

**OVERVIEW AND HIGHLIGHTS:
SMART COMMUNITIES
EVALUATION**

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OVERVIEW AND HIGHLIGHTS:

Smart Communities Evaluation



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INTRODUCTION

The Smart Communities program aims to increase Internet use and to establish a “culture of digital excellence” in nine low and moderate-income community areas of the city of Chicago. We measure digital excellence through Internet access and use for jobs, health, civic engagement, government services, education, and other critical needs. The vision of the Smart Communities is to harness the Internet to improve the opportunities of residents and the quality of life in the target communities (LISC Chicago 2009).¹

Toward this end, the Smart Communities features a variety of programs – Internet training for residents, technical assistance and training for businesses, and digital media programs for youth. It is run by community-based organizations and included Internet classes for neighborhood groups, as well as neighborhood portals, ad campaigns featuring the photos and stories of participants, and “Tech Organizers” to spread the word.

Between 2010 and 2012, the program was funded through a \$7 million federal Sustainable Broadband Adoption grant through the Broadband Technology Opportunities Program (BTOP). The goals of the federal BTOP initiative were to increase the adoption and use of broadband, or high-speed Internet, at home and elsewhere.

This overview ties together key findings from 3 studies that examined outcomes from the Smart Communities program. Using mixed methods and addressing results for the neighborhood, residents, and community organizations, each study has a different focus:

Neighborhood-level change in the Smart Communities, compared to other Chicago community areas. Given the emphasis on creating a culture of technology use in the communities, examining change at the neighborhood level is a fundamental part of this evaluation. Using multilevel (hierarchical) statistical models and neighborhood estimates drawn from citywide surveys in 2008, 2011 and 2013, the analysis shows the Smart Communities experienced a greater rate of growth in Internet use, home broadband adoption, and several activities online, compared to similarly-situated Chicago community areas. The differences are large and statistically significant. Chicago is the only U.S. city to have neighborhood-level data over time, and so this report offers a rigorous and nationally significant study of the effects of a BTOP initiative (see Mossberger, Tolbert and Anderson 2014).

An in-depth examination of outcomes, benefits and challenges for participants at the FamilyNet Centers. This is the largest program, open to all residents, and this study complements the neighborhood-level data by showing what participants are doing online, the benefits they perceive from Internet use, and continued needs for the future. Questions were also asked about sharing of

¹ The Smart Communities neighborhoods are also part of a comprehensive community-building effort called the New Communities Program, and the technology programs are led by the same community-based organizations that are involved in broader efforts for neighborhood revitalization.

computers and Internet connections with neighbors, to understand whether this might have contributed to neighborhood change. The FamilyNet Center model integrates technology training with other assistance and activities, and was initially implemented within six LISC Chicago-led Centers for Working Families. The free Internet skills training was offered in English and Spanish. Although the federal funding through the Broadband Technology Opportunities Program (BTOP) ended in January 2013, the centers have since been expanded to 12 sites through funding from Americorps, the City of Chicago, and Comcast, and so this report may offer guidance for future program delivery. Among the outcomes tracked in the follow-up survey of participants were Internet use, broadband at home, self-reported skills, activities online, and self-reported benefits attributed to Internet use (see Mossberger, Feeney and Li 2014).

Results for community organizations, for providing technology leadership in the community.

The Civic 2.0 training was a distinctive program that offered training in Internet use for community leaders to enable them to find resources for their communities and to access data and information online about neighborhood issues. The courses were taught by Tech Organizers who worked with community groups and did more general outreach. This report contains the results a follow-up survey with Civic 2.0 participants. A summary of interviews with the partner organizations that implemented the Smart Communities program compares perspectives from the beginning to insights at its close. There is visible change over this period for the key partner organizations, in terms of their attitudes and greater organizational capacity for technology use (see Mossberger, Benoit Bryan and Brown 2014). This may help to sustain and expand digital excellence in these neighborhoods in the future.

This overview briefly describes the Smart Communities and the evaluation, and summarizes highlights from the three reports. The full reports can be found online at the Center for Policy Informatics at Arizona State University at <http://cpi.asu.edu>.

Mossberger, K., Tolbert, C., and Anderson, C. (2014). Measuring Change in Internet Use and Broadband Adoption: Comparing BTOP Smart Communities and Other Chicago Neighborhoods [Updated 2014]

Mossberger, K., Feeney, M.K., and Li, M.H. (2014). Smart Communities Evaluation: FamilyNet Centers

Mossberger, K., Benoit Bryan, J., and Brown, A. (2014). Smart Communities Evaluation: Civic 2.0 Participant Surveys and Interviews with Partner Organizations

BACKGROUND: THE SMART COMMUNITIES

The Smart Communities program is embedded in a larger comprehensive community-building initiative in Chicago, called the New Communities Program, which involves a number of neighborhood organizations and is coordinated by the Local Initiatives Support Corporation (LISC) in Chicago. There were 5 community-based organizations that acted as lead agencies for the federal grant, and the program served 9 of Chicago’s community areas (see Table 1 below). All of the Smart Communities have a majority of residents who are African-American or Latino, and all but three of the community areas exceed the average poverty rate for the City of Chicago, as shown in Table 1. In 2008, before the inception of the Smart Communities program, home broadband adoption in the Smart Communities was below citywide averages in all but one of the target community areas.

Table 1. Smart Communities Demographics at Program Inception, 2005-2009

CCA	Demographic Characteristics (%)				
	Black	Latino	Asian	Poor	High School Grad
Humboldt Park	43	53	0	34	63
Pilsen	3	82	1	30	56
Englewood	99	0	0	43	73
West Englewood	97	2	0	40	69
Auburn Gresham	99	1	0	27	78
Chicago Lawn	56	37	1	27	68
West Lawn	4	73	0	17	66
Gage Park	6	86	0	19	51
West Elsdon	2	75	1	12	62
City Avg.	34	27	5	20	79

Source: U.S. Bureau of the Census, American Community Survey 5 Year Estimates, 2005-2009.

The Smart Communities had several component programs designed to reach multiple constituencies throughout the target neighborhoods, and to integrate technology use with other assistance and activities. They were intended to create a critical mass of technology applications within the neighborhoods, with outreach to encourage widespread technology use beyond those who participated in training (Mossberger 2012). The programs included:

- **FamilyNet Centers** for basic skills, EveryDay Digital training and drop-in assistance;
- **Civic 2.0** training for block clubs, school groups and other neighborhood organizations;
- **Technology Organizers** for outreach and Civic 2.0 training for community organizations;
- **Business Resource Networks** for assessments and assistance for neighborhood businesses with less than 500 employees;
- **YouMedia programs** for youth established in neighborhood libraries;
- **Digital Youth Network** after-school programs;
- **Digital Youth Summer Jobs** available to participants from the Smart Communities areas;
- **Community Portals** in each of the 5 lead agency neighborhoods;
- **Advertisements** on buses and bus shelters emphasizing the benefits of being online, and featuring photos and quotes from neighborhood residents

The training programs studied in more detail through participant surveys are the basic skills and EveryDay Digital training in the FamilyNet Centers, and the Civic 2.0 program. The EveryDay Digital classes were open to all community residents and served 2,018 individuals. The Civic 2.0 classes were developed to reach residents who were active in neighborhood groups, and 817 community leaders and volunteers took these courses.

Both types of classes were free, and taught in Spanish as well as English. Consistent with the goal of creating a culture of digital excellence, or widespread technology use throughout the communities, the evaluation of the Smart Communities program measures outcomes for neighborhoods, individual participants, and community organizations.

Neighborhood Change, 2008-2013

Community-level change in Internet access and use was an important goal of the Smart Communities program, and Chicago is unique in its ability to track change over time, with neighborhood data for 2008, 2011, and 2013. Can it be said that the Smart Communities as a whole have experienced an increase in either broadband use or Internet use? How does this change compare to other Chicago community areas?

These questions can be addressed by comparing neighborhood estimates of the percentage of the population using the Internet over time, and controlling for rival explanations, using regression

analysis. The Chicago neighborhood estimates are based on citywide, random sample telephone surveys (ranging from 2000-3400 respondents) conducted in 2008, 2011, and 2013.² To increase the probability of interviewing low-income respondents, the samples included cell phones and landlines, in proportion with the population use at the time. The surveys were conducted in Spanish and English. Because of small sample sizes in each of the community areas, simply disaggregating respondents in the survey by neighborhood could lead to biases. Instead, multilevel (or hierarchical) statistical modeling and post-stratification weights are used to estimate various aspects of Internet use by neighborhood.³ This method creates robust predictions, even when sample sizes within a specific community area may be small. This method also allows the researchers to convert the individual-level data into geographic estimates by neighborhoods. The results are point estimates or predictions of Internet access and use for various online activities for each of Chicago's 77 community areas.⁴ These estimates can be read like percentages, making it simple to interpret and compare results.

These estimates of Internet access and use across neighborhoods are next used to predict change over time. To account for change in demographic factors over this five-year period, we use multivariate regression models where the outcome or dependent variables are created by taking the difference in our point estimates from 2013 minus 2008. The outcome variables measure change in Internet use or online activities over the five-year period.⁵ The models control for other rival explanations that might effect the percentage of the neighborhood population using the Internet, including change in the percent of the population in poverty, earning a high school degree, demographic populations, and age of the population from the 2008 and 2013.

² The random sample telephone surveys were based on a unique geographic sampling frame, where respondents were drawn from each of Chicago's 77 community areas (in a stratified sample).

³ Respondents in the surveys were asked to identify their cross-streets and the locations were geocoded by census tract. The survey data was merged with aggregate level census tract information from the U.S. Census.³ The statistical models are based on data that combines individual and aggregate variables, and provides more accurate and representative estimates than could be obtained from the individual-level data alone.

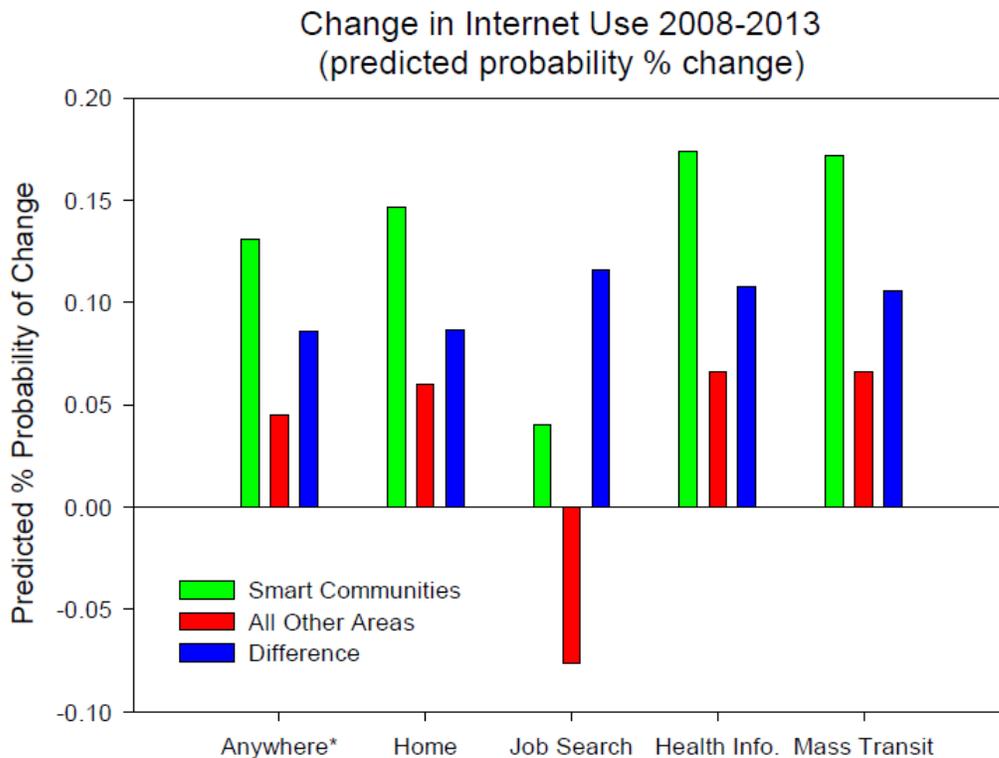
⁴ We use random intercept multilevel statistical modeling with post-stratification weights (and simulations) to generate population estimates of broadband access and online activities by neighborhood (see Lax and Phillips 2009 for a related methodology).

⁵ The primary explanatory variable is designation as a Smart Community, coded 1 or all other community areas coded 0. The models control for other factors that could increase access and online activities including change in racial and ethnic populations in neighborhoods (percent Latino, black and Asian), change in age, change in poverty rates and change in educational attainment during 2008-2013 time-period.

Our independent variables measure change in the percent of the population in poverty, earning a high school degree, demographic populations, and age of the population from the 2008 and 2013 5-year American Community Survey, provided by the U.S. Census Bureau. The data were downloaded from the Census website at the census tract level and then aggregated upwards to create the 77 community level aggregates, weighted by community area population size. As with the dependent variables, the independent variables used in this analysis are the differences between the 2008 and 2013 aggregate values.

Findings: Technology Use Improved More in the Smart Communities than in Other Chicago Neighborhoods

- A prior analysis tracking change from 2008-2011 showed a large and statistically significant increase in Internet use anywhere (including public use), comparing the Smart Communities to other Chicago community areas, and controlling for demographic differences and change (Tolbert, Mossberger and Anderson 2013). But, there were no significant differences in either broadband at home or activities online in 2011.
- Using the same methods to extend this analysis to cover 2008-2013, we find that **the increase in Internet use anywhere is still higher in the Smart Communities, but that now residents in the target neighborhoods also have higher increases than other similar Chicago community areas in broadband access at home and in use of the Internet for job search, health information, and mass transit. These differences were large and unlikely to have occurred by chance—i.e. they are statistically significant.**



Note: All probabilities reported represent statistically significant differences between the Smart Communities and other Chicago community areas. Estimates are based on multivariate statistical models with other neighborhood-level factors (e.g. demographic factors, etc.) held constant at mean values. Differences not statistically significant between Smart Communities and other community areas for use of the city website, government information, political information online, or training online.

- Over time, the higher increases in Internet use in the Smart Communities translated to higher increases in home adoption, and online access to information on jobs, health, and transportation.
- These differences are relatively large, and it is not likely that they have occurred by chance. As Table 2 shows, the Smart Communities had increases in Internet use anywhere and broadband access at home that were 9 percentage points higher than in other, similar Chicago community areas. The differences for activities online (job search, health, and mass transit) were even somewhat larger – between 10 and 12 percentage points.
- One explanation for the differences from 2011 may be that experience with the Internet increased motivation to adopt broadband at home and to do more online. This is consistent with research that shows that Internet users are more likely to engage in human capital-enhancing activities online as they gain more experience (DiMaggio et al. 2001).
- It is possible that new resources available for discounted broadband encouraged increases in home broadband access. The 2011 survey was conducted before Comcast launched the Internet Essentials program, which offers discounted broadband to households with children who qualify for free or reduced-price school lunch. While it is impossible to know whether this was a factor, the discounts may be one explanation, helping to increase broadband adoption after 2011. It is also possible that home adoption increased because residents gained more experience over time. This is an important outcome, because home broadband access is related to a greater probability of engaging in a broader range of activities online, including activities related to public policy goals. This is true even with the emergence of mobile access (Mossberger, Tolbert and Hamilton 2012).
- The statistical models did not reveal higher rates of change in Smart Communities for use of the Internet for: government Information; political information, online classes or training, the City of Chicago website.
- While neighborhood-level analysis cannot point with certainty to the Smart Communities program as the source of the changes over time, the differences are unlikely to have occurred by random chance and the analysis controls for or rules out many other explanations. It controls for demographic change – for the possibility that the change that we see is due to higher-income or younger residents moving in, for example. By controlling for the characteristics of neighborhoods, it eliminates the potential explanation that all of the lower-income neighborhoods are simply “catching up” over time, with or without the program intervention. Although this is an aggregate level analysis, it is based on individual level data, with repeated measures over time, controlling for other factors. As a result, we can be reasonably confident that the treatment, in this case, Smart Communities program, was associated with higher rates of change in Internet access and use.

FAMILYNET: PARTICIPANTS REPORT POSITIVE OUTCOMES

Consistent with the positive neighborhood-level outcomes, program participants at FamilyNet Centers reported increased Internet use as well, and improvements in their lives they attributed to this Internet use. There is also evidence of resource sharing with neighbors, possibly contributing to neighborhood-level change. Affordability is still a barrier for home broadband adoption for some, and others express a need for more skills.

The FamilyNet Centers emphasize the integration of technology with a variety of services within the Centers for Working Families, including financial counseling, income support, resume building and job search. The program provides residents drop-in Internet access, and 12 two-hour training modules in Computer Basics and EveryDay Digital courses. Some participants who completed required courses received netbooks, on a first-come first-served basis. The program did not offer discounted broadband. But, Comcast made available its Internet Essentials discounts toward the end of the grant period, and the Smart Communities promoted this for the residents who were eligible (households with children receiving free or reduced-price school lunch).

Telephone surveys were conducted in English and Spanish with FamilyNet participants after they had completed the training, generally at least 3 months afterward.⁶ All participants who filled out a form consenting to be contacted for a follow-up survey were called, and there was a 60% response rate for pre-consented participants. While this was not a random sample, responses were weighted by center to make the results more representative of the population of FamilyNet participants. For the training at the FamilyNet Centers, 378 participants responded to the survey and reported the following results, among others:

- 87% used the Internet in past 30 days, and 43% used the Internet at least on a daily basis.
- Where baseline data was available, we compared current Internet use (within the past 30 days) to information about whether these same respondents ever used the Internet at the time they registered for classes. For this group, there was **an increase of 28 percentage points for Internet use**. That is, 86% of this sample reported using the Internet within the past 30 days after classes, but only 58% of these respondents said that they ever used the Internet when they signed up for classes. The results for Internet use for this group are similar to those for respondents overall.

⁶ Because some consent forms were collected after respondents had participated in the program, it is difficult to know exactly how long ago this group had completed the training.

- Participants were asked whether Internet use after the classes had helped them to do a variety of things:
- 30% of these respondents said it helped them to get a job
- 40% said it helped them to follow what their children did in school
- 57% said it helped to manage their health
- 69% said it helped them to get government services.
- Modes of access mattered for these self-reported outcomes, as respondents who had both broadband at home as well as smartphones were more likely to report these positive impacts, across questions.
- Following the classes, about 2/3 of respondents had some form of Internet access
- 53% had broadband at home
- 9 percent had smart phones only
- 2% had dial-up home Internet access
- 34% had no personal Internet access
- FamilyNet participants do engage in many activities related to policy goals for economic development, education, health, and government service delivery online. Internet use for job search, health, and information from the City of Chicago website were all reported by over 50 percent of FamilyNet participants, and among the most common activities online.
- Barriers remain for some participants. For the 45% of respondents who do not use the Internet at home, most report that they cannot afford to have home access – 81%.
- Another group of barriers was related to skills or fears about dangers online – issues addressed by the classes. For those who do not have the Internet at home, 37% don't feel they know how to use it well enough, 40% cite worries about safety, and 20% say it is dangerous.
- The majority of all survey respondents – about 75% or more - say they can use a mouse or email, or find information on the Internet very well or at least somewhat well. Most participants report acquiring these basic skills, but there is more variation for more complex tasks such as word processing, use of spreadsheets, or ability to create a website.

- One-third of the Internet users said they had helped someone else to use the Internet in the past 30 days; about half of the individuals they helped lived in the neighborhood. This indicates some spillover or multiplier effects may be promoting neighborhood-level change, as trainees encourage others to go online.

CIVIC 2.0: COMMUNITY GROUPS LEARN ABOUT RESOURCES ONLINE

To promote the role of community-based organizations, the Smart Communities offered a distinctive Civic 2.0 training program on use of the Internet for block clubs, school groups, nonprofits, and other community-based organizations. In contrast with other BTOP training programs, Civic 2.0 addressed knowledge of Internet resources for neighborhood groups. Additionally, through collaboration between the partner organizations delivering the Smart Communities programs, the intent was to create a capacity for leadership around technology issues within the community.

The Civic 2.0 training was delivered by “Tech Organizers” who were also responsible for outreach overall for the Smart Communities programs. The Tech Organizers delivered a curriculum that consisted of three sessions: one on use of the city’s website and open data portal; another on resources for researching crime data, school data, and other information online addressing neighborhood issues; and a third session on social networks. Additionally, however, some of the Tech Organizers indicated in interviews that they used the training to work with participants on projects such as setting up Facebook pages, blogs, or websites.

Surveys were conducted by telephone in English and Spanish by the University of Illinois at Chicago’s Survey Research Lab (SRL) and took 10-15 minutes each. The response rate for the telephone survey was 58% (of those who had filled out consent forms) with 231 individuals completing the telephone survey. The results reported here are not weighted, as weighting by community made no difference. Data collection for the telephone survey occurred between January and March, 2013, after the federal BTOP grant for Civic 2.0 training had ended. Findings from the survey included:

- **Work with a neighborhood group:** Approximately 3 out of 4 participants – 76% -took the class as part of a neighborhood organization.
- **Worked on a project together:** 20% of respondents worked on a group project as part of their class.
- **Internet use:** While some participants were new Internet users, overall this group had more experience online than the FamilyNet participants taking the EveryDay Digital training.
 - More than 50% reported using the Internet at least once a day. And over 80% of respondents reported using the Internet from home.
 - This compares to 43% of FamilyNet respondents who said they used the Internet daily, and only 53% who had broadband at home.

- **Skills:** At least 80% of respondents reported that they can use email and find information online very well or somewhat well. Although the basic skills were not the focus of this training, these skills are needed for the tasks such as research and contacting officials.
- **Neighborhood portal usage:** After the class, 45% of respondents used a neighborhood portal in one of the Smart Communities. This compares to about one-quarter of the FamilyNet respondents who used the neighborhood portal afterward. This is consistent with the focus of the Civic 2.0 classes and also with participants who are active in neighborhood organizations.
- **Chicago portal usage:** Use of Chicago's open data portal was somewhat lower than the neighborhood portals, at 37% overall.
- **Activities online:** The most common activities related to the classes that were reported in the follow-up survey were
 - Researching an issue online (70%)
 - Using the City of Chicago website (63%)
 - Researching neighborhood schools information and crime information (both 51%).
creating a website afterward was least common (8%), but this was part of the training only in some communities.
- **Interaction on neighborhood issues:** The Internet might provide new venues for communicating with residents and others about community issues.
 - 50% of respondents reported interacting with more people online on neighborhood issues after the class.
 - 44% reported more frequent online interactions on neighborhood issues after the Civic 2.0 training.

These neighborhood interactions have the potential for contributing to the culture of technology use in the neighborhood, and for supporting civic engagement around neighborhood projects or concerns.

PARTNER ORGANIZATIONS VIEW TECHNOLOGY IN NEW WAYS

Because one of the goals of the effort was to create the capacity for leadership on information technology use in the community, we compared responses to interviews in 2010 and 2012-13. Most partner organizations were originally engaged in community development or social services and not technology programs. The 2010 results showed that while these community-based organizations were motivated to help their communities compete on a level playing field, that the organizations often did not use technology extensively themselves and sometimes expressed a lack of comfort with IT.

“Frustration” was a word used numerous times during one lead agency interview, to describe struggles with technology use in the organization, as well as the director’s personal feelings about the fast pace of technology change and the difficulties keeping up with it. For others, the issue was how to manage the problems that technology introduced within their own organizations, like viruses and time wasting. At least one of the lead agencies used to block social networking sites and other websites. The Smart Communities initiative caused them to think about how they used technology internally, and how they might better take advantage of the opportunities online. Another group initially expressed some doubt about the value of technology for the organization beyond some improvements for internal record keeping and efficiency. This respondent stressed the need for face-to-face organizing, and that technology could not replace the personal interactions needed.

Following the Smart Communities initiative, the tone of the interviews changed, with organizations describing technology use with a greater sense of confidence and potential. They talked about internal use of e-newsletters, iPads, YouTube, Facebook, Twitter, smart boards, Skype, webinars, and mobile phones. Overall, there was a greater comfort level with technology, which respondents attributed to the exposure their organizations got from the program.

The interviews also revealed changes occurring within organizations in all of the community areas. One lead agency described an ambition to become a technology hub for other organizations in the community.

Consistently, groups described new tools that affected both their organizations and community interactions. “We still use flyers quite a bit in the community, said one organization, “but we’ve definitely moved more toward using technology to do this due to the funding and the portal’s availability. One of the highlights of the BTOP program is that the portal has become an anchor for the community.” Another lead agency observed a more general change in attitudes:

“We needed organizational mindset change, we were steeped in the methods that had worked for us for decades. A lot of nonprofits thought of tech as threatening and for the big guys or corporate

sector. If we had integrity we thought we'd do personal touch points and door to door and while those still have value, we've rethought the benefits of technology to the organization."

The follow-up interviews demonstrated that partner organizations now use technology in a variety of ways and have a more expansive vision for what it can mean to the community:

- There has been an increase in technology planning, staffing, training, and budgeting in these organizations, beyond the Smart Communities efforts. Community organizations now use technology more themselves.
- There is a desire to continue the Civic 2.0 and EveryDay Digital training, address the problem of affordability, and integrate technology into a variety of programs, especially for schools, parents, and youth. Resources, however, are a challenge now that the federal funding has ended.

Often mentioned in the interviews as a continued source of information after the end of the grant were the neighborhood portals that have been created for each of the five communities. The portals contain a directory of neighborhood businesses and nonprofit organizations. Listings on the portal are one measure of outreach and connections with other organizations for the Smart Communities program, and another indicator of relative progress toward building a networked community.

- Comparing the five portals, Auburn Gresham and Pilsen had the most neighborhood businesses and organizations listed, with over 300 entries (nearly 200 of them businesses). Humboldt Park had over 200 organizations listed, most of which were nonprofit organizations. All five neighborhoods had around 150 or more organizations listed.

SUMMING UP: ACCOMPLISHMENTS AND CONTINUED NEEDS

The Master Plan for the Smart Communities envisioned neighborhoods where individuals are able to participate in decision making and civic life; where economic development thrives; and where residents enjoy quality access to education, health, and government services. For this reason change is measured at the neighborhood level, as well as Internet use by participants in training for residents and community organizations.

The neighborhood-level analysis is unique for a digital inclusion initiative, and shows that the Smart Communities experienced a higher rate of increase in broadband adoption and several types of Internet use, compared other neighborhoods in Chicago between 2008-2013, and controlling for demographic change. This included a 9 percentage point higher rate of increase in broadband adoption at home and Internet use anywhere, and an 11-12 percentage point difference for use of online job search, health information, and transit information. Between 2008 and 2011, only Internet use in any location was significantly higher in the Smart Communities. But, by 2013 there were statistically significant differences in broadband adoption and activities online.

Although this is an aggregate-level analysis, it is based on individual-level data, with repeated measures over time, controlling for other factors. As a result, we can be reasonably confident that the treatment, in this case, Smart Communities program, was associated with higher rates of change in Internet access and use. These differences suggest new resources and potential for future outcomes for individual opportunity and community development.

Results for program participants suggest positive outcomes as well. For FamilyNet respondents who received training in the EveryDay Digital curriculum, 87% have used the Internet within the past 30 days, and there was a 28 percentage-point increase in Internet use among those we were able to track before and after the program. Many respondents are going online for a variety of activities that can contribute to individual opportunity and neighborhood benefits.

The Civic 2.0 classes predominantly involved participants who are involved in neighborhood groups, as intended. Access to information was the most important result for participants. Seven in ten had researched policy issues since taking the courses, and over 50% had accessed other information online. Nearly half of the respondents – 45% - said they used the neighborhood portals after the classes. Fewer respondents engaged in contacting, posting or commenting, and a small minority (under 10%) created websites, blogs or Facebook pages after the class. The information emphasis in the reported outcomes is consistent with the modules, which helped respondents to find information relevant to their neighborhoods online. Nearly half of the participants said they had more online interaction around neighborhood issues following the classes.

What activities beyond training might account for the change that is visible at the community level? Although nearly 3,000 people have received training, there were other elements of the program intended to stimulate broader change. Outreach by Tech Organizers and advertising on buses and bus shelters spread the word. Informal learning and resource sharing has the potential to multiply the benefits of training programs, and some respondents reported that they helped others in their neighborhood to go online. The Civic 2.0 program engaged community groups who can lead others in the community. And Smart Communities partners demonstrated an increased awareness and use of technology within their organizations and in their activities in the community. These developments may help to sustain and expand Internet use in these communities.

Still, there are residents who remain offline. Even for those who participated in training programs, 1 out of 3 do not have broadband at home or even mobiles access. By far the biggest barrier mentioned is affordability. Still others feel a lack of confidence in their skills, even after training. One of the challenges will be to provide further solutions for affordable access and continued training and support. And, while the neighborhood-level analysis and participant surveys provide some evidence of positive effects, what remains for the future is to examine how this increased Internet use affects quality of life outcomes for residents – especially for health, jobs, and mobility for work.

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