

Technology Integration in Detroit:

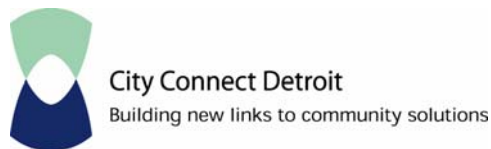
Keys to Increasing Technology Use in the Motor City

A report based on the findings of:
The DetroitCONNECTED Think Tank For Technology Integration
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Introduction

Mass application of technology allows society to improve communication, productivity, and standards of living. In the United States today, many technological breakthroughs with the potential to improve the quality of life are passing by older urban centers because of socio-economic trends affecting their ability to react to innovative breakthroughs. In Detroit, where much of the city's infrastructure was created before the advent of post-industrial information technologies, low and middle income residents have struggled to keep pace with the ever-changing world of technology. Obsolete hardware, unsustainable models of training, and a general inability to keep pace with the changing marketplace have caused many Detroiters to fall behind in the race for progress through technology. If this critical issue is not addressed soon, the community will lose billions in tax revenue and income, as well as tomorrow's leadership base. This report examines some of the key challenges, resources, and strategies available for overcoming the technology gap in Detroit, laying the groundwork for a comprehensive approach to technology integration throughout the city.

Many challenges confront Detroit in its quest to fully realize the benefits of modern technology. But, with planning and the use of existing community resources, the barriers to success may be overcome. Ongoing initiatives, combined with local, state, and national best practices, may be leveraged with community collaboration to produce a culture where technology use is widespread and commonplace. One initiative in particular, known as *DetroitCONNECTED*, has provided city leaders with valuable insight into the realities of community technology integration. The project, which offered low-cost computers, wireless connectivity, and technical assistance to community centers, revealed the benefits – and difficulties – omnipresent in servicing technology hungry neighborhoods. Integrating the lessons of this project into community discussion will assist stakeholders in identifying the subtleties of cost, access, support, and policy which must be addressed before technology use can become pervasive in Detroit.

As challenges and resources emerge, the strategies required to overcome decades of slow technology adoption become clear: infrastructure will need improvement, content delivery should be driven by the customer, program growth must be planned for, operational sustainability made a top priority, and public policy re-examined. It is not enough to hand out computers; the global economy requires cities to integrate technology as they once integrated electricity. With a community-wide commitment to increasing the use of modern technologies by all residents, Detroit can improve the quality of life for its citizens and compete successfully in the global marketplace. This report sets the stage for a culture of pervasive technology, such that Detroit may expeditiously regain its reputation as an innovative and dynamic technology leader.

The Challenge

Many of Detroit's residential neighborhoods have been overlooked in their efforts to attract the investment of information technology providers who invest in infrastructure upgrades which benefit the larger community. Without access to modern technologies such as high-speed or wireless internet connections, citizens are placed at a disadvantage when competing in the modern economy. Communities without modern technologies are unattractive to young professionals who contribute much to the vitality of a neighborhood. Recently, while Detroit's downtown reaped the benefits of new technology upgrades, a pilot project known as *DetroitCONNECTED* demonstrated that demand for technology access is as strong in the city's neighborhoods as in the central business district. With this knowledge, community leaders have increasingly sought to provide a bridge service between today's limited investment and tomorrow's full scale integration of technology. The real challenge is to define strategies for successfully bridging the technology gap, thereby laying the foundation for a service which will return Detroit to the pinnacle of innovation and dynamism.

Initial Roadblocks

Decades of disinvestment have created roadblocks which must be overcome before the integration of technological innovations can be more fully realized in Detroit. These include:

- Strategic planning does not exist for city-wide technology integration
- Cost of individual access is prohibitive for many residents
- Migration of talent from Michigan and Detroit creates a veritable 'Brain-Drain'
- Shrinking state support limits public assistance for most initiatives
- Federal support of Detroit and Michigan is below the national average
- High illiteracy rates among residents affect what strategies will be successful
- No culture of collaboration currently exists

Methodology

The School of Social Work at the University of Michigan and City Connect Detroit hosted a *Think Tank on Technology Integration in Detroit* during the fall of 2004. These dialogues gathered leaders from the nonprofit, government, academic and business communities to share best practices for expanding the technical literacy of city residents, offer resources and challenges facing the community with regards to technology, and examine the lessons of the *DetroitCONNECTED* model, a project which has dealt first hand with the realities of expanding technology use throughout Detroit's residential communities. These discussions revived long dormant lines of communication between key community stakeholders, and informed the creation of this report.

Findings of the Think Tank on Technology Integration

The *Think Tank on Technology Integration in Detroit* produced a wealth of information for use in planning tomorrow's technology programming. Findings include valuable insight into current technology initiatives ongoing in the city, best practices for meeting the city's technology demands, and strategies required for success.

Current Initiatives

Many efforts are underway to improve Detroit's information technology profile, though no single initiative provides a comprehensive solution to all of the challenges at hand. Understanding these current initiatives allows leaders to leverage community momentum and create a vision for comprehensive technology integration inclusive of residential neighborhoods.

Private Sector

Vast areas of Detroit's residential neighborhoods are unable to access high speed wireless technology because commercial providers have not made adequate investments to provide residents with these services. Generally available along commercial corridors, downtown, and near school buildings, limited access to high-speed connectivity is representative of larger technology gaps in Detroit's residential neighborhoods. Studies suggest that Detroit does not currently receive the level of private commercial investment which its market characteristics would typically attract. A bridge service between the limited investment of today and tomorrow's market realization is required to demonstrate Detroit's underinvestment to commercial providers.

Public Sector

The City of Detroit has responded to technology needs through a variety of initiatives, most notably an expansion of cost-free wireless connectivity beginning with Cobo Center and the Coleman A. Young Municipal Building, moving north to Campus Martius Park, and reaching Grand Circus Park by the end of 2004. Similar service is planned for the People Mover, Eastern Market, the Riverwalk, and Belle Isle in 2005. These projects are part of Mayor Kwame M. Kilpatrick's initiative to grow Detroit, which targets the improvement of telecommunications infrastructure as an important part of the city's rebirth.

While city government is working to connect the lower Woodward corridor, Wayne State University has focused its "Techtown" initiative north of their Midtown campus. Techtown is an ambitious project to locate high-tech businesses within two-dozen blocks between Midtown and the New Center area of Detroit. If physically linked, this project and municipal efforts would create an uninterrupted corridor of high-tech access and application throughout the central city.

Detroit Public Schools has done much to bring technology into the city's neighborhoods through its participation in Michigan's Freedom to Learn program. The program gives middle school students the use of a wireless laptop computer for the entire academic year, exposing them and their families to modern technology which they might otherwise find unattainable. The school system's wireless signal extends into many neighborhoods, but as with city and university initiatives, does not readily target residential neighborhoods, nor consider long-range maintenance, growth, and content delivery mechanisms.

Third Sector

The nonprofit community in Detroit has attempted to overcome hurdles slowing integration of technology into the city's residential neighborhoods, but their capacity remains insufficient to deal with the scope of the challenge. Many of the hurdles facing the city with regards to technology integration are the result of economic realignment on a national and global scale - migration of talent, shrinking state support, and below average federal support. For the nonprofit sector to successfully overcome these barriers, they must work closely with the public and private sectors, while aggressively taking advantage of funding opportunities currently available. One such opportunity, Michigan's *Cool Cities* initiative, is designed for just such an endeavor and should be pursued for technology programming and infrastructure.

DetroitCONNECTED: Informing the Future

The School of Social Work at the University of Michigan, along with the Gateway Group, developed *DetroitCONNECTED* as a self-supporting technology program whose mission was to bring technology integration to Detroit neighborhoods with low-cost computers, wireless connectivity, and other technical assistance at faith-based Community Technology Centers (CTC's). During pilot projects at St. Suzanne on Detroit's westside and the Belle Isle Yacht Club, the team implemented technology upgrades and worked with CTC staff to address the technology needs of their communities. Activities included the creation of wireless hotspots, computer labs, and computer training courses for residents. Evaluation of the project's activities produced many valuable lessons about the realities of technology implementation in Detroit. Among them:

- The viability of community technology centers requires a minimum resource base
- Inadequate resources created high rates of burnout among community technology 'experts'
- The failure of centers where burnout occurred offset the creation of new centers, limiting the integration of technology across the city
- Technology 'experts' in the community have diverse, though inconsistent knowledge of various technology issues
- Technology 'experts' in the community may be surpassed in skill by students when professional development opportunities are not available

These lessons, along with project planning and resource materials, are highly informative and provide Detroit with important lessons for its future technology initiatives. The

DetroitCONNECTED project, though not able to fully integrate technology use in Detroit, should serve to inform a larger plan for technology integration in the city.

Finding Solutions for Detroit

Together the initiatives underway offer a variety of resources for the community to use in fostering technology adoption. However, no single project addresses all of the challenges outlined in this report. To answer its technology needs, Detroit must look near and far to find solutions which make sense in the city.

Existing Community Resources

Among the resources which Detroit has to offer, there are several which could be further leveraged in order to develop technology adoption in the city. These include:

- **Universities** - Detroit is home to several world class academic institutions, and within a short drive of many more. The expertise and resources available at Wayne State University, the University of Michigan, and other area institutions should be harnessed to support technology improvements.
- **Cell Phone Ownership** - Studies suggest that Detroit has the second highest rate of cellular phone ownership in the nation, a high-technology coup for a city with so many pressing technology needs. If properly leveraged, Detroit can use its cellular market share to attract private infrastructure improvements, such as high speed cellular technologies. At the same time, innovative content should be considered for a city with such widespread cellular use.
- **State/School Laptop Program** - The Freedom to Learn program places wireless laptops into the hands of middle school students, who invariably share this experience with friends and family members. This program alone brings technology to thousands of Detroit residents who might not have experienced it otherwise. At the same time, the connectivity which Detroit schools have obtained in order to operate wireless networks for this program may be expanded throughout the neighborhoods in which they reside.
- **Public Purchasing Power** - Detroit is the eleventh largest city in the United States, and with that comes incredible purchasing power. If city government, Wayne State University, and Detroit Public Schools coordinate their telecommunications purchasing, it could bring significant infrastructure improvements to Detroit.

State and National Models

The State of Michigan and its localities are increasingly active in their pursuit of technology upgrades and integration. In Flint, the Michigan State Housing Development Authority is working with the nonprofit organization *One Economy* to bring low-cost web surfing to residents through agreements with housing developers. Oakland County has recently announced an ambitious plan to blanket itself with free wireless signals. Ottawa County has consolidated its municipal, police, and fire telecommunications purchasing power in order to secure increased high-tech upgrades in its aging infrastructure; Muskegon County has set aside Community Development Block grant monies to fund the development of a county-wide wireless system. Even smaller cities such as Coldwater and Gladstone have begun offering municipal connectivity with the assistance of a third-party coordinator. All of these models of technology integration align with Michigan Governor Jennifer Granholm's *Cool Cities* initiative which identifies technology access as an essential ingredient for attracting young professionals to Michigan's cities. As the state's largest municipality, Detroit should align its technology efforts to leverage these existing models.

Across the nation, locales are aggressively taking the initiative to develop cultures of technology, even when the private sector has failed to encourage adoption. In San Diego, government facilitated the creation of a nonprofit organization to oversee a wireless network; in Philadelphia, local government is spearheading a similar, more ambitious project. In Houston, for-profit technology centers are increasingly common in new commercial developments, the result of innovative development agreements crafted by that city. Planners who once traded development rights in exchange for parks or parking garages are now seeking connectivity and computers. These trends are widespread from San Francisco to San Juan - in fact, Puerto Rico, with its many infrastructure development challenges, has overcome communications difficulties by becoming a leader in wireless connectivity.

Requirements for Successful Integration of Technology throughout Detroit

After reviewing what challenges persist, what is being done to address these challenges, and what lessons can inform future efforts to propel Detroit into the technological forefront, several core components emerge as essential to any strategic plan for the future of technology use in the city. Within a framework of informed behaviors, infrastructure, content, maintenance, growth, and public policy must be individually considered for an integrated technology approach to be successful.

General Behaviors Required for Success

- **Target Neighborhoods Where Success is Possible** - One of the lessons of the *DetroitCONNECTED* model is that community groups with insufficient resources will not be able to overcome their own capacity issues and sustain the project.

Research by Wayne State University Professor Jo Anne Sobeck recently confirmed this notion, finding that organizations with a budget above \$20,000 annually are more likely to benefit from capacity building, including services such as those provided by the *DetroitCONNECTED* partnership.* For successful technology integration throughout all of Detroit's neighborhoods, programs should first target neighborhoods with strong community groups that have the capacity to grow with success.

- **Evaluate Contrasting Community Technology Centers** - Market research with regards to technology use can be difficult, since neither the person surveyed, nor the surveyor, are likely to know how technology will be used in the future. Programs which hope to know their market can only evaluate what has and has not worked elsewhere. The review of a successful CTC, contrasted with an underperforming one, would provide helpful insight into the kinds of services required by the community.
- **Remember that Broadband isn't Just the Web** - It is easy to think that handing out computers with free internet connections will magically alleviate Detroit's technology challenges, but this is absolutely not the case. High speed connectivity offers a realm of possibility, and like electricity one-hundred years ago, very few people know where the medium will lead. Today, broadband connectivity is primarily used for delivery of the internet, but already it provides some people with phone service and others with security camera networks. Programs that understand broadband connectivity as internet service alone will soon be left behind by those with the broader vision.
- **Users that Drive Growth and Content Find Value** - The innovative models that make Amazon.com or eBay so wildly popular are not very innovative at all – they are just democracy in the marketplace. When users drive growth and content, they will inevitably find services valuable over the long term. For the integration of technology in Detroit, this means examining what users like to use and what they benefit from, then giving them more of it. The *DetroitCONNECTED* project demonstrated a demand for technology access and connectivity in residential neighborhoods, but it did not create content for users. This does not suggest that content shouldn't be provided, but that novice users are generally happy with only a computer and internet connection. As users become technology experts, they may demand alternatives to simply surfing the web.
- **Scalability** - Technology changes constantly and any program that hopes to bridge the gap between today's limited application and tomorrow's high-tech world must keep that in mind. A scalable program which can adjust to a changing user base, changing geographic focus, and changing economic outlook is essential for the successful integration of technology in Detroit neighborhoods. It should know when to get bigger, when to get smaller, and when to stay the

* Sobeck, Joanne, PhD., "Capacity Building with Urban Nonprofits." Wayne State University. Presented at the Michigan Nonprofit Association Capacity Building Research Symposium on 7 December 2004.

same.

- **Obsolescence** - The ultimate outcome of any program designed to integrate technology use in Detroit neighborhoods is simple: to put itself out of business. Showing residents how to use tools like broadband service and cellular technology is important today, but in just a few short years of successful programming these skills will become ubiquitous and unnecessary. New skill requirements will emerge. But, if programmers have done their job correctly, technology usage will have become so ingrained in the fabric of Detroit society that the market will adequately prepare residents for the coming innovations.

In addition to these general behaviors, there are four core elements which must be planned for simultaneously in order for programming to be successful. These components, infrastructure, content, maintenance, and growth, are NOT mutually exclusive: they must be planned for together and integrated where necessary to bring sustainability and success to programming. Each component contains a complex array of programming goals which should not be overlooked.

Infrastructure

- Individual and communal access are available to all
- Modern technology is used so residents are not playing catch-up
- Technology use is institutionalized to ensure city-wide penetration

Content

- The adoption trigger is not predetermined, but chosen by the user
- Content includes dynamic, location-specific, and educational material as a supplement to existing web-based content
- Program focuses on aggregating content, not providing it
- Tools are provided for managing and filtering content
- Training assists those in need

Maintenance

- A viable sustainability plan exists to support pre-determined outcomes
- Expert's groups foster the development of homegrown experts
- An on-going dialogue between community leaders and users fosters tomorrow's technology programming

Growth

- Sustainable markets are targeted
- Geographic and popular goals are set for market expansion
- Community awareness of the benefits of technology increases
- Obtainable goals create success stories used to expand project support base

Additional Elements and Public Policy Issues

With an eye to infrastructure, content, maintenance, and growth, and following the general behaviors outlined for success, Detroit can successfully integrate technology into the lives of its neighborhood residents in a few short years. To speed this process, there are several public policy issues which should be kept in mind. Among them:

- **Better Coordination** - There exists a need for better coordination and communication among key stakeholders in Detroit and Michigan. If public, private, and nonprofit organizations make collaboration and communication a higher priority, the integration of technology into the lives of Detroit residents will occur faster and with greater efficiency.
- **Joint Purchasing Power** - The City of Detroit, Wayne State University, Detroit Public Schools, and others, harbor an enormous purchasing power that can be harnessed to great advantage in the city. By coordinating telecommunications purchases, Detroit's stakeholders have the ability to leverage technology infrastructure upgrades much faster than they can today.
- **Appeal to Loan Officers** – Self-sustaining programs can be loaned against and will attract the assistance of Michigan's Broadband Development Authority, an expert in broadband connectivity throughout the state. Not only does the MBDA provide financial resources for fledgling projects, it brings an enormous knowledge base to the table. In order to attract the MBDA, programs should be competitive in cost, coverage, and functionality.
- **Long Term Planning** - For Detroit to compete in the global marketplace, it cannot allow residents to miss out on the benefits of modern technology. Thus, in addition to short and mid-range activities which will bridge today's technology gap, the city and all her constituents should make long term planning an integral part of their strategy for success. Access, mobility, and connectivity are needed now, but the dynamic nature of technology dictates that these will not always be what are necessary.

Conclusions and Next Steps

These findings provide a roadmap for making technology accessible and commonplace among Detroit's entire population, including throughout its much overlooked residential neighborhoods. They suggest the importance of a collaborative approach, one which can pool resources and leverage existing community initiatives for maximum value. Comprised of decision makers from the public, private, and nonprofit sector, a community-wide effort at bridging the technology divide should build on the lessons of

the *DetroitCONNECTED* model and the recommendations of this guide, without fear of innovative approaches to technology integration.

With fund development assistance and neutral facilitation, the time is right for Detroit to develop a significant response to decades of technological stasis. As funding opportunities are being developed for a full scale initiative, a planning body gathered from a core group of collaborative participants should begin to develop step-by-step proposals for project implementation. This will expedite the response time when funding opportunities do arise, and will provide additional resources for solicitation of assistance from potential supporters. Today, after the first hand experience of the *DetroitCONNECTED* project, the cross-sector involvement of Detroit's *Think Tank on Technology Integration*, and the recommendations of this report, Detroit is prepared to move ahead with community-wide technology adoption. Progress is attainable with technology, and in the twenty-first century it must be planned for like any public infrastructure necessary for community vitality.

Endorsements

The following organizations contributed to this report and endorse its recommendations:

Community

Detroit Area Pre-College Engineering Program	Jason D. Lee
Nonprofit Enterprises at Work	Neelav Hajra and Jennifer Acree
NPower Michigan	Jan Gensheimer
Salvation Army	Nathaniel Warshay
United Way Community Services	Ursula Adams

Government

City of Detroit, Office of Information Technology Services	Dave Rayford
Michigan Broadband Development Authority	Bob Filka
Michigan Office of Technology Partnerships	George Boersma
Office of Detroit City Councilwoman Albert Tinsley-Talabi	Joyce Henderson
Office of Michigan State Senator Buzz Thomas	Dennis Deno

Academic

Alliance for Community Technology, University of Michigan	Vlad Wielbut
Center for Urban Innovation, University of Michigan	Vivian Sanders
Central Administration, University of Michigan	Richard Carter
College of Engineering, Wayne State University	Robert Kakos, Ph.D.
Detroit Public Schools	Roland Moore
Freedom to Learn, Michigan Virtual University	Bruce Montgomery, Ph.D.
School of Information, University of Michigan	Peter Keller-Transburg
School of Social Work, University of Michigan	Paula Allen-Meares, Ph.D.
School of Social Work, University of Michigan	Larry Gant, Ph.D.
Techtown	Howard Bell
Techtown/Center for Urban Innovation, University of Michigan	Marlo Jenkins

Business

Boldface Technologies	Dan Reynolds
Gateway Group	Garrett Myers
Internet Operations Center	Jay Harrison and Rhonda Hall
Services Marketing Specialists	Marti Richardson
The Collective	Paul Schutt

Additionally, these organizations have reviewed and endorse this report and its findings:

Michigan Association for Computer Users in Learning	Ric Wiltse
Council of Michigan Foundations	Gail Schaub
Wayne County Community College	Magalene Hester, Ed. D.

Facilitation/Conveners

Project facilitation services were provided by City Connect Detroit. Participants included:

Geneva J. Williams
Dierk Hall
Dan McDougall
David Cherry