Draft for feedback, July 23, 2001

White Paper: Civic Extension for the Information Age[1]

Harry Boyte and Paul Resnick, with Peter Levine, Robert Wachbroit, and Lew Friedland
hboyte@hhh.umn.edu, presnick@umich.edu

Executive Summary

Advances in information and communication technologies have created both new possibilities and new threats to the vitality of our communities and our democratic way of life. It is clear that new technologies are a powerful means of entertainment, and that technology training is an important element of workforce development. But can communities harness the democratic potential of these technologies to enhance public participation and accountability? Can citizens, acting together, create new forms of social, cultural and economic wealth that have community-wide benefits? A broad campaign of experimentation, learning, and capacity building will be necessary if local communities are to mitigate the threats of the information revolution and take advantage of the opportunities it offers to create flourishing places, healthy local economies, and vital public life.

The following outlines a concept for a "Civic Extension Service for the Information Age," aimed at renewing the historic partnership tradition between public America's public universities and local communities in addressing local problems in a collaborative fashion. It holds promise for helping to renew the civic mission of public research and land grant institutions, while helping communities take a proactive role in dealing effectively and productively with the technological revolution sweeping our world.

Background: The Need for Civic Partnerships

In American history, the work of the general citizenry – not government or experts or professional politicians – was the key to the production of many public things, from common schools and libraries and parks and museums to local symphony orchestras.

A strong understanding of the citizen and community role in coping with new technologies begins with the recognition that America again faces challenges on many fronts – from homelessness and the environment to school violence and economic development – that cannot be adequately addressed by government or large institutional systems acting alone or as the singular initiator. Without substantial re- engagement of the general citizenry many problems are simply likely to go largely unaddressed. And this

---

[1] The following White Paper developed out of the E-Commons Conference sponsored by the Institute for Philosophy and Public Policy at the University of Maryland, the Center for Democracy and Citizenship at the University of Minnesota's Humphrey Institute, and the Center for Communication and Democracy at the University of Wisconsin-Madison. The E-Commons Conference was made possible by a grant from the Ford Foundation. This benefits from the discussion at the conference, Peter Levine and Robert Wachbroit's working paper on The Public Telecommunications Service, and the early paper on The New Information Commons by Lew Friedland and Harry Boyte.

pattern is, if anything, especially dramatic in the case of the new information technologies.

The problem is that this work-centered view of public problem-solving and public goods creation has dramatically eroded in recent decades. A sense of public work depends on people seeing themselves as the makers of public things; people who contribute public talents; people who are accountable. We have seen an erosion of civic muscle as understandings of citizenship have narrowed to "voluntarism" (helping out, and one and one service). Meanwhile, "politics" has come to be conceived as electoral involvement or the politics of protest and advocacy. From the vantage of many civil servants, citizens are viewed in partial terms, as clients and customers, taxpayers and targets, or protestors and claimants. As as Paul Light of the Brookings Institution observes, few in government see citizens as co-producers of public things. "Departments and agencies have plenty of advocates for doing things for and to citizens," Light argues. "But there are almost no voices for seeing government workers as citizens themselves, working with other citizens."

What is true in government holds true, in the main, for public universities. Since the 1950s, the predominant trend has been to see the main role of such institutions as providing services and expert counsel. "Outreach" and "technology transfer" has replaced older partnership approaches. To talk about a different practice and model of collaborative public work between public universities and other institutions and citizens is to undertake a process of retrieval.

Cooperative Extension's Civic Roots: A Forgotten History

One hundred years ago, America's public universities, like urban settlements, the "schools as civic centers" movement, adult education, community colleges, and many other efforts were infused with a strong civic and public mission. This was accompanied by a philosophy which viewed government and educational institutions as catalysts for the efforts of citizens rather than as replacement for civic energies or deliverers of service. Jane Addams, for instance, co-founder of the Hull House settlement, was an especially insightful critic of the detachment of professional education and practice from the experience of work and lives of ordinary people. "There is a pitiful failure to recognize the situation in which the majority of working people are placed," she argued. "[There is a tendency to ignore their real experiences and needs and, most stupid of all, we leave quite untouched affections and memories which would afford a tremendous dynamic if they were utilized." Addams insisted that the true purpose of settlement education – or higher education – was "to free the powers of each man and connect him with the rest of life."

Liberty Hyde Bailey, Dean of the College of Education at Cornell, was the leading philosopher of the cooperative extension system associated with land grant and public universities. Bailey chaired Theodore Roosevelt's Country Life Commission which outlined the extension vision and philosophy in 1909. He had a philosophy much like Jane Addams, and indeed likened cooperative extension to "rural settlements." Bailey believed that "students in agriculture are doing much more than fitting themselves to follow an occupation. They are to take part in a great regeneration. The student in

agriculture is fitting himself for a great work." Bailey envisioned the cooperative extension system of county agents as part of the broad "Country Life Movement" which sought to build thriving rural democracies.

This approach challenged practices of expert-dominated extension work: "[Any] idea that an expert shall go into a community and give advice to the farmers on the running of their farms and on all sorts of agricultural subjects." Bailey declared this approach was likely to fail on the face of it. Even where it conveyed new information it created dangerous dependencies, not capacities for self-action. "The re-direction of any civilization must rest primarily on the people who comprise it, rather than be imposed from persons in other conditions of life." The most important role of extension agents was to help capacities develop their capacities for collective action. "Our present greatest need is the development of what might be called 'the community sense' – the idea of the community as a whole working together toward one work."

Through the 1930s and into the 1940s, these views contended with more technocratic approaches in extension. Indeed, the public work approach of Bailey and others experienced a revival in the 1940s. For instance, during the New Deal, the soil erosion service in cooperation with cooperative extension involved more than two million farmers in 793 Soil Conservation Districts to create sustainable agricultural practices. One document from a 1939 national extension conference, "Democracy has roots," urged all specialists and experts to have "a proper respect for [farm communities'] common sense and for the constructive self-reliance of farmers." The Conference held that "the technician must always take a place of secondary importance" and farmers "must take active part in formulating the programs themselves." Put simply, it held experts should be "on tap, not on top."

Similar views were articulated by many other public and land grant leaders. Lotus Coffman, president of the University of Minnesota in the 1930s and 1940s, challenged those "who locate the university on some Mount Olympus." He argued that public universities "must breath the spirit of helpfulness and of interest in the problems of men everywhere." Kenyon Butterfield, president of three land grants (Rhode Island, Massachusetts, and Michigan State) put it this way, in criticizing narrower views, in his speech to the land grant association in 1917:

> "We are still too individualistic in our thinking, in our teaching. We still send out too many farmers whose chief concern is more corn; too many lawyers and business men unmoved by the ideal that their life aim should be service to the democracy.
>
> The key to the relation of the Morrill Act (land grant) institutions and the new democratic era [is] to socialize as well as train experts; to give men and women a vision, to equip them with the tools that they may forge…a new freedom out of the chains of injustice; to send them forth as persons who know the meaning of life."

Butterfield added that "these are the very secrets of power for our Land Grant Colleges and Universities."

The task of developing a new extension which can help communities address the challenges of the new technological revolution is to renew and adapt this practice and philosophy of partnership, in work with communities across the country. Recent years have lessons here, both of professions in partnership with citizens and of new examples of civic uses of technology.

Public Work and Catalytic Professionalism

Over the last decade, the Center for Democracy and Citizenship has worked with cooperative extension services in several states, as well as other institutions interested in revitalizing their civic missions (schools, public health departments, settlements, local governments and even a large nursing home in Minneapolis) to adapt and renew public work patterns of professional practice. Other professionals have worked in close association with the Center as well. For instance William Doherty, professor of family social science at the U of M and a national leader in the field of family therapy, has been seeking to re-conceptualize family practice as a field of scholarship, practice, and graduate education using a civic approach. The cluster of "Families and Democracy" partnerships in action research, based at the University, has spawned the Family Life 1st movement of families seeking to re-establish the priority of family life in a hyperactive, consumer culture by collective public action of families. In this and other efforts, family professionals work in what Doherty calls "catalytic partnership" with families, not as experts with the answers. (see www.FamilyLife1st.org)

In rethinking professional practice, the concept of professional as "catalyst" has proven especially helpful. Literally "catalyst" means an agent that initiates or speeds up a chemical reaction without itself being exhausted. It comes from the Greek, *katalysis*, from *kata*, meaning down, and *lyein*, meaning to free or liberate.

In the 1990s, some pats of cooperative extension offer practical lessons in recovering older traditions of government and public universities as catalysts. In several states – Wisconsin, Minnesota, Alabama, and North Carolina – significant parts of extensions work as sought to integrate themes of "public work" and "citizen politics" of everyday problem solving. This has meant shifting roles of extension agents from service providers to more interactive problem solvers who help communities define their own problems and implement solutions. In Anniston, Alabama, for instance, Barbara Mobley, an extension agent for 29 years, shifted her approach. Instead of providing services and information, she helped people organize their own problem solving groups on many different issues. This mean "letting go of previous methods we used in prescribing a 'fix' for a community problem," Mobley explained. "We shared the ownership, and redefined our role to be a catalyst." The 1999 statewide conference of Wisconsin Extension Service declared a public work approach to be its defining feature (for examples, stories, and history, see http://www.uwex.edu/ces/media/catalog/exten.html)

Promises and Perils of Information and Communications Technologies

Before turning to the catalytic roles that universities might play, it is worth reviewing the civic promises and perils of information and communications technologies.

Technological advance has fundamentally altered the cost structure of communication, coordination, and information management. In the realm of communication, technology allows individuals and groups to interact at a distance and exchange messages over a period of time (e.g., email, voice mail). In the realm of coordination, technology has enabled advances in commerce such as integrated supply chains and just-in-time inventory, and everyday quality of life improvements such as dynamic adjustment of traffic light timing to minimize waiting. In the realm of information management, technology has made it possible to assemble, aggregate, and visualize information of local interest, from crime, to environmental contaminants to locations of community resources.

These changes in the landscape of communication, coordination, and information management create new opportunities for greater citizen participation and public accountability in all aspects of civic life. They also create new opportunities for ordinary citizens to work together to produce public wealth. On the other hand, these changes in the landscape also create perils, from loss of individual privacy to loss of local control. It will require an engaged citizenry to steer a course that turns the promises into reality while avoiding the perils. Consider, first, the possibilities.

PROMISES

What are some of the civic opportunities for use of new information technologies? Consider some examples of early success stories in the areas of citizen participation and public accountability, and public goods creation.

Participation and accountability
One opportunity is to create new avenues for citizen participation in public decision making. While access to email and the Web is just now becoming mainstream, Steven Clift and other with the Minnesota e-democracy project have already accumulated more than five years of experience with citizen discussion of public issues. They have managed to engage serious deliberation where participants consider others' viewpoints. On various issues, decision makers have also participated in the discussions. Thus, not only does the forum provide another avenue for politicians to seek citizen input, but it creates greater public accountability for the politicians. As noted above, there are important issues to be thought through about how long to save archives of such public discussions and how easily searchable they should be.

Geographic information systems are another way of facilitating citizen participation and public accountability. In this case, rather than providing a mechanism for participation, they provide a mechanism for citizens to formulate and understand issues that are of importance to them. These systems work by visual displays of information on maps. The information to be displayed may be the location of crimes, toxic waste sites, schools, or churches, or demographic information such as race or income. Often, patterns that are hidden in large databases, such as a lack of public transportation to the places where most new jobs are being created, are immediately apparent when information is displayed visually on a map. Such mapping can be linked to public work, the strengthening of neighborhoods and local communities, and the development of civic and technology skills. On the West Side of St. Paul, the Community Information Corps involves Hmong

and other new immigrant young people in a mapping process that will feed a large GIS data base for the community, highlighting especially a wide range of learning opportunities in formal and informal settings. This learning mapping, in turn, is an integral part of generating a "Neighborhood Learning Community" on the West Side that taps the talents and knowledge of a large variety of cultures and groups.

Information systems can also help to coordinate the civic activity of individuals. For example, there are now national websites like volunteermatch.org that help match individuals with service opportunities. In California, Daniel Ben-Horin founded CompuMentor more than a decade ago, to help match information technology professionals to non-profit organizations that need technical assistance. In Chicago, Dan Bassill runs the Tutor-Mentor Connection, a network of local programs that match adults with children for tutoring and career mentoring.

Public goods

The information age has also created new opportunities for citizens to create public wealth. They can generate and distribute information about their local community that benefits everyone. They also can use the coordination capabilities of technologies to enhance local economic development.

In an era when publishing information was costly, publishing was left to professionals. In an era of desktop publishing and free and low-cost web sites, that has changed. As one example of the movement for citizen-led civic journalism, a group of young people in Harlem, initially inspired by a high school teacher, have published local news on the web for several years (see www.harlemlive.com). The Asset Based Community Development Institute at Northwestern University (www.northwestern.edu/IPR/abcd.html) has promoted an approach of citizens collecting information about local assets, including institutions such as churches and schools, and individual skills, connections, and resources. At a block level, the Who's That project at the University of Michigan (www.whothat.org) is developing tools that make it easy for a residential block to make a directory of residents, including photos, hobbies, and resources they might share with each other.

There are two general approaches to economic development in the face of increased interdependence. One focuses on import substitution, getting local residents to buy locally produced goods and services, in order to keep resources flowing in the local economy. New information technologies can help to coordinate local exchanges. The Time Dollar Institute suggests the maintenance of a local accounting system, a pseudo-currency, to encourage networks of exchange that would be difficult to arrange through barter only (see www.timedollar.org) and provides software to help maintain those accounts. Enterprising individuals and community groups have set up systems to coordinate local exchange all over the country and around the world.

The other approach to economic interdependence focuses on increasing exports, as that brings money into the local economy. Here, too, there are opportunities to use new technologies, to research external market opportunities and to participate in complex supply chains. For example, in the small Appalachian town of Athens, Ohio, June Holley

of ACENet (http://www.acenetworks.org/) has been incubating a network of worker-owned businesses since 1985, many of them turning their family recipes into specialty foods businesses. While ACENet encourages residents to buy locally, an important part of its strategy has been to sell globally. It maintains a database of information about regional and national retailers and distributors and helps new ventures to connect with these larger market opportunities.

Perils

One peril is a loss of privacy. Records of mundane activities such as grocery store purchases are accumulating in corporate databases. Official government records such as births, arrests, and property sales are becoming more accessible. Surveillance cameras are ubiquitous in private commercial establishments, and a number of municipalities have begun to experiment with installing them in public places to monitor crime. While all these uses of technology bring individual and communal benefits, they also entail a loss of privacy for individuals, which may lead to risks if the information is used for purposes other than its original intent.

A related peril comes from long-term record keeping. For example, public dialogue about an issue at a live forum may not live beyond that forum, except in the memories of the participants. Public dialogue carried on over a computer network, however, can be easily archived and searched at a later time. Again, this brings potential benefits in accountability, but may chill dialogue if people fear that their words may be used against them years later. As with privacy issues, communities will need to think through the benefits and costs of maintaining long-term records of civic conversations.

A third peril is a loss of local control entailed by participating in a global economy and global information networks. In a global economy, local communities cannot expect to make and export the same products for generations. They must understand the larger supply chains they are part of, and what new sources of competition they may face from communities around the world. The loss of control applies in the social arena as well. Local zoning and other regulations may keep casinos away and control a red light district, but on the Internet, gambling and access to pornography are personal rather than communal decisions.

A fourth peril is a lack of openness and transparency in the telecommunications infrastructure. Many of the opportunities discussed below depend on a base of widespread citizen ability to contribute as well as access information. Unfortunately, some proposed network architectures (for Internet access through cable systems, for example) privilege content that someone is willing to pay to make visible, entertainment and commerce. Other content would either be unreachable (so-called walled gardens) or reachable with a lower quality of service, such as delays or low bitrate. Moreover, even when citizen contributions are accessible, they may be invisible to most people who access information through a commercial portal. Proactive decisions may need to be taken to preserve an open architecture if local communities hope to maintain the Internet as a medium for diverse dialogue and civic work.

Perhaps the greatest civic peril of the information age is simply the privatization of leisure that began with radio and television and continues with each new generation of

technology. There has always been a social aspect to civic work, and conversely civic projects often arise when people gather for purely social purposes. Cable TV, VCRs, music, and video games now offer opportunities for entertainment alone, potentially crowding out civic activity. An important challenge of the information age will be to employ technologies in ways that bring together diverse groups of people for recreation and fun, as well as civic ends. One promising trend is that media production equipment has become so affordable that ordinary citizens can now capture and create new cultural forms on a local level.

The Current Institutional Landscape of Civic Technology Work

In communities around the country, the promises and perils of the information age have not gone unnoticed. Community groups, schools, philanthropic foundations, and government agencies have all taken initiatives, and colleges and universities have been part of many of these initiatives. It is worth surveying the existing landscape before proposing future roles for colleges and universities in a civic extension service.

Community Networks

In the 80s and early 90s, prior to widespread public access to the Internet, community networks sprang up around the country. At the time, only universities and military contractors were networked together. Going by names such as freenets and public electronic networks, community networks allowed ordinary citizens to get access to local content and the broader Internet through dial-up connections and stations in public places like libraries and community centers. Usually, a university partner was involved, providing access to its computer network at little or no cost. There were several hundred community networks and they formed a membership organization, the Alliance for Community Networking (www.afcn.org).

In the mid-90s, as access to the Internet through AOL and other ISPs became available and affordable, community networks had a crisis of purpose. Some held on to the ideal that access should be free, especially because of concerns about a digital divide along racial and economic lines, though they had an increasingly difficult time convincing universities to donate their computing resources. Others declared that their mission had been accomplished and closed up shop. Many refocused their efforts on local content. They helped community organizations to post web pages, they hosted discussion areas (the Minnesota e-democracy site discussed above grew out of the Twin Cities Freenet), and they maintained portal pages with links to local organizations and events. Those community networks that have thrived tended to have continued institutional involvement from colleges and universities (e.g., the Blacksburg Electronic Village) or libraries (e.g., Three Rivers Freenet). One notable exception is the Seattle Community Network, which, although many individuals and organizations contribute, is an independent entity.

Today, community networks face competition from commercial providers of local content, often affiliated with local newspapers. Those competitors, however, tend to focus more on entertainment listings than civic activity. It seems likely that there will always be an ecological niche for citizen involvement in maintaining on-line information about local civic activity.

Community Technology Centers

Community technology centers provide public places where people can learn how to use information technology and have ongoing access to technology that they may not have at home or work. Antonia Stone started the first center, called Playing To Win, in Harlem, in the early 1980s. In the 1990s, libraries, churches, schools, public housing sites, boys and girls clubs, and many other organizations began to open public access sites and offer educational programs. Many of the same people who were involved in starting community networks also helped to start community technology centers, and in some cases both are operated by the same organization. There are now more than 500 affiliates of the national Community Technology Centers Network (www.ctcnet.org), but this is probably only a small fraction of the number of actual centers.

In the mid to late 1990s, the federal government provided funding, through separate initiatives in the Departments of Education, Commerce, and HUD. The rhetoric justifying these programs is usually leveling the playing field for those who might otherwise be left behind in the digital age. Hence, workforce development is a big component of the federal programs.

Private foundations have also supported a number of community technology centers, sometimes with a workforce development focus, but in some cases with a broader agenda of community development or helping individuals develop the skills of citizenship in an information society. For example, Cynthia Stilley at the Flint, Michigan Public Library, with funding from the W. K. Kellogg Foundation, has involved teenagers in making web sites for local community organizations and in making profiles of local people and organizations.

Despite the large education component of programming in community technology centers, colleges and universities have not played a large role in this movement. College students are occasionally a source of volunteer teachers at the community centers. Faculty and staff sometimes help community groups write grant proposals or perform an evaluation of program effectiveness as part of grant requirements.

Community Development Initiatives

Many community development initiatives have included an information technology component. The Los Angeles initiative involving geographic information systems and the ACENet specialty foods business incubator described above are both good examples. Project for Public Spaces, which works with communities across the world to create thriving local markets, recreational spaces, parks, plazas and other vital spaces, has begun to provide a variety of technology tools for communities to use (see www.pps.org).

These initiatives have received both government and private foundation funding. One program that might serve as an interesting model for a new civic extension service is the W. K. Kellogg Foundation's Managing Information with Rural America. It followed a

process-oriented model of convening community stakeholders to define and then tackle local problems that had some information component to them.

Non-Profit TA Providers

A number of technical assistance providers now specialize in helping non-profit organizations to make good use of computer technology. The most common providers are management support organizations that have recently added technology planning and management to other services they have provided, such as financial management and board development. A few organizations specialize in technology assistance, such as Npower, which started in Seattle and is now spawning affiliates in other cities. Whether stand-alone or as part of a larger management support mission, technical assistance providers contribute to civic life by building the capacity of non-profit organizations, which are key civic players.

Some providers match volunteer labor with non-profit needs, as well as providing direct consulting service. For example, CompuMentor, mentioned above, functions on this model. If run well, these volunteer matching services can provide important side benefits beyond direct service; some volunteers provide ongoing services to an organization they are matched with and through their connection with the organization become more involved in the non-technical aspects of the civic work of the organization. The lore, however, is that the overhead costs of supervising volunteer matching well are quite high, so that the total cost of providing technical assistance to non-profits is higher through volunteer placement than through professional consultants.

Another source of technical assistance is on-line materials. The Benton Foundation's helping.org and CompuMentor's techsoup.org are two sites that provide comprehensive collections of links to on-line resources.

Technical assistance providers charge membership fees and fees for service, but these fees are usually much lower than for-profit consulting companies would charge. Some portion of operating expenses for technical assistance providers typically comes from individual, corporate, and foundation donations.

Roles for colleges and universities

Given this institutional landscape, what roles can colleges and universities play in helping communities come to terms with the promises and perils of the information age? Most of them have already decided that they should leave the provision of Internet access to commercial ISPs. Provision of technical assistance to non-profit organizations may well be best left to the non-profit organizations that specialize in it, in part because provision of such services involves significant management challenges for which universities do not have any comparative advantage over other institutions.

The primary comparative advantage of colleges and universities is in creating environments for learning and developing comprehensive, community-wide partnerships. For instance, the energy, enthusiasm, and intellect of enrolled students can be harnessed as a resource for communities and degree programs can prepare graduates for civic

technology work. Faculty and graduate students are familiar with research methods and can help community members to apply them appropriately to generate new knowledge that has practical import. Students and faculty know how to access the scholarly record and present it in ways that are useful in community settings. Finally, some faculty are good at leading conversations for learning, posing questions that cause people to think about things in new ways, though of course there is considerable variability in faculty skill levels.

In the case of many public and land grant institutions, there are many practices to build on for community wide educational and partnership efforts. In Wisconsin, for instance, Public Television – part of the cooperative extension system – has seen its mission in part as helping spark community wide dialogues and actions on pressing public issues. In Minnesota, Minnesota Extension Service has sponsored a highly successful "ACCESS Minnesota" which works with small businesses, communities, civic groups and others to promote and strengthen local economies. Minnesota Continuing Education is now sponsoring a series of "Community Technology Leadership Seminars," regional educational seminars, with support from the University's Civic Engagement Task Force. The seminars are based on helping communities to think about cooperative community action, what they call "the least used but most effective tool" for rural communities to use with telecommunications.

Colleges and universities also have some non-academic resources. Most have a reasonably modern technology infrastructure (at least more modern than most community organizations have). They have buildings where meetings can be held. Faculty and staff often have social networks that include powerful people or potential sources of funding for community projects.

Finally, colleges and universities have some respect in the larger society as institutions free of the domination of narrow or "special" interests. Higher ed holds multiple potentials for creating public spaces where there is a diversity of opinion, viewpoint, and knowledge which can lead to larger public judgment and moral vision that raises the questions "for what purpose," and "to what end." Many in the society are looking to higher education to help take leadership in the critical challenges of democratic renewal.

It may be instructive to examine the activities of a relatively new organization, the Alliance for Community Technology (ACT), which is a joint initiative of the W. K. Kellogg Foundation and the University of Michigan School of Information. ACT performs a catalytic role at the intersection of academia, foundations, and community serving organizations. ACT works operates one step removed from the direct work that we envision for a new civic extension service, working to support the sector of community serving organizations. It offers a useful analogy, however, in that it draws on the strengths of universities described above. One activity of ACT is a Community Information Corps that involves master's level students in community work and supports graduates who pursue such work with financial incentives and professional development opportunities. The other main activity is convening conversations and supporting the work that comes out of those conversations. For example, ACT convened a workshop that explored the roles that open source software (OSS) and application service providers (ASPs) might play in the meeting the information management needs of non-profit

organizations, which led to an important insight about synergy between OSS and ASPs in the non-profit sector that may not exist in the for-profit sector. As another example, ACT has convened conversations among the Native American Tribal Colleges about the provision of digital library services, which appears to be leading toward significant joint efforts among those colleges.

Strategy

Many details remain to be worked out in this vision of a civic extension service for the information age. Would the new service be an evolution of the existing extension service, or a new organization? Would there be a role for community colleges? for non-land-grant public universities? How should the civic extension service be organized administratively? How would it be staffed? Who would pay for it? Which organizations and institutions would it be most important to connect with first in each community?

Rather than offering a blueprint at this time, we suggest a strategy of citizen engagement in working out the details. This means beginning a wide dialogue in communities and across institutions about this concept, and how higher education may again become a resource for citizens to use in addressing the dramatic challenges we face in a time of technological transformation.

Conclusion

A hundred years ago, as the nation faced the transition from a largely agricultural and rural society to a technological and industrial world, public universities and the land grant system played a key role. In particular, the cooperative extension developed with a strong mission to facilitate healthy rural communities. Economic growth and prosperity was one element of that democratic way of life, but by no means the only one. Cooperative extension helped communities to build their capacity to act together on issues ranging from health and local schools to rural theater and arts companies. It took leadership, in short, on the largest challenge of all: how to create a healthy, democratic way of life, a "rural civilization" in which people would flourish.

In a time of widespread concern for the overall values and deepest public directions of our commonwealth, that is again a concern. Public universities and extension hold potential, again, to take leadership.