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An Exploration of

The Digital Divide

Mesa, AZ

Next Century Cities

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Mesa Arizona

An Exploration of the Digital Divide

Tucked between Phoenix and the Tonto National Forest is the vibrant city of Mesa, Arizona. The history of Mesa dates back almost two millennia to the arrival of the Hohokam people who built the area's original canal system and established a community. In the late 19th century, the U.S. Army arrived in the region and opened the way for settlers to arrive in the Mesa area, which had since been abandoned by the Hohokam people. Now, almost 200 years later, Mesa is home to over 500,000 people who live, learn, and work within its borders. Spread over 138 square miles, they are a relatively dense community as the 35th most populous community in the country.

In Mesa, there is an abundance of pride, history, and community that stretches across the city, but there is one thing missing: fast, affordable, and reliable broadband for all residents. Of Mesa's 518,000 residents, approximately 50,000 lack access to fixed broadband that meets the Federal Communications Commission's 25/3 minimum.¹ According independent research, this number could be even higher.²

An important part of the Mesa community are their students. Across the Mesa Unified School District, 63,124 students attend classes in 78 schools.³ As Mesa tackles their significant digital divide, community leaders hope to start with their student population. 29% of students across the State of Arizona lack access to broadband.⁴ The school district is partnering with nonprofits, the municipal governments, and community partners to collaborate on solutions.

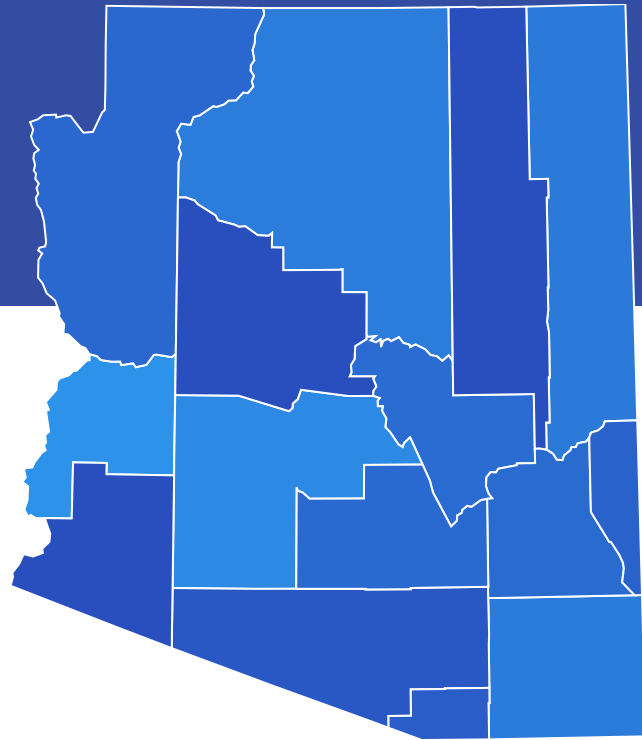


Methodology

Being able to explore Mesa’s digital divide with various community and municipal leaders across the greater metropolitan area simply would not have been possible without the support of the American Indian Policy Institute (AIPI). AIPI is a think tank housed at Arizona State University with deep expertise on broadband access and adoption, particularly in Indigenous communities. The organization has an unparalleled command of issues that perpetuate the digital divide, which paved the way for this examination of the state of connectivity the City of Mesa. One of the unique features of this Next Century Cities (NCC) member municipality is the size of the Native American population living in an urban community.

Data collection began with the Mesa City government in search of recent connectivity assessments. From there, NCC explored recent initiatives undertaken by the Mesa School District. Their initiatives have come as a result of COVID-19 and the transition to distance learning. Beyond government activities, our team reached out to nonprofits and other non-governmental organizations in the region and spoke with community leaders.

An important part of research in Mesa also included the work being done by the community’s urban native population. Our team spoke with leaders throughout this community and worked to highlight local perspectives.



COVID-19 brought national attention to gaps in broadband access and broadband adoption. It also highlighted the role of digital literacy and tools play in a community’s readiness for digital opportunities. Meanwhile, city leaders continue to play a central role in providing residents with the digital access and resources that they need in order to develop collaborative, forward-thinking, and inclusive digital solutions.

School and local leaders are continuing to battle the ongoing pandemic while ensuring that their community can successfully transition to digital citizenship. In Maricopa County, the jurisdiction that houses Mesa and Phoenix, the local officials are managing COVID-19 cases. However, at one point, the county identified 13,000 new cases in the seven days.⁵ Residents are still grappling with the residual impacts of business closures and remote learning mandates.

Mesa's Urban Native Community

Mesa is unique compared to thousands of other municipalities. According to the most recent data from the Centers for Disease Control and Prevention, the greater Phoenix-Mesa-Scottsdale, AZ Metropolitan Area boasts the largest American Indian and Alaskan urban Native Population in the country with 92,960 residents identifying in this community, 5.78% of the community's population.⁶ According to specific data from Mesa, the American Indian community comprises 2.7% of their population, again, a significant portion.⁷

94.4%

of national households are connected to broadband

72.3%

of tribal communities wield the same connectivity

While Mesa's local government is working to bridge the digital divide in their community, the urban Native population is facing an even larger divide of their own. Historically, Tribal communities face additional challenges related to broadband access and adoption. Yet they are often excluded from the policymaking conversations aimed at problem-solving. Nationally, while 94.4% of households are connected to broadband, only 72.3% of tribal communities wield the same connectivity.⁸ This 20 point gap has real consequences and is plaguing the urban Native population. This case study examines the many ways that Mesa and urban Native leaders are taking action to close this divide.

Municipal Government

@Mesa Free Wifi

Mesa's City government is working to deploy a public Wifi mesh network. This large-scale project across the downtown area is a public service for Mesa residents. Once connected to the internet, either through a fixed broadband connection or a mobile connection, residents can access an online portal that lists all available wifi hotspots, their physical address, and the hours that connectivity is allowed at that location.

Although fixed connections are more reliable and secure, public wifi is an important step in closing the digital divide. In cities nationwide, it connects provides critical access points for residents who are unable to afford or do not have access to broadband. Wireless connections are often used to complete school work at the public library, submit job applications in a municipal center or government building, or connect with family and friends at the community pool.⁹



Downtown Gigabit Broadband

In the downtown district, the Mesa city government has been working to install a city-owned fiber optic network. This fiber ring, originally installed a number of years ago, is currently being expanded through funds approved in a 2018 bond vote. The bond, focused on public safety and provided \$8 million to the city government to install an additional 37 miles of fiber for the downtown ring. This was to extend 110 miles of fiber optic cables. Supporting city services and smart public safety initiatives are top priorities. It will also support other economic development goals in the area. Once installed, the City plans to open this network to the public and make gigabit subscriptions available to businesses in the area. Municipal leaders are expected to seek funding for one more phase after this to complete the three ring system.¹⁰



(((School District)))

In Mesa, students across the 78 public schools are the focus of municipal efforts to close the digital divide in the midst of the COVID-19 pandemic. Previously, efforts across the community were focused on serving the public more generally, but the overnight transition to distance learning revealed the magnitude of the digital divide in Mesa Public Schools.

In Mesa, between 50-63% of students receive free or reduced lunch, depending on their education level, meaning their household income is only 1.85 times the federal poverty level or lower. These low income households are especially vulnerable during this time of distance learning as studies regularly show that a decision to forgo broadband subscriptions or technology adoption is rooted in cost. To combat this issue, especially as Mesa transitioned to distance learning, the school district and municipal government allocated \$7 million from federal coronavirus funding.

Prior to the pandemic, Mesa Schools already provided one-to-one technology for high school students and, as a result of the pandemic, was able to provide refurbished technology to junior high school students. However, a gap was recognized in elementary school students, where approximately 9,000 students lack at-home technology and 7,000 lacked access to broadband.¹¹




In 1997, Motorola and Intel started an organization known as Arizona students recycling used technology, AZ Strut. From its inception, the organization was dedicated to refurbishing and donating used technology to schools and nonprofits that lack the resources to independently close the digital divide. In Mesa, 1 in 10 households lack access to a computer at home and therefore are unable to access the many digital tools it offers.¹² During his time as Executive Director of AZ Strut, Tom Mehlert has realized the power that new computers can access untapped potential for students and young adults who lack the digital skills needed to succeed in the workforce. Donations to schools, community anchor institutions, and more allow new users to come online and take the first step in becoming connected.






SchoolConnectAZ




One organization working to connect public schools with the surrounding Mesa Community is SchoolConnectAZ. Originally, this organization was founded to connect schools across Arizona with community partners who had a mission to invest in their schools. Since the COVID-19 outbreak, SchoolConnect has focused on bridging the divide by supporting broadband adoption and digital literacy. Though these steps cannot close the divide alone, the organization is helping to connect outside organizations, as they have historically done, with the needs of public schools.

According to SchoolConnect's Executive Director, Tracey Beal, "It's exciting to see whole communities come together and love on their schools. And they have seen metrics start to move as a result." In Mesa, residents have recognized that closing the divide is not just a problem for government officials. Instead, people of all stripes and backgrounds are coming together to bring students and disconnected households online. SchoolConnect went beyond handing computers to students, they instead created a network of support that can lift up every community member.



The most unique aspect of SchoolConnectAZ's approach is their ability to recognize the specific contributions available to each organization. COVID-19 has created a sense of understanding among the general public that the digital divide, in Mesa and across the country, is far more pervasive than previously understood. As a result, many organizations recognize the need to assist, but lack the requisite knowledge and expertise to participate effectively. According to their mission, SchoolConnectAZ utilizes "the principles of "Asset Based Community Development" to focus on what various partners have to offer, and how to use the best assets of the community to build sustainable, mutually beneficial relationships."¹³

Using this method and community support, SchoolConnect rolled out a technology assistance program for students and their families. Tracey Beal led her team as they connected with business partners, engineering firms, and Computers to Kids, another Arizona nonprofit working to connect students. This coalition developed a connectivity package for students that included a refurbished computer, software licensing, and free technical support. In collaboration with local internet service providers, they met with each family individually to provide the package and ensure they had everything necessary to stay connected during the COVID-19 pandemic.



Often, community stakeholders want to partner on closing the digital divide, but do not know where to start. SchoolConnectAZ and similar groups are critical for bringing people together and getting digital tools to populations in need.

Unlocking Spectrum to Bridge the Urban Native Community's Digital Divide



Access to new spectrum could help ease the stark digital divide that exists within Tribal communities around Mesa. Currently many children that live on Tribal lands that attend Arizona public schools largely rely on the Wi-Fi provided by the school system. However, when they return home, they may have reduced broadband capacity if they have any access at all.¹⁴

In mid 2020, the Federal Communications Commission made additional spectrum available in the 2.5 GHz band. This spectrum is useful for both mobile coverage and fixed point-to-point uses, and is currently used to provide broadband service by legacy educational licensees and commercial providers that lease the spectrum. The Commission opened up a priority window for any federally recognized Tribes to apply for spectrum in the Rural Tribal Window. This proceeding was intended to support wireless networks in rural tribal communities that continue to struggle with affordable and reliable access to broadband.



Mesa's Digital Infrastructure & Federal Resources

When the federal E-rate program was started in 1996, only 14 percent of the nation's K-12 classrooms had access to the internet.¹⁵ The E-rate program stands in conjunction with state level subsidy programs to make information services more affordable for schools and libraries across the nation. Through funding from the Universal Services Fund eligible schools and libraries are able to receive discounts on telecommunications, telecommunications services, and internet access, as well as internal connections, managed internal broadband services and basic maintenance of internal connections.¹⁶ These services are intended to complement the efforts of state and local governments to bring internet access and increased capacity to schools and libraries.

Under the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) fifteen million dollars was allocated to the Institute of Museum and Library Services in order to equip museums, libraries, federally recognized Tribes, and organizations that primarily serve Native Hawaiians to respond to community needs resulting from the COVID-19 pandemic.¹⁷ These funds can be put to use by eligible institutions to expand digital network access, purchase internet accessible devices, and provide technical support services to their communities by December 31, 2020.

Additionally, the proposed Health and Economic Recovery Omnibus Emergency Solutions Act (HEROES Act) that passed the House of Representatives in May provides 15 billion additional dollars for schools and libraries to prevent, prepare for, and respond to the COVID-19 pandemic.¹⁸ This money would not be limited in the uses as long as it is related to prevention, preparation, and response efforts. Ideally, funding could cover the purchase of internet capable devices, internet service, and other digital services.

Successes in Mesa

The Mesa community is taking major steps to bridge the digital divide for residents across their community. Although Arizona has begun to see a decline in their COVID-19 cases, the municipal government, school district, and community leaders continue to take decisive action to ensure that every household has access to technology and the internet for as long as stay at home orders remain in place.

Mesa's specific focus on their student population is a method adopted by many communities across the country. This vehicle, as opposed to a focus on other populations, allows the issue to become relevant for a wider spread of community members by activating an appeal to parents, educators, and those concerned about the future workforce.

Notably, the work being done in Mesa reveals the untapped power of municipal governments and school districts working in concert to develop comprehensive connectivity plans. When Mesa received federal funding from the CARES Act, they could have acted to bolster city services, but instead recognized greater investment potential in the school system.

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