Rural Broadband Tools and Resources in the NCR

Broadband availability and access continue to be a problem in the United States, especially among rural and tribal communities. Researchers at Michigan State University created a tract-level web application of provision levels in Census tracts across the contiguous United States over a period of several years. Researchers from the Purdue Center for Regional Development will explain the Digital Divide Index (DDI), which is a descriptive tool at the Census tract level (and counties, too) to help community stakeholders better understand their digital divide landscape. Both resources can help users better understand local broadband data.

WEBINAR **February 27, 2023** **2:00 PM - 3:00 PM ET**

ncrcrd

NORTH CENTRAL
REGIONAL CENTER
FOR RURAL DEVELOPMENT

Be Prepared, NCR: A Community Planning Approach to Green Infrastructure, Hazard Mitigation, & Flooding

Kara Salazar and Carrie McKillip will present a new program funded through the Extension Disaster Education Network (EDEN) which is designed to support community-based updates of hazard mitigation and resilience planning with an emphasis on green infrastructure. Ken Hellevang will present being prepared for flooding, which includes knowing your roles, having educational resources prepared, and following forecasts.

WEBINAR **MARCH 7, 2023** **1:00 PM - 2:00 PM (ET)**

ncrcrd
NORTH CENTRAL REGIONAL CENTER FOR RURAL DEVELOPMENT

EDEN
EXTENSION DISASTER EDUCATION NETWORK

PURDUE UNIVERSITY

Center for Regional Development

Rural Broadband Tools & Resources

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Director

February 2022

Increasing Benefits

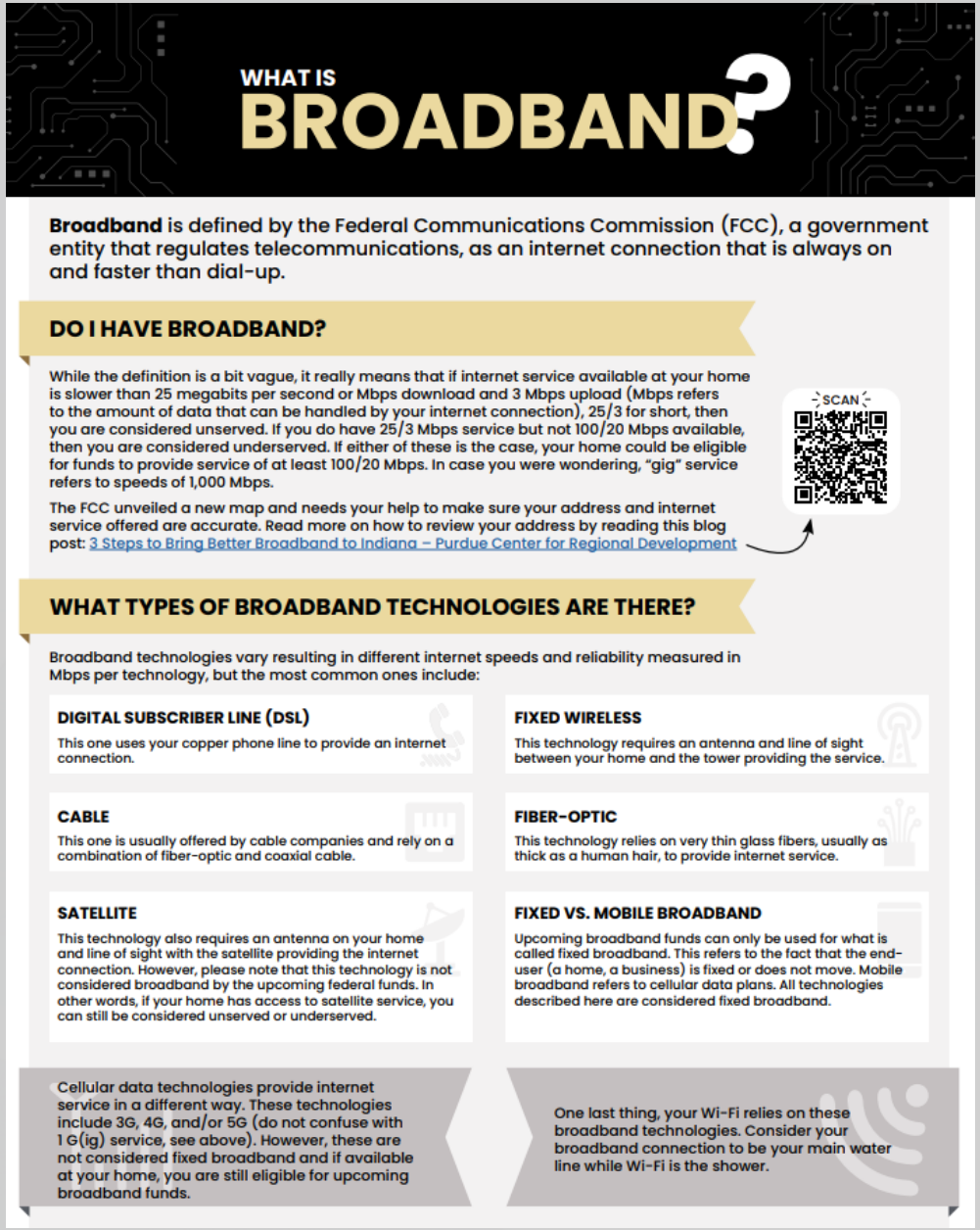
- Broadband DOES matter for several social & economic outcomes!
  - Household income
  - Employment levels
  - Firm attraction
  - Farm profits
  - Civic engagement
  - Increased housing values
  - Job productivity
  - Lower COVID mortality

- Adoption is (arguably) more important than simple availability

PCRD's Digital Inclusion Toolbox

- Educational/training
- Planning
- Resources
  - What-is-Broadband-A-Quick-Overview.pdf (purdue.edu)
- Technical assistance

- Visit: https://pcrd.purdue.edu/engagement/digital-inclusion



WHAT IS
BROADBAND?

Broadband is defined by the Federal Communications Commission (FCC), a government entity that regulates telecommunications, as an internet connection that is always on and faster than dial-up.

DO I HAVE BROADBAND?

While the definition is a bit vague, it really means that if internet service available at your home is slower than 25 megabits per second or Mbps download and 3 Mbps upload (Mbps refers to the amount of data that can be handled by your internet connection), 25/3 for short, then you are considered unserved. If you do have 25/3 Mbps service but not 100/20 Mbps available, then you are considered underserved. If either of these is the case, your home could be eligible for funds to provide service of at least 100/20 Mbps. In case you were wondering, "gig" service refers to speeds of 1,000 Mbps.

The FCC unveiled a new map and needs your help to make sure your address and internet service offered are accurate. Read more on how to review your address by reading this blog post: 3 Steps to Bring Better Broadband to Indiana – Purdue Center for Regional Development

SCAN

WHAT TYPES OF BROADBAND TECHNOLOGIES ARE THERE?

Broadband technologies vary resulting in different internet speeds and reliability measured in Mbps per technology, but the most common ones include:

DIGITAL SUBSCRIBER LINE (DSL)
This one uses your copper phone line to provide an internet connection.

FIXED WIRELESS
This technology requires an antenna and line of sight between your home and the tower providing the service.

CABLE
This one is usually offered by cable companies and rely on a combination of fiber-optic and coaxial cable.

FIBER-OPTIC
This technology relies on very thin glass fibers, usually as thick as a human hair, to provide internet service.

SATELLITE
This technology also requires an antenna on your home and line of sight with the satellite providing the internet connection. However, please note that this technology is not considered broadband by the upcoming federal funds. In other words, if your home has access to satellite service, you can still be considered unserved or underserved.

FIXED VS. MOBILE BROADBAND
Upcoming broadband funds can only be used for what is called fixed broadband. This refers to the fact that the end-user (a home, a business) is fixed or does not move. Mobile broadband refers to cellular data plans. All technologies described here are considered fixed broadband.

Cellular data technologies provide internet service in a different way. These technologies include 3G, 4G, and/or 5G (do not confuse with 1 G(ig) service, see above). However, these are not considered fixed broadband and if available at your home, you are still eligible for upcoming broadband funds.

One last thing, your Wi-Fi relies on these broadband technologies. Consider your broadband connection to be your main water line while Wi-Fi is the shower.

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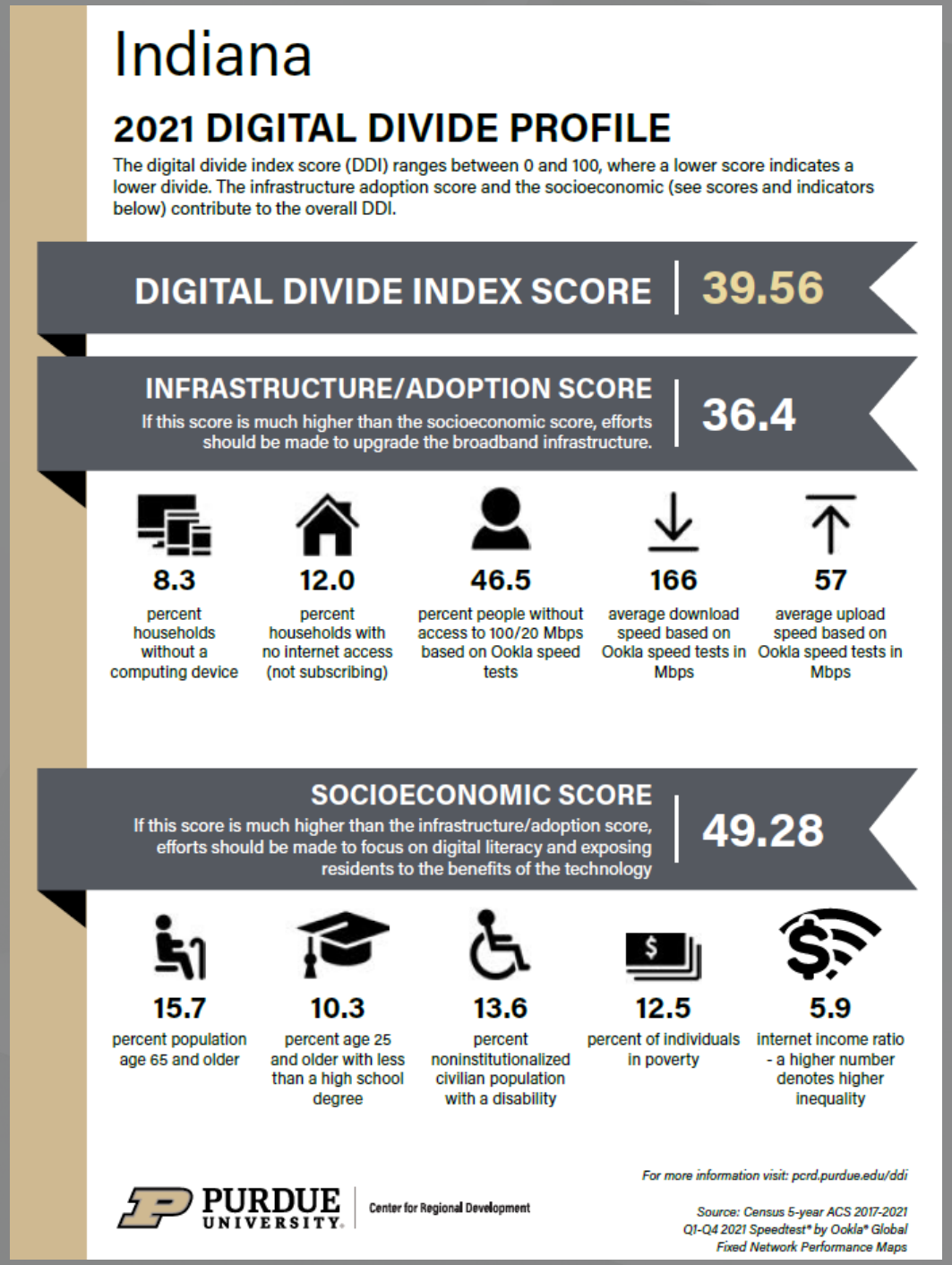
2021 Digital Divide Index

- Ten indicators
- Descriptive tool
- Increase awareness
- Jumpstart conversations

- Infrastructure/Adoption (INFA)Score
- Socioeconomic (SE) Score
- Digital Divide Index (DDI) Score

- Scores range from 0 to 100; higher score, higher the divide



Indiana

2021 DIGITAL DIVIDE PROFILE

The digital divide index score (DDI) ranges between 0 and 100, where a lower score indicates a lower divide. The infrastructure adoption score and the socioeconomic (see scores and indicators below) contribute to the overall DDI.

DIGITAL DIVIDE INDEX SCORE | **39.56**

INFRASTRUCTURE/ADOPTION SCORE | **36.4**

If this score is much higher than the socioeconomic score, efforts should be made to upgrade the broadband infrastructure.

8.3	12.0	46.5	166	57
percent households without a computing device	percent households with no internet access (not subscribing)	percent people without access to 100/20 Mbps based on Ookla speed tests	average download speed based on Ookla speed tests in Mbps	average upload speed based on Ookla speed tests in Mbps

SOCIOECONOMIC SCORE | **49.28**

If this score is much higher than the infrastructure/adoption score, efforts should be made to focus on digital literacy and exposing residents to the benefits of the technology

15.7	10.3	13.6	12.5	5.9
percent population age 65 and older	percent age 25 and older with less than a high school degree	percent noninstitutionalized civilian population with a disability	percent of individuals in poverty	internet income ratio - a higher number denotes higher inequality

For more information visit: pcrd.purdue.edu/ddi

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Source: Census 5-year ACS 2017-2021 Q1-Q4 2021 Speedtest® by Ookla® Global Fixed Network Performance Maps