Accessibility in the City: Redefining Access in the Digital World

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EXECUTIVE SUMMARY:

In conjunction with the City of Austin's Office of Design and Delivery, our team was tasked with redefining the scope of accessibility in a digital world--specifically, what does it mean for government services to be "accessible" in the 21st century?

As digital inclusion and access to the internet become increasingly essential in our day-to-day operations, the City of Austin must take active measures to bridge the broadband gap and improve the lives of its residents by ensuring equitable access to services provided digitally.

The City of Austin faces a number of challenges associated with income inequality, changing population demographics, and rapid urban growth, all of which compound the impact of digital inequity, alienating certain segments of the population from accessing government services. This report outlines the scope of "accessibility" and explores a variety of methods that can reduce the negative effects of digital exclusion along with providing specific recommendations for the City of Austin to become a more inclusive community. By enumerating and visualizing the problems facing digital accessibility, findings from this report aim to increase the visibility of the issue and improve the overall efforts in increasing digital literacy and connectivity.

INTRODUCTION & BACKGROUND

Accessibility, refers to enabling and empowering persons with disabilities to equitably access the physical environment in which they live. Accessibility also includes transportation, information, and communication which would allow individuals with disabilities to live independently and participate fully alongside other individuals in society[i].The current discourse around accessibility is rooted in compliance with the Americans with Disabilities Act of 1990. However, in today's digital era, where a majority of our daily interactions and transactions occur over the Internet, the concept of accessibility needs to be revised and broadened in scope, not only as it pertains to people with disabilities, but also, how it can affect internet users around the world. This report explores and redefines "accessibility" in governmental entities in the 21st century, and it provides specific recommendations which the City of Austin (COA) can adopt to promote inclusivity.

For this project, our primary contact was with Ben Guhin, Head of Design & Technology Policy for the City of Austin. The city is currently in the midst of moving towards an "open government", creating an online presence that would enable residents to easily access government services with greater transparency and accountability across the diverse public departments. Consequently, the city redesigned its official website in 2011 to provide an online portal including all city departments, services and government functions. Subsequently, it has actively taken initiatives to bridge the gap between those who do and do not have access to the Internet or internet capable devices. In fact, the City's efforts to narrow the broadband gap led it to win a Digital Inclusion Leadership Award from the National League of Cities.[ii] While Austin's move towards digitization is an important step towards achieving digital inclusion, digitizing government services and departments does not necessarily imply inclusiveness. Digitalization has the potential of alienating certain segments of the population from participating in a digital society if not addressed strategically. First, offering services online affects populations who do not have access to the Internet or internet capable devices. Second, it impacts persons who are unable to use such devices as a result of digital illiteracy and/or physical impairment that hinders use. Last, it can exclude certain groups from utilizing crucial government services due to social, economic and psychological hurdles. Therefore, we must redefine accessibility holistically to account for a variety of factors that may impact digital equity. Our team's aim was to work with city officials to identify current roadblocks in digital inclusion and accessibility and to offer a framework to address and overcome those barriers.

METHODOLOGY

We collaborated with members from the COA's Office of Design and Delivery over four weeks. The City employees' experience in identifying roadblocks to digital equity and how different factors compound inequitable access to digital and non-digital government services was invaluable to our research. Additionally, we used findings from the Community of Technology and Telecommunications Commission's Digital Assessment survey along with examples of real people to show how those issues may play out in an individual's life over a span of time. Furthermore, we have used case studies that have addressed this issue to inform our policy recommendations for the City of Austin.

FRAMEWORK

The new definition of accessibility must include persons with disabilities along with other socio- economic factors preventing access. This includes owning internet capable devices, restricted access to in-person services, limited operating hours and online service fees--all of which exacerbate inequitable access to not only physical but digital government services. As highlighted by the findings from Digital Assessment survey, "over 50,000 Austinites do not use the Internet, which may translate into lost opportunities for education, social and health services, and local participation.[iii]" We have defined digital inclusion, or digital accessibility as the ability of groups and individuals to access and use information via digital technology. This definition is better understood in three parts: awareness, accessibility and inclusion:

- **Awareness** is defined as the knowledge of existing services that are provided digitally. For example, residents must first be aware that they have the ability to pay bills online before they can make use of the online payment. Similarly, this includes not being aware of city locations with free public Wi-Fi. In a hierarchical sense, awareness is key, as all the other issues of digital accessibility are dismissed if a resident does not even know a city service exists online.

- **Accessibility** is defined as availability and affordability of devices (smartphones, laptops, tablets, etc.) and/or the Internet that would allow the residents to be a part of the larger digital community. Certain groups within society are completely excluded from accessing online services simply because they do not own a smartphone, cannot afford expensive data plans or are unbanked and cannot utilize electronic payment platforms. This includes disabled populations, such as individuals who are blind and have difficulty using a computer. More than 60% of Austin's population that does not use the internet claimed "access (was) too expensive.[iv]"

- **Inclusion** refers to the ability of effectively utilizing the services and benefits one derives from being a part of the digital platform. If a resident is aware of a service that exists and has access to it, but he or she is unable to make use of it, the resident is still experiencing digital exclusion. For example, if a resident has a smartphone and Wi-Fi but no knowledge of how to log on to the Internet, the resident is still digitally excluded. As found by the survey results, among people who

do not have home-based Internet access, 76% said that they did not know enough to go online themselves or that they would need some help.[v]

PERSONAS

An effective method of displaying how these issues affect someone on a personal level is by using personas. A persona is a semi-fictional representation of an individual based on population demographics and behavior patterns. Personas should be used carefully and thoughtfully to honor the real people that they are representing. Because personas have been controversial and run the risk of caricaturing users, our team chose to use the stories of real people as the basis for our personas[vi].

While they have been edited for privacy, these scenarios have occurred in the everyday lives of real individuals. Each persona is based on real stories that exhibit and elaborate the issues that face residents regarding digital accessibility. Any creative license taken with these personas are all based on demographic statistics found by the COA's Digital Assessment Survey. [vii]

Israel: Living Unbanked
Israel is a 65-year old gardener who gets paid in cash only. He is unbanked and does not speak English; therefore, using online services is not an easy or a useful option for him. While he is sometimes able to go to a city office to pay his bill during operating hours, he prefers to pay his electricity bill at a local grocery store, H-E-B, for a fee, so that he does not have to visit the government office. He does not trust the government, and he fears being turned over to Immigration and Customs Enforcement. Israel's trek to H-E-B is costly, not just because of the extra fee charged, but also, because he lives on the other side of town. This means added transportation cost, along with the extended drive time which cuts into his work day and causes him to lose money out of his already small paycheck.

Israel's circumstances show the importance of building trust with city residents and providing extended operating hours for government offices for people who have a cash-based income. While the unique public-private-partnership like the one which H-E-B definitely makes it less inconvenient for individuals like Israel and a preferred option in some cases, the City should consider how to remove the overhead fees that make it more expensive for unbanked individuals to pay for basic City services like electricity along with other utility bills. Furthermore, distrust in certain state systems

plays a large role in whether or not a resident feels comfortable in utilizing city services.

Tabitha: Living Without a Device
Tabitha is a homeless woman in her thirties living on the streets of Austin. She is homeless because she fled from domestic violence and has nowhere to go. Because many of her personal items have been stolen, Tabitha was left without a cell phone, making it difficult for her to find a job, or for potential employers to contact her.

While many residents have a device—one digital inclusion study states 83% of Austin residents have a smartphone with the ability to access the Internet—not everyone has a cell phone, and the consequences of not having a device can be dire[viii]. Tabitha's circumstances show the importance of public libraries (where she can access the Internet through a computer) and the importance of adult education programs where she could have the opportunity to earn a device and a possible path out of poverty.

Jeanette: Living with a Disability
Jeanette, a woman in her seventies, lives on social security and disability checks alone. After her stroke, it has been hard for her to get around, and though she recently had cataract surgery, it is still very hard for her to see. To pay her electricity bill, Jeanette takes an exhausting trip on the bus to the nearby H-E-B, where she can pay her bill for a fee.

Jeanette has a mobile phone, but does not have a data plan, and she has no knowledge of the ability to pay her electricity bill online. Her trip to H-E-B and the extra fees she has to pay could be avoided if she knew 1) how to use the Internet to pay her bill, 2) had Wi-Fi or knowledge of an easier place to go to with Wi-Fi, and 3) the utilities website was responsive enough to be user- friendly on a mobile device.

CASE STUDIES

Digital Equity Access Plan – Seattle, WA

In 2016, The city of Seattle launched the Digital Equity Action Plan (DEAP) to address the disparity of internet/digital access of residents. According to the DEAP, digital equity is defined as a means to ensure "all residents and neighborhoods have the information technology capacity needed for civic and cultural participation, employment, lifelong

learning, and access to essential services, to create opportunities and to reduce and eliminate historical barriers to technology access and use.[ix]" This clear interpretation of digital equity and inclusion is instrumental in shaping how residents and policymakers view this issue. The DEAP also sought to address the following issues:

- Limited or lack of internet access at home. "15% of Seattle residents don't have Internet access at home.[x]"
- Lack of transportation to internet service locations provided by the city (libraries, computer labs, etc.) as a barrier to digital access
- Lack of education on internet use/digital tools. A condition clearly defined by the DEAP was the lack of "low-cost or free technical support and training.[xi]"

As part of the DEAP, the city of Seattle also conducts a survey every four years to reevaluate levels of access for residents across the city. This survey routine is a critical component of the plan, as it allows for the city to reevaluate its strategies should it receive reports of declining access.

To provide residents with the tools to access digital services, the City of Seattle provided free surplus computers to participating nonprofits that help in the implementation of the DEAP. "The City surpluses hundreds of computers each year. These computers, which are usually about three years old, are provided for free to Seattle based nonprofit human service agencies and schools that serve Seattle residents. If your group is a 501(c)3 nonprofit organization that serves Seattle residents, you may be eligible to receive surplus computers." In addition to these surplus computers, they also work to provide refurbished laptops to residents, discounted smartphones and low cost home internet access.

Tech Goes Home—Boston, MA

Tech Goes Home (TGH) was implemented in Boston, MA in 2005, as a targeted policy strategy to provide residents in a lower income neighborhood access to technology. Students of Frederick Middle School had minimal access to technology. The School had tried to previously send children home with laptops but due to high crime rate in the Grove Hall neighborhood, Students could not safely carry their laptops home.[xii]" Frederick Middle School instead partnered with Openairboston.net, TGH, the Boston Housing Authority, the Boston Public Library, and other non-profits to create a scalable and safe methods of providing technology and internet access in the homes of Grove

Hall. The following programs provide opportunity for some of the most vulnerable populations in a city:

- *TGH School* is a facet of TGH that emphasizes digital education. A student and a parent learn from a student's teacher on how to monitor student progress as well as how to find extracurricular activities.
- *TGH Community* provides courses for adults in targeted communities on using digital technology. These courses cover a variety of subjects, including financial management and job searches. Typically, these courses are offered in community centers, libraries, or public housing.
- *TGH Small Business* targets local business owners who want to use digital tools to grow their businesses. By providing local entrepreneurs with said digital tools, revenue will be generated back into the local economy. Courses include marketing and finance, with emphasis on how running a business can be accomplished with digital tools and are provided by community-partnered organizations.
- *TGH Early Childhood* are courses for parents with younger children, that teaches parents how to use mobile applications "for early language, literacy, and STEAM skill-building." These courses are taught by an early education specialist, and the curriculum supplements parenthood with technology.[xiii]

For each of these courses, participants (including students and parents) must complete 15 hours of training for each group taught by a TGH staff member. After the coursework is completed, participants are offered the opportunity to purchase a new computer for $50.00. Another component of TGH is "TGH connectivity" which advocates for better internet connectivity in the city, as well as disseminates information on how residents can get online.[xiv]

Recommendations

DEAP succeeded in clearly defining the issue of digital inclusion. By creating a concise definition or summary of the problem, visibility of the issue will increase. Furthermore, creating an action plan to annually survey the population to measure levels of access is crucial in determining efficacy of strategy.

Adopting a categorized and targeted strategy shown in TGH would also be beneficial in serving targeted communities where digital access is falling behind. According to the COA, approximately "92% of Austin households have a home internet connection, and about the same percentage report actually using the internet...Over 50,000 austinites do not use the internet, which may translate into lost opportunities for education, social and health services, and local participation.[xv]" Adjusting TGH programs to target households in Austin who are struggling with digital access and supplementing individuals with devices and internet services is the most efficient strategy to adopt.

To effectively tackle issue of digital accessibility, the COA should:

- **Clearly establish and define the issue of digital accessibility:** COA needs to define digital accessibility as not only providing access to those with disabilities but providing access to all members of society. Defining the scope of digital accessibility is instrumental in shaping how residents and policymakers view this issue.
- **Campaign and branding**: To increase efficacy and adoption rates of digital access initiatives, COA should create a memorable campaign name and advertise it accordingly. Following the example of DEAP and TGH, a clear, concise title that can be used as an acronym is most effective.
- **Emulate or partner with TGH**: Creating a series of programs that cater to different needs can be an effective method of expanding outreach in an area. Given that 50,000 Austinites are without access to the internet or various digital services, providing them with a range of different options in expanding their digital literacy is beneficial.
- **Determine target areas and population**: Given that Austin has internet users higher than the national average, determining target areas of residents who have limited access is necessary to increase efficacy of accessibility initiatives.

- **Educate**: As noted in a previous report by the COA on digital inclusion, providing an education network is vital to the success of the program. According to this report, “African American subgroup(s) reported on relying on teachers, librarians, trainers...for learning to use the internet. Along with Hispanic residents also more often reported relying on a son or daughter to teach them in contrast to the low percentages reported by other groups.[xvi]” In many of these cases, the utility of the internet is not communicated well or apparent to non-internet users, and by implementing targeted education campaigns, adoption of digital accessibility initiatives is sure to increase.
- **Annual survey**: A year after implementing these initiatives, COA should conduct a survey to measure the success and adoption rates of internet and digital services. Should usership decrease, the city can adjust its strategy to promote areas that are experiencing decline.
- **Eliminate online service fees**: Online services fees are a costly barrier for low income residents. Paying an online service fee can be an undue financial burden on residents who cannot afford transaction fees. If paying a bill has a 3% transaction fee online as opposed to in person, residents are less likely to utilize digital services.
- **All city services should be accessible via mobile devices**: With mobile data usage surpassing desktops and personal computers[xvii], it is imperative that city services be accessible via mobile devices. Per COA’s digital inclusion report, 75.1% of residents report using their mobile device for online activity. This statistic shows the need for mobile optimized city services.[xviii]
- **Provide payment options for unbanked residents**: Unbanked residents have an extra hurdle to jump through in paying for city services. According to the Federal Deposit Insurance Corporation (FDIC), “6.5 percent of households in the United States were unbanked in 2017.

CONCLUSION

Although the City of Austin sufficiently provides means for local populations to access the internet, there is still significant disparity in digital accessibility. There is still significant additional costs of access for poorer residents. In addition to these costs, digital literacy and competency is a crucial component of this problem. If a resident has access to free wi-fi but lacks the digital literacy to pay a bill online ,then city services will continue to be underutilized. Digital literacy and cost of access also parallel troubling demographic trends--according to a previous city of Austin study, the 8% of residents who are not using the internet are “predominantly Hispanic, have not completed high school, and are somewhat older.” These problems are all compounding, meaning that a resident of minority status is less likely to possess a personal computer, and without a personal computer the level of digital literacy declines, which in turn makes the resident less likely to trust computers or digital services as they are less likely to see the utility in the internet. By marginally alleviating any of these issues, the rate of internet usership and digital accessibility will increase.

The city has the opportunity to create a lasting impact in the communities where access is a persistent issue. Creating initiatives that can address trust, literacy, and price have the potential to exponentially benefit all members of our community.

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