

Bleeding-Edge Technologies: New Challenges for Nonprofits

by Nettrice R. Gaskins

BLEEDING-EDGE” IS A COMMONLY used term that refers to technology so new that the user risks reductions in stability and productivity by using it. In the past, such technology was expensive and risky, but the combination of the World Wide Web and open source tools has created a paradigm shift resulting in more accessible, free, or low cost options for nonprofits, including Web 2.0.

Web 2.0 is a Web-based platform that includes several new tools and software used by nonprofits to help practitioners and administrators manage their organizations. Increasingly, small to mid-sized nonprofits are using the Web to create, edit, store, organize, manage, and publish content, and especially to build organizational capacity.

One of the most beneficial Web 2.0 tools for nonprofit organizations is the Content Management System (CMS), a system used to manage the content of a Web site. There are many reasons for wanting to use Web 2.0 software. Sometimes, smaller nonprofits reach critical mass and begin to grow exponentially, and managing Web-based content on an increasingly wider scale simply becomes too much to handle without employing new technologies such as a CMS. Also, Web 2.0 software can increase the amount of work strapped project managers can get done.

In the past, “bleeding-edge” implied a greater degree of risk, but the development of open source software has enabled many nonprofits to reap the rewards for successful early adoption of new technologies that are free or low cost and readily available online. This article will address some of the challenges of acquiring or using new technologies and how open source (vs. proprietary) software has helped smaller nonprofits choose the right solutions for their needs.

This article seeks to shed light on Web 2.0 tools and techniques, and explore which of the new technologies can be leveraged successfully at nonprofits to improve outreach, community building, and collaboration.

It is important to note that Web 2.0, CMS, and open source software are often less developed than their commercial counterparts (e.g. Kintera, Convio, etc.), they can take more time to set up, and they can be more difficult to use. Also, nonprofits may be unaware of their availability and utility.

Smaller nonprofits can significantly mitigate the challenges of awareness, time, and technical know-how by getting support from communities of their peers and technology planning.

This article seeks to shed light on Web 2.0 tools and techniques, and explore which of the new technologies can be leveraged successfully at nonprofits to improve outreach, community building, and collaboration. In so doing, it is important that nonprofits ensure that technology planning is part of their overall strategic planning. The more technology use is integrated with the broader vision and implementation of day-to-day work, the more likely they are to have the desired impacts.

Key Terminology

Web 2.0 is a term often applied to an ongoing transition of the World Wide Web from a collection of Web sites to a full-fledged computing platform serving Web-based applications to end users. Web 2.0 services are even predicted by some to eventually replace many desktop-computing applications for a variety of purposes. Web 2.0 has several features, including open participation, cost-effective scalability, and the capacity to harness the collective intelligence of thousands and thousands of users and developers.

A *Content Management System* (CMS) is a system used to manage the

content of a Web site. Typically, a CMS consists of a content management application that allows the content manager or author (who may not know Hypertext Markup Language [HTML]), to manage the creation, modification, and removal of content from a Web site without needing the expertise of a webmaster.

Open source refers to software whose source code is made available for use or modification as users or other developers see fit. A popular open source content management system being used by more and more nonprofits is Drupal. Instead of editing Web documents by hand and uploading them to a Web server, managers update content through a Web interface similar to a Web-based e-mail client. In addition, it provides a way to organize content in a logical way. TrollPlanet.com has made available a Drupal “Geek Sheet” to explain related terms to novices.

Another related term is *social software*, which enables people to rendezvous, connect, or collaborate through computer-mediated communication and to form online communities. Social software could encompass older media, such as mailing lists and Usenet, or it can refer to more recent software genres such as blogs and wikis. Basically, people form online communities by combining one-to-one (e.g., e-mail and instant messaging), one-to-many (Web pages and blogs), and many-to-many (wikis) communication modes. Also, in many online communities, real life meetings become part of the communication offerings.

Key Tools

A vast array of open source and social software tools are being used to facilitate online and real life communication and collaboration—often for free. Also, these tools connect nonprofits with vibrant developer communities to build on learning, or for fieldwork and

sharing. Following are a few of the most popular:

Blogs. A Weblog or blog is a Web-based publication consisting primarily of periodic articles written by one or many authors. Features include peer moderation and peer publishing tools. You can give every user in your organization or department the ability to post and manage an individual blog. (Also see “What’s a Blog, and Why Should Nonprofits Care?” by Zafar S. Shah at www.nonprofitquarterly.org/section/466.html).

- The Human Capital Institute has a blog directory for nonprofits at www.humancapitalinstitute.org/hci/blogs_directory.guid.

- Nonprofit Blog Exchange also has a site at nonprofitblogexchange.blogspot.com. This blog is a way to for mission-based organizations to publish short blog articles on some aspect of their work that might affect a completely different area of the nonprofit sector.

Forums. Also called discussion forums, these are areas on a Web site where visitors can post questions or make remarks on a given topic to be answered by their peers. Unlike blogs, forums are usually moderated to ensure that questions are answered and conversations stay on topic. You can create as many discussion forums as you want, and you can even enable your forum to accept and send e-mail messages, just like a Yahoo! group. You can find an example at: nonprofit.about.com/mpboards.htm.

Photo Galleries. At digital photo-sharing Web sites, users can create and maintain as many photo galleries as they want. Flickr (www.flickr.com) is one example.

Wikis. A wiki is a Web page that is user editable using relatively easy-to-use rules. This means that everyone can edit, change, or delete text. The most well-known wiki is an online encyclopedia at Wikipedia.org. An example of a nonprofit wiki can be found at www.mswiki.com/wiki/ResourcesForNonprofit.

Guidelines for Using New Technologies

Smaller nonprofits can greatly benefit from using the latest crop of bleeding-edge technologies because of the lower cost—they are usually free. Some important uses of these new technologies for nonprofits include technical assistance, fundraising, evaluation, strategic planning, community organizing, and collaboration. Many nonprofits are helping to develop the Web 2.0 platform to build network capacity, or as a goal to build on individual learning, or for fieldwork and sharing. Also, a few organizations are using the technology to build network support and help maximize resources for nonprofits.

Of course, there are some challenges associated with these new technologies, such as navigating the various options and identifying strategies for overcoming issues relating to acquiring or using open source tools. One model for using Web 2.0 technologies is CivicSpace Labs, a nonprofit that produces CivicSpace, a free and open-source software platform to help organizations create customizable, interactive Web sites, and to leverage work done by peer organizations that also use CivicSpace to run their online communities. The model is to create the software as open source, then sign up ISPs and consultants to host at costs low enough for cash-strapped grassroots organizations to afford. You can learn more about CivicSpace at civicspacelabs.org.

When considering new technology solutions for your organization, look not only at cost, capability, and ease of use, but also at the scale and level of interaction of the people who will use the technology. Creating a technology plan or road map helps to determine your organization’s technology needs and priorities. TechSoup, a technology Web site for nonprofits, has an online learning center with a host of information on technology planning at www.techsoup.org.

The budget for the technology plan should include estimated costs for all

aspects of the project. Due to the low cost of the software, more funds can be spent on technical support and training. Executives or administrators can hire new staff or train existing staff with the knowledge and skills to set up, maintain, and deliver the content. Additionally, ongoing training and support needs to be provided for staff, members, or others who will make the most use of the technologies. The resources are readily available, usually online, and often for free. Nonprofits should support technology in a way that addresses “organizational development” issues.

The Nonprofit Technology Enterprise Network (N-TEN) recently presented a session, “Smaller nonprofits: How to find the right technology resources” that can be found online at www.nten.org/ntc-2005-small. The Web page includes a link to session material that offers good suggestions on how smaller nonprofits can “significantly mitigate these open-source technology challenges of awareness, time, and technical know-how by getting support from communities of their peers.”

Nonprofit organizations looking to learn more about new technologies can find tips at Net2Learn (learn.net.squared.org/). This Web site is a “place for nonprofit staff, volunteers and supporters to share their knowledge and ideas on key issues, challenges and tools in the field of nonprofit technology.” There are several other Web sites that offer a range of resources, information, guidance, and discussion on topics such as:

- Social networking for nonprofits
- Drupal for nonprofits
- Blogging for nonprofits
- Building an online community

Another good resource is the CTC Resource Center, at www.ctcnet.org/resources/dir/. This is a peer-reviewed, interactive portal for community technology programs and nonprofits. This online tool is “designed

to facilitate the sharing of our members’ resources on program development, curricula, organizational management and sustainability.” The center also includes a category on technology resources.

Case Studies—Best Practices for Success

In the 21st century, most nonprofit organizations want to have a strong Web presence. The biggest benefit for nonprofits of moving to open source/Web 2.0 technologies is capacity building—the efforts aimed at developing staff skills or infrastructure within organizations needed to reduce the level of risk. Money used to acquire

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more expensive software, maintain Web sites, or update online content can be used in other areas. In extended understanding, capacity building also includes development of technology to further the nonprofits’ missions.

Typical nonprofits using bleeding-edge technologies such as Web 2.0 are small or mid-sized organizations with budgets of less than \$500,000. Some of them are grassroots or youth-based and do not have big technology budgets or staff with the necessary expertise. They rely on volunteer support or low cost, online resources such as CivicSpace, CTCNet, and Net2Learn to help maximize their existing resources. Following are a few examples of organizations and projects using these new technologies:

AmeriCorps CTC VISTA Project

The CTC VISTA Project (www.ctcvista.org) places AmeriCorps VISTA

members with nonprofit organizations across the country to help the organizations learn to use information and communications technologies to address the needs of low-income and at-risk communities. The Project is in the process of developing a Drupal-based platform to pool resources for their members and partner nonprofits. They actively recruit VISTA members with expertise in Web 2.0 software to help develop the platform and provide support, knowledge, and expertise of open source tools for nonprofit, community media, and community technology organizations in New England and around the country.

Local or regional organizations served by the CTC VISTA Project include the Castle Square Tenants Organization, Community Software Lab, Young Entrepreneurs Society, United Teen Equality Center, Tri-City Community Action Program, Project: Think Different, Herein Our Motives Evolve, and the Madison Park Development Corporation.

It is important to note that many of the nonprofit organizations in which VISTA members are placed do not have technology-oriented missions. For example, the Tri-City Community Action Program is a multi-service, anti-poverty agency serving the cities of Malden, Medford, Everett, and surrounding communities in Massachusetts. Boston-based Castle Square Tenants Organization works to maintain affordable housing in their community. To forward their mission to build a vibrant and safe community, they are installing wireless Internet for residents using the open source tool roofnet (roofnet.net). Castle Square has a staff of four and is relying on volunteers (and VISTAs) to roll out their project.

Former CTC VISTA project priority-area coordinator Jillaine Smith publishes a blog, *At the Intersection*, about using Web 2.0 tools in her work to integrate facilitation and strategic planning into the work of providing technology

assistance to nonprofits. You can read her posts at jillaine.blogspot.com.

The author has a digital media Web site at portal.nettrice.us/digital_media that is being moved over into a Drupal-based platform that will allow absolute non-techie staff, volunteers, and youth working with nonprofits post and manage site content. These platforms enable nonprofits to cut back on spending for print materials and Web site maintenance, as well as on hiring or training outside consultants to update content.

Youth Media

There are a few youth-focused initiatives, such as the NYMAP Video Exchange project, a partnership among community media centers from across the country committed to expanding services to young people, and Digital Bicycle, a community-oriented video-sharing project. In beta stage (for now), these projects publish Web content via Drupal and big video files through torrents, or small files that contain information about the content to be shared and about the host computer that coordinates digital media distribution.

Before Web 2.0, these centers had to budget annually for videotapes, CDs, and DVDs, postage to ship content to other centers, as well as staff time to duplicate and mail the tapes and discs. Youth-serving nonprofits are using open source tools to distribute digital projects to members of their communities and the world, at reduced cost and risk to the centers. Youth participants are able to create, edit, store, organize, manage, and publish their projects via content management systems set up and maintained by the partners. This author maintains an open source Internet TV channel at portal.nettrice.us/bm, using Broadcast Machine.

CitizenSpeak

CitizenSpeak (www.citizenspeak.org) is a free e-mail advocacy service for grassroots organizations. By using an easy-to-use open source content man-

agement system, CitizenSpeak has been able to lower its administrative costs instead of exacting fees to maintain fresh and up-to-date content and achieve crucial improvements in the site's functionality and usability.

Before Web 2.0, CitizenSpeak lacked a content management system, which meant that all modifications to their Web site had to be outsourced to a professional—an unaffordable expense. By making CitizenSpeak open source and integrated with host CivicSpace, CitizenSpeak reaches a pool of users far beyond the organization's limited outreach capabilities. The organization enables members to participate in their own e-mail campaigns and launch campaigns to pursue local issues. Additionally, the new technology enabled their non-technical site administrator to generate new pages, activate or deactivate features, administer user accounts, and make important updates. CivicSpace is a distribution of Drupal and another application, CiviCRM. CivicSpace employs Drupal developers who assist organizations like CitizenSpeak, who have a clear vision, as well as those who need to plan for their technology needs.

Dgroups

Dgroups (www.dgroups.org) is an organization that provides powerful online tools to enable international development groups and communities to collaborate with one another in order to spur global change. This organization provides an online workspace, or wiki, for members to collaborate. Each online workspace (an individual Dgroup) is built around a mailing list operated by software, with an online Web site providing an archive of messages, participant profiles, and resources for sharing documents, links, calendars, and the like.

Dgroups' challenge was to create a lightweight, decentralized option for organizations needing resources. The Dgroups model shifts away from

dependency on a single organization by connecting with existing vibrant content management system developer communities such as CivicSpace. Dgroups benefits from the ongoing support, development, maintenance, knowledge, and expertise of these developer communities.

Additionally, Dgroups created and published their Project Road Map as a wiki, including technical details on how to build the Dgroups on Drupal/CivicSpace. They employed skilled back-end Web administrators who were able to create these documents and make the organization's technology vision a reality. For more information on the Dgroups Project Road Map, visit wikis.bellanet.org/floss-dgroups/index.php/Project_Roadmap.

The development of the Web 2.0 platform provides many options for projects that provide nonprofit organizations with opportunities for technical assistance, fundraising, evaluation, strategic planning, community organizing, and collaboration. Powered by open source software, Web 2.0 is becoming the engine that will drive not only the availability of free software but also the emergence of new types of bleeding-edge technologies. Nonprofits will be able to use these technologies to improve their effectiveness.

The organizational and cultural implications of these recent technological developments still remain to be seen. What is clear, though, is that nonprofits are now beginning to address the challenges and look at effective ways to make the most of Web 2.0, or open source tools, while maintaining their missions.

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