Microsoft

Innovating for Inclusion

A Digital Inclusion Guide
for Those Leading the Way

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Innovating for Inclusion

"We must …. go beyond helping the billion people who use technology today, and bring [the benefits of digital life] to the other five billion. With technology moving so quickly, this is within our reach …. [But] we have to plan for it …. We have to think about the infrastructure and the training …. We have to think about how we finance these things, and maintain the quality."

–Bill Gates, Chairman, Microsoft Corporation, April 19, 2006

"What do we mean by an 'information society'? We mean one in which human capacity is expanded, built up, nourished, and liberated, by giving people access to the tools and technologies they need, with the education and training to use them effectively."

–Kofi Annan, Secretary General of the United Nations, November 16, 2005

Digital Inclusion: The Next Step in Addressing the Digital Divide

It is a major measure of progress that today we see an increasing emphasis on the topic of Digital Inclusion as opposed to dwelling on the issues of the Digital Divide. It represents a major shift in the discussion about how bridges can be built among those who have access to the core knowledge and resources that are critical to success in a global information society, and those who don't.

The purpose of this guide is to advance the rapidly evolving debate about what to do when undertaking a Digital Inclusion initiative by providing you, the reader, with an overarching strategic framework for how to do it.

The Cost of Digital Exclusion

As computers and the Internet become more central to everything we do, the cost of leaving 20 to 50 percent of the population on the wrong side of the Digital Divide becomes a significant issue for communities. Digital literacy and broadband access are not simply individual or household concerns. The lack of access and technical savvy for some affects educational methods and outcomes, civic engagement, community networking, and economic development for the community as a whole.

The Internet has introduced new ways to access and disseminate information. It has made producing and consuming information more convenient, immediate, and interactive than publishing, reading books and magazine articles, watching video on TV, or attending theaters.

Bridging the Digital Divide—or Innovating for Inclusion—offers government leaders an opportunity to create social and economic change with comprehensive leadership outreach, sound policies, program leadership, and community involvement.

To that end, this guide is designed to help you ask the right questions, bring together a local team, develop a vision, and Innovate for Inclusion to enhance Digital Opportunity in your community. The guide is divided into three sections:

- **Digital Inclusion as a Platform for Progress**, which provides the quantified benefits derived from ensuring widespread access to information technology and resources.

- **Organizing for Digital Inclusion**, which proposes four key areas of study that lay the foundation for Digital Inclusion planning.

- **Innovating for Inclusion**, a seven-stage process to plan, execute, evaluate, and improve policy and programs for Digital Inclusion.

Digital Inclusion as a Platform for Progress

Recent studies demonstrate the positive correlations among broadband penetration and high school achievement, job growth, and political involvement. Internet access is also becoming a critical tool in major life decisions, such as dealing with illness, buying a car, or looking for a job. Consider the following:

Data analysis from Robert Crandall, William Lehr, and Robert Litan of The Brookings Institution suggests that for every one percentage point increase in broadband penetration in a state, employment is projected to increase by 0.2 to 0.3 percent per year. "For the entire U.S. private nonfarm economy, this suggests an increase of about 300,000 jobs. At a disaggregated level, we find that employment in both manufacturing and services industries (especially finance, education, and healthcare) is positively related to broadband penetration. We also find that state output of goods and services is positively associated with broadband use."[1]

Regional studies show improved educational outcomes associated with programs that integrate computer technology into the curriculum. One national study, conducted by University of California Santa Cruz researchers Daniel Beltran, Kuntal Das, and Robert Fairlie, showed a six to eight percent increase in high school graduation rates for students with home computers. "Home computers may increase high school graduation by reducing nonproductive activities, such as truancy and crime, among children in addition to making it easier to complete school assignments."[2]

In a May 2007 presentation to the Personal Democracy Forum, Lee Rainie from the Pew Internet & American Life Project revealed data indicating increasing connections among the Internet and politics with 92 million Americans accessing government Web sites, 75 million accessing the Internet in conjunction with campaign activities (2004), and 21 million watching political videos (February 2007).[3]

According to a 2005 study by John Horrigan and Lee Rainie of the Pew Internet & American Life Project, the use of the Internet as a tool at major life moments increased significantly between 2002 and 2005. More importantly, those who did use the Web as a resource described the tool as critical in their decision making. "Our surveys show that 45 percent of Internet users, or about 60 million Americans, say that the Internet helped them make big decisions or negotiate their way through major episodes in their lives in the previous two years."[4]

In short, we see that online populations are leveraging the resources of information technology to enhance life and job skills, get more politically engaged, and make major life decisions. As online activities take on increasing influence in how society works, those without access and skills are challenged to keep up.

[1] Crandall, Robert, William Lehr, and Robert Litan, "The Effects of Broadband Deployment on Output and Employment: A Cross-sectional Analysis of U.S. Data," July 2007, Issues in Economic Policy, The Brookings Institution, http://www.brookings.edu/views/papers/crandall/200706litan.pdf

[2] Beltran, Daniel O., Kuntal K. Das, and Robert W. Fairlie, "Do Home Computers Improve Educational Outcomes?" Evidence from Matched Current Population Surveys and the National Longitudinal Survey of Youth 1997, January 2006, Institute for the Study of Labor, http://ideas.repec.org/p/iza/izadps/dp1912.html

[3] Rainie, Lee, "Presentation to Personal Democracy Forum," May 18, 2007, http://www.pewInternet.org/ppt/Lee%20Rainie%20-%20PDF%20material%20-%20for%20posting.pdf

[4] Horrigan, John, and Lee Rainie, "The Internet's Growing Role in Life's Major Moments," April 19, 2006, Pew Internet & American Life Project, http://www.pewInternet.org/PPF/r/181/report_display.asp

Cases Demonstrate Tangible Community Benefits

Regional and community case studies confirm that providing community networking, inclusion programs, and technology centers drives economic growth and creates both community and social benefit. Two such examples are the neighborhood programs at the People's Emergency Center in Philadelphia, Pennsylvania, and county initiatives sponsored by the e-NC Authority in Raleigh, North Carolina.

- The **People's Emergency Center** (PEC) has pioneered the use of Digital Inclusion programs as a central element of its community programs to help disadvantaged families restart their lives, increase hope and engagement for at-risk youth, increase community engagement, and stimulate community-wide economic development. By providing computer training, low-cost PCs, Web site design, and low-cost wireless access, PEC has demonstrated that Digital Inclusion programs complement other core social services, such as education, work-force development, and housing assistance.[5, 6]

- **e-NC Authority**, a grassroots nonprofit organization that links North Carolina's residents to the Internet and hosts a broad array of county and community programs, is building demand and laying the foundation for technology-based economic development.[7] In its case study, "Connecting Rural Citizens to Local Government, Local e-Government Utilization Program (LEG-UP)," e-NC describes the process used for working with 56 counties across North Carolina to help each community identify specific services that can be offered online, thereby increasing citizen access and decreasing government costs. e-NC has also spearheaded the development of telecenters—technology-rich office parks—placed in rural areas as part of larger programs to shift from manufacturing to information-based economies.[8]

The success of these initiatives has generated citizen interest as more people see Digital Inclusion as a tool for improving the economic and social metrics of the community in addition to an opportunity for personal and professional development.

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[5] People's Emergency Center Web site, "Bridging the Digital Divide: The Reach of PECCDC's Neighborhood Technology Programs" http://www.pec-cares.org/Digital%20Inclusion.htm, July 2006.
[6] Stone, Matt, "Wireless Broadband, A 'Silver Bullet for Poverty' Digital Divide Case Study, People Emergency Center," Civitium LLC, December 2004.
[7] e-NC Web site, "Connecting Rural Citizens to Local Government, Local e-Government Utilization Program (LEG-UP)," http://www.e-nc.org/pdf/LEG-UP_Success_Story.pdf
[8] e-NC Web site, Business and Technology Telecenters, http://www.e-nc.org/eImprovement/telecenter/telecenters.asp

Organizing for Digital Inclusion

As with other government initiatives, creating policy and programs that address Digital Opportunity requires a foundation of research, engagement, vision, and teamwork. More specifically, the Innovating for Inclusion model recommends completing the following planning process:

- Estimate the social and economic impact of the Digital Divide in your community.
- Research best practices or principles of Digital Inclusion and Digital Opportunity from other communities and assess replicability in yours.
- Set a clear vision or mission for your community.
- Build a high performance team that will translate that vision into a plan that can be executed in the next 9 to 12 months.

Estimating the Impact of Digital Inclusion

Before getting started, it is important for leaders to gather some basic information on the need and opportunity for Innovating for Inclusion in the community.

On a national level, more than half of households (53 percent of adults) do not have a broadband-connected computer in their homes. In their July 2007 report on "Broadband Adoption Trends and Consequence" and their 2005 report on "Digital Divisions," Susannah Fox, John Horrigan, and Lee Rainie of the Pew Internet & American Life Project identify that those most likely to be on the wrong side of the divide are those with low incomes and low levels of education, people with disabilities, seniors, African Americans, and Hispanics.

Measuring the availability of computers and the proficiency of technology users is a bit more difficult. Based on 2002 data from the Bureau of Labor Statistics on Consumer Expenditures, 98.2 percent of households have a color TV while only 59.3 percent have computers. Interestingly, most color TVs are "connected to the network" via satellite or cable; yet many of the computers in those same homes lack broadband access.[9]

In addition to looking at whether people have access to broadband-connected computers with the motivation and confidence to use them, governments can develop a forward-thinking view of the value of inclusion by inviting city staff to consider how a more connected population can allow governments to deliver services at a reduced cost with greater impact.

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[9] Percentage of items owned. Source: Bureau of Labor Statistics, Consumer Expenditure Survey Interview Data, 1992 and 2002; Rich Clabaugh, *Christian Science Monitor*.

Review Principles of Digital Inclusion and Digital Opportunity

Although every community has unique needs and opportunities to Innovate for Inclusion, pioneering government and community leaders across the country have already identified some common themes or principles for such programs. These have been characterized in "Power Up: The Campaign for Digital Inclusion."[10] Excellent programs generally address the following six principles of Digital Inclusion in their program design:

- **Affordable access to technology**—Bridging the Digital Divide requires new users to have hardware, software, and broadband Internet. Although there are many workable alternatives for each of these elements, good programs address all three elements of affordable access.

- **Targeted training**—Access without knowledge is useless at best. Although new users need basic training on the computer, the Internet, and basic word processing, they need more. They need training on Internet safety and responsibility, information on problem resolution and support, targeted workshops on applications that are aligned with their interests such as blogging for teens or scrapbooking for seniors, and customization tools for people with disabilities.

- **Digital empowerment awareness campaigns**—Some of the best programs wither with little response because of inadequate marketing and awareness campaigns. The best programs marry a professional campaign with viral communications, combining professionally developed marketing collateral and tactics with the neighborhoods, schools, and community. Whatever the vehicle, campaigns need to help people understand the value of being connected and recognize that support is readily available to help individuals and households get connected to the Internet.

- **Universal adoption mission**—What invigorates the mission for Digital Inclusion in this decade is the possibility and need for universal access. Previous programs existed in small neighborhood centers almost as islands of Digital Opportunity reaching small but appreciative audiences. Today's programs need to set bold targets of getting 90 to 95 percent of households the tools they need to participate in the digital economy and digitally literate society. Citizens are starting to expect that government leaders will take bold measures to bridge the Digital Divide and get communities online.

- **Metrics for accountability**—As with any initiative, it can be difficult to manage what you do not measure. Although it feels good to distribute 100 PCs, train 300 seniors, or offer 1.5 MB broadband for $6.95 a month, the best programs incorporate metrics that are aligned with project goals, with organizers checking regularly to evaluate progress and adjust strategy and tactics as needed.

- **Long-term sustainability**—A truism in government is that sustainability is the key to the success of any initiative. That is especially the case when Innovating for Inclusion. Whether managed from a city agency, state or county office, or a nonprofit organization, programs need continual oversight, funding, and accountability. The program design needs to be based both on a strong multifaceted business model and on partnerships that drive inclusion into other agencies and programs in the community.

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[10] Wynne, Maria E. and Lane F. Cooper "Power Up: The Campaign for Digital Inclusion" www.microsoft.com/digitalinclusion

Set a Clear Vision and Mission for Your Community

The vision or mission statement provides the starting point for the Digital Inclusion task force. The mission statement is to be used as "True North" as the project develops. Plans or alternatives not aligning directly with the achievement of the mission should be dropped.

For example, the City of Miami launched a comprehensive Digital Inclusion program called Elevate Miami. Its mission was inspired by Mayor Manny Diaz's goal to "build a sustainable and proactive community and an environment in which the economy grows and the individual prospers."

He focused on 21st century digital literacy as the cornerstone for Miami to become the "gateway of opportunity where the impoverished can break the downward spiral of economic adversity and educational inequity and all residents can pursue their hopes and dreams."

This mission statement has become the charter of Elevate Miami, which seeks to prepare Miami's citizens and businesses to play a productive role in the global economy.

Build a High-Performance Team

Digital Inclusion initiatives can start at many different levels. They can be as granular as an individual school effort to introduce technology that is used by students, teachers, and parents, and can be as ambitious as national programs to make key infrastructure resources available to all citizens.

In the United States, many of the most impactful Digital Inclusion programs have been driven by political leadership at the municipal and county levels. Many programs are launched by first appointing a mayoral task force or internal working group that may later be transitioned into a 501(c)(3) charitable organization that carries out the execution and expansion of the Digital Inclusion plan. The advisory board for these organizations often consists of:

- Senior city officials
- Advocates or representatives of underserved citizens
- Healthcare providers
- Chambers of Commerce members and entrepreneurs
- Public library system leaders
- Not-for-profit executive directors (technology centers)

- Major technology players in the community
- Economic development agency leaders
- Major financial sector players
- School system members
- Academics
- Foundation executives

One very strong community team is the board of Smart Riverside in Riverside, California. Steve Reneker, Executive Director, Smart Riverside, and Chief Information Officer, city of Riverside, says, "Smart Riverside brought the Riverside community together to develop and execute a program of inclusion and economic growth. Not only does the Smart Riverside board create and drive programs, but it provides a forum for member companies and institutions to bring ideas and programs. Creating digital opportunity is becoming part of the culture in the city of Riverside, California."

Innovating for Inclusion: A Seven-Stage Process

The Innovating for Inclusion model calls for using a seven-step total quality management process to help your team achieve specific community goals for bridging the Digital Divide and creating meaningful Digital Opportunity. The seven steps are:

- Define goals
- Create alternatives
- Incubate: prove the concept
- Replicate: scale and recycle
- Investigate and analyze
- Innovate: select an alternative
- Evaluate: measure and adjust

The timeline for this work can vary greatly based on the meeting frequency, the availability of support staff, group dynamics, the size and diversity of the geography, and the scope of the mission. The table below suggests a time frame and activity flow for a cohesive group meeting every two weeks to translate the mission into a scalable program for Digital Inclusion.

Define Goals	Investigate and Analyze	Create Alternatives	Innovate: Select 1	Incubate: Prove It	Evaluate: Measure	Replicate: Scale
Introductions Knowledge sharing Vision alignment Brainstorming Goal definition	Stakeholder analysis Surveys Community outreach Resource directory	Brainstorm alternatives	Evaluate against mission and principles Select alternative	Plan and implement pilot program	Collect data, evaluate pilots	Review, revise, and build plan to launch at scale
2-4 weeks	6-12 weeks	4 weeks	8 weeks	2-3 months	2 weeks	2 months

Note that although this appears to be a linear process, it is not. The mission might be refined in the goals phase. Alternatives can be generated during the research or investigation phase; however, they must be captured and processed at the create alternatives stage.

The temptation to accelerate the process to arrive at a solution early must be kept at bay by the leader. We believe it is important to stick to the steps—they are here to save you and your team from reworking later on.

Step One: Define Goals

This step is perhaps the most challenging in the process. The advance team needs to translate research, conclusions, and vision into value for the task force or working team. The task force needs to draw from that research and their own experience to create program goals that are concrete, measurable, and relevant to their community. Core activities in this step are:

- Build a team so the task force becomes a true working team.
- Create a system for sharing knowledge to leverage the research done in the first phase (estimating the social and economic impacts of the Digital Divide and Digital Opportunity and reviewing the principles of Digital Inclusion) and the experience that team members bring into the process.
- Engage in in-depth discussions of the mission to ensure alignment with the team.
- Brainstorm specific goals or focus areas for this project.
- Define a specific measurable goal or objective for the program.
- Determine the gap in your community and the problem to be solved.
- Ask what opportunities could be created or captured. Where will your team focus to have the greatest impact? Where will you start?

When Greg Goldman took the helm as Chief Executive Officer at Wireless Philadelphia, the nonprofit organization chartered with overseeing Philadelphia's wireless project and creating Digital Inclusion programs, he found the mission already in place. Greg and his team quickly drew from that mission and their research to create a set of program goals that were measurable and specific.

More important than the numeric goals of providing 2,000–3,000 access bundles (hardware, software, access, and training) in 2007 is the programmatic focus. Wireless Philadelphia has elected to focus its inclusion efforts on building Digital Inclusion into the delivery plan for other social services. Initial pilots have included partnerships with welfare-to-work programs, transitional housing assistance, mental health recovery, ex-offender programs, and programs for young adults leaving the foster care system.

Greg Goldman notes, "Establishing a distribution mechanism for Digital Inclusion services that takes advantage of the existing structure for providing social services is our goal. We want to create systemic program changes such that Digital Inclusion is built into the delivery plan for all other social services. Initial pilots have indicated that such a partnership can be beneficial for both the clients and the supporting agencies."

Step 2: Investigate and Analyze

Once goals have been defined, the team is ready to fact-find and gather information. The team can now reach out to the community, conduct broader stakeholder analysis, and develop additional research to understand the root causes of the Digital Divide in its own community.

The team can also develop a sense of the interests and assets that the community as a whole has to invest in solutions and begin to think through how to leverage them. Overall, when Innovating for Inclusion, inclusive processes, stakeholder analysis, and outreach are essential to creating a result and a resolve that are scalable and sustainable. Although the foundation work may include a national survey or inventory of best practices and statistics, this step allows the team to develop in-depth local knowledge. Key questions to ask at this stage include:

- What are the key technology access issues in our neighborhood, city, or state?
- What best-in-class programs are already up and running?
- Which community or government leaders are passionate about bridging the divide?

The city of Minneapolis used inclusive processes to gather input and translate inclusion into the fabric and culture of the community discourse. Its Digital Inclusion outreach was supported by a broad coalition of city and community leaders, consultants, and grass-roots individuals from across the community.

With strong leadership from Mayor R.T. Ryback and the City Council, consultant James Farstad, and Digital Inclusion activist Catherine Settanni, this team facilitated more than twenty Digital Inclusion "Roundtable" meetings over the course of 18 months. They mobilized a dozen AmeriCorps members to support education and outreach efforts citywide. This team conducted more than a dozen meetings with city agencies, including libraries, park organizations, and schools, and interviews with each government department. The resulting stakeholder analysis and community benefits agreement integrated the community views on addressing Digital Inclusion into the context of an overall plan that also addressed governmental needs and opportunities.[11]

The Role of Quantitative Research

An element of outreach can be a survey or questionnaire conducted through the regular mail, electronically, or in person. Los Angeles, Boston, and Minneapolis all used surveys as one element of their analysis for broadband projects. Surveys about wireless broadband represent just a subset of the questions to investigate when looking at Digital Inclusion and Digital Opportunity. Questions to consider posing in the survey include:

- Do you have a computer? Does it work?
- Is it connected to the Internet? Is your connection fast enough for what you do?
- What programs or applications do you use (word processing, photography, and so on)
- What Web sites or Internet services do you use?
- Do you have all of the skills and resources you need? If not, what are the gaps?

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[11] Wireless Minneapolis Web site, http://www.ci.minneapolis.mn.us/wirelessminneapolis/index.asp and Digital Access Web site, http://www.digitalaccess.org

Step 3: Create Alternatives

Although we present this as a specific step, alternatives or solutions can be generated throughout the process. Write them down as ideas come up. Refrain from processing them too early. This is a good time to formalize the process and really brainstorm an exhaustive list of possible approaches. Going into this brainstorm, the team should have the following inputs in place:

- A mission statement
- A specific measurable goal statement developed by the team
- Best practices or principles of Digital Inclusion
- Research on the social and economic impact of bridging the Digital Divide
- Stakeholder analysis from your community
- A list of resources or programs that are already operating in your community
- More local research on the scale of the divide and root causes

In brainstorming, it is important to let wild thoughts fly and withhold judgment. Thinking out of the box is what it is about. The purpose of this step is to consolidate all of those great ideas that came up along the journey and then develop more. Explore the impossible and think about what can be done without getting bogged down on evaluation. Suspend judgment at this point—the next step will take care of evaluating what is feasible and what is not.

One organization that takes the planning process seriously is WinstonNet in Winston-Salem and Forsyth County, North Carolina. In October 2007, WinstonNet was recognized by the Intelligent Communities Forum as one of the Smart21 communities in the race for Intelligent Community of the Year, a prestigious recognition in itself.[12, 13]

WinstonNet boasts programs such as its sponsorship of 44 community computing labs, a Web portal, a countywide training collaborative that offered 189 free computer classes in fiscal year 2006–2007, and developing programs in wireless broadband and K–12 computing. One strength of WinstonNet is the board and the careful process of evaluation and planning.

Lynda Goff, Executive Director of WinstonNet, says, "With representatives from across Forsyth County, our board is very connected to both where our community has been and a vision for our future. When we consider a new project, we evaluate all of the alternatives, both as a board and by reaching back into area businesses and institutions. Then we very deliberately select a plan. Sometimes the consensus process takes some time, but when it's done, the board and really the whole community are there to make those plans into reality."

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[12] Intelligent Communities Forum, Intelligent Community of the Year and Smart21,
http://www.intelligentcommunity.org/forumviewmessage.cfm?forumnbr=4845&topicnbr=9634&discussionnbr=138961, October 25, 2007.
[13] Goff, L. Intelligent Community Awards Program 2008, Nomination Form, WinstonNet, October 2008.

Step 4: Innovate: Select an Alternative

Armed with a list of potential solutions, you can begin to boil the list down to the selected courses of action. At this point, the team can begin to evaluate the benefits of each suggested solution, combine solutions to reduce the list, and use a number of elimination techniques to arrive at the desired solution. First, consider each solution against the principles of Digital Inclusion and any new decision factors your team developed through this process:

Affordable access to technology—Could the solution concept make access to hardware, software, and broadband access more affordable and available to the community? How will the programs be developed to address diverse levels of income within the community?

Targeted training—What type of training programs will be considered and what channels will you employ to provide training? What training is necessary for each of the demographic groups you will include?

Awareness campaigns—Does the solution lend itself to both formal and viral marketing campaigns? How will people learn about their options?

Universal adoption mission—How demographically inclusive is your solution? Although you may not expect to go from 60 percent coverage to 95 percent in a year, is the solution scalable? Can you envision using these programs to achieve universal adoption over time?

Metrics for accountability—Is it measurable? How will you measure your program and determine success, failure, or needs for adjustment?

Long-term sustainability—Is the program concept sustainable? How can the solution become citizen owned, even at the lower levels of income? What partners or revenue sources are needed to ensure that programs can be sustained long enough to create the desired result?

Mission and goal alignment—Will this solution concept really address you community's goal for Innovating for Inclusion? Is there alignment? If not, go back. Do not be tempted to lose this connection.

One comprehensive program that continues to build on its mission is Indiana-based Net Literacy, a "youth-empowered," 501(c)(3) nonprofit organization that promotes computer and Internet literacy throughout communities.[14, 15] Through Net Literacy, more than 500 students from schools in Indianapolis, Fort Wayne, and other communities have volunteered to repurpose computers or teach in their communities and provide extensive one-on-one training for those who were formerly on the wrong side of the Digital Divide.

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[14] Net Literacy on Wikipedia, http://en.wikipedia.org/wiki/Net_Literacy
[15] Net Literacy Web site, http://www.netliteracy.org/index.html

Founded by middle-school student Daniel Kent in 2003, Net Literacy hosts a strong array of Digital Inclusion programs and unique leadership and decision-making structure. Through its Senior Connects program, it has provided personal training to more than 11,000 high school seniors. The Safe Connects program is developing Internet safety curriculum in four age-appropriate modules for students in grades K–12. Computer Connects allows kids to refurbish PCs and recycle them to families and community centers, and Community Connects sets up computer labs to Housing and Urban Development (HUD) and Section 8 apartments, community centers, preschool, afterschool, faith-based, and other nonprofit organizations seeking to establish their own computer labs. Each program remains true to the organization's mission and goals, and collectively the programs actualize all of the principles of Digital Inclusion listed above.

Now a college freshman, Kent says, "Although Net Literacy was developed as a youth-run initiative to help bridge the Digital Divide in 2003, the organization really grew because of the way we all worked together to build and develop programs. Net Literacy has a great board of student and adult members and a strong set of business and government partners. When we have the opportunity to add a new program, we talk about all of the alternatives, and we always know what to do next. Net Literacy is really about allowing kids to make a difference."

Step 5: Incubate: Prove the Concept

Before any citywide, county, or state deployment, a proof of concept or pilot is recommended to test the inclusion program and make sure that it can deliver the expected results.

Pilots should start by establishing milestones for measurement and end with an evaluation of the measurements collected at each milestone. These measures will be used to determine expansion of the pilot or incubation to other areas.

Wireless Philadelphia started its program with four neighborhood pilots. The first pilot, Love Park in the center of Philadelphia, focused on technology, portals, and the ability to engage businesses and visitors. The pilot in Olney reached into an ethnically diverse, lower-income neighborhood and focused on creating community partnerships and prototyping training and communications plans.

The Norris Square pilot supported a mostly Spanish-speaking community with a focus on training and bilingual local news. The fourth pilot was actually not a Wireless Philadelphia project at all. The work of the People's Emergency Center (PEC) to provide training, refurbished PCs, and low-cost wireless Internet in that West Philadelphia neighborhood revealed insight on best practices. PEC, a nonprofit organization that supports abused and battered women and families, also supports economic development in this West Philadelphia neighborhood.

In the Philadelphia case, the pilots were planned in alignment with the mission, and there was very little additional top-down direction, leaving service providers and community groups room to innovate. Critical to the role these pilots played in the project were the consistent project management from the city and a thorough analysis of lessons learned citing best practices, areas for improvement, and recommendations.

Whether you launch a pilot or proof of concept, or evaluate existing programs, take the time to compare the results and processes with your goals for Innovating for Inclusion. Making adjustments in smaller scale programs is easier than changing larger ones.

Step 6: Evaluate: Measure and Adjust

As the incubation period ends, data analysis takes the team back to the starting point. Key issues to explore in detail include:

- How did the baseline measurements (the former current state) compare to the incubated results?
- Did the results close the gap or close the gap to the desired or expected levels of progress?
- Were new opportunities or problems identified in the course of the incubation?

One especially well-run organization that continues to measure and adjust programs is the Boston Digital Bridge Foundation, a 501(c)(3) nonprofit organization that was spearheaded by Mayor Thomas M. Menino and remains both aligned with and complementary to Boston city government functions. Included among the many programs sponsored by the Boston Digital Bridge Foundation:

- *Technology Goes Home*, which provides both community and school-based training and PC purchase options for low-income families.
- *TechBoston*, which offers advanced computer training to equip Boston Public School students with skills essential for success in careers and postsecondary education.
- *Project Refresh*, which recycles used computers from area companies into the schools and the community.

Since the programs' inception in 1999, more than **3,000** families have graduated from them. More than **10,000** people have participated in the Boston Digital Bridge Foundation programs. Surveys conducted by the Boston Digital Bridge Foundation found that:
- **87 percent** of participants reported a significant increase in the connection to the community as a direct result of the programs.
- **92 percent** of parents reported their children's schoolwork improved significantly through involvement in the Technology Goes Home program.
- **95 percent** of the participants made significant improvements in their computer skills.
- **99 percent** of participants were very satisfied with the Technology Goes Home program.

Step 7: Replicate: Scale and Recycle

With evaluations from pilots in hand, the team can now build specific plans to launch and expand the programs. Critical to this step is establishing a sustainable organizational structure that continues to engage and excite the community, but that takes long-term accountability for fund development, program direction and adjustment, and delivering results.

Creating Digital Opportunity is more of a continuous process. Bridging the Digital Divide requires that individuals, households, and small businesses have broadband-connected devices with the training and motivation needed to use those tools to improve their lives. As more and more of the information and services that power our society become online resources and as the opportunities for using digital media for creation and community increase, these tools become central instruments for personal development and continuous learning. Although this objective may be bolder than some leaders elect to consider, program objectives should certainly evolve as our society changes.

A Cautionary Note

Although following the process described in this guide with a good team and mission statement can go a long way toward producing the desired results, a few areas of risk should be clearly noted. Among them:

Funding or lack thereof—Digital Inclusion programs need diverse, sustainable funding sources. Full programs that include equipment, software, access, training, and content can be expensive. It is important to align the scale of work to the scale of funding, or alternatively build a funding plan that enables the desired outcomes. Of course, the principle on sustainability was identified as a best practice area, but it is worthy of repetition. The best programs create a culture that builds funding sources over time and finds ways to have these programs become "citizen invested" or "earned" or "citizen owned" over time.

Thinking too big or thinking too small—The too-small project won't make a difference; the too-big project won't get done. Most historical programs that bridge the Digital Divide provide only a narrow bridge for a small segment of underserved residents. With government policy and program leadership, larger goals can be set and achieved, but even these program must be built into a set of smaller attainable tasks.

Managing complexity—Make sure that someone on the team understands the details of what it takes to deploy wireless in 50 square miles, refurbish 4,000 PCs, train 10,000 seniors, or add curricula to 40,000 afterschool programs. That operational knowledge needs to be balanced with the ability to simplify the project and focus on applications and value.

Leadership—Strong, consistent leadership is critical to inclusion efforts. Leadership transitions, especially those from task force to structure, need to be managed to maintain and invigorate the passion, mission, and focus.

Measure it—Few communities actually benchmark their inclusion gaps before building programs, and many are so busy "doing" that they don't measure. A detailed university-led study may not be practical, but do find a few metrics that can be tracked over time. Review the metrics to ensure that programs are scaling and actually closing the Digital Divide in your community.

About the Authors

Maria E. Wynne
Maria E. Wynne is the Senior Director of the Office of Economic Development and Innovation for the U. S. Public Sector for Microsoft Corporation. In her most recent assignment, she was General Manager for the U.S. State and Local organization at Microsoft. In her nearly 25-year career, Maria has generated success in sales, marketing, business development, and operations management for technology leaders Xerox, Microsoft, and Ameritech (now the new AT&T). As a senior executive leader, she has been responsible for leading sizable organizations in both public and private sector environments. Maria earned her bachelor of arts degree at North Central College, Naperville, Illinois, and her master of business administration from Northern Illinois University. She has continued her executive development with executive training at the Center for Creative Leadership and at Northwestern University's Kellogg School of Management. She serves on the board of the Goodman Theatre in Chicago, Illinois, where she resides.

Karen Archer Perry
As the founder and principal consultant in Karacomm, Karen Archer Perry is professionally and personally committed to putting technology into service for people and businesses. She brings to any program her ability to clarify issues, advocate solutions, mobilize crossfunctional teams, and facilitate decision making. Karacomm specializes in working with communities to develop wireless programs that ensure that their investment in municipal wireless delivers value to residents. Karen has worked with planners in Philadelphia, San Francisco, and Winston-Salem to shape community programs for wireless broadband services. In these cities and others, she has collaborated on Digital Inclusion strategies, created PC purchase programs, conducted focus groups, developed community engagement programs, evaluated pilot networks, researched and documented best practices, and created and implemented community marketing programs. Karen holds a master's degree in electrical engineering from Cornell University. She worked for the AT&T, Lucent Technologies, and Bell Labs family of companies for 20-plus years. She holds membership in both the Institute of Electrical and Electronics Engineers (IEEE) and the Society of Women Engineers.

Lane F. Cooper
The Editorial Director of BizTechReports, Lane F. Cooper brings more than 20 years of experience as a reporter and editor analyzing the business and technology industry. Technology magazines that have carried his bylines include *Information Week*, *Telephony*, *tele.com*, *Communications Week*, *Communications Week International*, *InternetWeek*, *Byte* magazine, *Enterprise Systems Journal*, and *Multimedia Week*. Lane has been responsible for a number of editorial launches, including *Healthcare Marketing*, *PR News*, *Multimedia Week*, *Technology Transfer Week*, *Electronic Imaging Report*, and *Broadband Networking News*. Lane also broadcasts *The Washington News Bureau Technology Minute* for WTOP radio, the top-rated news and information station in the Washington, D.C., metropolitan area.

Innovating for Inclusion Resources

Digital Literacy Curriculum
Microsoft Digital Literacy Curriculum: http://www.microsoft.com/upcurriculum
Microsoft Unlimited Potential Curriculum: http://www.microsoft.com/digitalliteracy

Internet Safety Services
Microsoft Safety Services: http://www.microsoft.com/protect/default.mspx
Wired Safety: http://www.wiredsafety.org
Stay Safe: http://staysafe.org

Accessibility
Microsoft Accessibility Services: http://www.microsoft.com/enable
The Alliance for Technology Access (ATA): http://www.ataccess.org/about/default.html

Organizational Support for Nonprofits
TechSoup: http://www.techsoup.org/index.cfm
CTCNet: http://ctcnet.org

Statistics on the Digital Divide
U.S. Census Bureau:
http://quickfacts.census.gov/qfd and http://www.census.gov/population/www/socdemo/computer.html
The Children's Partnership: http://www.techpolicybank.org//AM/Template.cfm?Section=Home1

Research on Broadband Penetration and Societal Impact
The Pew Internet & American Life Project: http://www.pewinternet.org
The Brookings Institution: http://www.brookings.edu