OPINION

Op-Ed: City of San Jose Tackles Challenge of Digital Equity

*By **Dolan Beckel** / January 13, 2017*

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San Jose has long recognized the need to address the digital equity gap and increase digital inclusion. (Illustration by EFF, via Flickr)

As the Capital of Silicon Valley (http://www.sanjoseinside.com/tag/siliconvalley/) , San Jose is the "center of the universe" for innovation and disruptive technologies powered by the Internet economy.

The San Jose metro area is the most connected region in the United States, according to the 2015 American Communities Survey. (https://www.census.gov/programs-surveys/acs/) That same year, Bloomberg cited San Jose as America's richest city, based on its high median income.

San Jose, however, is very much a tale of two cities with significant inequality for income and connectedness.

San Jose's income inequality gap is one of the largest in the nation, ranking 22nd out of 19,500 cities in 2015. This gap continues to widen, according to a December 2016 report (https://www.nber.org/papers/w22945) issued by the National Bureau of Economic Research.

Despite being the Capital of Silicon Valley, more than 12 percent of San Jose's households have no internet access; in the richest city in the United States, more than 40 percent of our residents with incomes under $20,000 have no household internet access. This represents 100,000 people, a significant digital divide that cannot be overlooked, and one the city is actively taking steps to reduce.

The key driver that influences the digital divide is affordability. Given San Jose's income inequality, not only have people become lost in the statistics—they have lost practical opportunities to participate in this intensely connected world for learning, jobs, public and commercial services, and civic engagement.

President Clinton identified the issue in 1998, and since then the nation has made significant progress to address the digital divide on a national level to reduce long-term implications for social equity and stability. More recently, President Obama pursued many policy initiatives towards the vision of achieving greater digital equity that provides better access and opportunity to digital tools, resources, services, and skills.

This progress could reverse, however, both as the income gap widens and as more educational, workforce, health care and civic engagement opportunities move online. For example, the "homework gap" in San Jose reveals too many students attempting to do their homework assignments on smart phones while clustering around school buildings after hours looking for a signal.

And not just students are affected. Seniors, small businesses, entrepreneurs, recent immigrants, the unemployed, the homeless and other underserved community segments all struggle for inclusion in today's digital world, whether they are applying for jobs, signing up for Social Security or emailing their families.

Prioritize Innovation, Inclusion

San Jose has long recognized the need to address the digital equity gap and increase digital inclusion. All of San Jose's hub community centers now have free public Wi-Fi and several have dedicated computing facilities where volunteers from nonprofit organizations provide digital literacy training.

The San Jose Public Library is the largest provider of free Internet access in Northern California. The library system also provides comprehensive and relevant digital and information literacy training. These solutions, however, are largely ad hoc or "point" solutions, not "system" solutions. They neither reflect today's mobile society nor address the primary barriers to greater digital inclusion—affordability and availability of broadband internet and appropriate computing devices in the household.

Last year, the San Jose City Council unanimously adopted a Smart City Vision (http://www.sanjoseinside.com/2016/04/08/san-jose-creates-online-data-hub/) with the aim of becoming the "most innovative city" in the United States by 2020—an ambitious goal. The policy promotes the use of innovative technologies to make the community safer, more sustainable, and more digitally inclusive.

The mayor and City Council also approved the creation of the Office of Civic Innovation & Digital Strategy to help advance the goals of the Smart City Vision through strategy formulation, technology demonstration projects, and large-scale technology solution delivery. As a first order of business, the Office of Civic Innovation created a roadmap to guide our ongoing efforts to embrace new technologies, reframe our core and legacy business applications, and promote digital inclusion.

The Smart City Vision means we will need to shift mindsets—both in San Jose and nationally—so that digital inclusion and digital infrastructure moves from an ad hoc "nice to have" concept to something that is essential to our economic and social development, driven by community needs and a strategic plan.

Achieving these goals will require a robust citywide public and private sector digital infrastructure using or installing assets that can provide internet service, as well as the availability of affordable broadband Internet access. To this end, four of our 20 priority innovation projects in the roadmap will address digital inclusion: create a broadband strategy; create a digital inclusion strategy; and pursue two pilot projects targeting the barriers to digital access and affordability that once proven can be taken to scale.

A Focus on Digital Inclusion, Digital Infrastructure

Tackling digital infrastructure, broadband strategy, and digital inclusion strategy together is critical to optimize our efforts, because these issues are tightly linked. The development of a broadband strategy will focus on how we might expand, enhance, and fill gaps in the city's digital infrastructure, ideally through public-private partnerships since public resources are severely constrained. In parallel development, the city's digital inclusion strategy will identify how we can leverage existing resources and develop new programs and improvements for underserved community segments to overcome the barriers of access, affordability and digital literacy.

Digital inclusion is most effective when the private sector builds and operates digital infrastructure; we are not proposing that the city enter into competition with the telecom industry. However, the city can intervene strategically when the market fails to meet minimum performance expectations such as affordability, location, bandwidth, throughput and latency.

San Jose's digital inclusion strategy addresses all aspects of digital inclusion—access, affordability and literacy—but iterates by community segments. We will focus first on low-income families with students and seniors over 65–the two segments most digitally excluded. Since local data is not available, "street surveys" are being conducted by a non-profit research company and Stanford University to identify Internet usage and digital inclusion barriers in low-income neighborhoods. Future iterations will focus on digital inclusion for small businesses, entrepreneurs and other underserved segments of the community.

In early 2017 we will launch "SpeedUp San Jose (https://www.speedupsanjose.com/)," which will allow residents, visitors and workers to test out their real-world internet speeds from various providers and provide feedback on pricing and satisfaction. This data will shine a light on private sector market performance at a granular level, and will inform our geographic and segment strategies for digital inclusion and infrastructure.

Partnerships for Access, Affordability, Adoption

The city of San Jose is also partnering with the East Side Union High School District to pilot the deployment of free outdoor Wi-Fi for students, their families and other members of the community. The pilot schools have sufficient devices for students and will provide additional equipment for any households unable to access the Wi-Fi. The students will become the "digital inclusion force" that will provide better access, affordability, literacy and adoption for homes on the wrong side of the digital divide.

This partnership was driven by the school district that secured $2.7 million in funding for the design and installation of infrastructure for first three attendance areas through Technology Bond Measure I, which voters approved in 2014. We are hopeful this model partnership can be replicated by other school districts as well as other cities.

Also, San Jose is now partnering with Facebook, which is installing its "Terragraph" technology (https://code.facebook.com/posts/1072680049445290/introducing-facebook-s-new-terrestrial-connectivity-systems-terragraph-and-project-aries/) as a proof-of-concept project in our downtown testing the next generation of millimeter wave length, 60 GHz wireless networks. This could lead to an extended deployment by the company and ultimately enable the city to provide affordable or free broadband service at street level, benefiting thousands of residents, businesses and visitors both downtown and in underserved neighborhoods.

San Jose, recently designated a "Digital Inclusion Trailblazer" (http://www.digitalinclusionalliance.org/digital-inclusion-trailblazers/) by the National Digital Inclusion Alliance, is well positioned to successfully confront the interconnected challenges of broadband and digital inclusion, so that access to top-quality high-speed networks can spur innovation and growth while ensuring these opportunities are available to everyone.

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