

City of Seattle Report on Information Technology Access & Adoption

Disabilities Community - Focus Group Results

A focus group with twelve individuals with disabilities was conducted May 28, 2013 in collaboration with the City of Seattle Commission for People with Disabilities. This was part of the *Information Technology Access and Adoption in Seattle: Progress towards digital opportunity and equity* study conducted by the City of Seattle. The group was assembled to represent the range of challenges one might face in using technologies, and the disabilities represented included mobility (6), vision (2), hearing (2), and developmental (3). One individual reported two disabilities. Other attendees included an ASL interpreter, a notetaker, and a liaison from the Disabilities Commission. Eight of the participants were men and four were women. Seven participants responded to a brief written survey and all contributed substantially to the focus group discussion. Of the seven who took the survey, one had completed a four-year degree, three had completed some postsecondary education and three had graduated from high school. Most of these participants were between 36 and 50 years of age, with incomes of less than \$20,000 per year. None of these participants had children younger than 18 at home, but four lived with at least one other adult. In the focus group, several mentioned fulfilling teaching, training, or advocacy roles, though only one survey respondent reported being employed.

The session began with a variety of dishes (which everyone seemed to appreciate!) and some time for conviviality and getting to know one another. All attendees participated in the discussion and allowed time for each person to be heard. Their comments often fed off of one another, and they seemed to learn from one another's experiences.

The discussion focused on four topic areas related to technology use:

1. How and where do you (or your family) use the Internet? Who does the Internet benefit? Who does it leave out?

2. Do you use Facebook or other social media and would you use social media to communicate with government?

3. What new services using very high speed Internet would interest you, and what concerns do you have?

4. What are the best ways for you to connect with government? What should the government keep in mind if they want to be sure to reach people with different disabilities, and how can these communities most effectively ask questions and express their opinions?



Summary

Overall, it was apparent that technology is an *especially important* resource for this group. Participants discussed the ever-expanding role of technology in helping people with disabilities overcome challenges they face regularly. New technologies help them access information and services, and allow them to claim autonomy (e.g., enabling them to find directions and navigate independently using a smart phone) and to participate in ways that are effective (e.g., communicating in ASL). All survey respondents use computers and the Internet at home, and most use computers and the Internet elsewhere as well, including public venues such as the library, a cafe or restaurant, or a community technology center.

People with disabilities often face significant challenges related to transportation and communication. Additionally, many live on a fixed income and struggle with the costs of technology and services that could help them overcome barriers to access.

Those who completed a survey reported a high level of technology use *despite considerable discussion* about the costs of that use. Additional barriers to technology use were discussed, including awareness and education about available devices and services, as well as concern and about being “tricked” into contracts for services they don't need, at a price they can't afford. Some were also concerned about privacy and threats to their security, especially as Internet speeds become faster.

Participants mentioned the benefits of Facebook for deaf people who are able to communicate easily, find other deaf people, and plan events and gatherings. However, the same program is very demanding of people who use a screen reader because of frequent changes in screen layout and content. Participants who find it difficult to travel greatly appreciate Skype *group chat* for meetings and public engagement, but this technology does not work well for deaf people unless an ASL interpreter is present. Additionally, participants commented that some people with disabilities (often including older people) don't have an interest in or an aptitude for technology so to reach them, more established but still functional methods must be used, such as TTY, or video relay. Overall, participants urged the City to continue its efforts at inclusion by engaging the principles of universal design and incorporating a variety of formats for giving and receiving information, including hard copy, electronic (email is the most universal), and telephone.

Participants expressed considerable interest in high speed Internet, and identified multiple concerns, including cost, accessibility across the city especially considering Seattle's topography, the availability of technical support for using the service, and increased concerns about privacy and security.

Technology Access and Use

Overall, it was apparent that technology is an *especially important* resource for this group. Participants discussed the ever-expanding role of technology in helping people with disabilities overcome challenges they face regularly. New technologies help them access information and services, and allow them to claim autonomy (e.g., enabling them to find directions and navigate independently using a smart phone) and to participate in ways that they appreciate (e.g., communicating in ASL). Most survey respondents (71%) rated their skill level in using computers or the Internet above the midpoint at "Skilled" or "Expert," and the rest selected the scale's midpoint.

Focus group participants described how they were able to use technology to perform tasks that were previously very difficult. Several discussed how communications technologies ease the difficult transportation process; some described their use of technology to lower communication and participation barriers, and others detailed the ways in which technology allows them to participate in work or volunteer activities.

The people in this group are substantial- and relatively well-informed technology users, which is consistent with the advantages they experience with communications technologies. Those who completed our survey reported a high level of technology use *despite considerable discussion* about the costs of that use. Nearly all survey respondents (86%) have a cell phone - mostly (71%) smart phones.¹ (Not quite half reported having a landline, a level that was similar to our other focus groups.) All of those with a smart phone use texting. Most (71%) have a computer at home (a laptop for almost half and a tablet

Importance of technology

- information is power. If you have it available for you, if it is portable, it can be incredibly powerful as a tool.
- An iPhone, next to a PC is one of most valuable things I have. *It's access to the world.*
- If you have technology with you wherever you are, that empowers you to participate.
- Even in the best of times when funding a center with assistive technology, people's needs are so individual - not all deaf/blind people need the same screen reader or the same equipment - sometimes they need combinations that no one has used before. You have to be creative. If there is enough money, they can do it individually. But it's not easy for any facility to accommodate everyone unless they have a very large budget.
- I hope that in considering all these technologies, the concept of universal design comes to mind. In the world of accessibility we all have a lot of needs and with universal design many sizes will fit many people.
- There are some generalities that are going to exist within a particular community, like blind or low vision. But be careful not to make a blanket assumption that all people who are blind/ sight impaired would like "X." Some might like video, some might want to be in person.

¹ The participants often said *iPhone*, *iPad* and *Facebook* even when they were referring more generally to smart phones, pads, and social media. Sometimes it took a while to sort out whether their comments about strengths and weaknesses referred to particular devices or to categories of technologies.

for almost half) and all have Internet access at home, through cable (57%), DSL (29%) or wi-fi (14%). Most also have a data plan for their cell phones. Most (86%) use the Internet and all the Internet users also use email attachments.

Asked about the ways in which they use these technologies, respondents selected an average of six different categories of use for computers and the Internet, including searching the Internet in general (86%), specifically for community information (71%); shopping, getting information about a local business, and watching TV (each 57%); contributing to a blog or wiki, attending a class or webinar, finding health information, and looking for answers to computer problems (each 43%). About one-third each checked selling goods and services, working from home, and visiting the library from home. One focus group participant said that computers enable him to telecommute and another mentioned the use of handprint technology to track his time at Volunteers of America.

The group discussed two complementary approaches to providing access: *universal design*, intended to provide the least restrictive facilities, services, and information resources for people with the widest possible range of abilities and circumstances; and *individualized accommodations*, tailored to individuals whose abilities and circumstances fall outside the range of universal design. Participants explained the complexity - and cost - of using assistive technology to improve access, noting that individual needs can be unique and complex, and may require creative combinations of technologies.

Transportation

Technology has reduced barriers to access due to transportation in two ways: 1) various strategies - especially mobile Internet access - make it easier to use public transportation; and 2) thanks to technology, some previously unavoidable trips are no longer necessary. Several people reported relying on the very accessible King County Metro website and on various

Like about using computers and the Internet

Transportation

- Transportation issues can be really prohibitive for people and if people don't have technology at home, not being able to get to where the technology is can be restrictive.
- Having Internet access is *huge* empowerment. The first thing lots of blind people think about is shopping for groceries, through Safeway or Amazon Fresh. Delivery is great; transportation is really difficult.
- I use an app from KC DOT, their new One Bus Away app. With that, my iPhone has eliminated the need to carry around 20 lbs of bus schedules. I can navigate the county bus and light rail by iPhone. *It has made life about 90% easier.*
- The KC metro site in general is really accessible... Trip planner - I found it accessible to the technology I use. Hop Stop - it's accessible via iPhone and voice over. When a person has these things, when it's easy to use them, a person is empowered because they know how to use them - all these things working together

mobile apps (e.g., One Bus Away, HopStop, Next Bus, and Trip planner) to navigate the bus and light rail systems. Some people remarked that these resources are not always accurate and that vehicles sometimes deviate from posted times, but others noted that this is probably inevitable with public transportation. Even the day of the session, technology can in handy for participants: two people said that their Access busses dropped them off at the wrong location for the focus group, and that apps on their iPhones helped them find their way. Attendees clearly learned from one another, with one person pointing out that whether or not they could benefit from any given technology (for example, these smart phone apps) depended on their being aware of and able to use it.

Participants also mentioned ways that online shopping, and the opportunity to telecommute, have substantially reduced the number of trips they have to make.

Communication

One person with hearing difficulties mentioned that Facebook hosts a large community of (mostly young) deaf people because it has proven to be such an effective way to find one another and to spread the word about things going on in the community without having to go through a relay communication system. This person mentioned the same age-related issue we've heard in other focus group sessions: she said that Facebook is most effective for younger people and that older deaf people tend to avoid it.

Skype was also mentioned as an alternative to video relay. On the positive side participants noted that it is the sound is clear and the service easy to use, but on the negative side, they commented that group chat is expensive through Skype. One person described using Skype for advocacy and described the benefits of participating in video interviews and public meetings over Skype.

The ensuing discussion about how ensure that deaf people could also participate underscored the need for thoughtful consideration about providing access to people with a wide range of abilities, and attention to how rapid changes in technologies provide new opportunities and

Communication

- It matters to have a Smartphone with you and to have Voiceover available
- Facebook talks about events, what's going on in the community. Younger group signs up for KOMO 4 news to get information about schools, road closures. They use Twitter - it is a lot of young deaf people. Older deaf people avoid Facebook. But kids do depend on Facebook for gatherings or events. That convinces a lot of deaf people to sign up for it.
- When you allow people with a disability - who are sight or hearing impaired - to [participate in a Skype video interview or public meeting], it allows them to express themselves better, and adds that feeling of one-on-one. ...we are able to be involved in open, public meeting. I am a proponent of allowing video and audio feed.

challenges for people with disabilities. One person commented that Skype participation would not work for deaf people without an ASL interpreter. This group also discussed the possibilities of engaging an ASL interpreter (first choice) or using CART (Communication Access Realtime Translation) or "real-time captioning" to include deaf people. A disadvantage of CART is that ASL is the native language for some deaf people who may not read English well enough to benefit from English captions (and, more generally, the complexity of responding to new immigrants who were also disabled was mentioned in passing but probably not in the detail that this subject deserves.)

Using public access computers

All survey respondents indicated that they use computers and the Internet at home and 71% mentioned other locations as, such as the library or a cafe or restaurant (43% each), or a community technology center (29%). Participants discussed some of the challenges in using publicly available computers, including difficulties in traveling to them, the lack of privacy, and the sometimes very specific needs of individual patrons. One person mentioned individuals must know the software they would need to download to be able to access each specific public access computer. Another detailed his use of Dragon Naturally Speaking, a speech recognition program, and that he teaches its use at his technology center. Clients would like to implement this software at home, preferring to dictate in private, but they often find that even when they can afford the software, it is very RAM-intensive and the hardware upgrade is too expensive.

Satisfaction with Internet service

Most people were satisfied with the speed and reliability of their home Internet service, but few were satisfied with the cost and only about half found the customer service satisfactory.



Participants commented that the quality of Internet service is inconsistent across the city, largely related to the service provider. When asked what one thing would most improve their cable service, 60% said "price" and 43%,

"Speed."

Even as they expressed dissatisfaction with the cost of service only one person was unwilling to pay more for faster service. One-third said they would pay between \$10 and \$20 per month and half selected between \$20 and \$30 per month.

Barriers to technology

Even as they extolled the advantages afforded by information technologies, it was also observed that technology is not a panacea. One person, for example, pointed out that blind people vary in their level of interest and aptitude with technology. Speculating about why others in their community don't use computers or the Internet, the most frequent answer was because the computer is too expensive (60%). Nearly as many thought it might be because of the cost of the Internet service, or just not wanting it or not knowing about it.

Cost came up multiple times during the discussion. One person said he pays more for his cable service than he does for rent, and another observed that many people with disabilities are on a fixed or limited income. Because these expensive technologies can mean the difference between being able to participate fully and not participating, focus group participants have decided to make the financial sacrifice to invest in the technology, and speculated that others who may benefit from the technology just as much as they, nevertheless decide not to invest because of the expense.

Concerns also arose about the cost of broadband service, various accessibility tools, and the hardware to run them.

Trust and confidence also emerged as a barrier to accessing technology. Consumers need a relatively high level of technical understanding (how reliable is this service, how fast is it, how fast do I need?) to be able to make a well-informed purchasing decision. With smart phones, in addition to not wanting to pay for services that would not be needed, participants explained that some people are afraid of being tricked into contracts for services they don't need, at a price they can't afford. In a related issue, some participants voiced concern about the safety and security of material posted to the Internet, with one person adding that as Internet speeds

Barrier Comments

- It's hard to figure out what the [smart phone] contract is. Will it go up in 6 months? I would love to switch to a smart phone if I could. But cost is a factor.
- For deaf people, video relay service is free but we need cable or a data plan for video capacity. This gets more expensive every year. We need 4G for steady transmission; it would be nice to have the same price for at least a year.
- Skype: right now, the one complaint deaf people have is the cost. For group chat, it's expensive. For some, it's better than relay because it's clear. But video relay is clear. If it were free - it would be better.
- Video is in my language [ASL]. Many deaf people prefer ASL, knowledge of English is limited but I pay \$65 / month for unlimited data even if I do not use voice. If you pick a lower price, it's limiting. So if I'm at home or in the office, I use video relay.
- People need access to the tools, opportunities to try things out in order to see whether they have the aptitude.

increase, so do threats to security. Some mentioned being "guarded" with their online information and reluctant to consider allowing their medical information to be posted online. Another said "I probably put too much (private information) out there. I use it all the time."

Several people mentioned related factors, such as **awareness and education** as important in access to technology. Some people may not be aware of the available tools and how they can be used. Even focus group participants exhibited different levels of information regarding cell phone contracts. Participants explained that people find out about resources through various organizations, but that availability must be met with the individual's readiness to take in and act on the information. Some people may not be interested and others may not know how to get an Internet carrier.

Some mentioned **age** and "standard generational issues," observing that "a lot of seniors don't want anything to do with [unfamiliar] technology, and that's it." Another observed that older deaf people avoid using Facebook, a technology that is quite important to younger members of the deaf community. However, one person mentioned what may be a promising program of senior-to-senior computer mentoring out of the Mayor's office.

Participants considered **other locations** where those without home access may utilize technology, such as at work. However they recognized that people may have limited time to use the Internet for their own purposes at work. One person mentioned that the Lighthouse of the Blind provides computer access for employees, but because of work demands and transportation restrictions, employees find it difficult to take advantage of the opportunity. The library operates LEAP (Library Equal Access Program), increasing access for people with disabilities. However travel to the library or other locations can be very challenging, and once there, time is also limited.

Barrier Comments (continued)

- A lot of people with disabilities are on a fixed income. They can't afford astronomical prices of having a cell phone and hooking it up through 4G at \$65 per month. I already pay more for cable than for rent. Sometimes it would be a choice: pay for Internet or pay for food?
- It really separates the haves from the have nots. It is important to look at why some people don't have these things and how to make them more equitable.
- There are a lot of ways to learn about resources, and still, a lot of people don't. No one knows everything.
- [My mother] is apprehensive about using the Internet. She is afraid that Big Brother - the government - is watching.... also "Small Brother," all the advertising and commercial interests.

A few participants observed that technology is **ever-changing**, requiring re-learning with each change. One person described the challenges a blind person faces in coping with the frequent changes in Facebook.

High Speed Internet

Participants were positive about the possibility of high speed Internet, with some immediately saying they would sign up and others discussing the benefits, such as being able to attend public meetings without travel (and some drawbacks) of high speed Internet.

Some of the concerns were:

- The cost of the service.
- The type of infrastructure that would come to the neighborhood.
- Unevenness of access across the city, considering the unevenness of current Internet service and Seattle's hilly topography.
- The availability of technical support for the service.
- Concerns about privacy and security increase with increasing speed.
- Becoming increasingly dependent on such technology such that "when things like that go down, everything goes down."

High Speed Internet

- Having that high speed capability with regard to public participation...if weather is bad, if you didn't get your access ride... This could really save a lot of energy for people. You could do it via video conferencing. There are so many reasons why it could be incredibly efficient for many of us.

Cable TV and Video Content

All who subscribed to cable TV were satisfied with the reliability, and most were satisfied with the customer service, but only 60% were satisfied with the cost and half said "price" as the one thing that would most improve their cable service, followed by reliability (40%).

Although most survey respondents still rank cable as their top choice for watching TV content, even more ranked Internet TV (via programs like Netflix or Hulu) as their first or second choice.

Seattle.gov and the Seattle Channel

Most of the survey respondents have Seattle.gov and all have seen the Seattle Channel. Nearly all have watched it on cable, and almost half have seen it over the Internet. Focus group participants appreciate that Seattle.gov is accessible for people with disabilities. They also noted that the cost of cable to be able to watch the Seattle Channel is a barrier for some.

Social Media

Most (83%) of the focus group participants (and most of the survey respondents) are Facebook users. Most of the survey respondents check email at least daily and all check it at least a few

times per week. About half of the survey respondents say they check Facebook at least daily and about one-third check it a few times a week. Most of the survey respondents don't use Twitter and those who do check it no more often than a few times a week.

Participants described many benefits of social media, including its effectiveness at quickly disseminating information widely, which can be extremely useful for emergencies. Others appreciated its ability to keep them in touch with home and family, as well as introducing them to a broader community, such as helping deaf people (especially young deaf people) find each other, plan events, and communicate. Participants recognized the generational aspect of media like Facebook, commenting that deaf seniors prefer TTY and letter writing.

Participants also mentioned negative aspects of social media, including excessive advertising, discomfort with widely sharing personal information, and for those users who rely on a screen reader, the frequent changes of screens introduces a regularly renewed challenge.

Participants explored the possibility of using social media to communicate with government. Many were positive about the idea, but those who are visually impaired prefer listservs or email because Facebook is so challenging technologically for people who use a screen reader. Overall participants valued the notion of a "push" technology for certain types of information, noting that with email or listservs, they'd have to actually check it to get the information.

Positive aspects of social media

- Social media has been an exceptional tool in many areas: law enforcement, missing children. It's great for getting information out there big.
- I use Facebook all the time. I rely on it. I'm of the generation where it's second nature to me. I don't have access problems.
- I use it - Facebook and email is how I communicate. I probably put too much there - but I use it all the time.

Negative aspects of social media

- One drawback is when you have advertisers - we're bombarded with advertisers. Especially Facebook and Twitter.
- I'm a guarded Facebook user. I put no personally identifying stuff on the Facebook page. I don't want it out there for others to see.
- I'm behind the times. I love technology and I learned Facebook because it's interesting and challenging. I'm a screen reader user and the technology changes so often. I don't get it till a year later and then they change it anyway... Probably there are blind teens who are on it all the time. They invest the time and energy. With Facebook, I have to think hard and learn something new whenever there's a new graphic - new interface.

Communicating with Government

In both the survey responses and in their focus group comments, participants expressed enthusiasm for giving their perspective to and receiving important information from the government. The survey offered a series of checkboxes with different ways respondents might give opinions to the City and another series with ways respondents might *get* information *from* the City. About half selected "email or online survey" and about half selected "Community meetings" as ways to get information to the city, and nearly as many selected "Call in to a meeting," "Discussion over the Internet," "In person focus group," and "Facebook." Nearly all selected "Email" as the way to get information from the City, and almost as many checked "TV news." About half of the respondents checked the "City's website," "A notice in the mail," and "Facebook." In addition to these options, one focus group participant said she heard about the focus group from her housing supervisor and another encouraged the City to reach out to the nonprofit community for dissemination.

When it comes to just contacting government, survey respondents most prefer to use email, followed by in person and telephone.

In the discussion about how best to encourage civic engagement among people with disabilities, the overall summary is that, because of the strengths and weaknesses of each strategy, it is important to offer a *variety* of options if the City is to accommodate different abilities and circumstances. For example, in response to positive comments about the virtual public participation enabled by the video and audio feed possible with high speed Internet, other participants noted barriers that would exclude some from using that technology, such as the need for an interpreter for deaf participants, the inconsistency of service across the city (even with current broadband), and that the cost of Internet access may be prohibitive, especially to those on a fixed income. Because people with disabilities vary so much in their interest in and aptitude for technology, some might really appreciate video access while others might strongly prefer to be present in person.

Communicating with the government

- It would be nice if the City of Seattle would have Facebook with an RSS feed to be sent to email.
- If I wanted communication from the City of Seattle, I'd prefer a listserv or email. Because the technology of Facebook has been so challenging for me.
- Email is really handy but you have to check it to get it. There are times when a Twitter feed would be good, for things we want to know about like transportation information, road closures, snow days - weird things like that. There are good reasons for city to have social media presence, though I'm not crazy about hanging out on Facebook.
- Get the word out by email, texting, phone, and word of mouth.

Thus, the group's consensus was that to ensure access to participation by individuals with disabilities, it is important to offer many format types, including hard copy, electronic, and phone, always ensuring ease of use, affordability and availability. In addition, developing technologies such as Skype group chat to be more effective in allowing wider participation by people who are unable to travel to an in person meeting, was important to these participants. This focus group was itself mentioned as a model for inclusive participation.

Engagement

- When you're looking at what the City can do to make sure people with disabilities are involved across the board, have focus groups like this one. Collect benchmarks at 6 months, 12 months. Focus groups like this will help you shape the ground floor of your product.

Learning

These participants are assertive about the value of technology for overcoming barriers to access for various groups, and the challenges which arise with rapidly evolving technologies, so it is hardly surprising that they brought up the importance of training opportunities. The City was encouraged to learn from what other states, such as CA, TX and NY, have done. One added that that one resource for the City would be the compilations of resources that some states have made available in their different focuses and approaches to different disabilities.



Information about the City of Seattle Commission for People with Disabilities is available at Seattle.gov/disability

See the full report with other focus groups and survey results at Seattle.gov/tech/indicators
City of Seattle Department of Information Technology
Community Technology Program