IPPSR POLICY FORUM: Broadband in Michigan

February 7, 2018

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Connected Nation and Connect Michigan

CONNECTED NATION℠ Michigan

CONNECTED NATION & CONNECT MICHIGAN

"Our mission is to improve lives by providing innovative solutions that expand the access, adoption, and use of high-speed internet and its related technologies to all people. Everyone belongs in a Connected Nation."

Core competencies include:

- Network mapping, validation, and analysis
- Residential and business adoption research
- Local, state, and national policy analysis and capacity building
- Community technology planning

Connect Michigan, subsidiary of Connected Nation, has been addressing broadband and technology since 2009

- Implemented the State Broadband Initiative from 2009 to 2014
- Partnered with the Michigan Public Service Commission
- Collaborate and address broadband issues at all scales with a diverse group of stakeholders
- Have worked with 54 of Michigan's 83 counties to improve the education and capacity for broadband

CONNECTED NATION & CONNECT MICHIGAN

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Access

The physical connection to high-speed infrastructure

Adoption

Recognizing the value of broadband and subscribing either at home, work, or via public institutions

Use

Skills and applications to leverage technology to improve quality of life and community/economic development

Supply

Demand

WHY DOES IT MATTER?

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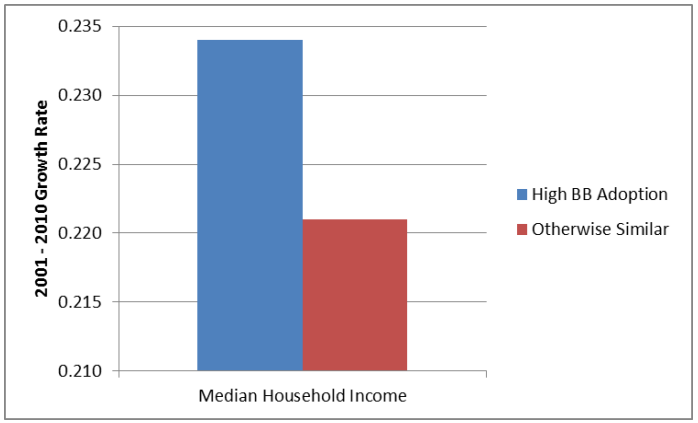
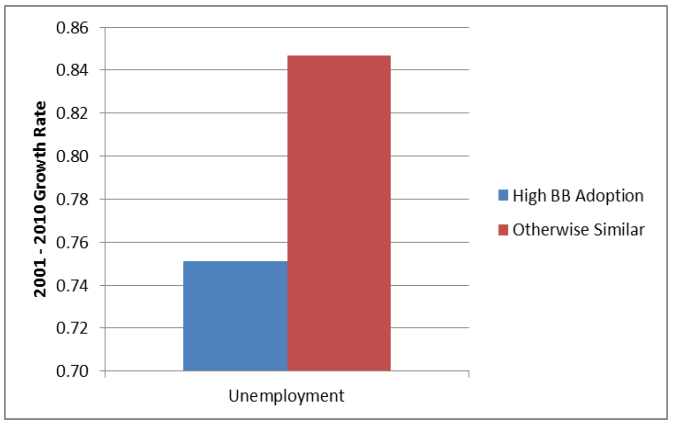
In rural counties, between 2001 and 2010…

Where broadband adoption was high, (60%+)…

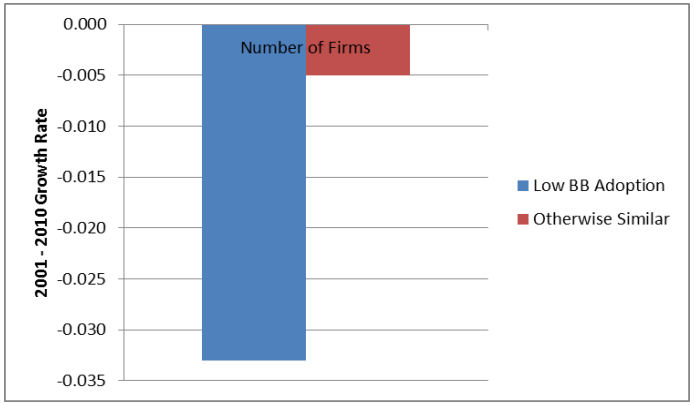
Income Grew Faster



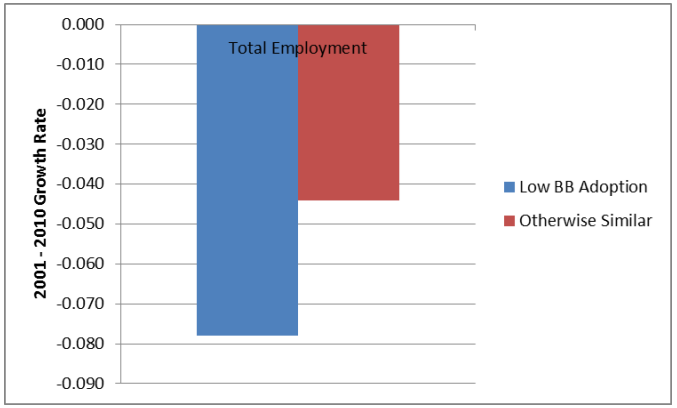
Unemployment Grew Slower



Where broadband adoption was low, (<40%)…



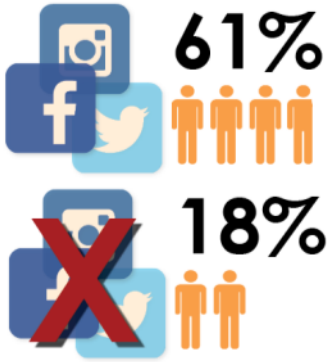
Lost More Businesses



Lost More Jobs

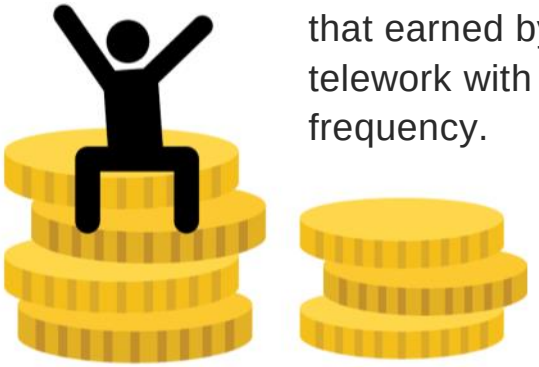
Whitacre, Gallardo, and Strover. 2014a. *Telecommunications Policy*

WHY DOES IT MATTER?

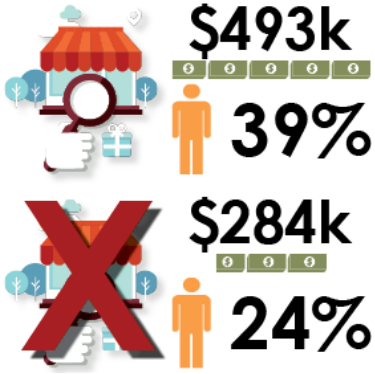


Small businesses using social media weekly are 3x more likely to have recently hired and hired for more positions than businesses that don't use social media.

As digital literacy increases among residents, so too does digital interaction between residents and local businesses and residents and local government.



Residents who do not telework typically have incomes that are 75% of that earned by those who telework with some frequency.



Small businesses with websites have higher annual revenues and are more likely to have recently hired than those without websites.

ACCESS IN MICHIGAN

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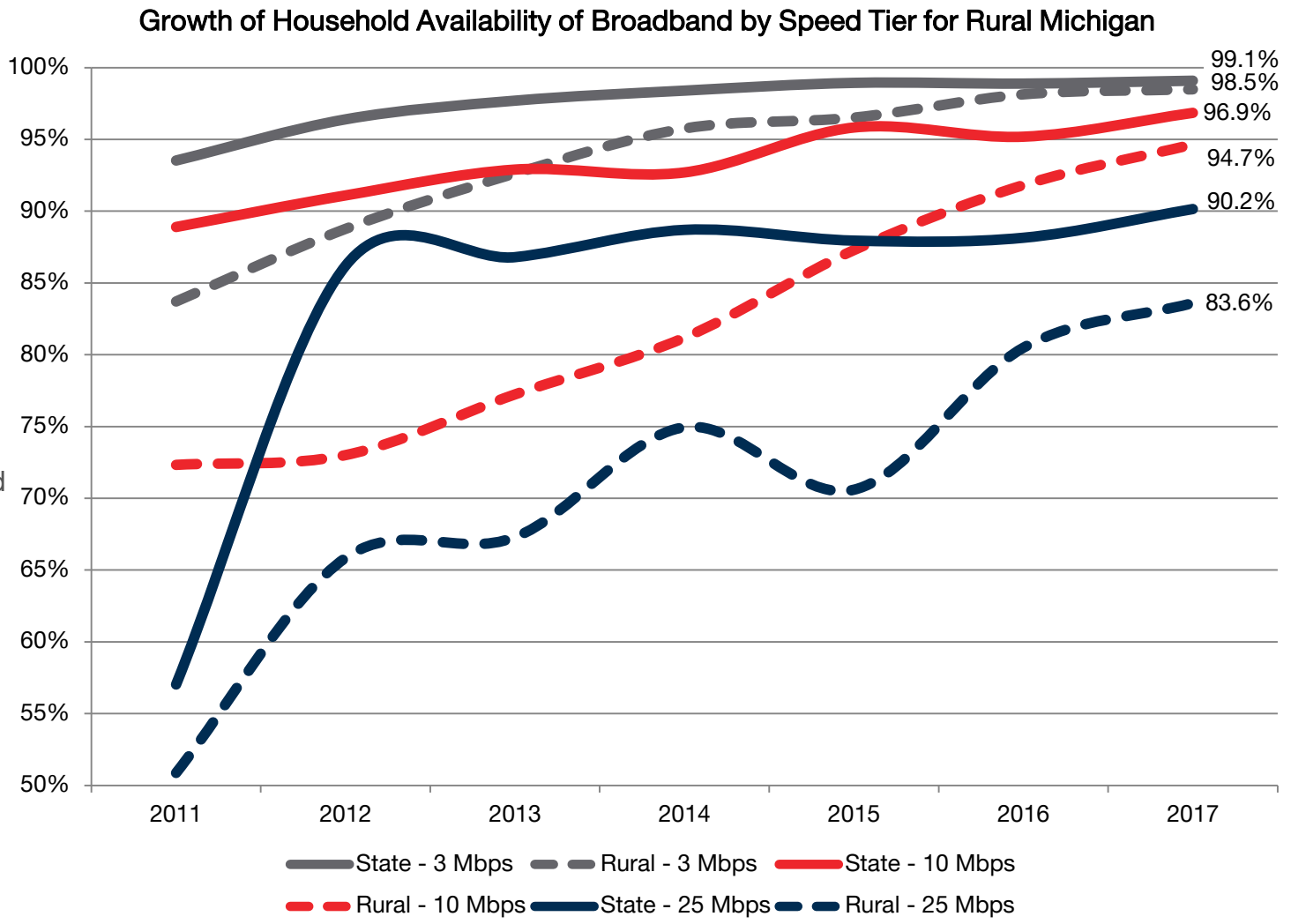
Michigan has experienced expansion in broadband access over the last seven years. However, availability in rural areas has not kept pace with the state as a whole.

Between 2014 and 2017, 2.1M homes received a new 25 Mbps connection. However, only 7.1% of these connections were made to households that did not already have access to a connection of this speed from another provider.

While the chart and data paint a fairly rosy picture, maps of the same information show the breadth of the issue.



UNSERVED HOUSEHOLD DENSITY

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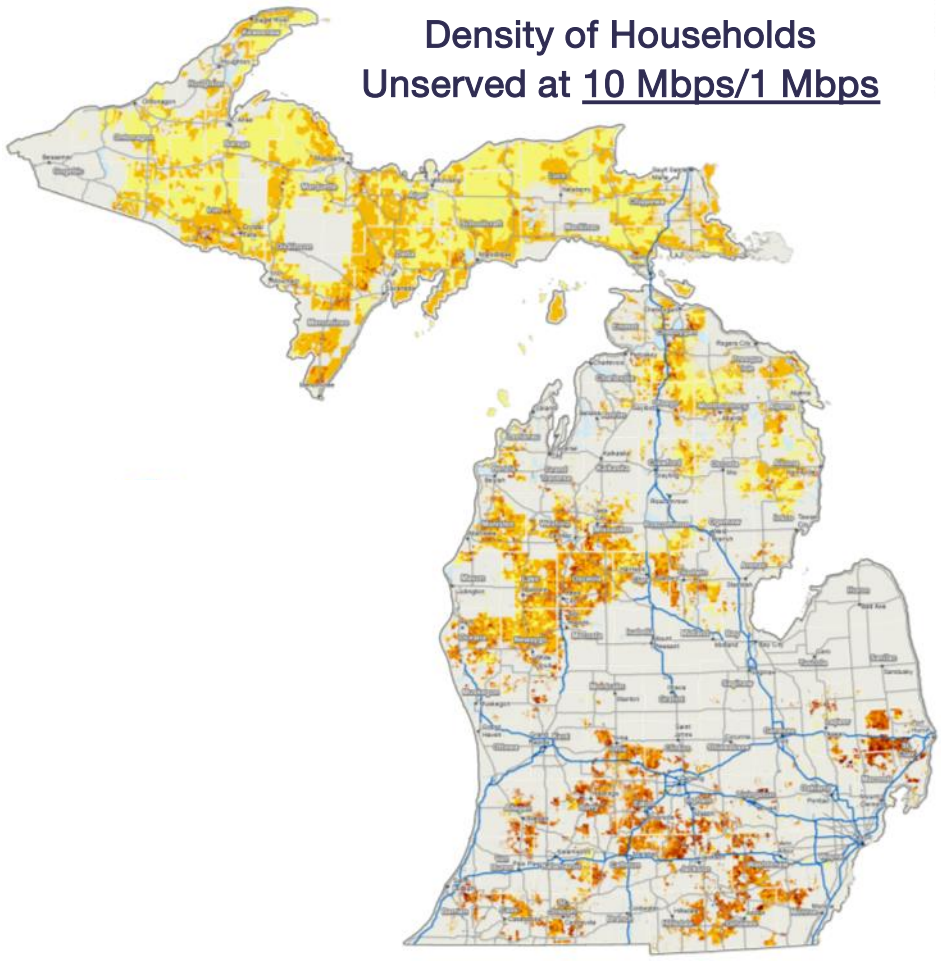

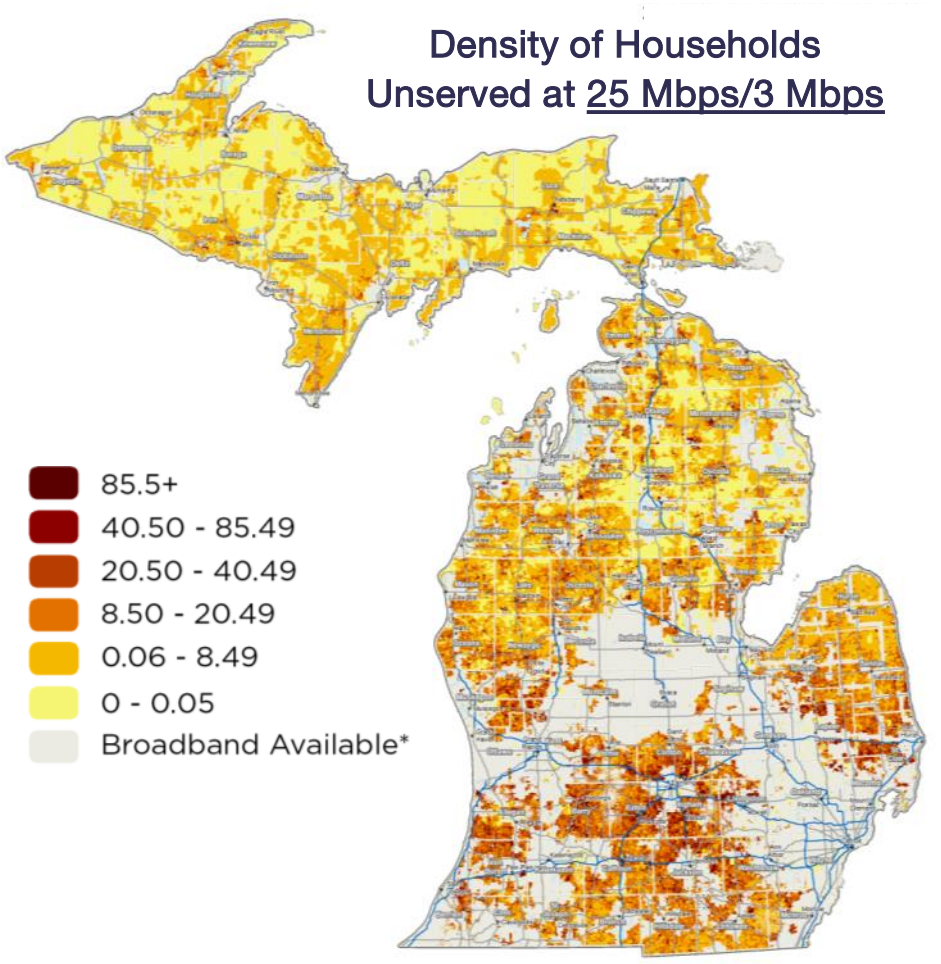

COMPETITION

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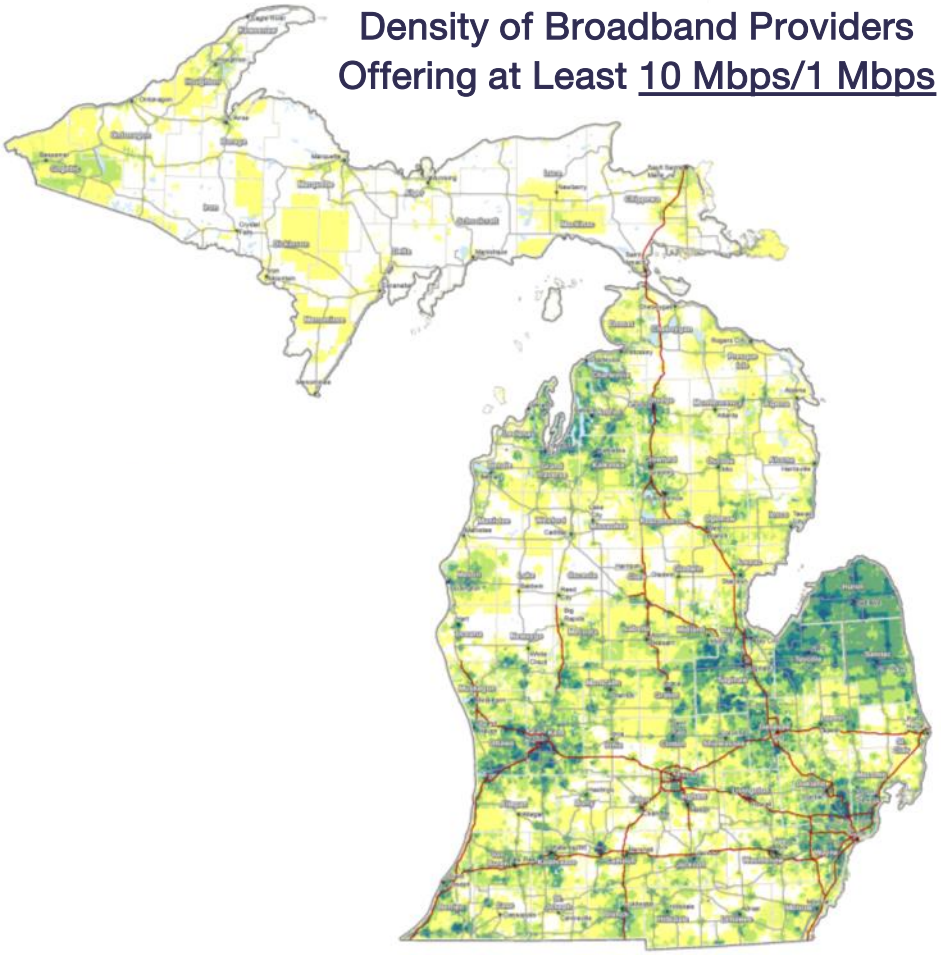
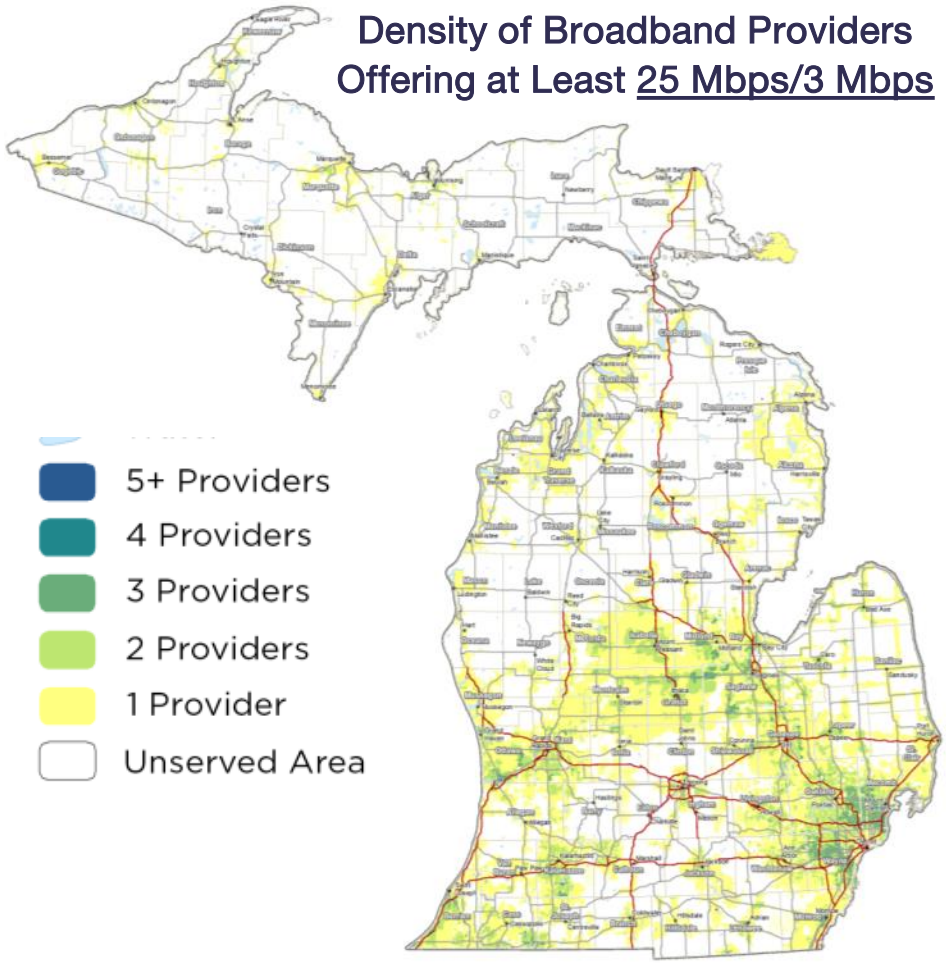
Density of Broadband Providers Offering at Least 10 Mbps/1 Mbps



Density of Broadband Providers Offering at Least 25 Mbps/3 Mbps



CONNECT AMERICA FUND EXPANSION

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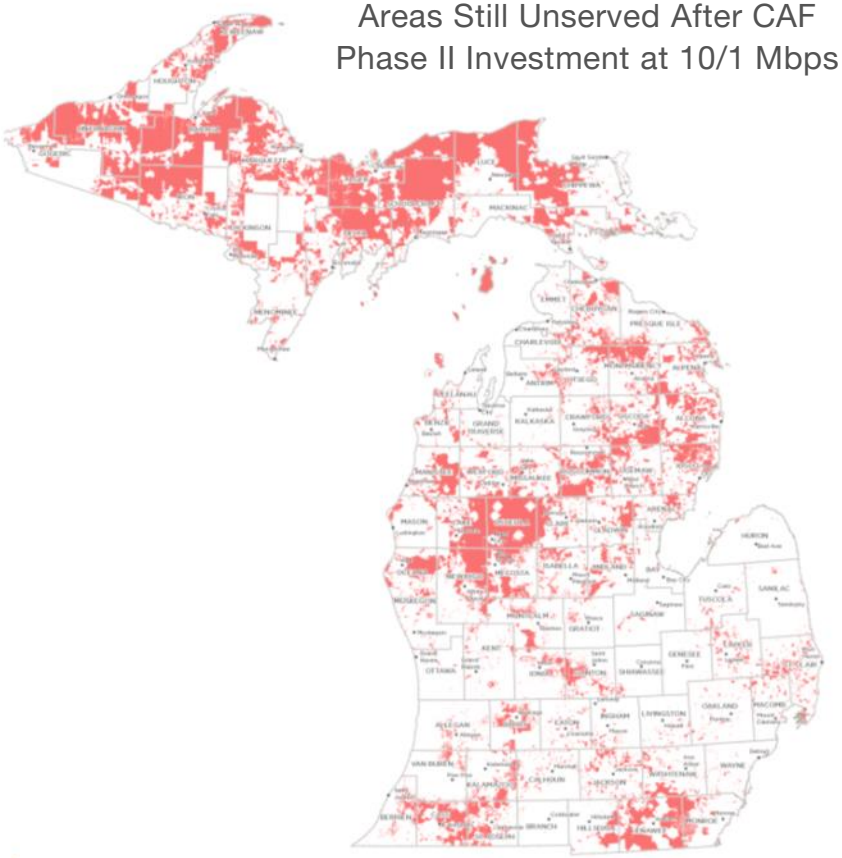
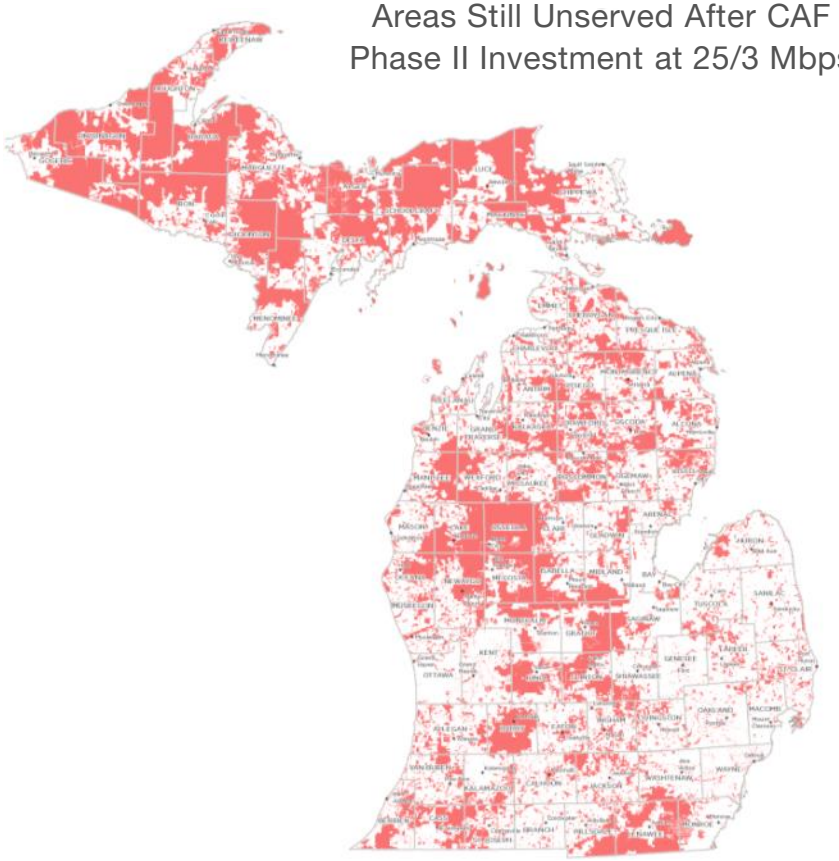
FCC Subsidy and Locations Served	Total	AT&T Michigan	Frontier	CenturyLink	Rate of Return Carriers
Locations to be Served	**207,232**	86,635	68,512	25,230	26,855
Total Subsidy	**$381,920,159**	$178,504,062	$130,403,154	$54,168,186	$18,844,757

Areas Still Unserved After CAF Phase II Investment at 10/1 Mbps



Areas Still Unserved After CAF Phase II Investment at 25/3 Mbps



ADOPTION

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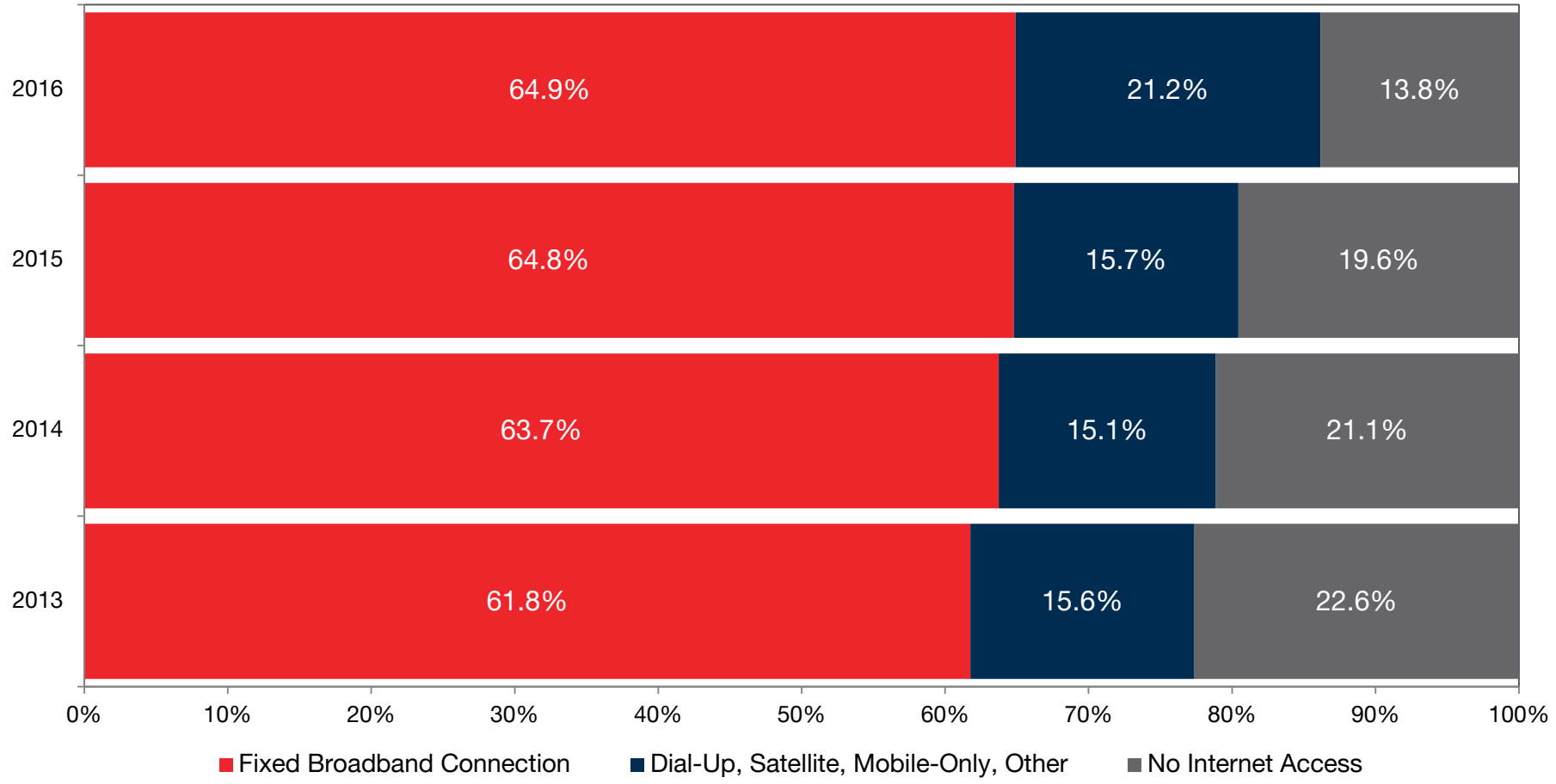
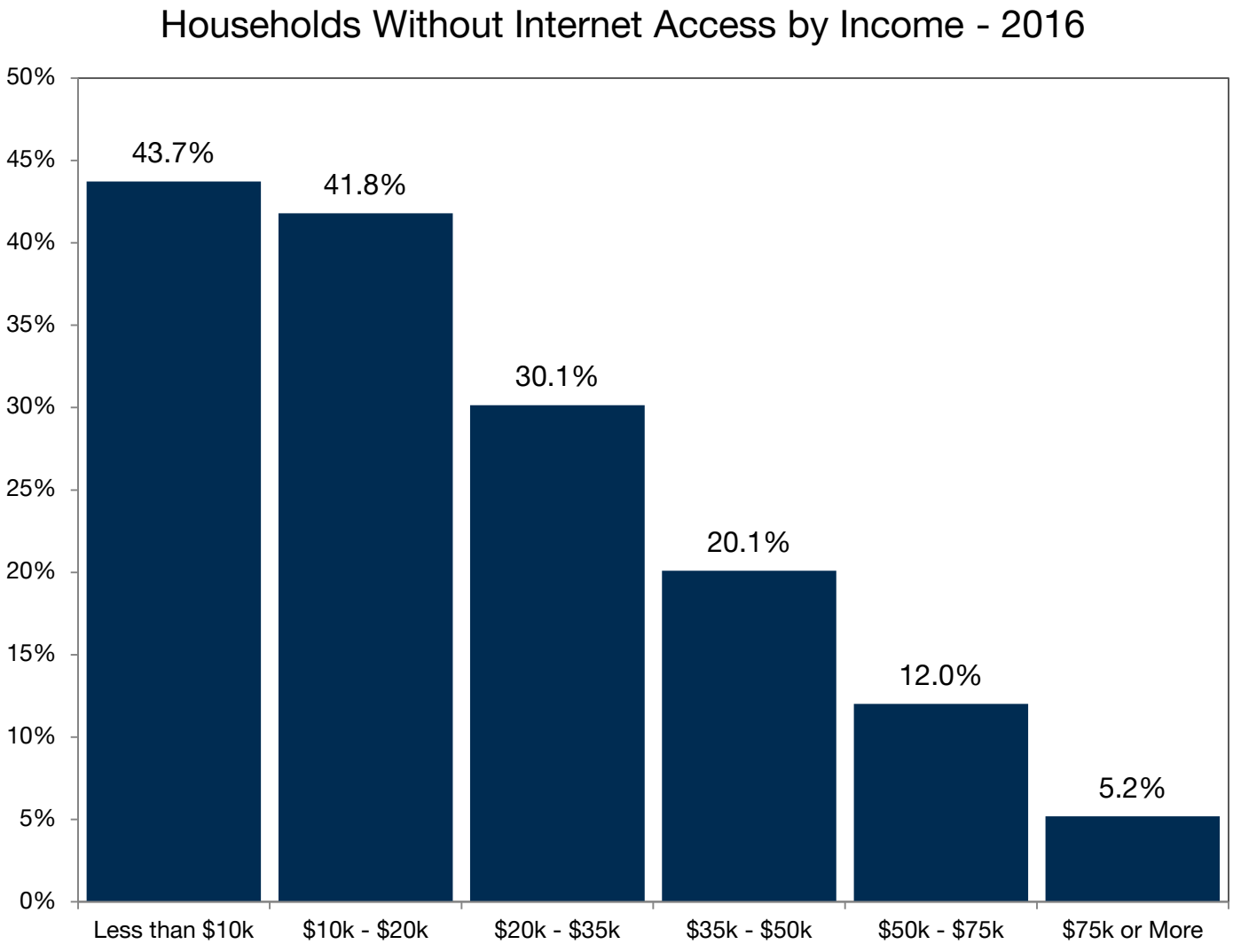
Trends in Michigan Household Internet Adoption



ADOPTION

The lack of a home internet connection disproportionately impacts low income households across the state. According to the FCC's 2018 Urban Rate Survey, nationwide, the average cost per download megabit for residential service is $5.16. This average cost is lower in Michigan at $4.12. Michigan's cost is a bit higher than our neighbors in Ohio, Wisconsin, and Illinois where the average cost per download megabit is $3.64, $3.22, and $2.61, respectively. Residents in Indiana tend to pay more for internet service where the average cost per download megabit is $10.58.



MICHIGAN'S BROADBAND GOALS

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Governor Snyder's 21st Century Infrastructure Commission identified goals, examined gaps, and recommended ways in which the state can work to be a more digitally inclusive state and more fully participate in a digital economy. The report sets goals for both broadband infrastructure (supply) and adoption (demand).

These are aggressive goals that will require bold action to achieve.

Broadband Infrastructure Goals	Current	Gap
All residents and businesses have access to fixed broadband with a speed of 25/3 Mbps by 2020	90.1%	9.9%
All residents and businesses have access to fixed broadband with a download speed of 100 Mbps by 2024	87.5%	12.5%
All areas of the state have access to a mobile broadband connection with a download speed of at least 10 Mbps by 2020	89.2%	10.8%
All areas of the state have access to a mobile broadband connection with a download speed of at least 25 Mbps by 2024	0%	100%
95% of residents have adopted a fixed broadband connection by 2024	64.9%	35.1%
95% of residents have adopted a mobile broadband connection by 2024	58%	37%
95% of businesses have a web presence by 2020	68%	27%

OVERCOMING BARRIERS

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Barriers

- Low density of households results in limited or no return on investment for delivering service
- No federal, state, or local authority to require broadband deployment
- Process of installation can be long, cumbersome, or inconsistent
- Even when available, service can be out of reach for residents for a variety of reasons (e.g. cost, literacy, awareness, etc.)
- Terrain, vegetation, lakes, etc.

Ways to Overcome

- Bring public assets to the table to form partnerships
- Create consistent application, fee, and approval timeline structures across counties and other jurisdictions
- Increase demand
- Lower capital costs and shorten installation time of expansion
- Encourage affordability
- Improve digital literacy and awareness
- Explore and encourage new technologies and new models of expanding into low density areas

21st CENTURY RECOMMENDATIONS

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Recommendations of the 21st Century Infrastructure Commission:

✓Create the Michigan Consortium of Advanced Networks to:

- Policy coordination; streamlining and expediting new infrastructure construction, providing technical assistance to communities and other stakeholders
- Asset management; continue efforts to map and research broadband
- Digital literacy education; expand digital literacy efforts including stakeholder convening and collaboration
- Funding options; provide funding to entice investment for affordable mobile and fixed broadband access. $50M annually was recommended to help fund broadband expansion.

- Identify and work to eliminate state and local regulatory barriers to broadband deployment
- Work with private sector providers to develop public-private partnerships that help to expand infrastructure into areas with low household density

LOCAL ACTION

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Lyndon Township, Washtenaw County

- Township underserved by broadband
- Brought ISPs to the community to explore opportunities for expansion, but ROI wouldn't work
- Passed a bond in August 2017 (by a 2 to 1 margin) to construct fiber network
- Township will then work with ISPs to offer service to residents and businesses on the new network

Clare County

- Small ILEC installing gigabit internet services
- ILEC and community partnered to promote new infrastructure to grow local businesses and attract investment
- Have entered into PPPs in the past to accelerate infrastructure expansion
- Hold annual business technology summit to connect businesses with tech. providers.

Harbor Springs, Emmet County

- Wants to improve the digital literacy of the community and businesses
- Developed their own training program to train groups of all types on the latest technology including social media, tablets, website development, etc.
- Wine and Web (most popular)

Roscommon and Newaygo Counties

- Instead of focusing on attracting new businesses, programs aimed at retaining, growing, and sustaining those already in the community
- MichiganWorks office and local EDCs conducting training programs to get more businesses online with social media and websites

THANK YOU

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