

# THE STATE OF BROADBAND IN WISCONSIN

NOVEMBER, 2018



# BROADBAND STRATEGY

## Four Major Broadband Initiatives:

|              | <u>Investment</u> | <u>EndPoints</u> | <u>Completion</u> |
|--------------|-------------------|------------------|-------------------|
| 1. BadgerNet | \$25M/Yr.         | 1,300+           | 2018              |
| 2. CAF II    | \$570M/5Yr.       | 230,000          | 2020              |
| 3. FirstNet  | \$46B/25Yr.       | 50 States        | 2023              |
| 4. NG9-1-1   | \$30M/Yr.         | 109              | 2020              |



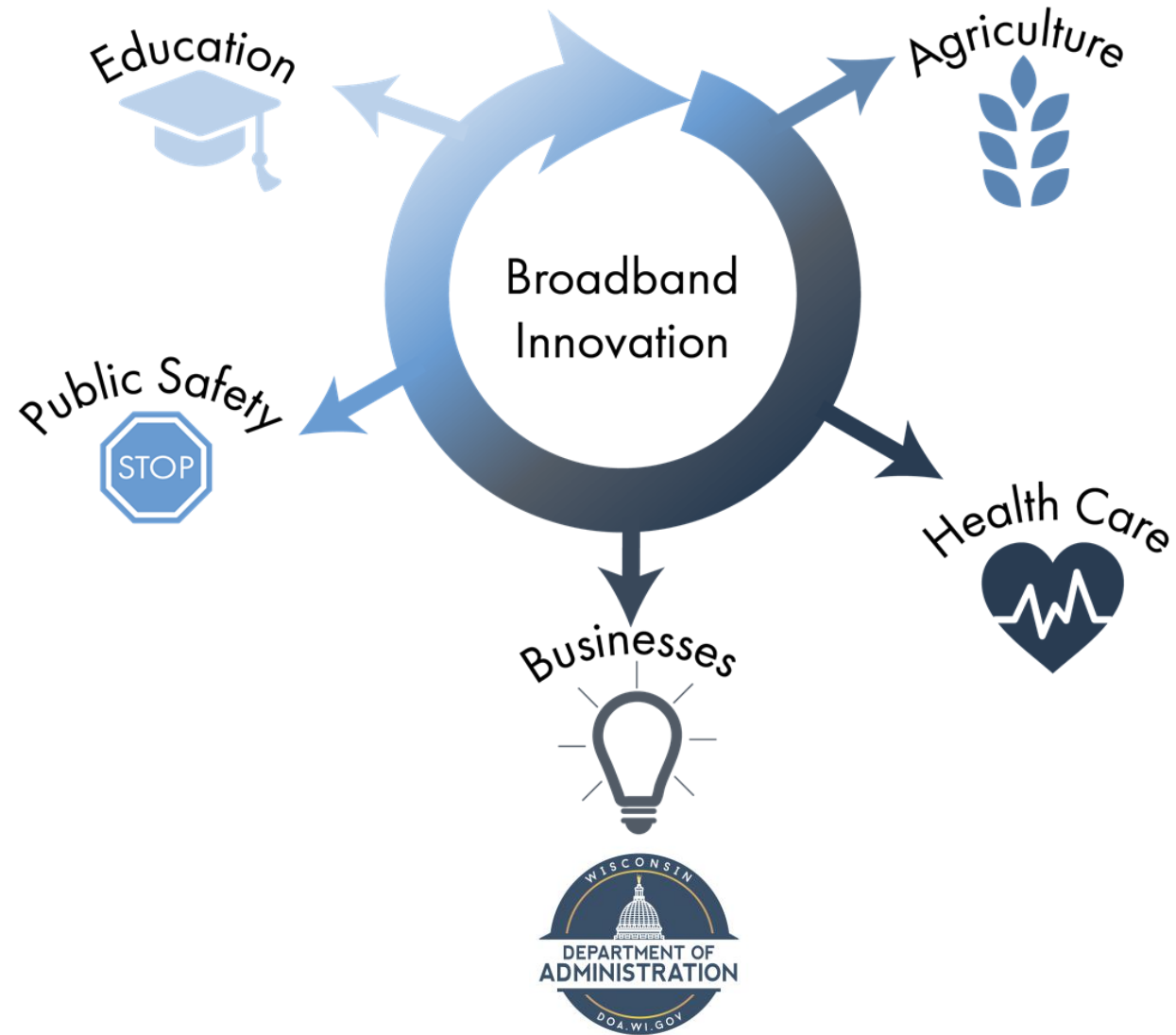
# BROADBAND STRATEGY

- Established:
  - Wisconsin Broadband Stakeholder Working Group - Chaired by PSC Angie Dickison & DOA David Cagigal
- Advanced Cluster Planning Benefits
  - Highlight and map economic development needs by collaborating with WEDC and PSC on business surveys
  - Share one stop business applications (20,000/Yr.)
  - Share existing fiber infrastructure locations for state facilities, schools and libraries
  - Prioritize and leverage commercial, residential, state facilities, schools and libraries needs
  - Reduce speculative CAPEX spend through better planning & smart digging

PROVIDE BROADBAND DEMAND TRANSPARENCY



# Expanded Broadband = Innovation



# EXPANDED BROADBAND = INNOVATION

- Economic Development
  - Broadband enables small business owners and entrepreneurs to stay connected even while on the move
  - Rural businesses particularly benefit – can reach customers who could never visit the stores in person
  - Reliable broadband supports innovative online tools – e.g., Wisconsin One Stop Business Portal
- Education
  - State-of-the-art online courses for all Wisconsin's districts
  - Interactive online courses tailored to students' needs – those who are ahead don't have to slow down, and those who are behind can catch up
  - Connectivity transformative for rural districts – e.g., WiFi on the bus



# EXPANDED BROADBAND = INNOVATION

## ■ Health Care

- Patients and medical professionals no longer limited by geographic barriers
- Incentivize adoption of electronic health records and e-care technologies – can save more than \$700 billion nationwide over the next 15 to 25 years

## ■ Agriculture

- Data can be gathered and transmitted via cellular and broadband networks to the cloud, then back to desktop computers or hand-held mobile devices in the field
- Better management decisions in real time

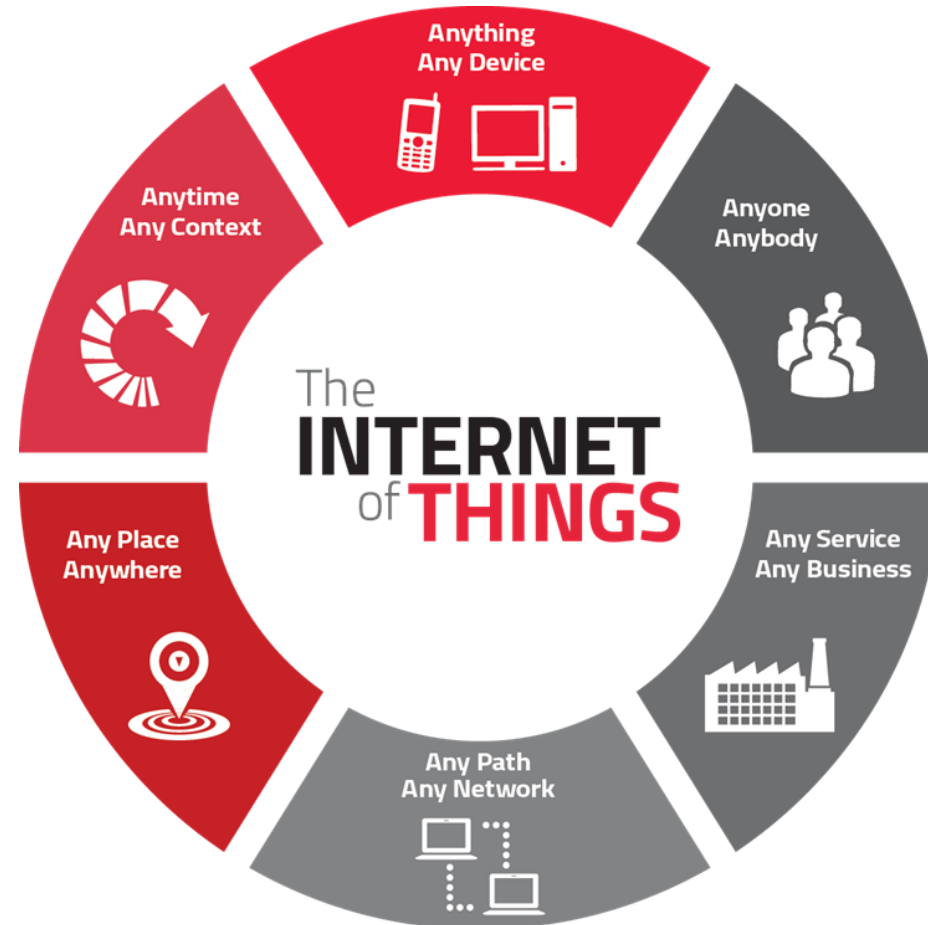


# EXPANDED BROADBAND = INNOVATION

- Public Safety
  - FirstNet – Federal Program with AT&T to build out cell coverage for the states, including Wisconsin. Coverage for Wisconsin will be completed by 2020. Where lack of coverage remains, deployables will be dispatched in states of emergency. Commercial infrastructure will be available to Wisconsinites when there is no state of emergency.
  - NG 9-1-1 – will transform analog to digital service requiring additional infrastructure for 109 Public Safety Answering Points (PSAPs)

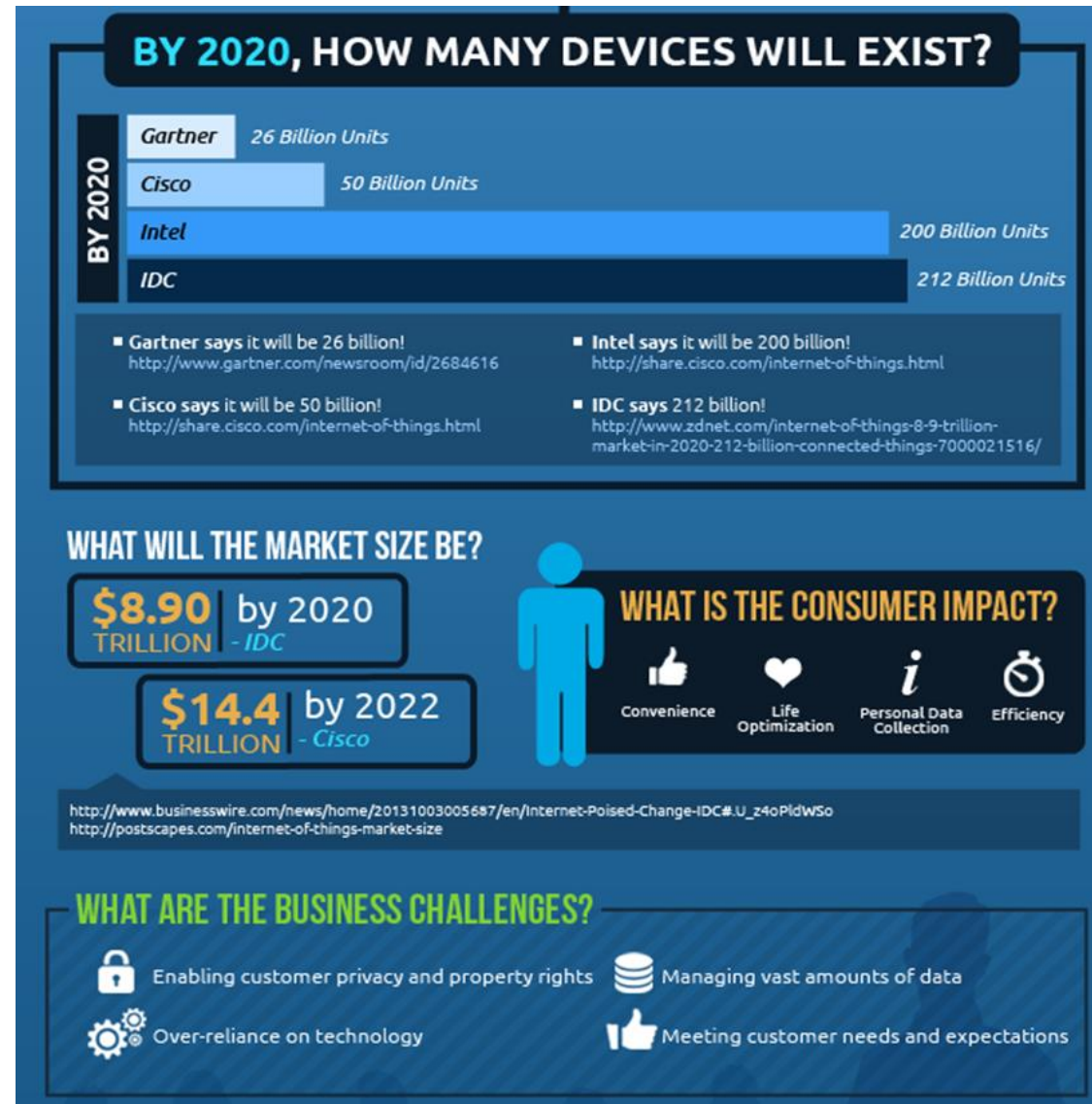


# Smart Strategies





# Smart Strategies



# Smart Strategies

## Home & Building Automation

- Bringing intelligence, convenience and lifestyle



## Smart Energy

- Adding power awareness to products and helping to save energy



## Multimedia

- Wireless audio streaming and advanced remote controls



## Security and Safety

- Improving remote control and home monitoring



## Industrial M2M Communication

- Internet enhanced M2M communication using existing Wi-Fi infrastructure



# SMART STRATEGIES

- Smart Cities Connect – April 1-4, 2019 Denver, CO.
  - <https://spring.smartcitiesconnect.org/>
- Community Engagement
  - Policy, Funding, Commerce, Inclusion, Governance
- Digital Transformation
  - Data, AI, Sensors, IoT, Cyber Security, Privacy, Blockchain
- Smart Mobility
  - Transportation, Autonomous, Public Transit, Ride Share
- Urban Infrastructure
  - Networks, 5G, Utilities, Energy, Grid, Lighting, Water/Waste
- Urban Operations
  - Public Safety, Planning, Emergency Response, Sustainability



# SMART STRATEGIES

- Performance/Convenience
- Cost
- Resilience
- Security



# QUESTIONS

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State of Wisconsin  
Chief Information Officer

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# Expanding Broadband Access in Wisconsin

# Programs and Resources

## Broadband Expansion Grants

In five years,  
**138 grants**  
~\$20 million to  
spur internet  
build-out.



## Broadband Forward!

Get your community  
recognized for being  
ready to expand  
broadband access!

## Telecommuter Forward!

Support and  
promote the  
availability of  
telecommuting  
options!



## Broadband Maps & Planning Tools

**100 + internet  
providers** and **\$870  
million** in federal  
broadband subsidy  
areas are visible  
on our maps.



## Internet Discount Finder

Internet providers offer an array of discounted internet subscriptions based upon a variety of factors such as income, participation in Free and Reduced Cost Lunch programs, housing assistance, veteran status, Medicaid, Supplementary Security Income and more.

The Wisconsin State Broadband Office has developed a tool to help identify available programs based upon location.

Enter your address to search for available programs.

Q search...

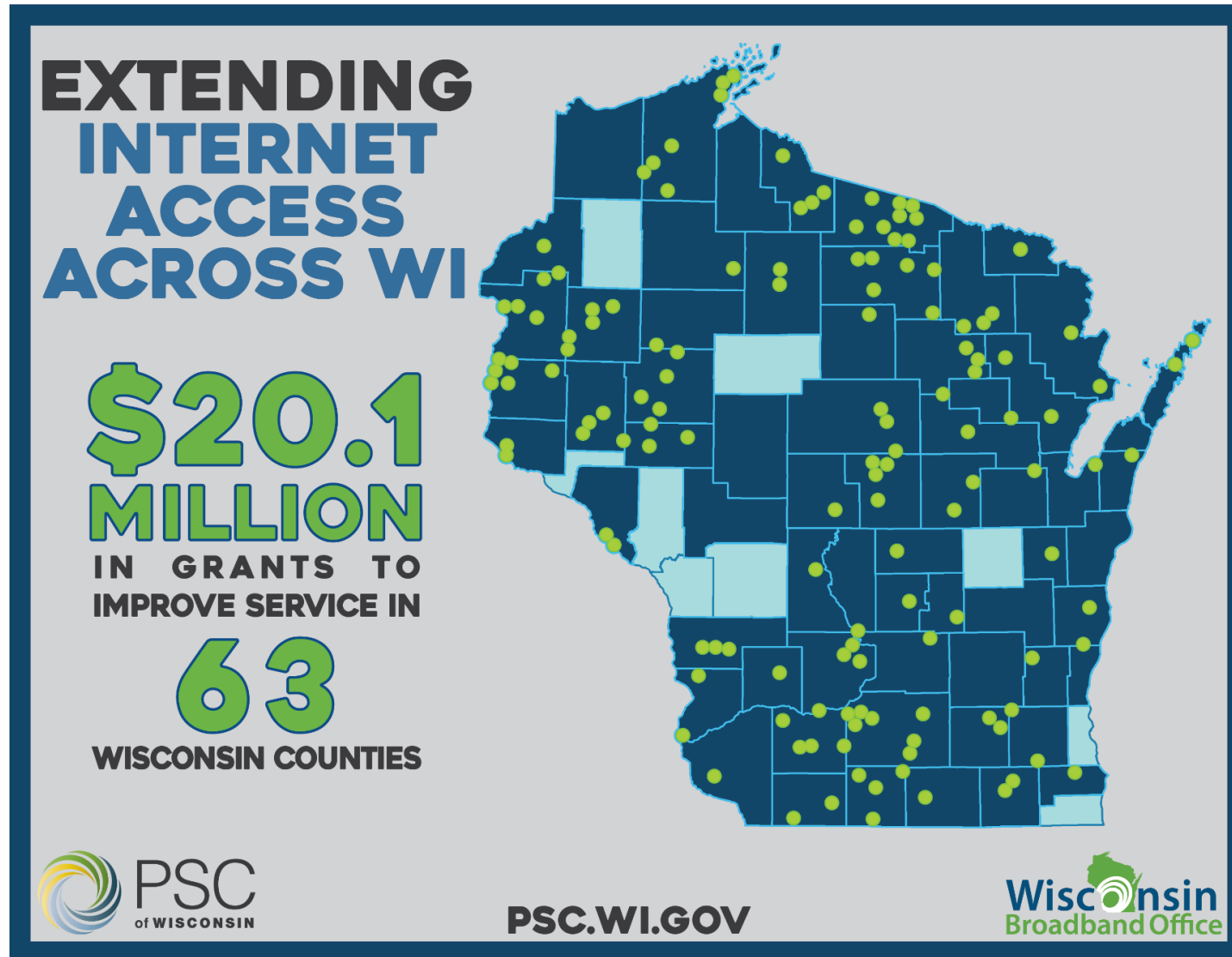
## Download & Print Local Coverage Maps

County and legislative district  
coverage maps are now available!

[Print local coverage maps](#) ▶



# Wisconsin Broadband Expansion Grant Program





## Who may Apply for a Broadband Grant?

To be eligible, an applicant must fall within one of the following three applicant categories:

- An organization operated for profit or not-for-profit, including a cooperative.
- A telecommunications utility.
- A city, village, town, or county that has entered into a partnership with an eligible organization or telecommunications utility.

## What Specific Items of Information Must be Discussed in the Grant Application?

The statute that authorizes the Broadband Grant Program requires that the Commission give priority to applications that include any of seven factors listed in the statute:

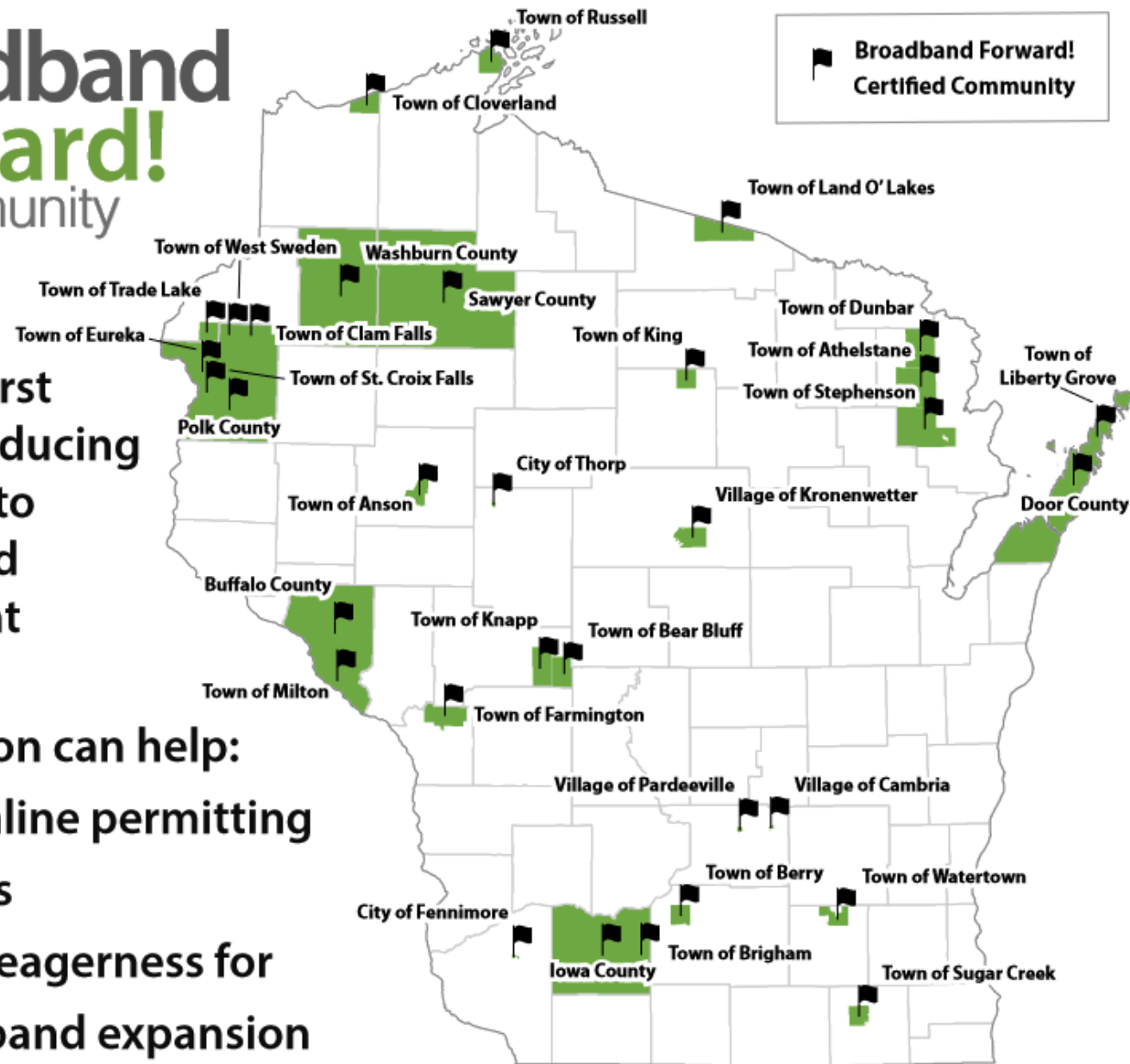
- Matching funds
- Existing broadband services
- Scalability
- Will not delay broadband service in adjacent areas
- Public/private partnerships
- Project impact
- Economic impact

To date, the Broadband Grant program has been quite competitive. The Commission has received many more applications than it can fund. The discussion of priority factors has been the key element of the application that the Commission has used to decide which apps to fund.

Take the first  
steps in reducing  
obstacles to  
broadband  
investment

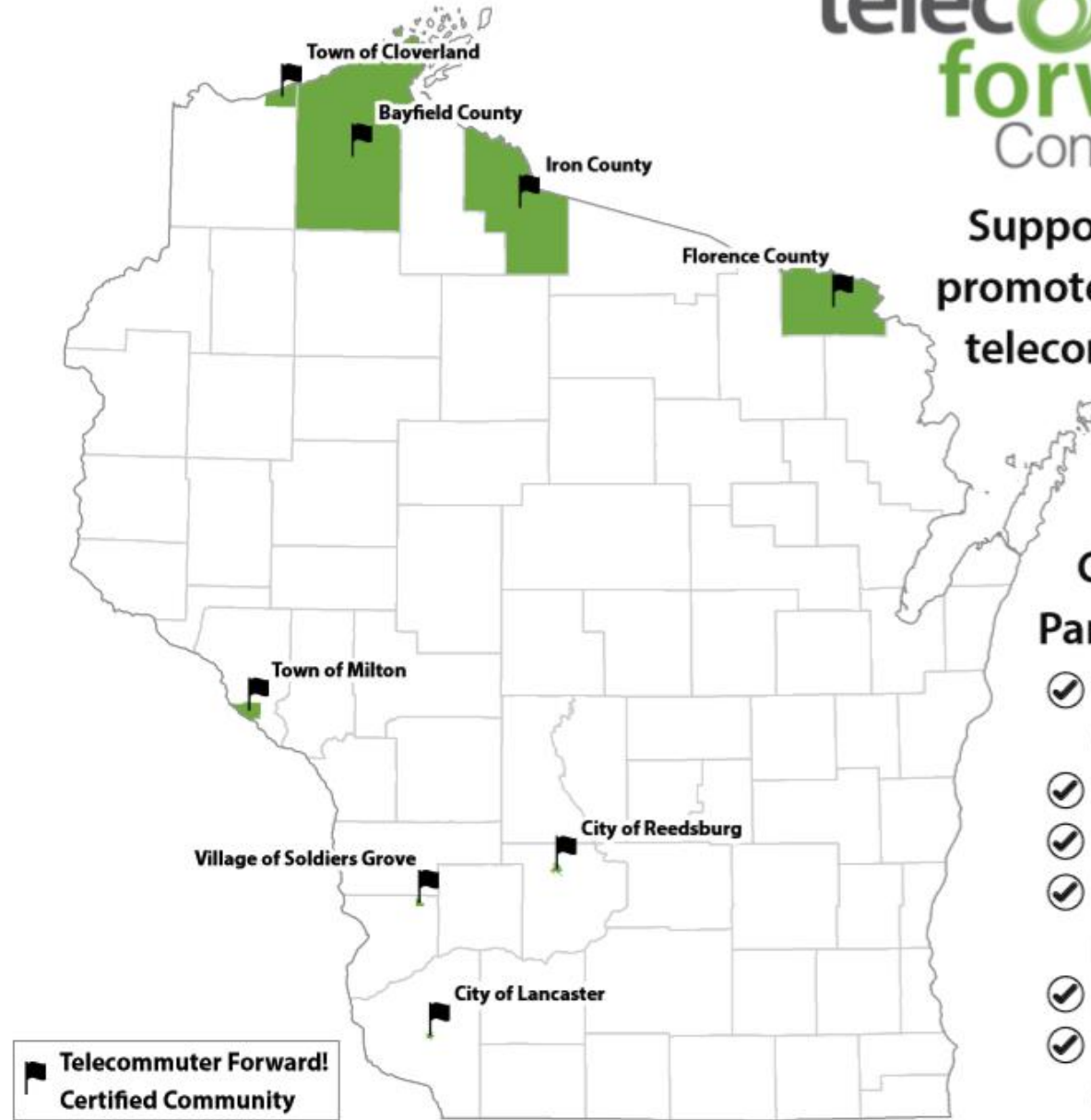
Certification can help:

- ✓ Streamline permitting process
- ✓ Signal eagerness for broadband expansion



# telecommuter forward! Community

Support and commit to  
promote the availability of  
telecommuting options



## Coordination and Partnership Between:

- ✓ Wisconsin Broadband Office
- ✓ Broadband providers
- ✓ Realtors
- ✓ Economic development professionals
- ✓ Employers + employees
- ✓ Other telecommuting stakeholders

## COMMUTE TIME – ZERO. INSPIRATION FROM NATURAL SURROUNDINGS – PRICELESS!

Bayfield County is proud to be the first  
**Telecommuter Forward! Certified  
Community** in the United States.



Telecommuting made easy with high bandwidth fiber infrastructure available throughout the area.

More companies are gravitating towards telecommuting to promote work/life balance. Industry leaders like Deloitte, IBM and Intel hires for several positions across departments, which require telecommuting. Critics have identified countless benefits of telecommuting.

These are some of our favorites:

- Fewer interruptions
- Better time management
- Greater flexibility
- More time for work
- Reduced down time
- Greater efficiency
- Better balance
- Increased confidence
- Avoid stress
- Save time and money

[VIEW BROADBAND CONNECTIVITY](#)



### Telecommuting Employers

- ✓ Forbes top 100 companies for remote jobs
- ✓ WSBTV top 30 companies hiring for work from anywhere
- ✓ Benzinga top 40 companies hiring for flexible jobs



### CAF-II Funding in Wisconsin

| Price - Cap Carrier | 6-Year Total Funding / Subsidy | Number of Households & Businesses |
|---------------------|--------------------------------|-----------------------------------|
| AT&T                | \$ 54 M                        | 24,513                            |
| CenturyLink         | \$ 332 M                       | 129,203                           |
| Frontier            | \$ 186 M                       | 76,735                            |
| <b>CAF-II Total</b> | <b>\$ 572 M</b>                | <b>230,451</b>                    |

### A-CAM Funding in Wisconsin

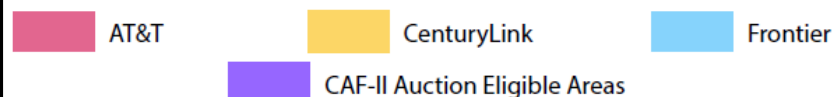
| Rate of Return Carriers | 10-Year Total Funding / Subsidy | Number of Households & Businesses |
|-------------------------|---------------------------------|-----------------------------------|
| <b>A-CAM Total</b>      | <b>\$ 300 M</b>                 | <b>53,747</b>                     |

### CAF-II Auction Funding in Wisconsin

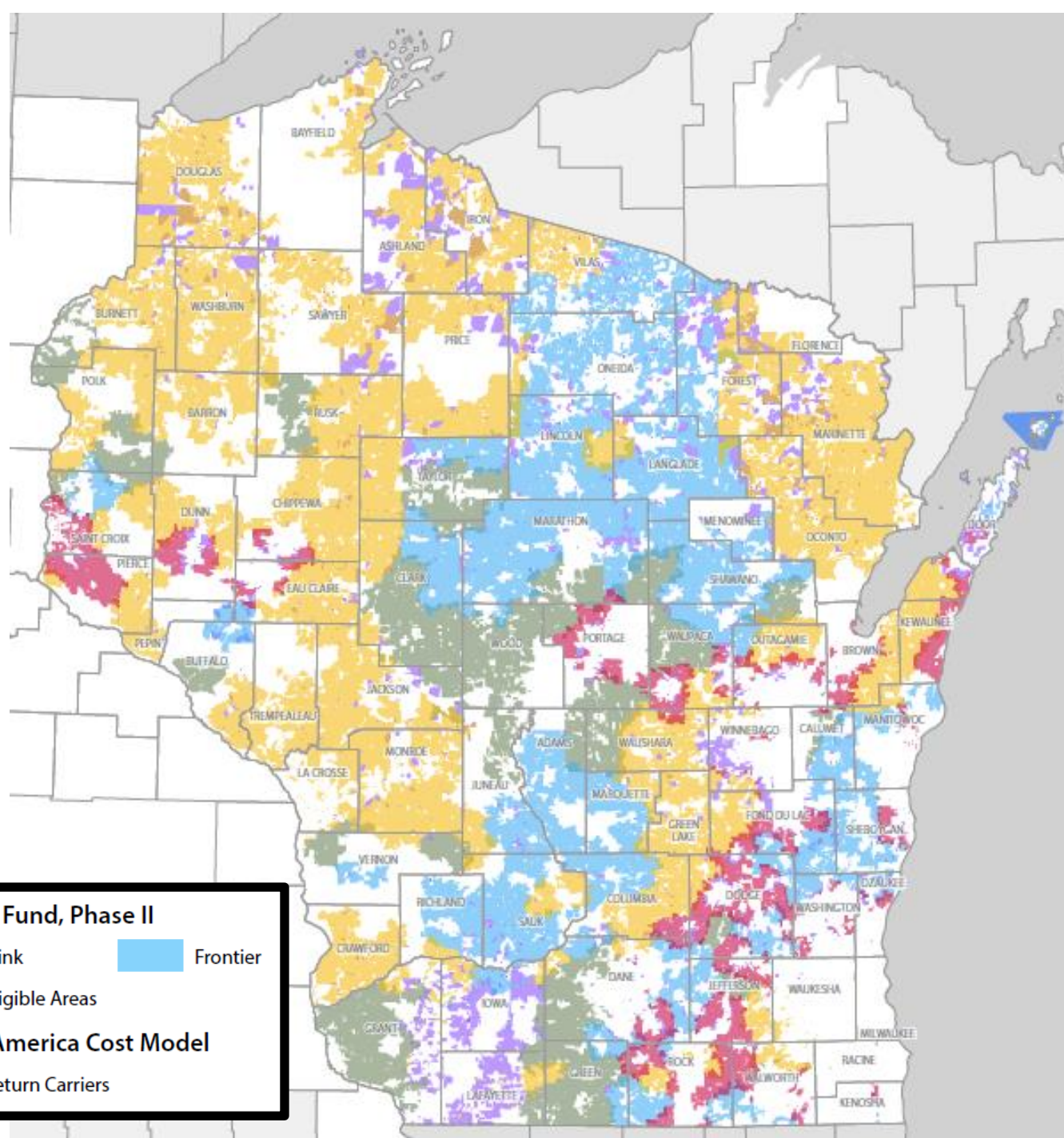
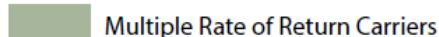
All figures are for eligible areas and are subject to changes and corrections.

| Potential Carriers          | Total Annual Reserve Price | Number of Households & Businesses |
|-----------------------------|----------------------------|-----------------------------------|
| <b>CAF-II Auction Total</b> | <b>\$ 11.28 M</b>          | <b>17,943</b>                     |

#### CAF-II - Connect America Fund, Phase II

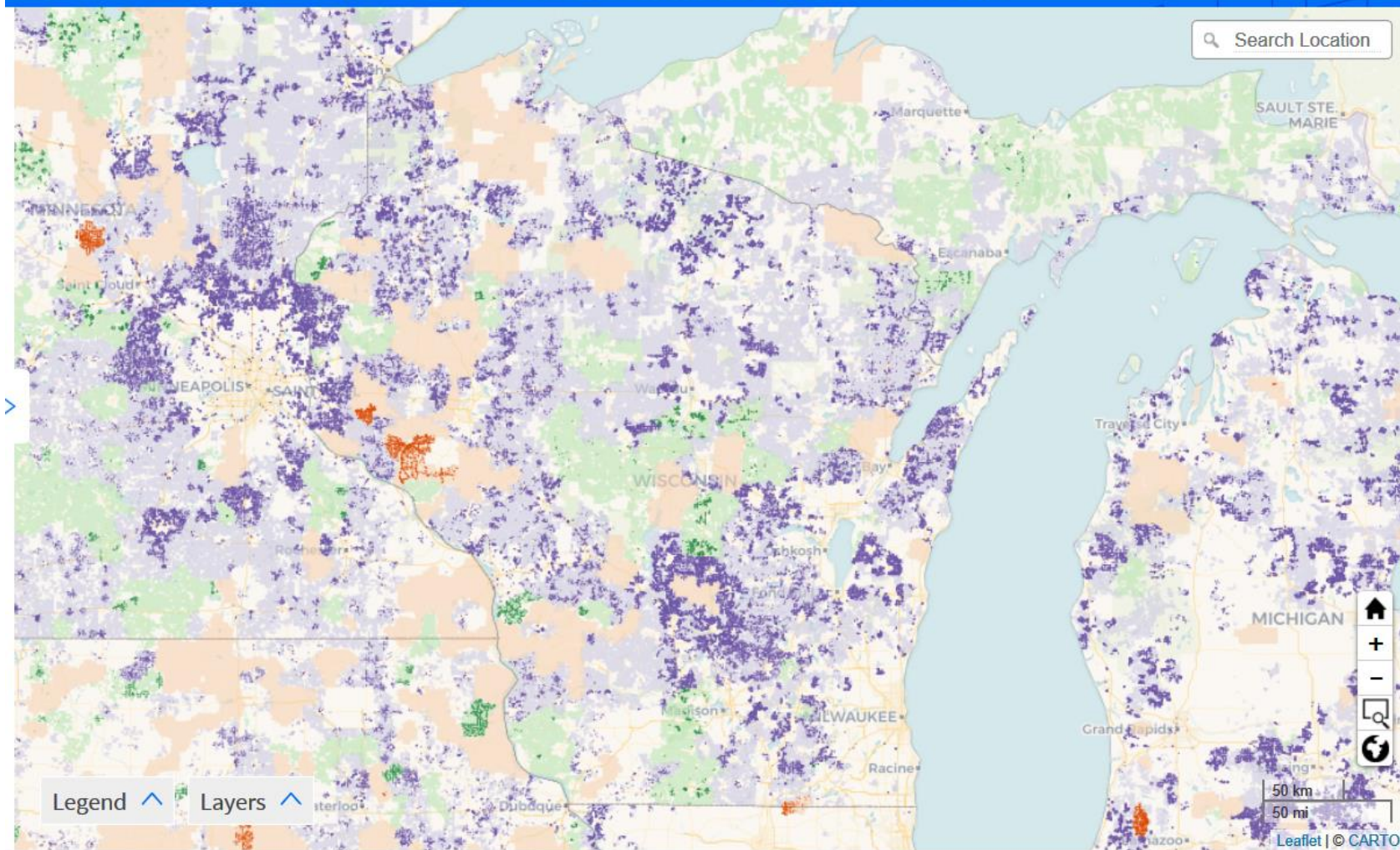


#### A-CAM - Alternative Connect America Cost Model





# Connect America Fund Broadband Map



Fund

All Funds

State

All States

Company Name

Search Company Name

Speed (Applicable only to Local Data)

All Speeds

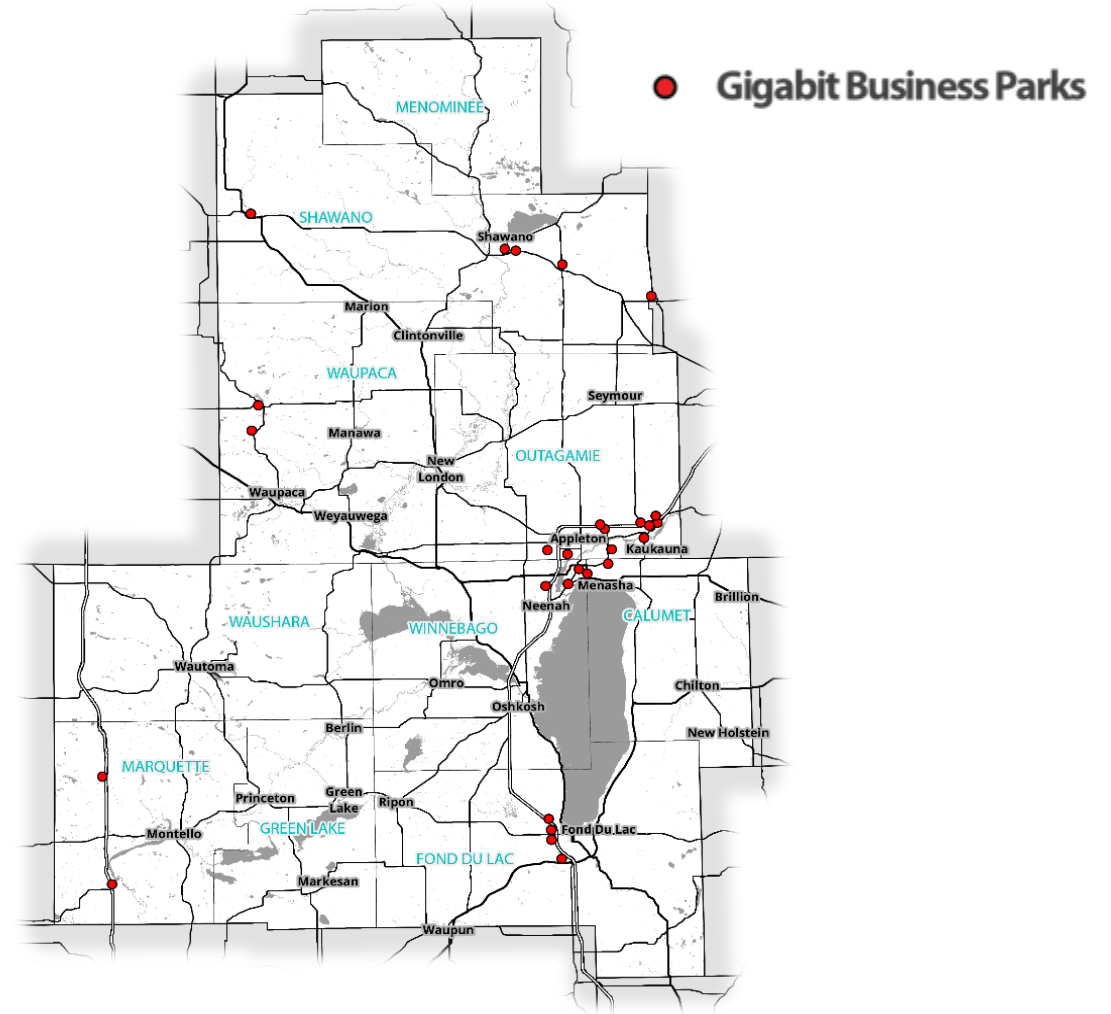
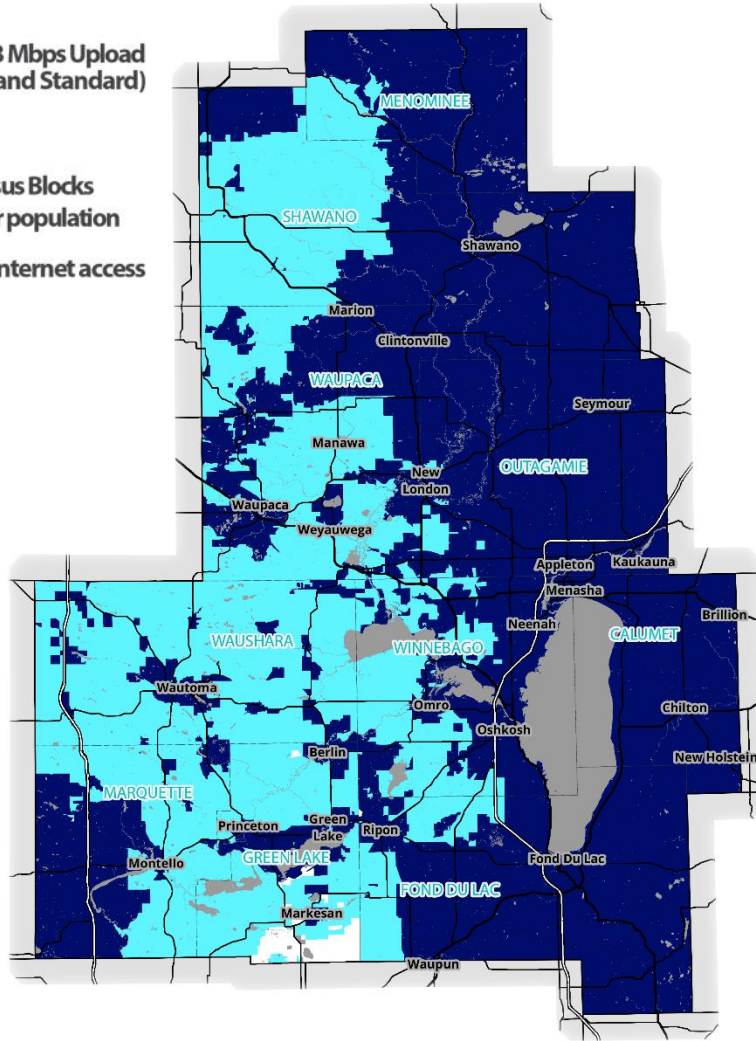
Deployment Year

All Years

[Reset All](#)

# Broadband Coverage in the ECWRPC Area

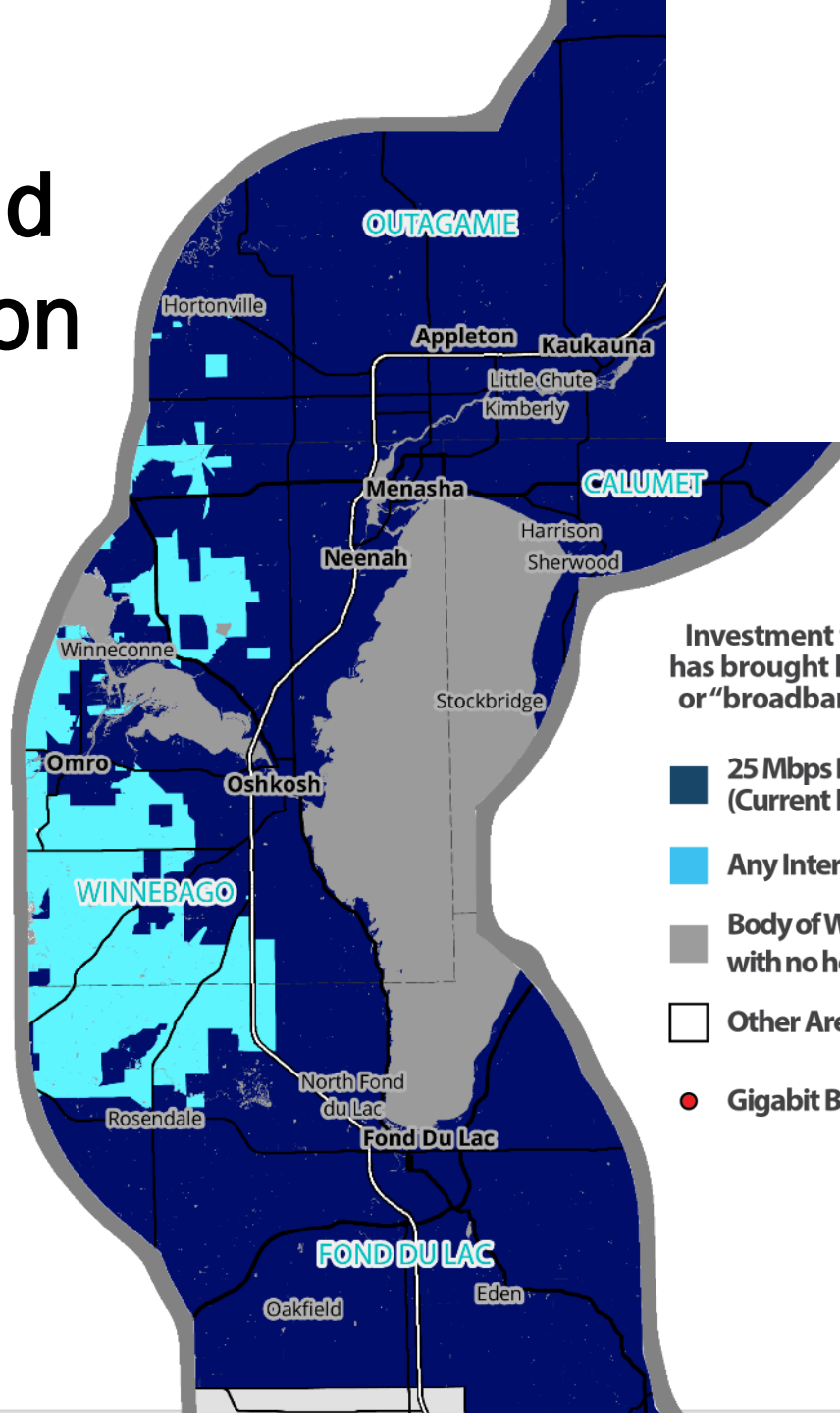
- 25 Mbps Download / 3 Mbps Upload  
(Current FCC Broadband Standard)
- Any Internet Access
- Body of Water or Census Blocks  
with no households or population
- Other Areas with no internet access





# Broadband Coverage on the I-41 Corridor

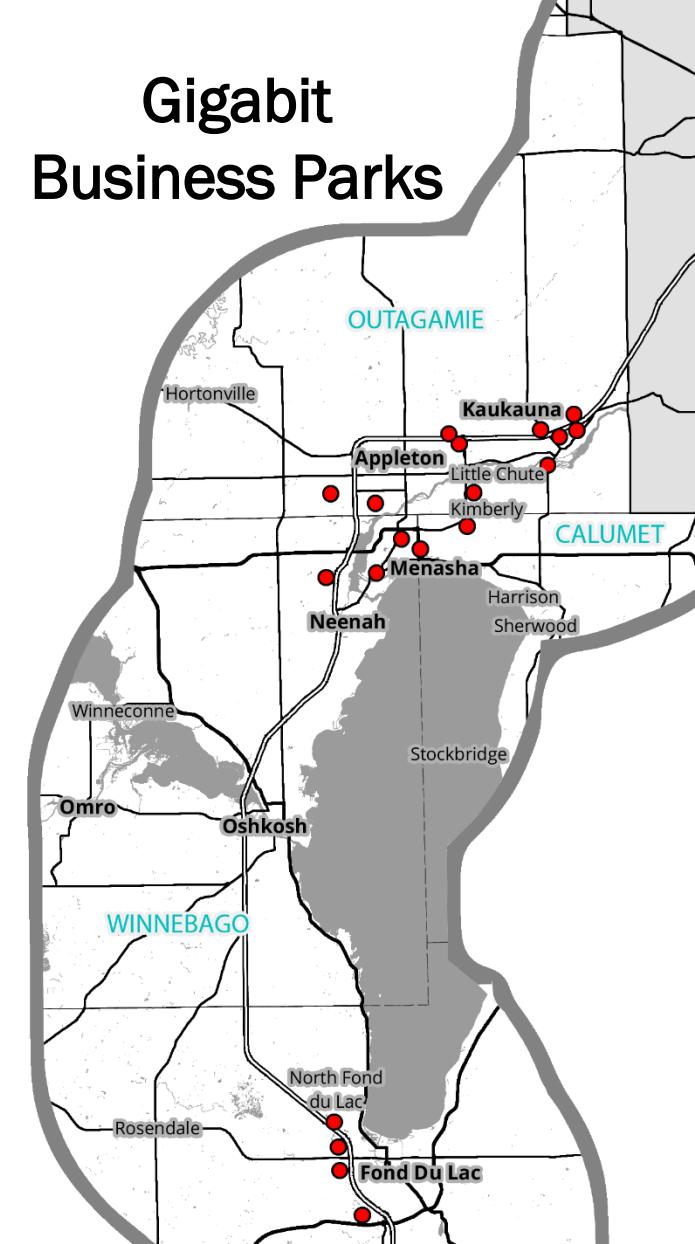
2017 Coverage



Investment from internet providers has brought high-speed connectivity, or "broadband" to much of the state.

- 25 Mbps Download / 3 Mbps Upload (Current FCC Broadband Standard)
- Any Internet Access
- Body of Water or Census Blocks with no households or population
- Other Areas with no internet access
- Gigabit Business Parks

## Gigabit Business Parks



# Mapping Resources

All WBO Maps: <https://psc.wi.gov/Pages/Programs/BroadbandMaps.aspx>

Wisconsin Broadband Map

- <http://maps.psc.wi.gov/WisconsinBroadbandMap/>

View and Print Internet Coverage PDF Maps (County, Assembly, Senate, U.S. Congress)

- <https://psc.wi.gov/Pages/BroadbandMaps.aspx>

Wisconsin Broadband Expansion Grant Recipients

- <https://maps.psc.wi.gov/ExpansionGrantAwardees/>

FCC CAFII Map

- <https://data.usac.org/publicreports/caf-map/>
- <https://www.usac.org/about/tools/contact/default.aspx>
- <https://www.fcc.gov/consumers/guides/connect-america-fund-phase-ii-faqs>

# Contact Information

Questions related to the administration of the broadband grant program may be addressed to the following staff:

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