that "search engines are the most common starting point for obtaining online government information among all major demographic groups," with 44 percent of respondents saying they found government websites via generic search (Smith, 2010). That percentage will likely increase in coming years. Nonetheless, it would not hurt for governments at all levels to work more closely together to make their websites more accessible to the citizenry by linking them in some fashion.

Social networking sites and capabilities also challenge the portal model, since bottom-up, user-generated sites can appear spontaneously and fill demands. For example, Facebook is filled with local community fan pages that often provide better information than some highly-planned community portals. Of course, community hubs that develop through social networking sites are not necessarily going to be developed with an eye toward the full range of local community needs in mind. Moreover, it is unclear whether or how they will be sustained over time. Their development is likely to be haphazard and because of that it is unlikely such sites would fully achieve the vision set forth by the Knight Commission.

Some Thoughts on Financing Online Hubs

The cost of local online hubs will obviously be proportional to the scope of their ambitions. More ambitious plans for online portals—especially those that opt to fund and integrate public media into the mix along the lines of Model 3 described above—will be significantly more expensive than online hubs that focus strictly on Model 1 content and services.

Some Model 3 proposals to have governments create public interest portals rely upon taxes on private media operators so that the government could finance what would become competing public media initiatives. That is a mistake. Forcing struggling private media providers to fund their public sector competitors raises fundamental fairness issues and potentially skews media markets in favor of public media operators. The *Informing Communities* report got it exactly right when it said, "Governments should avoid regulations that distort incentives. Rules should not make investments in traditional media artificially more attractive than new ventures, or vice versa" (Knight Commission, 2009). General treasury funds could be used to support some local hub schemes without unjustly burdening private media operators with new levies (although it could still skew markets or crowd-out some private investment).

Of course, many local hubs would not require any government funding at all since the basic digital infrastructure could be very affordable and many of the needed resources—including human resources—could be donated. Philip Neustrom of the Local Wiki project estimates that to replicate in other communities a hub model similar to that which they developed for Davis, California with the Davis Wiki would likely only cost \$2,000 to \$10,000 (Neustrom, 2010). Those resources would be needed mostly to cover the hardware expenses (computers, servers, Internet access, etc.) and other back-office costs. Again, this assumes that volunteers donate time to these projects and that other resources are donated by others in the community. Some communities might need to spend much more to hire people to develop the hub and keep it current.

Who Should Do What

To keep this transition going in communities across America and advance the ideas explored in this paper, various stakeholders will need to undertake certain tasks. Below is a plan of action that details the roles of these stakeholders in creating local online hubs.

Local Governments

What local governments do in response to these challenges will vary by community but, generally speaking, the *Informing Communities* report's sage advice to them is worth reiterating: "Government's first role should be to let experimentation thrive," and "governments should be careful not to pose barriers to innovation" (Knight Commission, 2009). To the extent local hubs already exist in their communities, local governments should ensure that these hubs are given access to all relevant data about the government and other community affairs organized by it. If the community lacks a vibrant local online hub, however, the government could take steps along the lines suggested above to create, or provide seed money for, such a hub.

State and Federal Governments

Greater transparency and access to vital public data should be the first charge of state governments or federal agencies looking to assist in the creation of local hubs. Targeted grants for some local hubs may be another option, although care should be taken to avoid imposing a particular hub vision from outside the community receiving support. Access to various public facilities might also be useful if hub creators or managers need space to convene meetings or house equipment.

Local Libraries and Other Community Organizations

Local libraries and other community organizations can help gauge community interests and develop content and resources for local hubs. Local libraries with well-trained staff may be one of the best places to start discussions about local informational needs and identify other stakeholders who can help facilitate local hub creation or improvement.

Local Businesses and Advertisers

To the extent local hubs depend on advertising support, local advertisers could help provide economic sustenance in much the same way they do for local newspapers and broadcast outlets. Local businesses could also offer varying degrees of assistance—either through direct financial sponsorship and support or through in-kind donations of services, support or needed technology.

Local Media Outlets

Creative partnerships could be brokered among local media outlets (newspapers, broadcast radio and television operators, community access television providers, cable or telecom operators) to foster or assist local hubs. Some local media operators might already have excellent local hubs in operation, but they still might be able to partner with other stakeholders to improve those hubs. While it is true that many traditional local media and information media providers are struggling, as the *Informing Communities* report correctly noted, "there is a transition underway requiring fresh thinking and new approaches to the gathering and sharing of news and information" (Knight Commission, 2009).

Local Universities

Local universities can provide many different resources and benefits to local online hubs. First, they can provide talent. In particular, if local universities have journalism or computer science programs, students or professors from those pro-

grams could be tapped to help develop sophisticated local hubs. Second, universities could host the online site themselves or cross-subsidize various hub activities. Third, universities could offer direct funding for the venture.

State Universities

Universities outside local communities might be able to develop special programs or tracks within journalism or computer science programs to help train students who can go out in the field and help develop local hubs. Those programs might also be able to develop a toolbox of technologies and templates for readymade hubs. Some respected university programs and scholars are currently studying emerging models and identifying best practices for other local hubs to imitate. Some computer science programs are also working to provide the "code toolbox" necessary to make local hub creation easier. To the extent university programs such as these can help their own local communities first, it can help them incubate successful models elsewhere.

Foundations and Venture Capitalists

We need to encourage other foundations, non-profits and individual benefactors to support efforts such as the Knight News Challenge or directly invest in innovative local community online hubs and programs. While the Knight News Challenge represents one way to incubate innovative new local hub models, we need more partners in this endeavor. Identifying them and convincing them to support local community informational portals and services should be a top priority. Foundations should consider a matching program in which partners would agree to match gifts to certain best-of-class programs and applications. If a half-dozen other foundations were willing to follow Knight's lead and match grants, we could significantly expand the number and increase the quality of community online hubs. Instead of tens or hundreds of thousands of dollars for awardees, we would be looking at millions.

Community Champions and Volunteers

Last, but certainly not least, high-quality hubs need committed community leaders and contributors. Finding champions in the community who will help lead these efforts is obviously essential. Many of the case studies discussed in this paper began with the efforts of a small handful of inspired, active, civic-minded citizens who were looking to make a difference in their communities using digital technologies.

Conclusion

Recommendation 15 of the *Informing Communities* report operates at such a high level of abstraction that it is difficult to know what the contributors envisioned for these high-quality local hubs. The good news, however, is that incredible things are happening on this front in communities across America. "Countless civic groups already use new communication and information-sharing tools to promote political action, operate an opposition movement, or mobilize community activism," noted Beth Simone Noveck, who served from 2009 to 2011 as the U.S. deputy chief technology officer for open government (Noveck, 2009). The Benton Foundation has observed, "Communities across the country are taking control of media, adapting new technologies to the social, economic, educational, cultural, and information needs of their residents" (Johnson and Menichelli, 2007).

This paper has attempted to show, using evidence culled from real-world experiments, that government websites, community wikis and local media portals are evolving rapidly and offering citizens a wealth of informational inputs about their local communities. Indeed, there is reason for optimism here. The future of informed local communities has never looked brighter.

With this optimism in mind, I offer the final general conclusions on the creation of online community hubs:

There is no one-size-fits-all, best approach to designing high-quality local online hubs. A thousand flowers are blooming in today's information marketplace and that is a wonderful thing. The more experimentation, the better at this point. But we should not assume that a hub model that works well in one community will automatically work for another. Models that catch on in some communities may flounder in others. Some communities may be served by multiple hubs that specialize in serving various informational needs, while other communities might get all those needs served by one portal.

Our primary concern should be underserved communities. Unsurprisingly, local online hubs tend to flower in large and mid-sized communities before smaller ones. Thus, we need to put a lot more thought into how to deal with those communities who have nothing in place today. That can be facilitated by the next few steps.

• Create a "toolbox" that could help underserved communities. While there is no one best model for each community, a "toolbox" approach should be developed to help underserved communities. It should include a variety of tools and useful advice to help residents access information

about their government and local communities. For example, universities [see discussion above], foundations, and others could help package some of the tools and models discussed throughout this report and find ways to get them out to other communities. This is partly what the Knight Foundation has sought to achieve with its Knight News Challenge, although not specifically aimed at underserved communities.

- Create metrics and measure demands and needs. A needs assessment should be conducted within each community to determine what its informational needs are and what kind of hub(s) can address them. We need to think about how to accomplish that, who is in the best position to conduct such a survey and what questions to ask. The Knight Foundation, working in collaboration with Monitor Institute, is developing a Community Information Toolkit designed to address this need. The Toolkit will include a Community Information Scorecard to help a community assess its information ecology and use this information to guide action to strengthen the community's information ecosystem. Additionally, the Harwood Institute is preparing a white paper (part of the same Aspen/Knight series as this paper) that will lay out a process for community leaders and members of the community at large to assess their local information ecology.
- **Do not set the benchmark for success too high.** Regardless of the metrics we choose, we should be careful when establishing baseline expectations about what constitutes success. The effectiveness of online community hubs should *not* necessarily be measured solely by the number of people visiting those sites on a regular basis. Availability and usability should trump actual site time in terms of effectiveness measures.

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APPENDIX

About the Author

Adam Thierer is a senior research fellow at the Mercatus Center at George Mason University where he works with the Technology Policy Program. Thierer's work covers technology, media, Internet and free speech policy issues with a particular focus in online child safety and digital privacy policy issues.

Thierer has spent almost two decades in the public policy research community. He previously served as the president of The Progress & Freedom Foundation, the director of Telecommunications Studies at the Cato Institute, a senior fellow at The Heritage Foundation as a fellow in Economic Policy and a researcher at the Adam Smith Institute in London.

Thierer is the author or editor of seven books on diverse topics such as media regulation and child safety issues, mass media regulation, Internet governance and jurisdiction, intellectual property, regulation of network industries and the role of federalism within high-technology markets. He earned his B.A. in journalism and political science at Indiana University and received his M.A. in international business management and trade theory at the University of Maryland.

Thierer has served on several distinguished online safety task forces including Harvard Law School's Internet Safety Technical Task Force, a Blue Ribbon Working Group on child safety organized by Common Sense Media, the iKeepSafe Coalition, and the National Cable and Telecommunications Association and the National Telecommunications and Information Administration's Online Safety and Technology Working Group. He is also an advisor to the American Legislative Exchange Council's Telecommunications and Information Technology Task Force. In 2008, Thierer received the Family Online Safety Institute's Award for Outstanding Achievement.

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