Digital Excellence Action Agenda | 2009

City of Chicago
Mayor Richard M. Daley

Letter from the Mayor

Thank you for your interest in the City of Chicago's Digital Excellence Action Agenda, a collaborative plan for enhancing and promoting greater access to technology throughout Chicago neighborhoods and city government.

For many years, the City of Chicago has worked to promote greater access and use of technology by residents, businesses and government. Free computer and internet access at Chicago Public Library branches, technology classes at our senior centers, increased numbers of computers in our Chicago Public Schools classrooms, free Wi-Fi at Millennium Park and the increasing availability of City services and information on our website are just some of the many steps we have taken.

Building on past and current initiatives, the Digital Excellence Action Agenda outlines the City's latest efforts to promote universal, meaningful participation in technology. We seek to strengthen digital infrastructure, raise awareness about the importance of technology training and education, connect youth, families, businesses, and visitors to more technology resources, and improve accessibility.

The importance of these efforts cannot be overstated. Chicago continues to compete with other cities in the U.S. and globally on a range of issues, including technology, so prioritizing digital excellence in our city is more important than ever.

The Digital Excellence Action Agenda will serve as the City's guide as it strives for digital excellence for all. By working together, we can bring the benefits of technology to all of Chicago's residents.

Sincerely,

Mayor Richard M. Daley

Table of Contents

Executive Summary

The ***Digital Excellence Action Agenda 2009*** contains the steps that the City of Chicago and its sister agencies are currently taking, or plan to take, to achieve digital excellence—universal, meaningful participation in technology. The Action Agenda incorporates many of the recommendations of the Mayor's Advisory Council on Closing the Digital Divide, lays out new policy ideas, expands on current programs, increases interdepartmental coordination, proposes methods to raise awareness about technology, encourages various partnerships, and suggests other ways in which the City can lead by example and help Chicago achieve digital excellence.

The Action Agenda includes 32 action items organized around six high-level digital excellence objectives. Each action item identifies a specific opportunity to work toward achieving the corresponding objective through municipal government, resident, business, and community digital inclusion efforts, and aims to create opportunities for Chicagoans while strengthening Chicago's position as a leading global center.

One of the action items, the Digital Excellence Demonstration Communities (DEDCs) will play a key role in digital excellence efforts by functioning as test beds for programs and strategies that address all five drivers of digital excellence—effective Internet access, affordable hardware, suitable software, digital education, and evolving mindsets. Successful results, along with final benchmarks, will be shared and used as models to drive digital excellence in other Chicago communities and citywide.

The Digital Excellence Action Agenda is a living document. As the City and its partners make progress on stated goals, develop new priorities, and identify new opportunities, the City's Action Agenda will, in turn, reflect these changes and new directions.

Executive Summary

OBJECTIVE 1 — *Build a cutting-edge broadband infrastructure and create a regulatory environment that helps achieve this goal*

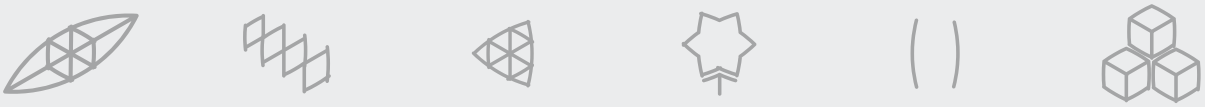
Action Items

1. Develop and publish detailed standards for broadband-readiness in public and private, new and renovated developments; enact policies that encourage developers to meet broadband-readiness standards
2. Develop plan to meet the City of Chicago's long-term communications needs
3. Coordinate efforts and collaborate with leaders in the Chicago region and other metropolitan areas to foster broadband development
4. Encourage the Federal Communications Commission to release a national broadband policy

OBJECTIVE 2 — *Help consumers and families access technology resources and services*

Action Items

1. Leverage 311 to help residents seeking training and assistance to find local technology resources
2. Make it simpler for residents to access e-services on the City's homepage
3. Enhance Wireless Internet Zones in public buildings by increasing the bandwidth and the number of hotspots
4. Upgrade and increase the number of computers at City locations to expand online information access
5. Promote the new Chicago Public Library (CPL) website and Integrated Library System (ILS) that provides patrons with access to online resources
6 Expand CPL CyberNavigators program to provide additional technology training to the public
7. Work with financial institutions to create special savings accounts to be used for technology purchases
8. Encourage companies to recycle their computers and provide them to low-income families
9. Identify opportunities for providers of technology solutions to the City to contribute to digital excellence efforts
10. Conduct a detailed digital excellence study to determine the barriers to technology use and access for underserved Chicagoans



Executive Summary

OBJECTIVE 3

Raise awareness and demonstrate the value of technology for residents and communities

Action Items

1. Develop a comprehensive public awareness campaign that demonstrates the value of technology
2. Saturate a small number of communities with technology to demonstrate the transformative power of technology
3. Create a clearinghouse for technology resources available through government, community groups, and companies
4. Allow Chicago students to gain experience working in the City's technology departments and centers

OBJECTIVE 4

Leverage technology for economic growth

Action Items

1. Organize a Small Business Technology Fair to help neighborhood-based businesses leverage technology
2. Conduct a detailed survey of technology use and needs among Chicago businesses
3. Implement strategies to close the technology "talent gap" between employee skills and business needs
4. Facilitate deployment of digital public information kiosks by community and business organizations

Executive Summary

OBJECTIVE 5

Increase digital literacy and the use of technology in K-12 education to encourage the development of twenty-first century skills

Action Items

1. Provide relevant technology professional development opportunities to enhance the teaching and learning experience
2. Use technology to expand the availability of relevant data to the educational community
3. Encourage digital literacy and twenty-first century skill development for the educational community
4. Expand the use of digital media distribution throughout the educational community
5. Expand access to online instructional resources to the educational community

OBJECTIVE 6

Ensure that the City of Chicago deploys accessible technology tools and services and fosters increased adoption of accessible information technology in Chicago at large

Action Items

1. Commit to a clear, nationally-recognized set of standards for technology accessibility
2. Incorporate accessibility reviews into the custom application development process
3. Include accessibility as a review criterion for procured technologies and new releases of existing technologies
4. Include technology accessibility as part of an upcoming evaluation of the City's compliance with Title II of the Americans with Disabilities Act
5. Hold workshops for City and sister agency staff on new trends and best practices in accessible technology

Introduction

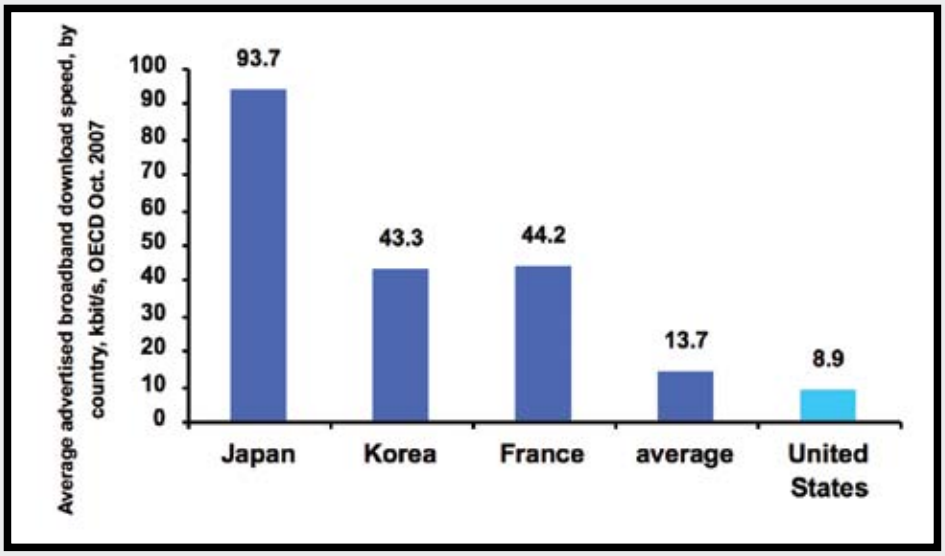
The world is quickly changing. Permeating every aspect of our lives, digital technologies are now prerequisite for participation in the mainstream economy and social spheres. Blogs and other online media are becoming as popular as books and newspapers. YouTube is becoming as significant as television. Search engines are now an essential portal to learning, shopping, healthcare, and society in general. Online collaborative tools like Facebook or LinkedIn connect people across interests and spaces and offer new social, economic, and civic opportunities. Through the Internet and digital tools, people manage their finances, pay bills, buy and sell goods and services, and make investments. Economically, digital technology can help to create more productive communities and stronger, more inclusive labor, consumer, and housing markets. Telemedicine and other related technologies can bring remote healthcare into homes and schools, reducing the number of emergency room visits. Digital technologies can help transform the lives of individuals and communities, closing education, health care, and economic gaps.

The United States is the birthplace of the Internet and was, in the 1990s, a global leader in broadband deployment and innovation. In order for the United States to maintain its position as a global information technology (IT) leader, the nation must continue to encourage innovation, grow its talent pool, and invest in its IT infrastructure. The study, *How technology sectors grow: Benchmarking IT industry competitiveness 2008*, conducted by The Economist Intelligence Unit, concludes that "[a]s an incubator of high-tech start-ups and technology innovation and as a developer of talent, the US remains a pace-setter. However, the gap is narrowing as IT industry environments in Europe and Asia—including in emerging markets—are becoming more competitive."

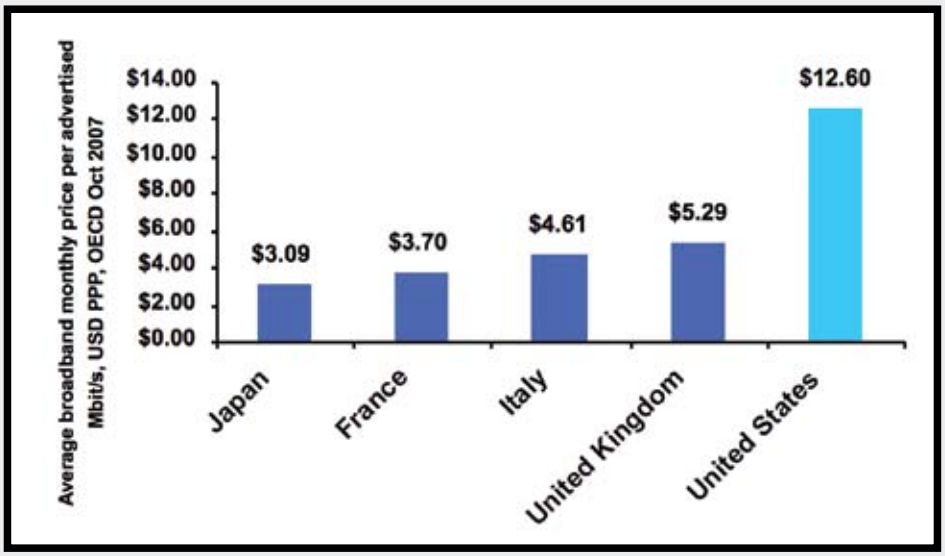
The Organisation for Economic Co-operation and Development (OECD) has gathered a range of international broadband-related statistics, which can be found on the *OECD Broadband Portal*. Based on these statistics, the United States, despite being a leader in broadband infrastructure and adoption at the beginning of the decade, risks losing its position at the head of the pack.

Introduction

Most Americans are accessing the Internet more slowly than their counterparts in other developed countries. The average advertised download speed in Japan is 93.7 megabits per second; the average in America is 8.9.[2]

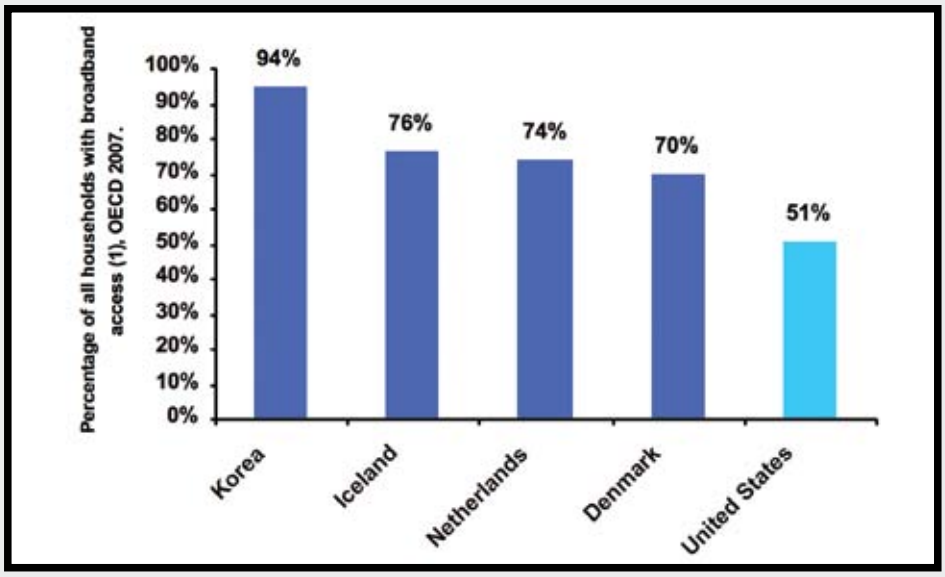


Americans are also paying more for broadband services. The average American pays $12.60 per megabit per second; the average Japanese consumer pays only $3.09.[3]



Introduction

And, broadband is reaching comparatively fewer Americans than residents of other industrialized countries. 94% of households in Korea have a broadband connection; only 51% of American households have broadband connections.[4]



In order to maintain the United States' competitive edge, these challenges must be addressed by federal, state, and local government, the private sector, non-profits, and individual consumer efforts. Broadband use is especially important as new web-based applications and web-delivered audio-video content require high-speed connections. "High-speed connections [at home] facilitate frequent Internet use and the migration of tasks online, so that broadband users engage in a greater range of activities online and gain greater familiarity with the Internet."[5] In order to make American broadband more competitive, decision-makers can learn from other countries that have implemented innovative deployment and regulatory models to promote affordable broadband usage. And with more than 80% of U.S. residents now living in urban areas,[6] it is clear that cities like Chicago can and must take the lead in bridging the digital divide.

Introduction

Currently, nearly 40 percent of Chicago residents are either entirely offline or have limited access[7]. Thus, 4 in 10 residents face technology barriers of varying degrees. Statistically, seniors, minorities, and low-income and less educated residents are most likely to be offline or less-connected.[8] In an increasingly competitive world, all Chicagoans have a stake in closing this divide. Achieving digital excellence—universal, meaningful participation in technology—is vital to maintaining Chicago's position as a leading global urban center and is critical to City government's ability to continue delivering high-performing services and operations.

Fast-growing companies that provide an expansive tax-base can only survive in places with cutting-edge infrastructure and a talent pool of technically -skilled workers. Similarly, the City of Chicago needs technically capable workers to serve residents and visitors better, cheaper, and faster. The public use of e-services is an opportunity to maximize taxpayer value and convenience. Therefore, increasing and improving access to these services is an integral goal.

While maintaining constantly evolving telecommunications infrastructure may be challenging, it is imperative to guaranteeing a decent quality-of-life for Chicagoans. The notion of infrastructure as a key competitive advantage is nothing new for Chicago. After all, the city grew to international prominence in the nineteenth century due to its position as a railroad hub; in the twentieth century, Chicago was again distinguished by its expressway and air transport infrastructure. And in the twenty-first century, Chicago's status as a global metropolis will be closely linked to its ability to integrate digital infrastructure and resources into all aspects of resident life.

The ***Digital Excellence Action Agenda*** is a collaborative effort to incorporate digital excellence into all areas of city government and lead by example. Building on past and current initiatives, the City of Chicago's goal is to drive digital excellence to strengthen and modernize infrastructure; connect residents, businesses, and visitors to technological services; raise awareness about the transformative power of technology; encourage economic development; empower students with 21st century skills; and improve accessibility.

Chicago's Digital Leadership to Date

Since 2004, under the leadership of Mayor Richard M. Daley, the City of Chicago and its sister agencies have led the nation in working to achieve the vital and ambitious goal of digital excellence by increasing resident access to digital technology. Wireless Internet Zones, free Wi-Fi hotspots provided by the City as a service to residents and visitors, are available throughout the city via Chicago Public Library (CPL) branches and other public places such as Millennium Park, the Chicago Cultural Center, and Richard J. Daley Plaza. Free computer and Internet access is available at all 79 CPL branches and librarians and CyberNavigators provide valuable technology assistance and training to residents. The City's Senior Centers, Youth Career Development Centers, and Workforce Development Centers provide computer and Internet access and technology training; and, the Department of Business Affairs and Consumer Protection offers free monthly technology training through its business education workshops. Chicago Public Schools (CPS)' Student Tech Services, which encompasses its TechCrew, Dell TechKnow, and TechCorps programs, teaches students technology concepts and skills in order to carry out basic computer problem resolution in their schools. Tech37, an After School Matters program, allows teens to work with technology professionals to gain specialized skills creating websites, editing digital videos, producing music, programming robots, and other technology-based activities. Through these and other programs and initiatives, the City and its sister agencies have begun to lay the groundwork to transform Chicago into a digitally inclusive and fully integrated city.

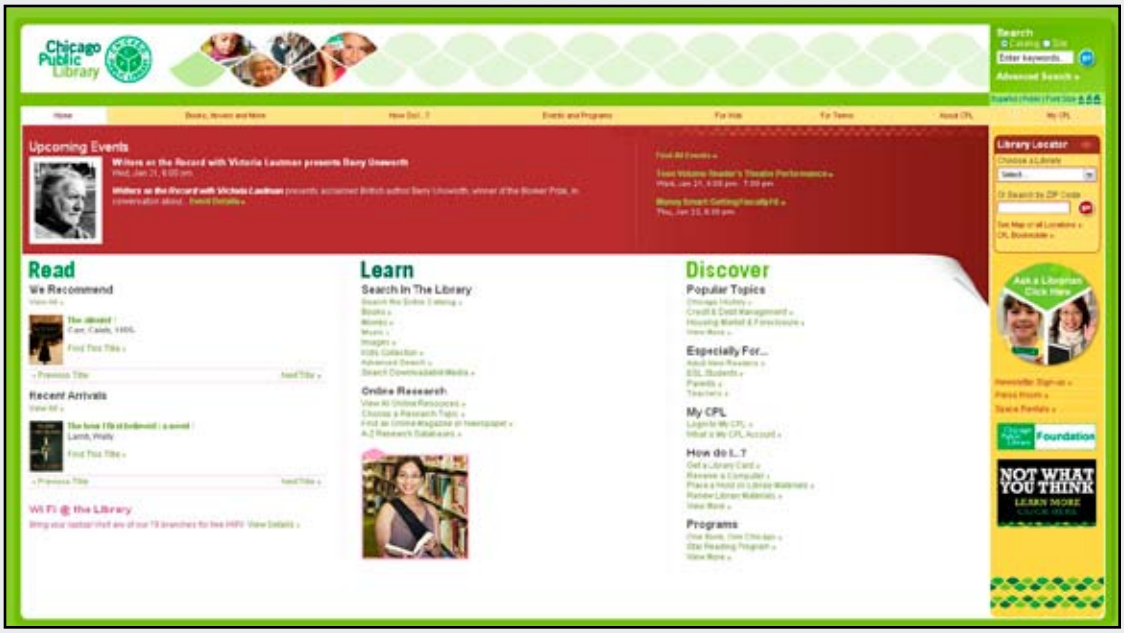
Chicago's Digital Leadership to Date

Using Technology to Deliver Innovative, Award-Winning Services

The City of Chicago is committed to producing innovative web-based services for its residents and employees and is the recipient of many awards for its efforts. In 2004, the City was honored for building one of the best city Web portals in the nation and has received other awards from the Center for Digital Government and from Government Technology for its website and web-based services. 311 City Services was awarded the 2004 Public Service Excellence Award by the Public Employees Roundtable (PER) and the 2003 Innovations in American Government Award by the Ash Institute for Democratic Governance and Innovation at Harvard University's John F. Kennedy School of Government.

The Chicago Police Department's Citizen and Law Enforcement Analysis and Reporting (CLEAR) system has also received several awards, including the Ash Institute for Democratic Governance and Innovation's 2007 Innovations in American Government Award, the 2005 ESRI Special Achievement in GIS award, and CIO's 2004 Grand CIO Enterprise Value Award.

Both the Chicago Public Library's new website and Chicago Public School's new alumni website are recipients of the Web Marketing Association's 2008 Web Awards for Outstanding Achievement in Website Development.

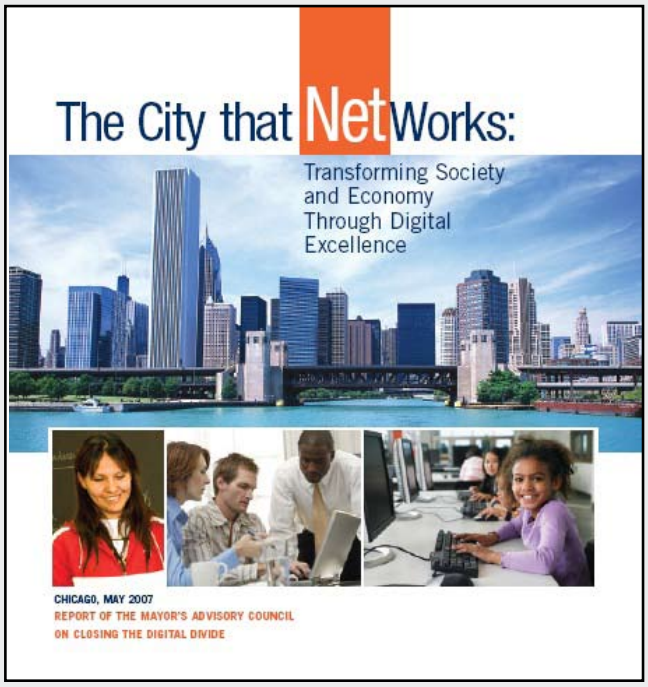


The Chicago Public Library launched this award-winning site in March 2008.

Chicago's Digital Leadership to Date

Mayor's Advisory Council on Bridging the Digital Divide (2006-2007)

In 2006, Mayor Richard M. Daley created a Mayor's Advisory Council on Closing the Digital Divide with the goal of bringing public, private, and non-profit sector leaders together to create a policy framework for bridging the gap between technology haves and have-nots. Over a period of twelve months, the Advisory Council established working groups to examine current conditions, activities, and best practices for closing the digital divide. In addition to holding a series of public hearings, the Council surveyed and interviewed community-based organizations, workforce development groups, universities, and senior Chicago-area corporate executives. The Advisory Council's work culminated in a 65-page document of comprehensive recommendations entitled *The City that Networks: Transforming Society and Economy Through Digital Excellence.*



The Report of the Mayor's Advisory Council on Closing the Digital Divide recommended that the City focus on digital excellence as an opportunity to transform institutions, the economy and communities.

Chicago's Digital Leadership to Date

In their report, the Advisory Council identified five key drivers to achieving digital excellence that have served as the framework for the creation of the City of Chicago's Digital Excellence Action Agenda:

- **Effective network access** that is high-speed, affordable, and available everywhere
- **Affordable hardware** with the capacity to connect to the Internet and tap into the full range of its visual and other resources
- **Suitable software** that meets the needs of individuals, families, businesses, and communities
- **Digital Education** that provides the training and technical support for users to become comfortable and proficient
- **Evolving mindsets** that value learning, connecting, and communicating through technology, and that recognize the business and other opportunities of expanding Internet access.[9]

Based on these key drivers, the council made a number of recommendations to "ensure universal digital access and to improve community, educational, economic and other outcomes."[10] The Advisory Council's recommendations include:

- Launching a broad-based, multiyear, and citywide awareness campaign
- Developing a citywide portal to provide access to technology resources for individuals and businesses
- Moving as many city government services and information online as possible
- Expanding the Chicago Public Library's role as a key information provider and provider of digital access
- Ensuring that all Chicago Public School students are fully digitally literate by the time they graduate from high school, and
- Establishing several demonstration communities throughout the city to serve as examples of digital transformation and integration.

The City embraces the Advisory Council's assertion that Chicago should work to become a "global leader in ensuring that its residents, its businesses, and its communities are informed, connected, and empowered through technology"[11] and draws on their recommendations in this *Digital Excellence Action Agenda.*

Chicago's Digital Leadership to Date

Municipal Broadband and Market Assessment

Following the rapid changes in the municipal Wi-Fi market during the summer of 2007, the City of Chicago sought new opportunities to foster affordable broadband development in Chicago. To facilitate this, the City partnered with the City of Boston and the City of San Francisco to commission a study that would identify promising strategies for major American cities to expand broadband access and use. Completed in spring 2008, *The Future of Municipal Broadband: Business, Technology, and Public Policy Implications for Major U.S. Cities* analyzes city policies, industry data, and international broadband best practices. The report confirms that Wi-Fi and broadband market conditions are in flux and that Wi-Fi will continue to face pricing pressures; concludes that, through collaboration and advocacy at the federal level, local governments could influence national broadband policy and assist in the development of a strong national technological infrastructure; and, states that community broadband efforts must address both the supply of and demand for broadband services through awareness-raising programs and public sector use. The results of this report have had a major impact on the City's approach to digital excellence and community broadband initiatives, including this *Digital Excellence Action Agenda*.

Digital Excellence in Chicago: A Citywide View of Technology Use

In order to effectively outreach to communities without access, it is essential to determine how many and what types of individuals, families, and businesses do not have access to the Internet and why not. National research has been conducted to determine where the digital divide exists across U.S. populations through surveys like the Pew Internet and American Life Project and the U.S. Census; however, this data does not currently exist for the City of Chicago.

Therefore, in an effort to fully understand and determine the barriers to technology use for the underserved in Chicago, the City of Chicago and its partners, the MacArthur Foundation and the State of Illinois Department of Commerce and Economic Opportunity, commissioned the University of Illinois at Chicago and the University of Iowa to conduct a digital excellence study to identify areas in Chicago with low Internet use.

Chicago's Digital Leadership to Date

The resulting report, *Digital Excellence in Chicago: A Citywide View of Technology Use*, provides data on information technology access and use in order to define relevant gaps and provide a baseline for evaluating progress in the future. In other words, the study shows statistically where and why the "digital divide" exists in Chicago. The study was designed by researchers from the University of Illinois at Chicago and the University of Iowa and is based on a random-sample telephone survey of 3453 Chicago residents aged 18 or older. The survey was conducted by the University of Iowa Hawkeye Poll in June and July 2008.

The *Digital Excellence in Chicago* report will help the City and the broader community to strategically target digital inclusion efforts and change conditions and awareness in the Chicago communities that either do not have access to technology, or do have access but have not achieved digital excellence. Indeed, the initial results have informed the City's approach to digital excellence initiatives, including this *Digital Excellence Action Agenda*. Several statistics noted in this Action Agenda are also based on the results of this study, which has been released simultaneously and is available on the City's digital excellence website at www.cityofchicago.org/digitalexcellence. For a brief overview of the study results, see page 29 of this document.

Digital Inclusion Grant Program

In May 2006, the City of Chicago launched the Digital Inclusion Grant Program to help fund the acquisition of computer hardware and software or the development of community technology portals in underserved communities. The City's Department of Business and Information Services (now called the Department of Innovation and Technology) issued a Request For Proposals to Chicago's non-profit community technology centers for projects that would address digital inclusion objectives. The City disbursed $250,000 in grants to eleven organizations working to bring technology to underserved communities. The descriptions of the organizations and their projects follow.

Chicago's Digital Leadership to Date

Ada S. McKinley Community Services

Ada S. McKinley Community Services, Inc. (McKinley) provides a broad range of human services to individuals and families in some of Chicago's most economically disadvantaged communities. McKinley is using the City's grant to create a full-service college preparation computer lab for the McKinley East/Highlands Special School Talent Search Program and a specialized educational lab for its students with learning disabilities.

Better Boys Foundation

The Better Boys Foundation (BBF) works to improve the quality of life for North Lawndale youth and their families through age-appropriate programming that enhances emotional, social, academic, and career development. Using the City's grant, BBF is purchasing Apple MacBook laptops to create a Mobile Learning Lab. This Lab will allow BBF to deliver technology-based programming aimed at helping youth master fundamental reading, writing, and math skills; become proficient users of technology; acquire twenty-first-century skills; and improve overall school performance.

Deborah's Place

Deborah's Place helps women find stable housing, sustainable incomes, and greater self-determination through a continuum of housing options and comprehensive support services. Deborah's Place Learning Centers teach at-risk homeless women basic computer and technology literacy skills. The City's grant is being used to engage community members to provide peer-to peer support, training, and assistance, and to increase ownership of computer and Internet devices among Deborah's Place tenants.

The Cara Program

The Cara Program assists homeless and at-risk populations by providing training, permanent job placement, and critical support services through programs like Cleanslate. Cleanslate is a social enterprise program that provides transitional job placements through internships. With the City's grant, the Cara Program is purchasing desktop computers and supporting peripherals, which were evenly allocated across their six locations. Using the additional hardware, the Cara Program can more effectively provide job-related computer skills-training to Cleanslate interns.

Digital Workforce Education Society

Digital Workforce Education Society (DWES) is an international non-profit organization that provides digital infrastructure, workforce training, and online collaboration applications. The City's grant allows DWES to improve its infrastructure and obtain technology and support resources to assist with various efforts, including the responsible disposal and reuse of computer and electronic products and the creation of education and entry-level employment opportunities in disadvantaged communities for the work of collecting, refurbishing, warehousing, and deploying these assets.

Grow Your Own Illinois

The Grow Your Own Teachers (GYO) initiative is a partnership of community organizations, higher education institutions, and school districts that support parents, community leaders, and paraprofessionals in low-income communities to become highly-qualified teachers. Through the City's grant, low-income GYO teacher candidates are acquiring laptops, which are greatly enhancing their success as college students. In the long term, the literacy skills gained through use of these laptops

Chicago's Digital Leadership to Date

enable the candidates, as teachers in high-need schools, to increase digital literacy among their low-income students and families.

La Casa Norte

La Casa Norte's primary goal is to foster economic self-sufficiency and independence among homeless and at-risk youth, families, and individuals in Humboldt Park. La Casa Norte is using the City's grant to reward clients who have made great strides toward employing technology in ways that build the skills they need to achieve economic self-sufficiency. Clients who fulfill a community contribution requirement and reach programmatic benchmarks relating to employment, education, and other La Casa Norte programming are rewarded with computer hardware and software that help them pursue their ambitions and aspirations.

Local Economic and Employment Development Council, Inc.

The Local Economic and Employment Development Council, Inc. (LEED Council) promotes an economic environment that encourages business growth and creates access to jobs and opportunities in the North Town, Near West Side, West Town, Humboldt Park, and Logan Square communities. The City's grant is funding hardware, software, and consulting costs related to the establishment of a computer technology center (CTC). Building on existing training programs with computer-based applications, LEED Council is also creating new computer-skill classes and a new basic academic program to improve reading and math skills. The LEED Council CTC also provides open computer lab access for job seekers and general public use.

St. Leonard's Ministries

St. Leonard's Ministries provides programmatic intervention between prison and reentry to ex-offenders by systematically addressing issues of substance abuse and recovery; psychological, testing, and counseling services; employment preparation and training; life-skills development; and housing acquisition St. Leonard's Ministries Women's Program, Grace House, is using the City's grant to create a computer lab geared toward increasing digital literacy among formerly incarcerated homeless women.

Street-Level Youth Media

Street-Level Youth Media delivers educational media arts and technology programming to Chicago's disadvantaged youth. The City's grant is funding Street-Level Youth Media's technology enhancement and development project, which is building the technological infrastructure of the organization and supporting the enhancement and growth of its on- and off-site media arts technology programs. The upgrades and additional hardware and software increase the range of media and technology skills that can be taught to advanced level students and the number of workshops and projects the organizations can take.

Test-Positive Aware Network

Test-Positive Aware Network (TPAN) works to empower HIV-positive people to live healthier lives and become advocates for themselves and others in their communities. TPAN is using the City's grant to acquire new technology resources for the Chris Clason Memorial Resource Center, an on-site publicly accessible print and electronic library of HIV/AIDS information materials. The acquisition of additional technology resources allows for an increased number of clients and members of the general public to access HIV/AIDS informational materials; apply for benefits online; communicate with care providers via e-mail; and conduct job search-related activities.

Digital Excellence Action Agenda

Building on Mayor Richard M. Daley's leadership to date and under the direction of the Mayor's Office and the Department of Innovation and Technology (DoIT), a working group, which includes all City of Chicago departments and sister agencies, was convened to develop the next steps towards achieving digital excellence. This ***Digital Excellence Action Agenda*** is that plan. The *Action Agenda* incorporates many of the recommendations of the Mayor's Advisory Council on Closing the Digital Divide, draws on the findings of the *Digital Excellence in Chicago* study, lays out new policy ideas, expands on current programs, increases interdepartmental coordination, proposes methods to raise awareness about technology, encourages various partnerships, and suggests other ways in which the City can lead by example and help Chicago achieve digital excellence.

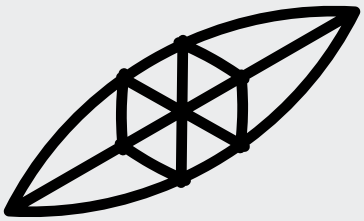
The *Digital Excellence Action Agenda* is organized around several high-level digital excellence objectives, which have been assigned to the following broad categories:

- Infrastructure and Regulatory Environment;
- Government and Community Services;
- Awareness and Marketing;
- Economic Development;
- K–12 Education; and
- Accessibility.

Each action item identifies a specific opportunity to work toward achieving the corresponding objective through municipal government, resident, business, and community digital inclusion efforts.

The *Digital Excellence Action Agenda* is an ever-growing and progressing document. While the steps outlined herein will guide the City of Chicago toward achieving digital excellence, the *Action Agenda*, like the best technologies, must be responsive and dynamic. As the City and its partners make progress on stated goals, develop new priorities, and identify new opportunities, the City's *Action Agenda* will, in turn, reflect these changes and new directions.

Infrastructure and Regulatory Environment



OBJECTIVE 1 ***Build a cutting-edge broadband infrastructure and create a regulatory environment that helps achieve this goal***

Much like telephone access, Internet access can no longer be viewed as an amenity. Internet access is a necessity in order to fully participate economically, socially, and civically in twenty-first century society and has become an essential service. Therefore, the City of Chicago's broadband infrastructure must be robust enough to meet the demands of a city with increasing technology needs. As more business is conducted and more services are offered online, broadband infrastructure must be expanded, while striving for high-speed and affordability. According to the *Digital Excellence in Chicago* study discussed in more detail on page 29, high service cost is the reason cited by more than half of the 31 percent of Chicago residents who do not access the Internet at home.[12]

Policies and regulations that assess broadband availability, encourage citywide communication and strategic planning, and promote strengthened standards must be pursued. Since national broadband standards are set by the Federal Communications Commission, it is critical that the City of Chicago work in partnership with local municipalities and other metropolitan areas and stakeholders to encourage a national broadband policy that ensures the United States remains competitive on the global stage.




Infrastructure and Regulatory Environment

ACTION ITEM 1

Develop and publish detailed standards for broadband-readiness in public and private, new and renovated developments; enact policies that encourage developers to meet broadband-readiness standards

Currently, new and renovated Chicago Public Library and Chicago Public School buildings are broadband-ready to help meet public usage and educational demand.

The City's Green Permitting Process successfully promotes the City's environmental policy goals through incentives for private developers to build sustainably, and is a valuable example of City standards impacting citywide development.

Next Steps

- Research and compile private sector best practices for the enactment of broadband-readiness standards
- Publish and disseminate new standards for implementation in new public and private developments
- Develop "big broadband" infrastructure through enhanced regulation of major renovations
- Using the Green Buildings model, identify potential incentives to encourage developers to meet broadband-readiness standards

ACTION ITEM 2

Develop plan to meet the City's long-term communications needs

Capital investment planning for the city's infrastructure (including roads, sidewalk, and sewers) is based on a multi-year capital improvement project plan, which is coordinated across infrastructure departments and updated annually. Broadband deployment is now considered a crucial component of the City's infrastructure and is integrated into its infrastructure discussions and meetings.

The City's fiber serves and connects core City facilities, including police and fire stations; however, as data demands and public safety needs increase, so must the capacity of the City's fiber infrastructure.

Next Steps

- Catalogue the City's fiber assets and develop a long-term citywide plan to meet future communications needs
- Partner with sister agencies to find overlap and opportunity points within fiber infrastructure
- Identify opportunities to coordinate right-of-way trenching

Infrastructure and Regulatory Environment

ACTION ITEM 3

Coordinate efforts and collaborate with leaders in the Chicago region and other metropolitan areas to foster broadband development

As previously noted in this report, Chicago is not alone in addressing the digital divide and is working with other major U.S. cities to address broadband needs and identify other digital inclusion opportunities. Chicago recently hosted a summit of Chief Information Officers from nearly 20 other large cities from across the United States to encourage information exchange and strengthen multicity partnerships.

Next Steps

- Create a mechanism for sharing digital excellence best practices locally and among other metro areas
- Participate in the identification of local, state, and regional technology gaps and work to tie together resources

ACTION ITEM 4

Encourage the Federal Communications Commission to release a national broadband policy

In June 2008, four cities (Chicago, Boston, San Francisco, and Miami) developed a U.S. Conference of Mayors resolution encouraging the FCC and federal government to develop a national broadband policy as a matter of economic competitiveness, equity, and quality of life that will ensure ubiquitous availability of affordable high- speed broadband services. The USCM-adopted resolution asked that the FCC redefine broadband speed and collect information on broadband coverage because broadband providers do not share coverage maps of where broadband service is and is not available. Tackling the digital divide becomes more complicated when it is difficult to determine technology have and -have-nots based on physical access to broadband infrastructure. The American Recovery and Reinvestment Act, which Congress passed in February, included funding for the federal government to develop a national broadband strategy.

Next Steps

- Continue to partner locally and with other metropolitan areas to ensure that the new national broadband strategy meets the needs of urban Americans
- Ask the federal government to mandate that broadband coverage maps be shared with local governments
- Encourage the FCC to redefine broadband speed and coverage standards

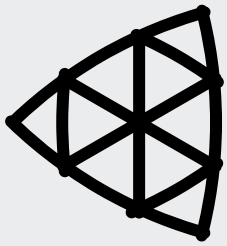
Infrastructure and Regulatory Environment

Chicago's iCAIR is global hub of academic broadband infrastructure

Chicago has become a key network communications center for the twenty-first century. This transformation relates, in part, to the work of the International Center for Advanced Internet Research (iCAIR), located on Northwestern University's Chicago campus, and its world-wide partners. iCAIR creates and implements advanced networking services and technologies for large scale networks—metro, state-wide, regional, national, and international. iCAIR's manages StarLight, the world's most advanced international communications exchange. This communications exchange is based on innovative optical technologies and allows for high performance communication services among sites throughout the globe. StarLight is being developed by iCAIR, the Electronic Visualization Laboratory (EVL) at the University of Illinois at Chicago (UIC), and the Mathematics and Computer Science Division at Argonne National Laboratory, in partnership with Canada's CANARIE and the Netherlands' SURFnet.

The global scientific community has been among the first users of StarLight, because this community requires, in addition to distributed computing and increased storage capabilities, extremely high-performance bandwidth in order to successfully support its applications. This exchange also supports the Metropolitan Research and Education Network (MREN), a multi-state advanced regional network, which provides high performance connections between universities and research labs to multiple national optical fiber-based networks, including those used by U.S. federal agencies. For more information about iCAIR and StarLight, visit www.iCAIR.org and www.startap.net.

Government and Community Services



OBJECTIVE 2

Help consumers and families access technology resources and services

In order to foster a true digital climate with universal access, the City of Chicago (in partnership with various governmental, non-profit, educational, and business partners) is conducting relevant market assessments, providing opportunities for technology training, and expanding hardware and software access for residents (especially to those with few or no technology resources). Currently, approximately sixteen percent of Chicago residents use a Community Technology Center, which is slightly higher than the national average; and 33 percent of residents have used technology resources at CPL branches.[13] In addition, in order for the City to best serve its residents, businesses and visitors, more services and online transactions continue to be added to the City's website, which receives an average of over 6.7 million hits per month.

ACTION ITEM 1

Leverage 311 to help residents seeking training and assistance to find local technology resources

311, the City's customer service request line, provides access to information regardingCity of Chicago programs and events as well as a wide range of City services and resources. Last year, 311 received record call volume of 4.6 million calls.

Next Steps

- Identify opportunities to incorporate technology information into 311 service

Government and Community Services

ACTION ITEM 2

Make it simpler for residents to access e-services on the City's homepage

Online services (including paying parking tickets, purchasing City Stickers, paying business taxes, and applying for a City job) are now conveniently located on one payment and services page, which is linked prominently on the City's homepage. As a result of these efforts, the number of City Stickers purchased online in 2008 increased by 35 percent from the previous year.

Next Steps

- Continue to identify services that can be represented on online services page
- Evaluate other services, payments, and forms that can be placed online

ACTION ITEM 3

Enhance Wireless Internet Zones in public buildings by increasing the bandwidth and the number of hotspots

The City currently provides Wireless Internet Zones, Wi-Fi hotspots, in public spaces including Daley Plaza, Millennium Park, the Cultural Center, and at all 79 Chicago Public Library (CPL) branches. A Wi-Fi pilot at Grant Park during the 2008 Taste of Chicago proved successful and lessons learned will be applied to future site selection and implementation.

Next Steps

- Prioritize the addition of Wi-Fi in high-traffic public buildings and parks
- Develop enhanced signage for Wi-Fi hotspots

Government and Community Services

ACTION ITEM 4

Upgrade and increase the number of computers at City of Chicago locations to expand online information access

Public points of access are critical to reaching the 31% of Chicagoans that do not have Internet access at home. The City currently reaches residents through school buildings, CPL branches, parks, Senior Centers, Youth Career Development Centers, Workforce Development Centers, Family Assistance Centers, Payment Centers, and other public buildings.

Next Steps

- Evaluate public access points that can or do offer computer use
- Consider economically-feasible methods or potential partnerships to provide supervised computer use opportunities at more public buildings

ACTION ITEM 5

Promote the new Chicago Public Library (CPL) website and Integrated Library System (ILS) that provide patrons with access to online resources

Launched in March 2008, the new ILS and website greatly improve library patrons' ability to access the system-wide catalog, online resources, and other services. Through this state-of-the-art computer system, CPL patrons may now reserve a book, DVD, or audio book; find out about programming; use sophisticated research databases; sign-up for a computer session, and access the library's resources 24 hours a day, 7 days a week from a home or office computer.

Next Steps

- The Chicago Public Library has an ongoing commitment to expanding this dynamic new website. CPL will continue to add content, improve access, and introduce new enhancements.

Government and Community Services

ACTION ITEM 6

Expand CPL CyberNavigators program to provide additional technology training to the public

At the launch of the new CPL website, Mayor Daley announced the expansion of the library's CyberNavigators program, which hires college students and graduates to work in branch libraries to help teach library patrons how to use technology. Recently, the program expanded from three sites to 42 CPL branches through grants from Bank of America, the Polk Brothers Foundation and other private donors.

Next Steps

- Introduce CyberNavigator program at additional CPL branches
- Develop strategy to recruit CyberNavigators from the City Colleges of Chicago (CCC)
- Identify opportunities to incorporate CyberNavigators into digital excellence programming

ACTION ITEM 7

Work with financial institutions to create special savings accounts to be used for technology purchases

Technology-focused individual development accounts and matched savings accounts offer a unique financing tool to make hardware and software purchases more affordable.

Next Steps

- Organize a work session with leading financial institutions
- Create or select a program model

ACTION ITEM 8

Encourage companies to recycle their computers and provide them to low-income families

The City of Chicago recycles its used or obsolete electronics hardware through donations to non-profit organizations such as Computers for Schools. Computers for Schools and other like organizations refurbish and then donate the computers to schools and other areas of need throughout the city. Encouraging the expansion of like programs can be a great step in driving hardware access to low-income communities.

Next Steps

- Introduce computer recyclers to the members of the Mayor's Council of Technology Advisors
- Encourage the private sector in Chicago to routinely donate and/or recycle used hardware to benefit non-profits and low-income communities in Chicago.
- Provide computer recycling information to residents and technology providers on City website

Government and Community Services

ACTION ITEM 9

Identify opportunities for providers of technology solutions to the City to contribute to digital excellence efforts

Many companies already participate in digital inclusion initiatives and are eager to transform the digital climate of the City of Chicago. In order to meet the needs of an approximately 36,000 person workforce in the twenty-first century, the City contracts with various technology companies to purchase needed computer hardware, software and applications.

Next Steps

- Research other technology public benefits agreements
- Define set of potential opportunities
- Share program with sister agencies

ACTION ITEM 10

Conduct a detailed digital excellence study to determine the barriers to technology use and access for underserved Chicagoans

The City has commissioned a technology use and access study conducted by the University of Illinois and University of Iowa, with support from the MacArthur Foundation and the State of Illinois Department of Commerce and Economic Opportunity. In order to effectively reach out to communities without access, it is essential to determine how many and what types of individuals, families, and businesses do not have access to the Internet and why. This data does not exist for the City of Chicago, and Internet providers are reluctant to share proprietary data. See the article that follows for further information.

Next Steps

- Publish research summary as well as full report
- Share results with other interested stakeholders
- Develop targeted strategies to more effectively address current barriers and expand access

Government and Community Services

Citywide Study Seeks to Understand Local Technology Access and Use

In an effort to fully understand and determine the barriers to technology use for the underserved in Chicago, the City of Chicago and its partners, the MacArthurFoundation and the State of Illinois Department of Commerce and Economic Opportunity, commissioned the University of Illinois at Chicago and the University of Iowa to conduct a digital excellence study to identify areas in Chicago with low technology use.

4 in 10 Chicago residents face technology barriers of varying degrees.

The report, ***Digital Excellence in Chicago: A Citywide View of Technology Use*** found that overall 25 percent of Chicago residents are completely offline, another 6 percent use the Internet at times but lack home access, and 8 percent have more limited and slow dial-up connections at home rather than high-speed broadband. Latinos, African-Americans, lower-income residents, less-educated residents, and older residents are less likely to be online at home or at all. The largest gaps in general Internet use are based on age. The next largest gap is based on ethnicity. Income ranks next in influencing use, but education gaps are nearly as important as income.

Income matters most for home Internet and broadband access.

The largest gap in home Internet access and broadband is based on a family's income. Disparities in home access based on age are also significant. Parents are more likely to have Internet access at home, although they are not more likely to be Internet users.

Government and Community Services

One-third of Chicago residents use the Internet at a public library.

Looking at low-income neighborhoods only, CTC use is higher in the poorest communities; parents are also more likely to use CTCs.

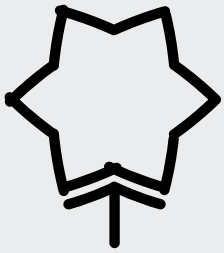
Younger residents and African-Americans are among the most likely to use public computers at libraries. Libraries are clearly fulfilling an important need for some of the less-connected in Chicago, and at the same time they appeal to those who are frequently online—the young and the better educated. Library Internet users are more likely to be aware of other public points of Internet access in the community and community technology centers (CTCs) are also important for pubic access as 16 percent of city residents report having used a CTC.

Affordability, interest, and skill stand out as the main reasons for not having a home connection.

Latinos, lower-income, less-educated, and female residents are significantly more likely to cite costs as the reason for not using the Internet at home. While older, higher-income, and less-educated respondents are most likely to say they are not interested, African-Americans are significantly less likely than whites to say they are not interested. Finally, older, Latino, lower-income, female, and less-educated residents are significantly more likely to say the Internet is too difficult to use.

The full report is available on the City's digital excellence website at www.cityofchicago.org/digitalexcellence.

Awareness and Marketing



OBJECTIVE 3 ***Raise awareness and demonstrate the value of technology for residents and communities***

Some Chicago residents do not use the Internet simply because they do not recognize its value.[14] Therefore, raising awareness about technology is an essential driver of digital excellence and a goal of the City. By recognizing the value and necessity of technology in twenty-first century life, Chicago residents can work together to achieve digital excellence and benefit from "the transformative economic and social opportunities it creates."[15] The City of Chicago plans to achieve digital transformation by increasing youth exposure to technology resources and employment, saturating neighborhoods with technology information and access, and demonstrating the ease and value of using technology in our everyday lives.

ACTION ITEM 1

Develop a comprehensive public awareness campaign that demonstrates the value of technology

In order to address the driver of digital excellence that calls for changing mindsets and raising awareness, a comprehensive, citywide public awareness campaign that simply and convincingly outlines the value of technology in everyone's life will be developed. The public awareness campaign would connect and envelop the various components of the *Digital Excellence Action Agenda* under one, unifying umbrella.

Next Steps

- Seek pro-bono assistance from marketing and public relations agencies to discuss audience, branding, and marketing channels
- Review data from Chicago Public Library awareness focus groups
- Outline municipal channels for communication, including partnerships with sister agencies
- Develop online presence for the City's digital excellence efforts

Awareness and Marketing

ACTION ITEM 2

Saturate a small number of communities with technology to demonstrate the transformative power of technology

In order "to demonstrate the power of a concerted, comprehensive and practical approach [to achieving digital excellence], and to serve as test beds of ideas," as suggested in the Report of the Mayor's Council on Closing the Digital Divide,[16] the City of Chicago has partnered with Local Initiatives Support Corporation (LISC) and the MacArthur Foundation to select three neighborhoods as Digital Excellence Demonstration Communities (DEDCs).

The Digital Excellence Demonstration Communities (DEDC) pilot program seeks to close the digital divide and demonstrate the power of digital excellence to catalyze change at the neighborhood level. Through a coordinated effort, four pilot communities will test ideas, approaches, and programs that provide individuals, businesses, and institutions with Internet access, hardware, software, and training they need to fully and meaningfully participate in digital activities; the resulting practical and sustainable programs, financial mechanisms, and partnerships can then be deployed throughout Chicago.

Next Steps

• See page 34 for more information

Awareness and Marketing

ACTION ITEM 3

Create a clearinghouse for technology resources available through government, community groups, and companies

Technology-related resources and services exist across the city but lack a coordinated clearinghouse to catalogue where they can be found. Resources and services, including software training, the location of public computer centers and free Wi-Fi hotspots, are valuable assets for community members and should be communicated through an engaging website.

Next Steps

- Work with City departments to catalogue technology offerings at City facilities, like CPL branches, and at sister agencies like schools, parks and community colleges
- Develop a simple online search interface
- Launch the website using a phased approach (phase one to include City department technology offerings and phase two to incorporate other resources, and a possible mobile version of the clearinghouse)
- Incorporate ways to advertise site into overall digital excellence awareness campaign
- Link clearinghouse to partner websites

ACTION ITEM 4

Allow Chicago students to gain experience working in the City's technology departments and centers

City of Chicago currently provides internship opportunities to college students within various departments, and Mayor Daley's Volunteer Network connects residents with a variety of volunteer opportunities.

At Chicago Public Schools, students must complete a minimum of 40 hours of service learning between 9th and 12th grade in order to graduate. Service-learning engages students in projects that serve the community while building social, civic, and academic skills.

Next Steps

- Establish technology-focused service learning or internship opportunities for Chicago Public Schools or City Colleges of Chicago students in City departments
- Explore opportunities to place CPS students or interns with Unisys, the City's primary technology servicer
- Discuss incorporation of CPS TechCrew students into City internship programs
- Encourage CPS students to assist technology trainers at Senior Centers as part of their service learning

Awareness and Marketing

Demonstration Communities Test Strategies for Bridging the Digital Divide

As suggested in the Report of the Mayor's Council on Closing the Digital Divide, the City of Chicago has partnered with Local Initiatives Support Corporation (LISC) and the MacArthur Foundation to select three communities as Digital Excellence Demonstration Communities (DEDCs). The DEDC program aspires to bring together various digital excellence activities by providing households, businesses, and institutions in multiple communities with access to an affordable bundle of technology resources that will enable them to increase participation in meaningful digital activities. The program also aims to show how technology can be used to improve outcomes in areas of interest to the community and the city at large (i.e. small business support, workforce development, education, utilization of public services and benefits, etc.)

The delivery and coordination of these efforts requires strong institutional leadership as well as broader partnerships in and outside the community. Therefore, the City of Chicago partnered with LISC/Chicago's New Communities Program, a long-term initiative designed to support comprehensive community development in sixteen Chicago neighborhoods, as each community's NCP efforts are driven by a strong lead agency. Each of the sixteen Chicago communities' lead agencies was offered the opportunity to submit a letter of interest to participate in the Demonstration Communities program and seven communities responded. From these seven, the City of Chicago, LISC, and the MacArthur Foundation, selected four semi-finalists. A Request for Proposal (RFP) was then issued asking each of the semi-finalists to provide additional details about the stakeholders that would be involved in the pilot, a proposed target area within their community, programmatic focus areas, and possible success metrics and indicators. Then, based on their responses to the RFP, four community areas—Auburn Gresham, Chicago Lawn, Englewood and Pilsen —were selected as the program participants.

Awareness and Marketing

Funded in part by the MacArthur Foundation and the Illinois Department of Commerce and Economic Development, and with the additional support of many additional public and private sector partners, the Digital Excellence Demonstration Communities will build on their NCP efforts to meet both digital excellence and NCP Quality of Life goals. The pilot program began its strategic planning phase in January 2009 during which each lead agency and its partners are suggesting, assessing, and selecting strategies aimed at achieving measurable results. The DEDC planning phase involves all key community stakeholders representing the interests of individuals, businesses, non-profit organizations, educational institutions, libraries, and community technology centers. Appropriate assessment, evaluation and reporting mechanisms will also be developed during the planning phase.

DEDC project implementation is expected to begin in summer 2009 and will run through the end of 2010. Successful results, along with final benchmarks, will be shared and used as models to drive digital excellence in other Chicago communities.

Digital Excellence Demonstration Communities

Southwest Digital Planning District

■ *Auburn Gresham*

Auburn Gresham is a predominantly middle class African-American community located nine miles from downtown. After two decades of residential flight and a few years of commercial disinvestment along the 79th Street retail strip, the community began to see a rebound in the late 1990s. The area is seeing new retail and residential development on 79th Street, housing reinvestment on many streets, and new housing construction in the Winnecona area. The neighborhood has a high concentration of the famous and historic Chicago-style bungalow homes and many Victorian-era homes as well.

■ *Chicago Lawn*

Chicago Lawn, on the city's Southwest Side, is a multi-ethnic working class community composed of African-Americans and people of Mexican and Arab descent who are determined to stop the

Awareness and Marketing

downward spiral of disinvestment and urban decay, and to create an attractive, safe and inviting place to live for families from many backgrounds. Historically, Chicago Lawn, which includes Marquette Park, had been a European-immigrant community, predominantly Lithuanian, German, Polish and Irish. By the 1990s, the gradual demographic change that had been taking place in Chicago Lawn increased rapidly. The population grew by 20 percent from 1990 to 2000, reaching 61,412. The African-American population more than doubled to 52.9 percent, the Latino population went up 7.3 percent to 35.1 percent.

■ *Englewood*

A majority African-American community once home to the city's second busiest shopping district at 63rd and Halsted streets, Englewood has struggled in recent decades to reverse a long decline in population and economic health. The neighborhood population fell 17 percent in the 1990s to 40,222, from a peak of 97,000 in 1960. But new development has begun to breathe life into the neighborhood and large public investments suggest a stronger future. St. Bernard's Hospital has built the affordable Bernard's Place development, and City Colleges of Chicago's new Kennedy-King College complex is at 63rd and Halsted, the site of a failed urban shopping mall.

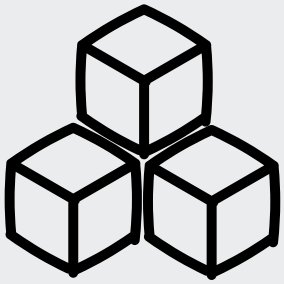
Workforce development, small business support, and youth engagement are shared priorities of these three neighborhoods which are participating jointly in the Demonstration Communities project.

■ *Pilsen*

Located on the city's lower West Side, Pilsen has been a point-of-entry community for more than 130 years. Today it is a primary gateway for Mexican-Americans, with a population that is 89 percent Latino and 37 percent non-citizens. Packed tight with modest cottages and brick two-flats, and flanked by a strong industrial district, the community is home to 44,000 people. The eastern section of Pilsen has attracted artists and galleries for more than 20 years. This arts district, along with the expansion of the nearby University of Illinois at Chicago, has brought the first signs of gentrification into Pilsen.

The neighborhood's digital excellence projects will have a major focus on education, employment and small business development.

Economic Development



OBJECTIVE 4 *Leverage technology for economic growth*

When technology changes our world, it often happens through business. We define our digital era not in the abstract, but in terms of products, services and brands—iPod personal music players, YouTube home video channels, Facebook webpages and Google searches, to name a few. "New economy" technology companies that develop products like these bring economic prosperity and talented workers to their communities. And Chicago is fortunate to be home to at least 11,000 of these fast growing companies, employing approximately 164,000 Chicago workers. [19]

At the same time, technology isn't just important for high-tech companies—it is an essential tool for every business in the City of Chicago. All across Chicago manufacturers are employing technology to increase productivity and stay competitive in a global market. Traditional manufacturers and even the smallest neighborhood businesses can use accounting software to better manage their resources, e-commerce tools to reach customers around the world, and location-based advertising to market their products and services to consumers in their own backyards. Just as technology can enable personal and community growth, it can also create new opportunities for all businesses.

Economic Development

ACTION ITEM 1

Organize a Small Business Technology Fair to help neighborhood-based businesses leverage technology

The City is committed to the growth of small businesses and already provides a range of training sessions and workshops. By expanding these offerings on digital topics, the City will help all businesses reap the rewards of technology.

Next Steps

- In fall 2009, the City will convene a fair and workshop to educate small business owners about technology applications and services

ACTION ITEM 2

Conduct a detailed survey of technology use and needs among Chicago businesses

Just as a digital divide exists between individuals using technology and those who are not, some businesses have better access to technology than others. Understanding patterns of technology use, and also access problems among companies across neighborhoods and industries, is critically important as the City shapes its digital infrastructure and economic development programming.

Next Steps

- A Chicago business technology needs survey will be distributed through numerous Chambers of Commerce and other non-profit business organizations
- The resulting data will be compiled and used to address the common technology needs of Chicago's small businesses

Economic Development

ACTION ITEM 3

Implement strategies to close the technology "talent gap" between employee skills and business needs

Businesses require strong technical talent to compete in the twenty-first century knowledge economy, but a disconnect exists between the skills schools and universities are equipping students with and the needs of their potential employers. To address this, the Mayor's Council of Technology Advisors launched an initiative to help universities and businesses coordinate technology curricula and encourage students to enter technology professions. At the same time, ChicagoLEADS, an initiative of the Mayor's Office, proposed a new technology-centered high school under the Renaissance 2010 initiative. In October 2008, CPS selected and approved the proposal for the Career Academy for Advanced Technology. The high school's focus will be on majors and careers in advanced technology to better align workforce development with the needs of Chicago's residents and communities. Four planned primary technology tracks would prepare students for entry-level positions in IT careers that typically have starting annual salaries averaging about $40,000.

Next Steps

- Build an online portal that links technology students with internships and jobs in Chicago companies
- Create joint employer-university work groups to generate and commit to solutions to close the talent gap
- The Career Academy for Advanced Technology will open in Fall 2009

ACTION ITEM 4

Facilitate deployment of digital public information kiosks by community and business organizations

The City provides tourist information kiosks at O'Hare and has installed kiosks, called EZ Pay Stations, at various sites across the city so that residents can easily pay for city services.

Agencies managing Special Service Area (SSA) districts are exploring ways public-way kiosks can offer interactive content to promote neighborhood businesses, citywide services, events, restaurants, and shopping opportunities.

Next Steps

- Determine process for installing information kiosks and advertising opportunities

Economic Development

West Town Wi-Fi Project Provides Internet Access to Residents

The West Town Chamber of Commerce administers a community and economic development program called a Special Service Area (SSA #29) on the near northwest side of Chicago. The SSA program provides the West Town community with the financial means to create, maintain, and manage clean, attractive and competitive commercial districts. SSAs, known as Business Improvement or Community Improvements Districts in other cities, provide a fair and transparent way to finance and manage improvement programs important to communities.

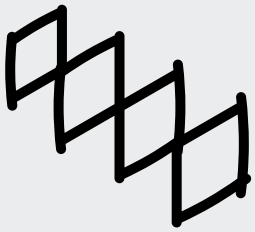
The Chicago West Town SSA #29 is a three-mile area, highly compacted urban environment that consists of both residential and commercial tracts, with twelve of the seventeen tracts classified as low- to moderate-income according to the U.S. Census information. This area serves a highly diverse racial make-up including Hispanic and Ukrainian residents and business owners. This area also serves a highly concentrated variety of small businesses along the commercial corridor and contains over 25,000 constituents.

Wireless network equipment on the roof of the Chicago Housing Authority's Noble Senior Housing Building. (Source: onShore Networks, LLC).

The purpose of the SSA #29 wireless Internet (Wi-Fi) project is to bring ubiquitous, affordable (free) Wi-Fi Internet access to a broad spectrum of users. It will supply access to the Internet via Wi-Fi to those who previously did not have affordable access (bridging the digital divide). It will also act as an economic development tool for the commercial district, helping to strengthen the small businesses that are crucial to our local and statewide economy. This will in turn help to keep these small businesses economically viable while attracting new businesses into empty store fronts that line the area, thus creating and retaining jobs and increasing the tax base.

For more information about the West Town Chamber of Commerce, go to www.westtownchamber.org; and, for more information about the Chicago Housing Authority, go to www.thecha.org.

K–12 Education



OBJECTIVE 5 ***Increase digital literacy and the use of technology in K-12 education to encourage the development of twenty-first century skills***

Integrating technology into K–12 education via learning standards, professional development, and other during- and after-school programs, will help to foster digital transformation in the minds of young Chicagoans, create a highly equipped twenty-first century workforce, and encourage the development of highly-engaged communities that actively participate economically and socially in the global society.

Current programs like Student Tech Services (a Chicago Public Schools program) and Tech37 (an After School Matters program) are providing CPS students with technology training and hands-on experience. Student Tech Services, which encompasses Chicago Public School's TechCrew, Dell Tech-Know, and TechCorps programs, teaches students technology concepts and skills in order to carry out basic computer problem resolution in their schools. (For more information about TechCrew, see the article that follows this section). Tech 37 allows teens to work with technology professionals to gain specialized skills creating websites, editing digital videos, producing music, programming robots and other technology-based activities.




K–12 Education

ACTION ITEM 1

Provide relevant technology professional development opportunities to enhance the teaching and learning experience

Professional development for teachers and administrators is a critical component of improving student achievement. After assessing the specific technology skills of more than 97% of CPS instructional employees, a learning management system (LMS) is now in place. In addition to tracking participation in professional development activities, the LMS offers technology professional development activities via multiple delivery methods to accommodate the diverse needs of adult learners.

Next Steps

- Expand onsite, online, and on-demand training on computer basics, Windows, Mac OS, Word, Outlook, PowerPoint, Access, Excel, and First-Class (CPS' online collaborative learning environment)
- Increase the number of eMentors providing on-site professional development to CPS schools

ACTION ITEM 2

Use technology to expand the availability of relevant data to the educational community

With the replacement of the legacy student information system and the implementation of a new Information Management Program and Communication Tool (IMPACT), the educational community will have unprecedented access to information concerning students, curriculum, and specialized services.

Next Steps

- Provide remote network access to all CPS teachers and administrators
- Provide training to teachers and coaches on the access and use of data available in the IMPACT Curriculum and Instructional Management (CIM) System
- Launch a district data dashboard and corresponding training for all school administrators

K–12 Education

ACTION ITEM 3

Encourage digital literacy and twenty-first century skill development for the educational community

The enactment of No Child Left Behind (NCLB) legislation requires that students demonstrate technology literacy. World class technology literacy assessment and technology literacy curriculum were created to complement existing CPS programs, which significantly reduce technology support costs while providing students unique opportunities to prepare for the workforce of the twenty-first century.

Next Steps

- Offer National Educational Technology Standards (NETS) technology literacy assessment and access to Technology Literacy curriculum to all CPS schools
- Offer Dell TechKnow program to all CPS elementary schools and TechCrew program to all CPS schools.
- Encourage CPS school participation in Net Day's Speak Up survey. Speak Up is a national online research project facilitated by Project Tomorrow[SM] that gives students, teachers, administrators, and parents the opportunity to share their viewpoints about key educational issues. Speak Up data represents the largest collection of authentic, unfiltered stakeholder input on education, technology, 21st century skills, schools of the future, and science instruction. Education, business, and policy leaders regularly use the data to inform federal, state, and local education programs.
- Distribute Net Day Speak Up Survey summary results to the educational community.

K–12 Education

ACTION ITEM 4

Expand the use of digital media distribution throughout the educational community

Through purposeful expenditures and the use of matching eRate funding, hundreds of CPS schools have access to a wide array of high-quality educational videos-on-demand. As infrastructure upgrades continue, all schools and departments will be able to utilize a range of digital educational video-on-demand services.

Next Steps

- Implement a K–8 WAN model to provide digital media services to all CPS schools
- Increase available digital media via donated and open source content
- Design and deploy media for outside organizations
- Host a district digital media conference

ACTION ITEM 5

Expand access to online instructional resources to the educational community

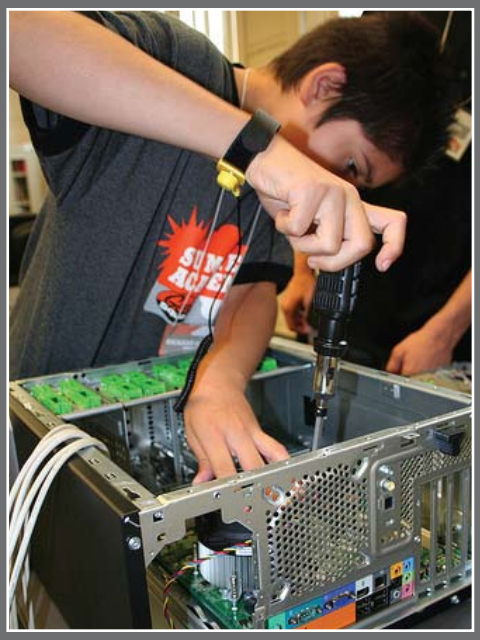
Access to online resources is a critical component of achieving digital excellence. In an effort to increase online access, CPS is working with the City of Chicago to improve access to information about schools and educational resources.

Next Steps

- Launch a CPS website with a focus on providing educational resources for parents, students, community members, and partners
- Create website links to unique learning programs, opportunities outside the classroom, and external educational resources provided by the City of Chicago
- Expand digital content available through the IMPACT Curriculum and Instructional Management (CIM) System and provide digital resources access-and-use training opportunities for teachers and coaches

K–12 Education

TechCrew Students Make Technology Work in Chicago Public Schools



Richard, Chicago Public Schools student, at the 2008 TechCrew Summer Academy.

In 2003, MOUSE (a non-profit organization that creates technology-based opportunities for underserved students) formed a partnership with the Chicago Public Schools (CPS) and UBS-Chicago to expand their MOUSE Squad program, which establishes student-run technology help desks in schools. The result of their efforts, CPS TechCrew (powered by MOUSE), is an after-school program designed to enrich students' educational experiences and job-readiness skills by providing them with a coach, training, and framework to carry-out basic computer problem-resolution within the confines of their school.

During the summer of 2004, CPS technology leaders and students attended two days of intensive training from MOUSE. At this time, Victor Herrera was the TechCrew Coach at Thomas Kelly High School, one of the largest schools in Chicago. Herrera says that, "After attending training, my students were prepared to handle the day-to-day technical issues and I was able to focus on helping teachers better integrate technology into their curriculum."

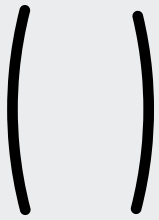
K–12 Education

For some students, the TechCrew has been more than an after-school activity: the program has helped them find their career path. Gabino Noriega, a former Kelly High School TechCrew member, now attends Illinois Institute of Technology and volunteers his time to train the next generation of TechCrew students. According to Gabino, "The experience you gain from being part of TechCrew is immeasurable. TechCrew helped me to find my passion for technology."

CPS leaders are also acknowledging the TechCrew's success, and interest in the program has exploded throughout the district. Program participation tripled during the 2007–2008 school year from the previous year. Currently, 46 CPS elementary and high schools participate in the program: 350 student members provide on-site technical support for close to 40,000 students and 3,000 faculty members. The TechCrew members solve 96 percent of all reported technical issues and have saved CPS an estimated $380,000 over the last two years. Ultimately, the goal is to have a TechCrew in every Chicago Public School. Herrera, now Technology Integration Specialist at CPS, is responsible for managing the TechCrew program, which is part of Student Tech Services, at the district-level.

For more information about Chicago Public Schools, go to www.cps.edu; and, for more information about Student Tech Services, go to www.cpstechcrew.blogspot.com.

Accessibility



OBJECTIVE 6 ***Ensure that the City of Chicago deploys accessible technology tools and services; and, expand and promote the use of accessible and assistive technologies***

The City believes that beyond making technology more readily available to residents, true digital excellence requires that all resources are available to all residents, regardless of physical ability or disability. Approximately 600,000 disabled people live and work in Chicago, and this number is expected to rise as the population ages and people acquire more disabilities.

Advances in technology have opened up the world in new ways for people with disabilities. But just as making buildings accessible requires the addition of wheelchair ramps, ensuring that technology is accessible demands conscious design and continuing vigilance. The City aims to be a leader both in ensuring that its own technology services are accessible and in fostering accessible technologies in Chicago at large.

ACTION ITEM 1

Commit to a clear, nationally-recognized set of standards for technology accessibility

There is no "silver bullet" for ensuring that technologies are accessible. However, standards developed by other government entities at the state and federal levels (like the Illinois Information Technology Accessibility Act Standards (ITAAS) and Section 508) offer objective goals that progress can be measured against. The City is currently using the new IITAAS as informal guidelines.

Next Steps

- The City will formally commit on an enterprise-wide basis to adopt technology accessibility standards
- The City will develop an implementation plan to ensure accessibility for its electronic and online services

Accessibility

ACTION ITEM 2

Incorporate accessibility reviews into the custom application development process

Software development teams internal to the City develop many of the technology services that interact with residents. Each project follows a standard process that includes reviews for security, compatibility with existing systems and other key benchmarks. Only projects that pass these review "gates" are put into production for use by staff and residents.

Next Steps

- The City will incorporate accessibility as a gate in its review process for all new software applications developed in-house

ACTION ITEM 3

Include accessibility as a review criterion for procured technologies and new releases of existing technologies

To maximize taxpayer value, the City procures many of its enterprise systems like personnel, financing management and buildings from outside vendors. The primary opportunity to incorporate accessibility into these externally developed applications comes in the procurement process, when vendors contractually commit to the features of the final product.

Next Steps

- The City will include a requirement of compliance with the aforementioned accessibility standards as a part of all contracts for technology services
- The City will include the same requirement in all public-private partnerships where technology products are offered to the public

Accessibility

ACTION ITEM 4

Include technology accessibility as part of an upcoming self-evaluation of the City's compliance with Title II of the ADA

In accordance with the requirements of Title II of the Americans with Disabilities Act, the City has begun an evaluation of its policies, programs, and facilities to determine whether they are accessible to individuals with disabilities and develop a priority-based program to improve accessibility where necessary. For the first time, the City will include technology access in the scope of their study.

Next Steps

- Include technology as a key part of the City's ADA compliance self-evaluation study
- Create a plan for removing any barriers relating to electronic and technology-based services that are identified as part of the Title II self-evaluation

ACTION ITEM 5

Hold workshops for City and sister agency staff on new trends and best practices in accessible technology

Beyond process changes, the City can also increase accessibility by raising awareness among staff. In collaboration with the ADA Great Lakes Center, the City has held several workshops to equip IT professionals, online content managers and other senior staff with tools and best practices to incorporate accessibility into their daily work.

Next Steps

- The City will expand the number and types of technology accessibility workshops offered to staff

Accessibility

Chicago Hosts U.N. Global Inclusive Tech Meeting

The City's efforts to foster accessible technology received a boost in May 2007, when Chicago hosted a special session of the Global Initiative for Inclusive Information and Communication Technologies (G3ict). The discussion focused on "the wireless Internet opportunity for disabled persons" and other new horizons for assistive technologies, and included international representatives from government, academia and industry. Leading advocates from the local disability community ensured that Chicago's perspective would be included in a dialogue that has since been taken around the world, to places like Tunisia, Ecuador, Switzerland and South Korea.

G3ict is a public-private partnership dedicated to facilitating the implementation around the world of the Digital Accessibility Agenda defined by the Convention on the Rights of Persons with Disabilities. It is a flagship advocacy initiative of UN-GAID, the United Nations Global Alliance for ICT and Development. G3ict, like the City, recognizes that "while new [technologies] can worsen the exclusion experienced by disabled persons in terms of their access to information and full participation to society, they can also provide extraordinary assistive solutions to empower them."

Mayor's Office for People with Disabilities (MOPD) Commissioner Karen Tamley (far left) at the G3ict Special Session "The Wireless Internet Opportunity for Disabled Persons: New Horizons for Assistive Technologies." (Source: G3ict)

Based on the success of the session and the high level of interest from the local disability community, the City created a permanent Accessible Technology Advisory Committee. Members of the committee continue to work with the City to identify priority areas and best practice strategies for increasing inclusiveness of technology in Chicago.

For more information about G3ict, go to www.g3ict.com; and for more information about the United Nations Global Alliance for ICT and Development, go to www.un-gaid.org.

Get Involved

Chicago's Digital Excellence Action Agenda demonstrates that the whole of the city's public sector—all city departments and sister agencies—view technology as critical to Chicago's future and are working collaboratively to achieve digital excellence for all. But government alone cannot achieve digital excellence; indeed, the City's efforts to bridge the digital divide have been supported by numerous companies, community-based non-profits, foundations, other government agencies, and individuals.

As we work to build Chicago's first Digital Excellence Demonstration Communities, the City must continue to leverage the talent, resources, and ideas of those outside of municipal government. These communities will be experimenting with a range of different strategies, each of which offers ways to collaborate with others. Examples of ways that individuals, businesses, or other institutions and organizations can get involved include:

- IT professionals from leading companies volunteer as TechCrew coaches or teachers at community technology centers
- Colleges and universities volunteer to research best practices and evaluate which approaches are most successful
- Residents, businesses, or non-profit institutions volunteer to create and participate in new computer recycling and refurbishing programs
- Banks and credit unions offer computer savings programs for low-income residents
- Residents, businesses, and IT professionals volunteer to build new neighborhood portals with information about community resources and local businesses

These are just a few examples of potential projects that can help Chicago achieve digital excellence, but the initiative cannot succeed without the collaboration of other industries and sectors. As projects begin to be implemented, the City will post new developments and specific partnership opportunities on its digital excellence homepage, http://www.cityofchicago.org/digitalexcellence. We encourage you to check this site frequently for ways that you can help make Chicago a leader in digital excellence.

Acknowledgements

Mayor Daley's Digital Excellence Working Group

Mayor Daley has created a working group composed of City departments and sister agencies who are involved in the work of the Digital Excellence Action Agenda. The following organizations play key leadership roles in this working group:

311 City Services
Matt O'Callahan, Acting Director

Chicago Housing Authority
Lewis A. Jordan, Chief Executive Officer

Chicago Public Library
Mary Dempsey, Commissioner

Chicago Public Schools
Ron Huberman, Chief Executive Officer

Chicago Transit Authority
Richard Rodriguez, President

City Colleges of Chicago
Wayne Watson, Chancellor

Department of Buildings
Richard Monocchio, Commissioner

Department of Business Affairs and Consumer Protection
Norma I. Reyes, Commissioner

Department of Community Development
Chirstine Raguso, Acting Commissioner

Department of Family and Support Services
Mary Ellen Caron, Commissioner

Department of Innovation and Technology
Hardik V. Bhatt, Commissioner and Chief Information Officer

Department of Procurement Services
Montel Gayles, Chief Procurement Officer

Department of Public Health
Terry Mason, MD, Commissioner

Department of Zoning and Land Use Planning
Patti Scudiero, Commissioner

Office of Budget and Management
Ann McNabb, Acting Budget Director

Office of Compliance
Anthony O. Boswell, Executive Director

Office of Emergency Management and Communications
Raymond Orozco, Executive Director

Mayor's Office for People with Disabilities
Karen Tamley, Commissioner

Public Building Commission
Erin Lavin Cabonargi, Executive Director

Acknowledgements

The recommendations of the Mayor's Advisory Council on Closing the Digital Divide, made in their report *The City that NetWorks: Transforming Society and Economy Through Digital Excellence*, informed this Action Agenda.

The additional organizations listed below also play key roles in developing and implementing the Action Agenda:

Global Initiative for Inclusive ICTs
Axel Leblois, Executive Director

International Center for Advanced Internet Research
Joe Mambretti, Director

LISC/Chicago
Andrew J. Mooney, Executive Director

MacArthur Foundation
Julia Stasch, Vice President

School of the Art Institute of Chicago
Adelheid Mers, Associate Professor

State of Illinois Department of Commerce and Economic Development
Warren Ribley, Director Designee

University of Illinois at Chicago
Karen Mossberger, Ph.D., Associate Professor

World Business Chicago
Rita Athas, Executive Director

Endnotes

1 Economist Intelligence Unit, "How technology sectors grow: Benchmarking IT industry competitiveness 2008" http://a330.g.akamai.net/7/330/25828/20080910172933/graphics.eiu.com/upload/BSA_2008.pdf.

2 Organisation for Economic Co-operation and Development, "5a. Average advertised broadband download speed, by country, kbit/s, Oct. 2007," OECD Broadband Portal. http://www.oecd.org/dataoecd/10/53/39575086.xls.

3 Organisation for Economic Co-operation and Development, OECD Broadband Portal, "4f. Average broadband monthly price per advertised Mbit/s, USD PPP, October 2007," http://www.oecd.org/dataoecd/22/45/39575011.xls.

4 Organisation for Economic Co-operation and Development, OECD Broadband Portal, "2a. Households with broadband access (1), 2004-07. Percentage of all households," http://www.oecd.org/dataoecd/20/59/39574039.xls.

5 Karen Mossberger and Carolyn Tolbert, "Digital Excellence in Chicago: A Citywide View of Technology Use," March 2009 (forthcoming), 23.

6 World Resources Institute, "Urban and Rural Areas: Urban population as a percent of total population," Earth Trends, http://earthtrends.wri.org/searchable_db/index.php?action=select_countries&theme=4&variableID=448.

7 Karen Mossberger and Carolyn Tolbert, 6.

8 Karen Mossberger and Carolyn Tolbert, 17.

9 Mayor's Advisory Council on Closing the Digital Divide, The City That Networks: Transforming Society and Economy Through Digital Excellence, City of Chicago, http://egov.cityofchicago.org/webportal/COCWebPortal/COC_EDITORIAL/DigitalDivide.pdf, 2.

Endnotes

[10] Mayor's Advisory Council on Closing the Digital Divide, iii.

[11] Mayor's Advisory Council on Closing the Digital Divide, iii.

[12] Karen Mossberger and Carolyn Tolbert, 33.

[13] Karen Mossberger and Carolyn Tolbert, 25, 30.

[14] Karen Mossberger and Carolyn Tolbert, 27.

[15] Mayor's Advisory Council on Closing the Digital Divide, 26.

[16] Mayor's Advisory Council on Closing the Digital Divide, 5.

[17] Mayor's Advisory Council on Closing the Digital Divide, 5.

[18] Mayor's Advisory Council on Closing the Digital Divide, 54.

[19] American Electronics Association, "Chicago's High-Tech Industry Employs 164,000," June 24, 2008, American Electronics Association, http://www.aeanet.org/PressRoom/prjj_cc2008_chicago.asp.

City of Chicago
Mayor Richard M. Daley