



TIPI Recommendations to Texas Broadband Development Office

Dr. Richelle Crotty

About the Technology and Information Policy Institute

Established in 1996 and directed by Dr. Sharon Strover and Dr. Keri Stephens, the Technology and Information Policy Institute serves to research imbalances and provide insights that inform public policies and programs focused on digital inclusion for everyone. Housed in the Moody College of Communication, at the University of Texas at Austin, the institute also investigates the social impacts of digital media, growing concerns around disasters and risk, and artificial intelligence in the future of work. In addition to sponsoring educational programs and conferences, the institute shares its world-class expertise in hopes of increasing access to communication technologies, and thus vastly improve technology literacy, standards of living, and innovation.

Objectives:

1. Every Texan has equitable, affordable access to broadband
2. Every Texan has access to affordable internet-enabled devices that fit their needs
3. Every Texan has access to digital skills and literacy trainings and technical support
4. Funds support community-based, long-term, comprehensive, systemic solutions to the digital divide that grant digital equity and digital dignity to every Texan

Recommendations:

Statewide: planning, data & research

- Create state, local, and community-based digital equity offices, to coordinate research, planning, and implementation.
- The digital equity offices should have, at minimum, one dedicated staff member to manage digital equity planning and implementation
- Map and report on statewide broadband availability and quality of service annually, with county and zip-code level data
- Administer grant programs to provide funding to encourage periodic digital inclusion assessments and needs and assets assessments, and provide for programs to incorporate findings and changes based on assessments
- Partner with universities to conduct research, mapping, and program evaluations
- Partner with existing digital inclusion and equity organizations to identify needs and implement programs
- Funds should be used to prioritize stakeholder and community engagement throughout the planning process by creating a stakeholder engagement plan that requires the (funded) participation of individuals from the covered populations



Statewide: affordability, accessibility, and availability

- Prioritize investments in long-term, comprehensive, systemic solutions
- Funds should be used to increase the capacity of trusted community-based organizations and community anchor institutions that often already provide digital inclusion services
- Invest in fiber-to-the-home and next generation services for all communities, including rural
- Work with Texas State Libraries and Archives Commission to invest in, improve, and extend broadband infrastructure at libraries to other community institutions and homes
- Expand Operation Connectivity, especially for lower-income populations
- Provide price-volume discounts in sparsely populated areas and in populations with low incomes with constrained ability to pay for service.
- Address ‘digital redlining,’ a process of income-based discrimination carried out against lower-income neighborhoods, and invest in community-based solutions
- Explicitly address racial/ethnic inclusion at county and state levels
- Identify and address barriers encountered by those who are ‘smartphone dependent’
- Improve local and state government public services’ mobile offerings
- Invest in a wider distribution of devices to address device gaps
- Invest in disaster planning and mitigation efforts to create resilient broadband infrastructures
- Make the Affordable Connectivity Program (ACP) permanent, make it easier for Texans to apply for ACP



Statewide Broadband Statistics

More than 12% of Texans live in areas where there is no broadband infrastructure that provides minimally acceptable speeds. And 43.3% of Texans live in areas where there is only one such internet provider. Even where infrastructure is available, broadband may be too expensive to be within reach. 13.7% of Texas household do not have an internet subscription.

Digital gaps across the State of Texas as of 2020 still exist:

- € 22% of all households do not have high-speed internet access at home (some 1,736,000 households).
- € 25% of Texas homes, or 2,406,000 households, do not have a desktop or laptop computer.
- € 19% households (1,827,000 households) neither have a desktop, laptop, or tablet computing device
- € 17% of households (1,594,000 households) do not own a smartphone.

Digital gaps exist in both rural and urban households across Texas:

- € 37.7% of rural households do not have a broadband connection.
- € 41.2% of low-income, rural Texans do not subscribe to broadband, which is lower than 33.9% of upper-income rural households and 27.6 of lower income metropolitan households.
- € Urban Texans with low incomes also face digital challenges; 28% do not have broadband access and 36% do not have a desktop or laptop computer.



Adoption of Broadband and Digital Devices Across Texas Metropolitan Areas

	Computer (desktop or laptop)	Wireline Broadband	Tablet Computer	Smartphone	Households
Dallas	78.1%	83.1%	60.8%	83.3%	46,782
Tarrant (Fort Worth)	82.6%	84.0%	65.7%	86.1%	35,436
Harris (Houston)	75.4%	77.1%	58.8%	80.4%	150,619
Travis (Austin)	88.7%	88.8%	69.0%	88.9%	22,830
Bexar (San Antonio)	76.2%	82.8%	61.1%	81.9%	33,606
State of Texas	77.20%	78.3%	60.6%	81.8%	497,815

Lack of Adoption of Broadband and Digital Devices in Texas

	Computer (desktop or laptop)	Wireline Broadband	Tablet Computer	Smartphone	Households
Metro, lower income	72,433	40,017	106,764	54,269	199,169
Metro, upper income	20,153	31,498	57,252	19,261	233,866
Rural, lower income	16,521	9,921	22,656	13,327	36,858
Rural, upper income	4,475	8,383	9,326	3,549	27,922
All Texas					
State of Texas	113,582	89,819	195,998	90,406	497,815



Broadband and Computer Adoption by Income

	Less than \$25K	Between \$25K and \$50K	Between \$50K and \$75K	Between \$75K and \$125K	Greater than \$125K
Metro					
Wireline Broadband	67.5%	73.5%	79.4%	83.9%	89.5%
Computer	50.8%	68.9%	81.9%	89.9%	96.1%
Rural					
Wireline Broadband	54.4%	60.0%	63.6%	65.8%	68.1%
Computer	42.2%	61.8%	74.8%	83.5%	90.0%
All Texas					
State of Texas					
Wireline Broadband	65.6%	71.6%	77.4%	81.8%	87.8%
Computer	49.4%	67.8%	81.0%	89.2%	95.6%

Digital Adoption by Race and Ethnicity

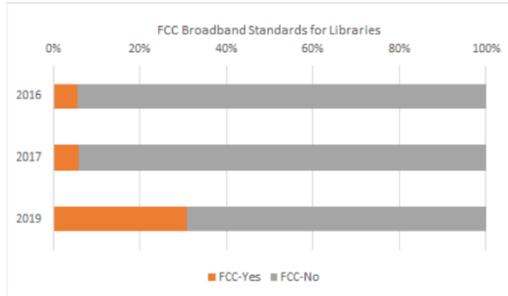
	Asian Americans	Whites	African Americans	Latinos	Native Americans
Dallas					
Wireline Broadband	89.1%	85.0%	75.8%	74.1%	77.0%
Computer	92.3%	81.2%	66.2%	64.0%	72.1%
Tarrant					
Wireline Broadband	88.1%	85.7%	75.7%	75.0%	75.6%
Computer	90.8%	95.3%	70.8%	68.9%	80.7%
Harris					
Wireline Broadband	88.3%	77.5%	73.3%	72.9%	70.1%
Computer	90.2%	77.5%	64.0%	64.5%	66.0%
Travis					
Wireline Broadband	92.6%	90.0%	79.2%	80.5%	84.4%
Computer	95.8%	90.8%	73.4%	73.8%	73.0%
Bexar					
Wireline Broadband	85.6%	83.5%	80.9%	78.9%	74.6%
Computer	88.4%	76.9%	72.5%	67.0%	67.6%
State of Texas					
Wireline Broadband	90.0%	78.5%	75.0%	73.2%	71.6%
Computer	92.4%	78.5%	66.6%	63.8%	70.3%



Libraries, Schools are Public Spaces
“Social Infrastructure”

Speed tests for TX libraries, 2020

Source: TSLAC



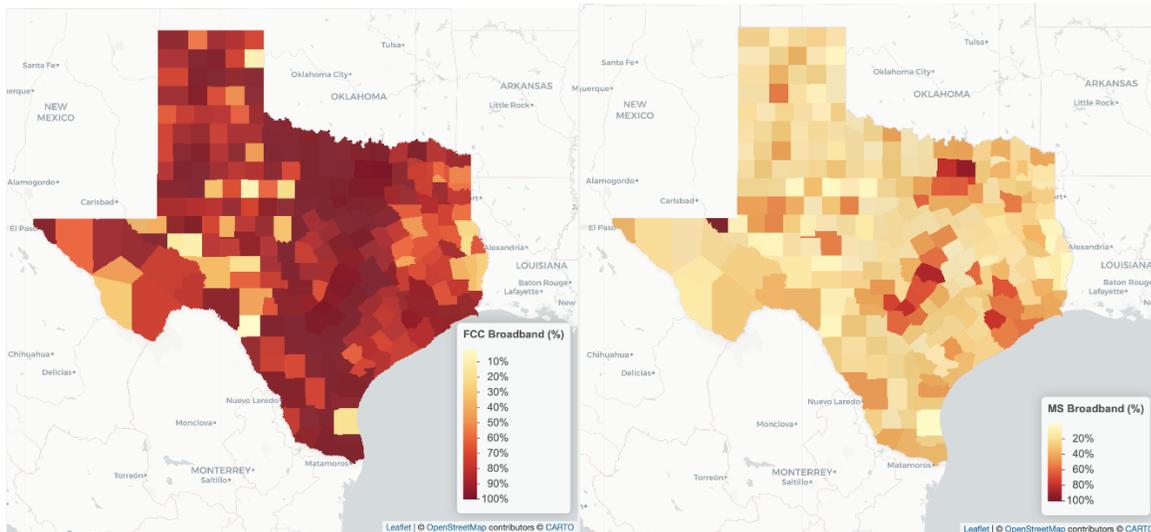
- ✓ Better library broadband is needed!
- ✓ Smaller wifi use decreases during COVID in rural libraries even if speeds are slower (Source: WhoFi 2020)

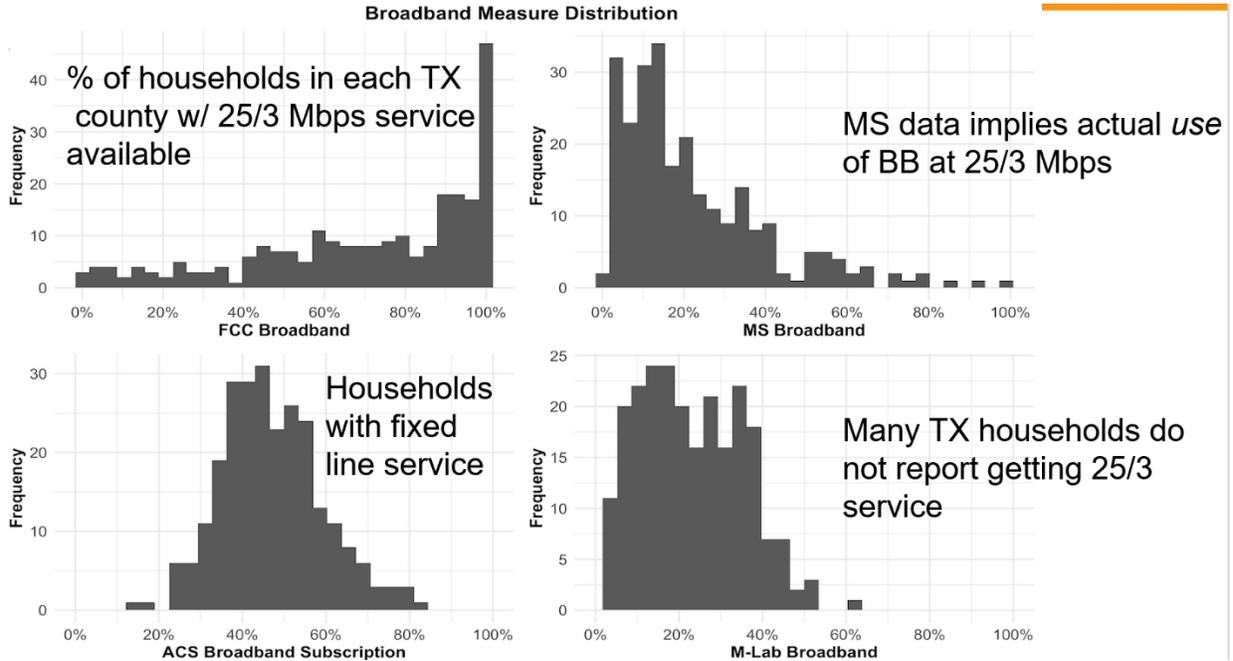
- People use libraries for
- ✓ Computer access
- ✓ Wifi
- ✓ Help with forms, email & all things digital
- ✓ Obtain reliable information

FCC standard for libraries is 100 Mbps service for libraries serving <50,000, and 1 Gbps for >50,000

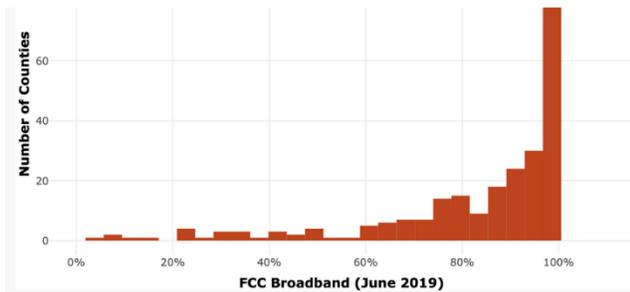
Issues with FCC Data

The FCC data on broadband availability overstates the availability of broadband in Texas. Until the FCC data is improved, it cannot be used solely as the basis to determine need for improvements to broadband infrastructure. In the image below, the FCC data on the left indicates that most of Texas has broadband availability in the 60-100%. Meanwhile the data provided by Microsoft on the Quality of Service of broadband in Texas indicates that most of Texas is in the 20-40% range.





FCC Broadband Availability v. Microsoft Broadband QoS in Texas

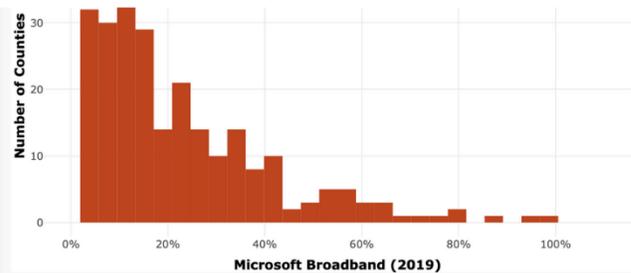


26

Counties out of 254 had less than 50% broadband availability

1%

of Texas population live in counties with less than 50% broadband availability



229

Counties out of 254 had less than 50% of population use broadband at 25/3Mbps

33%

of Texas population live in counties where less than 50% of its population use broadband at 25/3Mbps