



CALHOUN COUNTY BROADBAND **DATA COLLECTION**

CALHOUN COUNTY DATA COLLECTION EXECUTIVE FINDINGS REPORT

merit

THE MICHIGAN
MOONSHOT

PRESENTERS



Pierrette Dagg

Director of Marketing
& Communications

Merit Network, Inc.



Alexis D. Schrubbe, PhD

Moonshot Program Manager

Merit Network, Inc.



AGENDA

- **Introductions**
- **History of Broadband Gap in Calhoun County, Formation of Task Force**
- **Project Overview**
- **Data Collection Methods**
- **Presentation of Findings**
- **Next Steps**



The genesis of Calhoun County’s dynamic broadband modernization efforts began in 2020 at the Willard Library in Battle Creek. When public spaces suddenly shuttered as a result of public health initiatives in the wake of COVID-19, many families and individuals relying on public broadband access throughout Calhoun County were left without service. The Willard Library closure illuminated there were large numbers of families and individuals relying on public libraries for routine access. This population, once formerly hidden from the purview of the broader community, became a catalyst for a grassroots-led initiative to enhance broadband access in Battle Creek, which spread across Calhoun County.

A satellite view of Earth at night, showing a dense network of city lights across the continents. The lights are bright yellow and orange, contrasting with the dark blue of the oceans and the black of space. The horizon of the Earth is visible at the top of the image.

DEFINITION OF **BROADBAND**

Broadband Internet is currently defined by the FCC as a fixed connection that provides **a minimum of 25 Mbps download and 3 Mbps upload.**

Broadband service provides users with Internet fast enough for video conferencing, schoolwork, telemedicine applications, video streaming, and more.

DATA COLLECTION

As a tool for community, municipal
and educational engagement

Unbiased | Accurate | Granular | Longitudinal



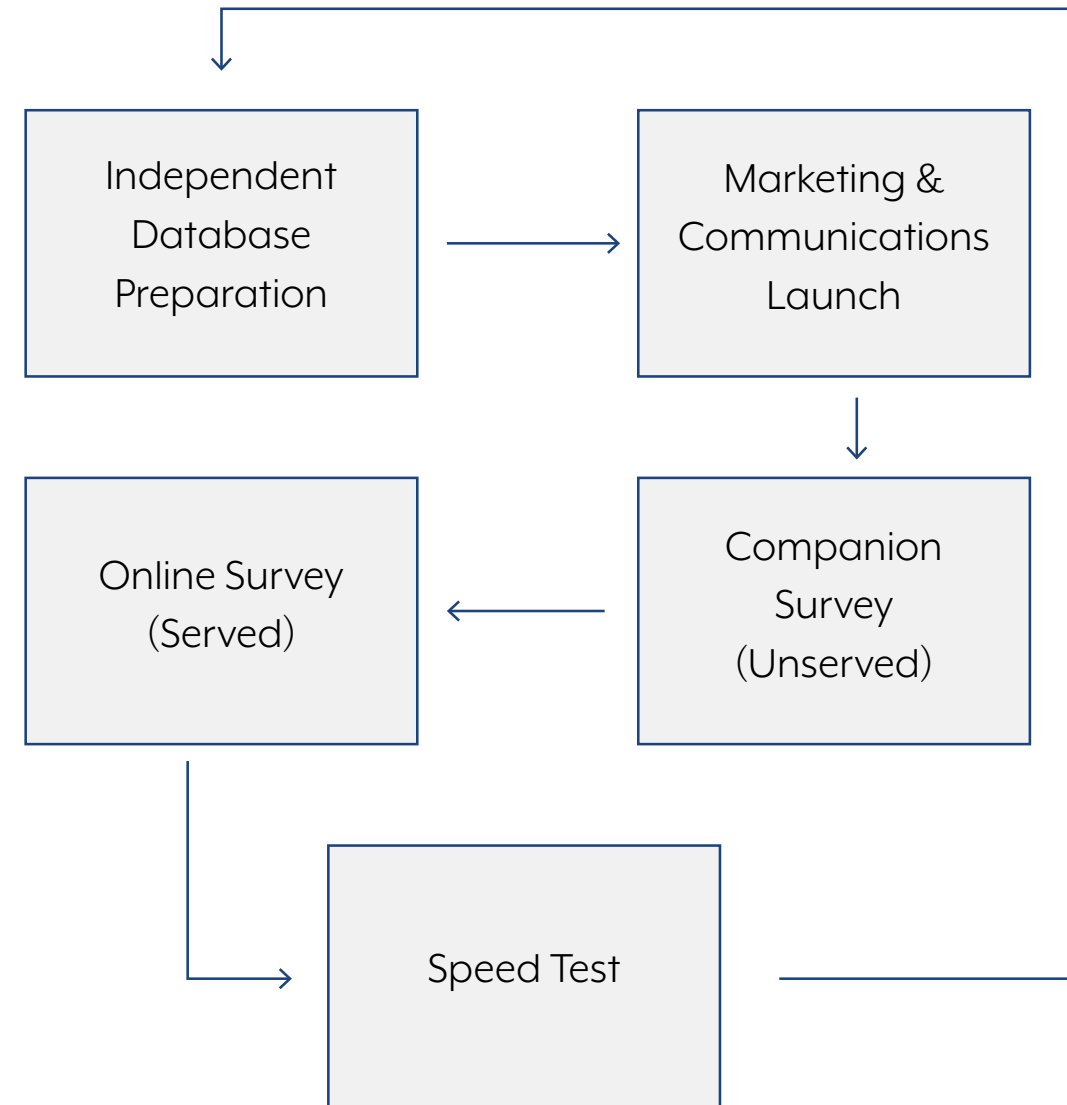


OUR GOALS & DESIRED OUTCOMES

- Quantifying availability and demand
- Produce unbiased, granular and accurate household broadband access maps & visualizations including served and unserved residences and businesses
- Produce data to inform infrastructure investment and to challenge 477 maps for federal funding
- Gather residents' experience about broadband usage and the ways in which access, or lack of access, impact quality of life
- Understand residents' positions regarding broadband service pricing and availability in their region
- Obtain more insights regarding Internet connectivity capabilities for the county's children and students up to age 18 population
- Outputs include: Executive summary, visualizations (maps/charts), merged databases, GIS files



Survey and study results were conducted by Merit Network. The methodology and results were developed with advisory assistance from the Quello Center at MSU.



SURVEY METHODS



PARTICIPATION OF COMMUNITY POPULATION

Township/City	Total Households	Response %	Fraction without Broadband
Convis Township	642	9.66 %	9.66 %
Marengo Township	845	9.23 %	76.92 %
Burlington Township	669	9.12 %	83.61 %
Newton Township	1036	8.98 %	68.82 %
Athens Township	908	8.26 %	70.67 %
Albion Township	440	7.27 %	81.25 %
Lee Township	499	6.41 %	93.75 %
Fredonia Township	703	6.12 %	58.14 %
Sheridan Township	745	5.91 %	56.82 %
Clarence Township	805	5.22 %	92.86 %
Clarendon Township	426	5.16 %	90.91 %
Tekonsha Township	628	4.78 %	70 %



PARTICIPATION OF COMMUNITY POPULATION

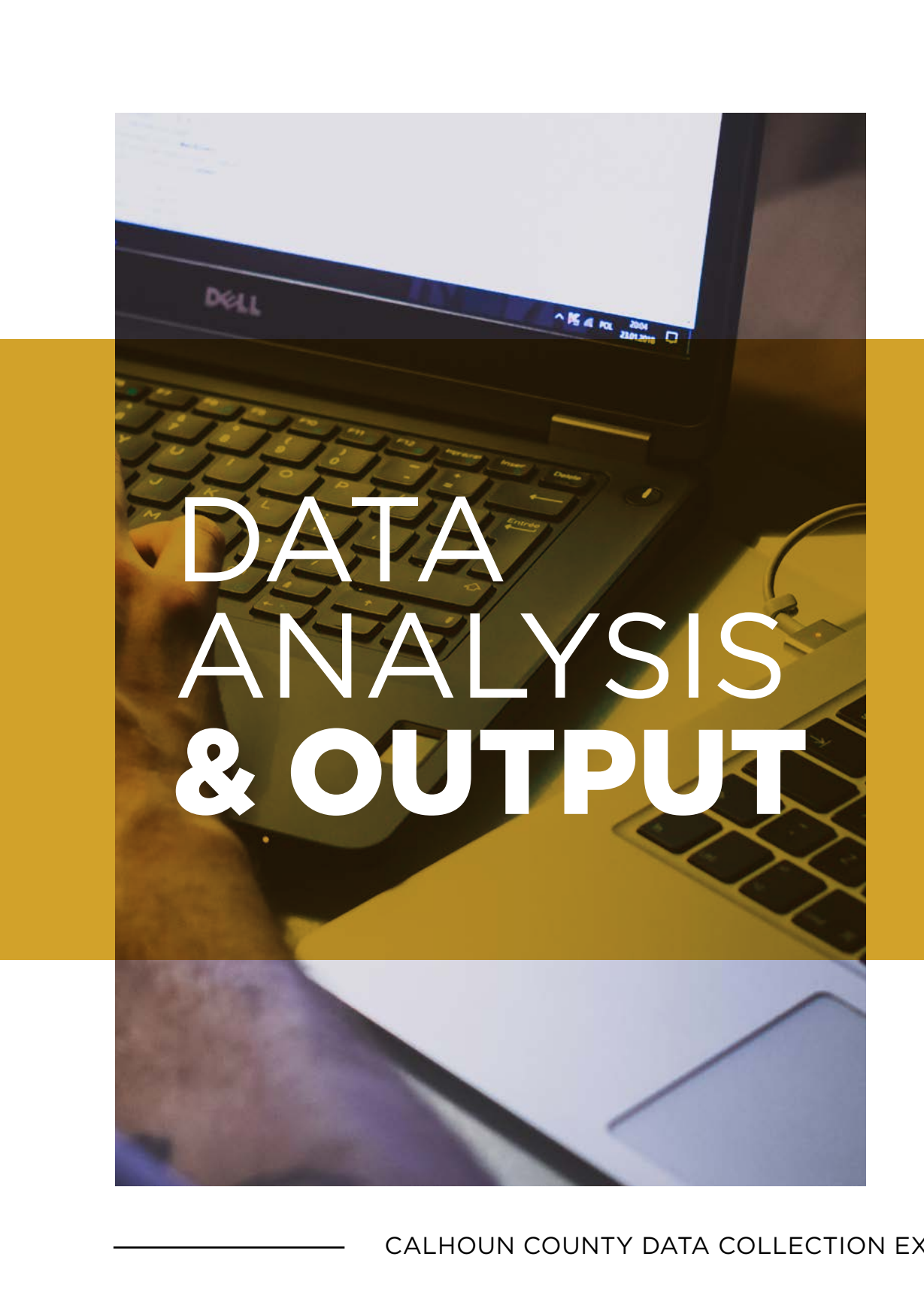
Township/City	Total Households	Response %	Fraction without Broadband
Emmett Township	4705	3.89 %	24.59 %
Homer Township	1170	3.76 %	54.55 %
Pennfield Township	3705	3.29 %	31.97 %
City of Albion	2812	3.2 %	41.11 %
City of Marshall	3377	3.14 %	24.53 %
Bedford Township	3747	2.32 %	28.74 %
Leroy Township	1429	14.21 %	67.49 %
Eckford Township	540	13.15 %	85.92 %
Marshall Township	1257	12.41 %	44.23 %
City of Battle Creek	20813	1.93 %	16.46 %
City of Springfield	2276	1.41 %	21.88 %
Bellevue Township	611	0.16 %	0 %

Survey data collected

- Unique survey ID for participants ties results to speed test values
- Street address
- Number of residents at address
- Number of children under 18 at address
- Number of people taking college or university courses at address
- ISP service delivery mode (fiber, DSL, satellite etc...)
- Satisfaction with ISP's service
- M-Lab speedtest results
- Price willingness to receive services
- Application needs for household Internet
- Reason for lack of service at unserved households, and more



**DATA
COLLECTED**



DATA ANALYSIS & OUTPUT

Visualizations

- Maps
- Graphs
- Charts

Executive summary & analysis

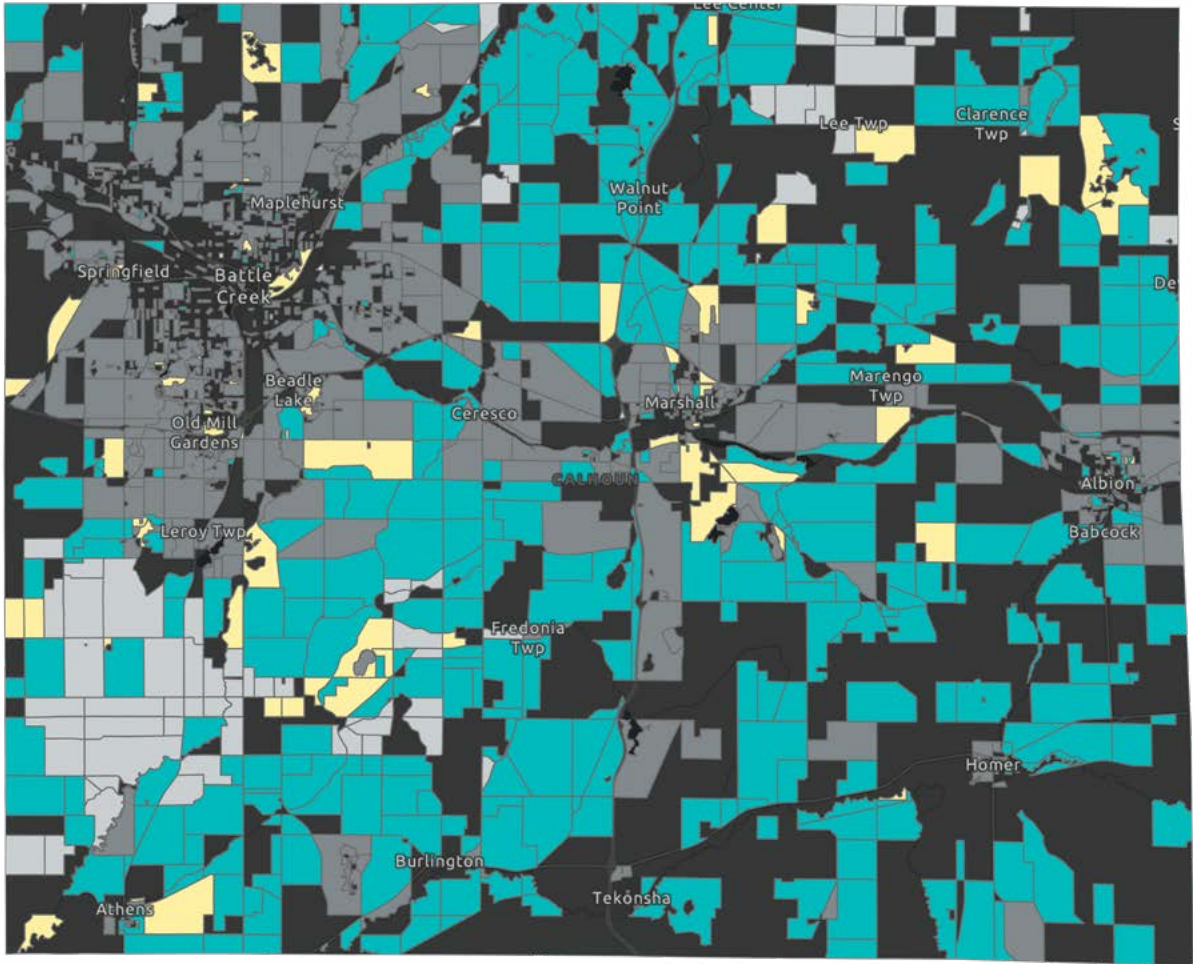
GIS export

Fully merged & cleaned database



EXECUTIVE SUMMARY **OF DATA COLLECTION**

Broadband Density Per Census Block **FCC Compared to Survey Results**

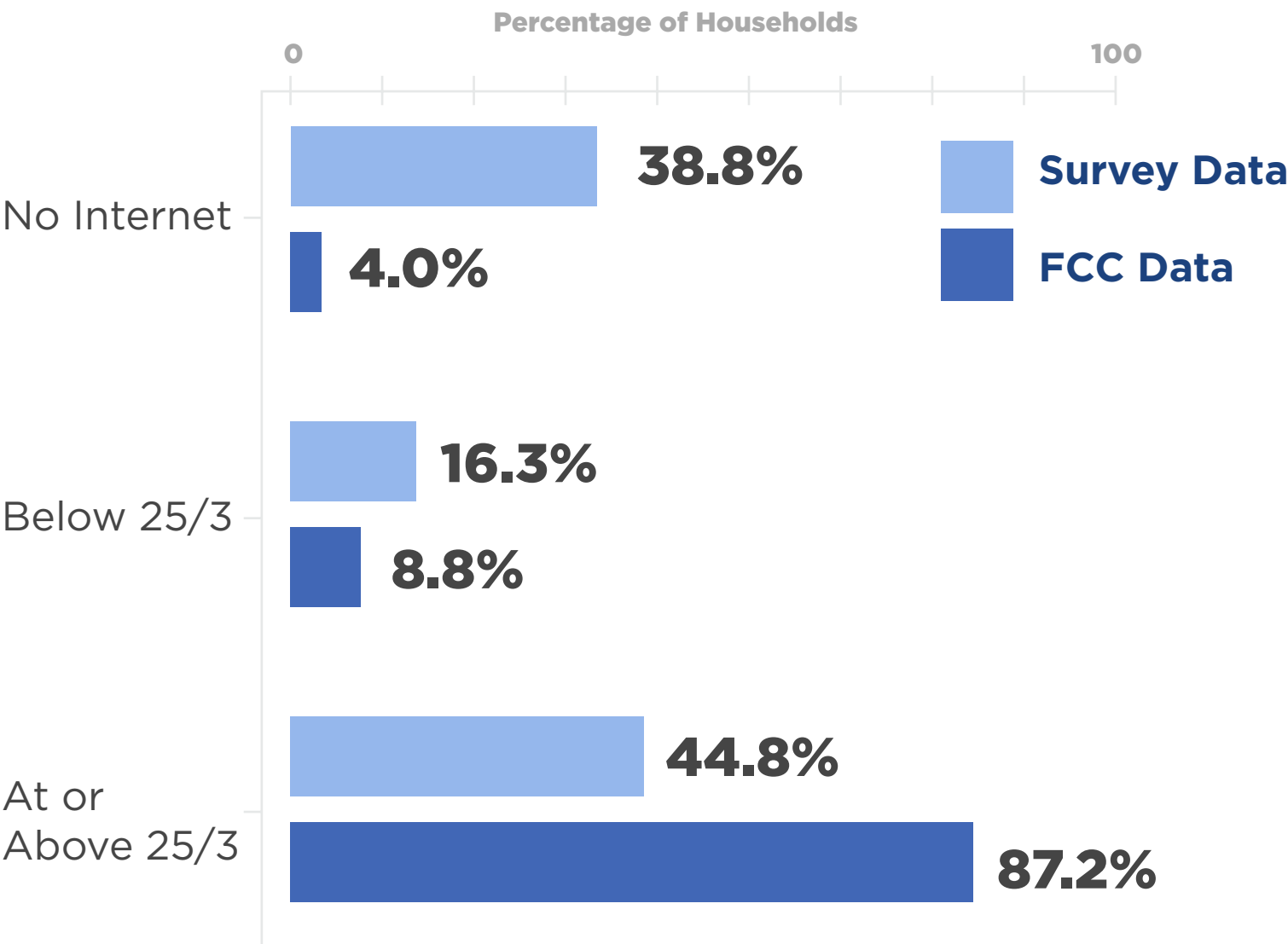


Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA

BROADBAND DENSITY

- Both Survey/Ookla and FCC Indicate Served
- Both Survey/Ookla and FCC Indicate Unserved
- Survey/Ookla Indicate Median Value is Below 25/3, FCC Indicates Served
- Survey/Ookla Indicate Median Value is Above 25/3, FCC Indicates Unserved
- No Survey Data Collected

Availability by the Numbers



Survey speed data as well as FCC data on the maximum advertised upload and download speeds per census block were each bucketed into one of the following categories: 1) No Internet, 2) Below 25/3 Mbps, or 3) At or Above 25/3 Mbps. Each survey result was then directly compared to the FCC census block the survey point falls within. **The differences between coverage reported by the FCC and data from this survey are drastic.**

This study suggests that within our sample of survey responses:

- 42% fewer homes** than indicated by Federal sources have access to broadband Internet speeds
- 7% more homes** than indicated by Federal sources have some connectivity at speeds lower than broadband
- 35% more homes** than indicated by Federal sources have no Internet connectivity whatsoever

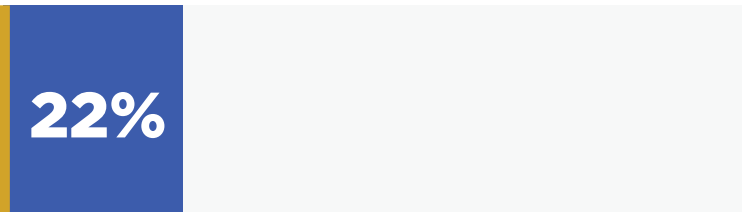
**Satisfaction With
Home Internet Service
Provider Options:**



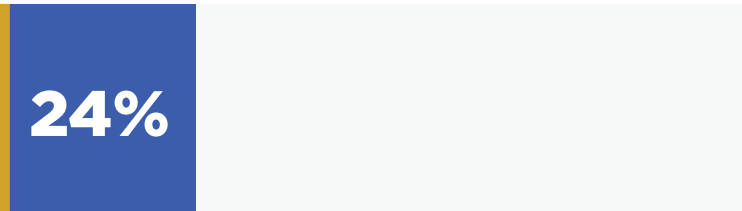
Satisfied **Neutral** **Dissatisfied**
37% **24%** **40%**

Only 37% of residents were satisfied with the Internet service provider options at their homes.

**Broadband in Households with
Childrean and
Students up to age 18:**

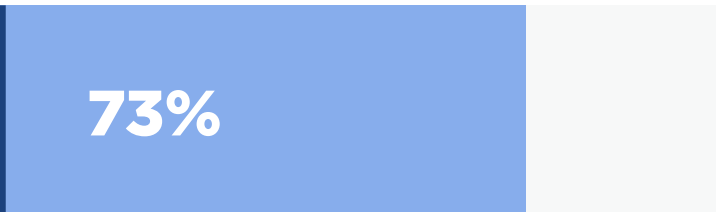


38% of surveyed households in Calhoun County have Children and students up to age 18. In these homes, 22% have broadband Internet.

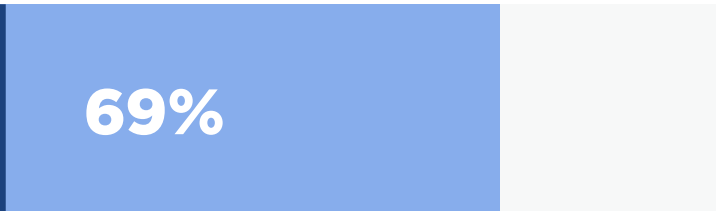


24% of households with no children and students up to age 18 report Internet access at broadband speeds or higher.

**Calhoun County
Resident Sentiment:**



Of Calhoun County residents that have no Internet access, 73% report that no services are available at their address and 23% state that the price for service is too high.



69% of residents with no Internet access indicated that they are willing to pay between \$26 and \$100 for service, indicating that the majority of these residents would pay for Internet service at their properties if it was available.



HOMEWORK GAP

Industry experts suggest that speeds of 100 Mbps/20 Mbps are truly reflective of modern bandwidth needs. Of households participating in the speed test, **only 9% of respondents had broadband Internet access** at that level.



EXECUTIVE SUMMARY

- Broadband is critical to a community's ability to thrive and remain competitive in terms of education, economic development, talent retention, employment opportunities and population growth
- Much of Calhoun County is unconnected or insufficiently connected
- Connectivity data indicates a problem more stark than established FCC data suggests
- Residents without broadband desire service, and connected citizens believe that more provider options are needed



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