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## Memo

To: State broadband offices

From: Jake Varn, The Pew Charitable Trusts

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Subject: Data strategies for state broadband expansion programs

The following memo contains information on why a comprehensive data strategy is critical to ensuring that states' broadband expansion programs are effective and in compliance with new federal funding requirements. It highlights the keys to creating data strategy and communicating a broadband program's progress, as well as common data sources and processes for data management.

### Data Strategies for Broadband Offices

Policies and programs to expand access to high-speed internet services, support affordability and digital literacy, and improve educational and economic opportunities through broadband access require data-driven decision-making at all stages of the process. For state broadband offices, having a comprehensive data strategy that spans from collection to impact evaluation is vital to implementing effective funding programs and planning for the future.

#### Collecting and Using Data

Data is an investment that helps a program make an impact where it is needed most. Collection and analysis of data bring credibility to the program and help better "tell the story" to generate support, build relationships with partners, and compete for additional funding opportunities.

Data collection processes will:

- Support an informed planning process to identify community needs, develop a mapping plan, and understand the current landscape to support the design of programs.
- Track outcomes and review the progress toward program goals, maintain and monitor compliance, and track deadlines. Reporting and data also support transparency into the use of public funds and will help meet the state's compliance obligations under federal funding.

- Expand opportunities to communicate and educate stakeholders about broadband needs, programmatic impact, and related issues. They will also help to target key information to reach a diverse array of constituents and stakeholders.

## Guiding Questions

To cultivate a successful data-driven program, ask:

1. What types of data are necessary to support the program, plan, or policy?
2. What data is already collected and usable, and by whom?
3. What data is still needed/wanted, and why?
4. How can we gather the additional data, and which research methods are available?
5. Who can be a “data-gathering partner”?
6. How can the data be used to meet program goals and communicate success?

## Key Elements

States will tailor data collection to meet their needs, but key data elements include:

Inventory to capture the existing state of broadband networks and facilities, current adoption rates, existing affordability, and digital literacy programs.

Program-specific output data to measure network expansion and improved service performance, new program delivery, changes in adoption rates, increased competition through grant applications and awards.

Partner and compliance review may require additional types of data beyond the application process. Work with local governments and stakeholders to identify what information is needed to measure success, and work with grantees and partners to collect that data.

Long-term impacts to show trends in adoption rates, improvement in education indicators and student performance, economic indicator improvement, civic engagement.

## Data Sources

A state broadband data strategy will use **existing sources of data** and **create new data sets** tailored to meet the needs of the program or to fill a gap in existing data. Existing data sources may include:

- **Federal government data sets:** Census American Community Survey (ACS) data, Federal Communications Commission (FCC) mapping and carrier-reported data, National Telecommunications and Information Agency grant and mapping data, Department of Agriculture grant program data, and Department of Housing and Urban Development.
- **Data from other state agencies** (transportation and asset data maps, enrollment in relevant benefit programs, etc.).
- **Internet service providers (ISPs), grantees, and community stakeholders** (local governments, regional planning entities, chambers of commerce, anchor institutions).
- **Educational institutions**, think tanks, nonprofits, advocacy organizations.

State broadband programs will need to determine if the available data is accurate, usable, and has value to move program goals forward. The data should provide flexibility and granularity sufficient to analyze and tailor its use to meet program needs.

### Creating New Data Sets

- Establish the need for additional data while balancing resource demand and barriers to getting the data and resources necessary to collect and report it.
- Identify data partners and their capacity to collect and provide data, including local/regional leaders, educational institutions, think tanks, and ISPs. Grantees can help collect new data, but it must be part of the program design and upfront agreements.
- Design a data collection process—including surveys, storytelling, and speed tests—with adequate sample size and collection methods to meet a rigorous review, and be ready to analyze and use the data.

### Examples – Public Speed Tests

- Utah’s [speed test portal](#)
- Washington state’s “[one-minute access and speed survey](#)” – [Press Release](#) (2020)

### Communication

Communication is a critical component of a broadband office’s data strategy, and different forms of data-driven communication are suited to different levels of detail, from social media and narrative storytelling to reports, charts, maps, and graphs. Distributing information and sharing successes requires adapting data to the most effective platforms and formats. Effectively presenting data can require tailoring presentations and publications depending on the audience and message. This work can include focusing the presented elements to the audience’s interest, including by specific jurisdictional areas or by presenting the office’s data on specific program goals, such as economic development, partnerships and stakeholder engagement, adoption and affordability, education and business opportunities, and transparency and grant compliance.

### Examples

- The [Broadband High-Speed Internet Availability in Vermont](#) page presents provider information in static printable map format and offers statistics by town. Vermont also publishes a variety of infrastructure asset maps, including a mobile wireless drive test, tower locations, fiber routes, and Wi-Fi hot spots.
- Wisconsin publishes a [variety of broadband maps](#), including public Wi-Fi locations and areas with state and federally funded projects. The comprehensive Wisconsin Broadband Map displays data from ISPs.
- [Purdue University’s Digital Divide Index](#) uses a combination of ACS and FCC data to create an infrastructure and adoption score and a socioeconomic score.

## Data Management

Ensuring that data is collected in usable and unified formats is a critical component of a broadband office's data strategy.

- Research and design around the **operational and legal considerations** for the collection, storage, and use of the data, including privacy, public records, transparency, and security.
- Make sure to have **adequate resources** for this task—it might be necessary to hire consultants, staff up with GIS specialists.
- Create the **necessary templates** for data sharing, nondisclosure agreements, and obligations for ongoing data submissions and updating requirements.

*This memo was prepared in collaboration with CTC Technology & Energy.*