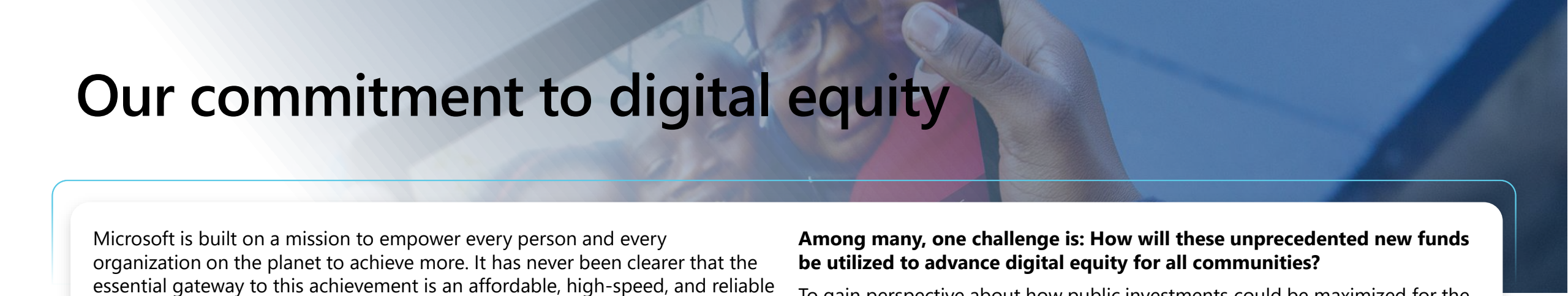
Microsoft

MATTEY CONSULTING LLC

Digital equity for all: The path forward for state implementation

January 2022



Our commitment to digital equity

Microsoft is built on a mission to empower every person and every organization on the planet to achieve more. It has never been clearer that the essential gateway to this achievement is an affordable, high-speed, and reliable connection to the internet, and access to affordable computing devices and digital skills to take advantage of it.

Recent significant public investments to shore up our infrastructure, specifically expanding high-speed broadband access and now digital skills training, present a once-in-a-generation opportunity to rapidly connect communities across the nation. And it couldn't be timelier. Millions of Americans still lack access to broadband – either because it's not available or they can't afford it – and are cut off from what has become essential to everyday life, particularly during the pandemic. To put it into numbers, as of June 2021, our data showed that 120.4 million people in the US do not use the internet at broadband speeds – more than a third of the nation's population.

Through our corporate social responsibility efforts, we are nearly five years into our work to help close the broadband access and adoption gap, and we have a long-standing commitment to close the skills gap. We've made steady progress in supporting local projects that reach millions of Americans with high-quality, affordable broadband, while equipping people from all 50 states with skills for in-demand jobs through our Global Skills Initiative. To continue to inform our understanding and approach, we've been listening to our partners, including internet service providers, telecom equipment makers, and nonprofits working to quickly connect customers and prepare them with the skills necessary for distance learning, remote work, telehealth, and simply staying connected with loved ones.

Among many, one challenge is: How will these unprecedented new funds be utilized to advance digital equity for all communities?

To gain perspective about how public investments could be maximized for the greatest, most immediate impact, we commissioned this report from Mattey Consulting, a firm that brings communications public policy expertise based on over 30 years in the sector. This report provides recommendations for building public investment programs that **holistically address broadband availability and affordability, access to computing devices, and digital skills**. The task will not be easy or fast. But taking time to design programs, application processes, evaluation and award systems, and frameworks for ongoing oversight will result in communities that are transformed and economically empowered by sustainable access.

We know that it will take the public, private, and nonprofit sectors to deliver the change we all want to see. Lasting change occurs at the local level and implementing solutions in communities where they're needed most can be incredibly complex. Yet, we're optimistic and encouraged by recent investments, state and local legislative efforts, and the expeditious movement of broadband offices to put solutions in place that will have lasting impact for families, students, and businesses. **We look forward to collaborating with state agencies and other key public and private stakeholders to make substantial progress in closing the broadband and digital skills gap, to deliver on a promise of improved quality of life for communities.**

About us

About Microsoft

Our mission—to empower every person and every organization on the planet to achieve more—has never felt more urgent. These times demand different thinking, concerted effort, and collective action in partnership with our global community. Through our corporate social responsibility efforts, we have committed to ensuring that economic opportunity is inclusive—for every country, developed and developing; every community, urban and rural; every business, small and large; and every person. Across our company, we have an array of programs and partnerships designed to reimagine and build a more equitable and sustainable future in these unprecedented times. The Microsoft Airband Initiative seeks to make affordable broadband access a reality for unserved and underserved communities around the world, and to help the communities we serve to digitally transform in the areas of healthcare, agriculture, education, and small business enablement. We have accelerated our Skills for Employability work to build foundational digital skills and provide access to high-quality, inclusive computing and computer science training and education. We are uniquely positioned to partner with policymakers and local leaders to meet the moment and ensure that technology's benefits reach everyone.

About Mattey Consulting

Carol Mattey, founder of Mattey Consulting LLC, has over 30 years of experience as a senior executive in the US government, consultant and lawyer focusing on communications public policy. From 2010 to 2017, Carol was Deputy Chief of the Wireline Competition Bureau at the Federal Communications Commission, focusing on the FCC's ongoing initiatives to reform over $9 billion in annual federal spending known as the Universal Service Fund (USF), which supports broadband connectivity for rural areas, schools, libraries, healthcare providers and low-income consumers. Among her many responsibilities, she led the development and implementation of the Connect America Fund to extend broadband to unserved areas in the United States. Carol is recognized as one of the country's leading experts on USF regulation and policy. Learn more at www.matteyconsult.com.

Executive summary

The digital equity imperative

Achieving digital equity requires a multi-prong strategy addressing:

- Availability
- Affordability
- Access to devices
- Digital literacy

Good policy depends on good data

Planning is a prerequisite to effective program design.

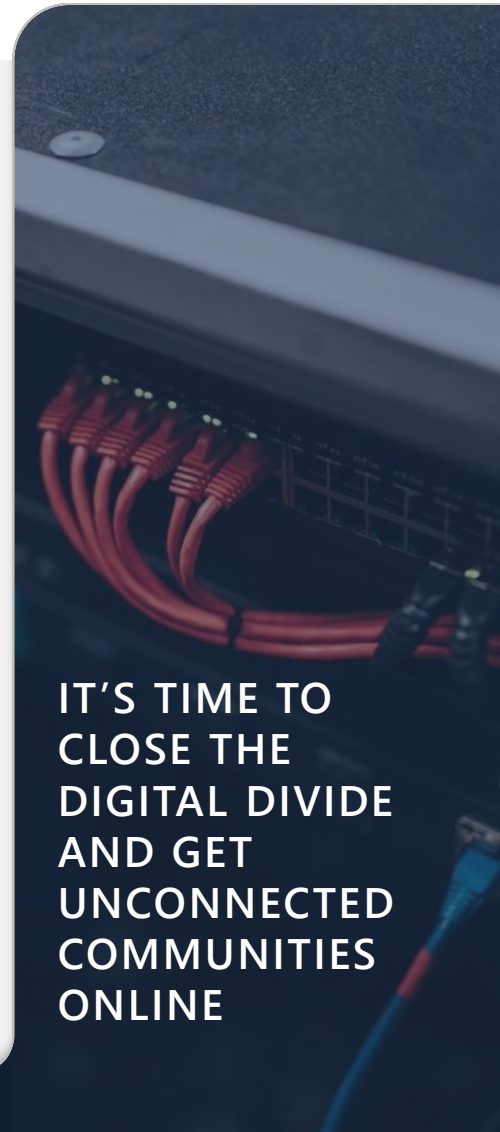
Use multiple datasets (availability, adoption, economic indicators, and current utilization).

Be prepared to integrate locally-developed data with federal data to better prioritize and target funding to meet local needs.

BEST PRACTICES

For fair, objective, efficient, transparent and consistent program implementation

- **Program design:** Adequately staff and resource state broadband offices to support new programs; size the problem; solicit community input; define success; provide clarity and transparency to all stakeholders; consider all technologies that meet congressional requirements as part of the solution set; prohibit overbuilding; prioritize scalable solutions that can be deployed quickly and projects that advance multiple objectives (e.g., adoption, job creation as well as deployment).
- **Application process:** Facilitate successful applications by providing technical support, clear guidance, easy-to-use tools, and other resources to the applicant community.
- **Evaluation and award:** Provide transparency for applicants, awardees, and communities regarding timing and process; utilize clear, objective scoring with defined parameters.
- **Post-award oversight:** Ensure adequate staffing and tools to provide ongoing oversight from award to completion and beyond; provide transparency for awardees and communities with construction progress dashboards; assess progress towards defined goals and be prepared to make mid-course corrections as necessary.



The digital equity imperative

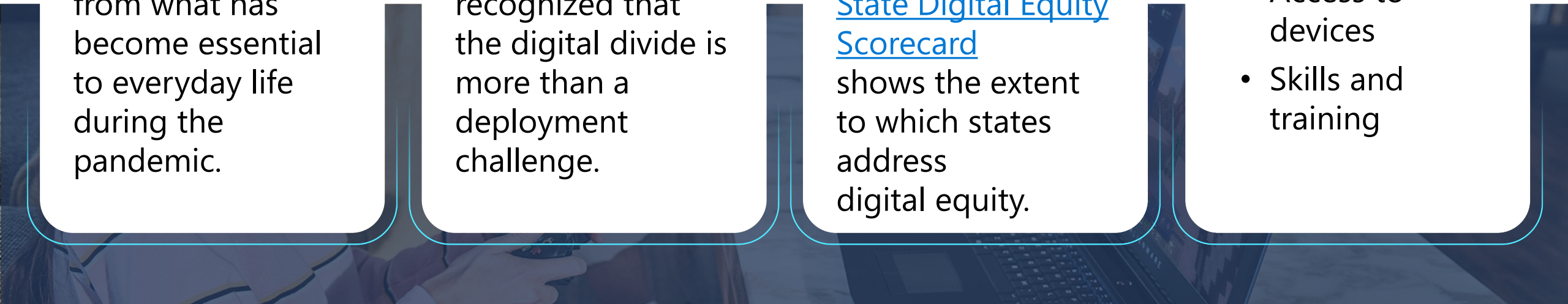
Millions of Americans don't have access to broadband – either because it's not available or they can't afford it – and are cut off from what has become essential to everyday life during the pandemic.

Digital Equity leaders such as the Benton Institute for Broadband and Society (Benton), Pew Charitable Trusts (Pew), and many others have recognized that the digital divide is more than a deployment challenge.

The changing economy demands that all US residents have basic digital skills to access essential resources and employment. The State Digital Equity Scorecard shows the extent to which states address digital equity.

To achieve digital equity requires a multi-pronged strategy addressing:

- Availability
- Affordability
- Access to devices
- Skills and training



Microsoft's perspective on digital equity

Microsoft's Digital Equity Principles provide an actionable framework for thoughtful implementation by states and localities to achieve digital equity for all.

BROADBAND ACCESS

- Ensure that broadband funding mechanisms are **targeted** and prioritized to reach unserved or underserved communities.
- Encourage a **technology-neutral approach** that provides the maximum value through **cost-effective** fund allocation to a mix of technologies and deployments. There is no-one-size-fits-all solution.
- Prioritize broadband solutions that will provide **rapid deployment** of broadband networks and services.

BROADBAND ADOPTION

Provide a long-term meaningful benefit to make **in-home broadband service affordable** for income insecure households.

COMPUTING DEVICES

Include sustainable subsidies for computing devices such as laptops that allow for **full participation** in education, healthcare, and other aspects of the digital economy.

DIGITAL SKILLS

Support digital literacy and skilling programs for newly connected communities and take a **holistic approach** to reducing digital inequities.

The challenge: How to utilize an unprecedented level of new funding to advance digital equity?

State agencies have a significant job ahead to implement new programs to ensure broadband is available, affordable, and effectively utilized by all.

PEW

The Pew Charitable Trusts: "The most successful state programs include the same core components: a state-level broadband office with full-time staff, systems to support local and regional planning and technical assistance, and well-funded competitive grant programs"

The years ahead: Funding implementation timeline

Dates are estimates and subject to change

2022

- **FCC's Affordable Connectivity Program** *(formerly Emergency Broadband Benefit)*: Rules Jan. 2022
- **Capital Projects Fund:** Sep. 24, 2022 deadline for State Program Plans; Treasury reviews State Plans on a rolling basis and awards funding
- **Broadband Equity Access and Deployment (BEAD):** NTIA issues Notice of Funding Opportunity; States in planning stage, develop 5-year action plans
- **Middle Mile:** NTIA issues Notice of Funding Opportunity (NOFA) and solicits applications
- **Digital Equity:** States develop Digital Equity Plans; NTIA begins to award State Capacity Grants
- **USDA ReConnect Round III:** Applications due Feb. 22, 2022

2023

- **Maps:** FCC releases new broadband availability map
- **Capital Projects Fund:** Treasury completes review and makes remaining awards
- **BEAD:** States submit Initial Proposals, possibly Final Proposals to NTIA; NTIA reviews and approves; States begin awarding sub-grants
- **Middle Mile:** NTIA awards funds within 270 days of NOFA
- **Digital Equity:** <2 years after awarding planning grants, NTIA begins awarding State capacity grants; <30 days of awarding State grants, NTIA establishes Digital Equity Competitive Grant Program; first application cycle

2024

- **BEAD:** Additional submissions of Final Proposals to NTIA; NTIA reviews and approves; States continue to award sub-grants for deployment
- **Digital Equity:** NTIA may continue to award State Capacity Grants; annual application cycle for NTIA's Digital Equity Competitive Grants

2025-26

- **Capital Projects Fund:** Funded projects must be "substantially completed" by Dec. 31, 2026
- **Digital Equity:** 2026 is last year for State Capacity grants; annual application cycle for NTIA's Digital Equity Competitive Grants program

2027-28

- **Reconnect III:** Deployment must be completed within 5 years of award (2027 for funds awarded in 2022)
- **BEAD:** Deployments must be completed within 4 years of award (2027 for projects awarded in 2023, later for projects awarded in subsequent years)
- **Digital Equity:** 2027 likely to be the last year for NTIA's Digital Equity Competitive Grants program

Digital equity will not be achieved overnight:
Be prepared for a multi-year process

What we've learned from the past

LESSON #1

Lack of comprehensive maps masks persistent broadband gaps

Recommendation

Leverage multiple data sets to target funding effectively and allow applicants to identify unserved or underserved pockets within otherwise served areas

LESSON #2

It's difficult to optimize all desired outcomes

Recommendation

Identify and resolve tradeoffs when developing a statewide strategic plan and specific programs

LESSON #3

Success should not be measured by dollars out the door

Recommendation

Monitor and verify desired outcomes – people served, people online (connections)

LESSON #4

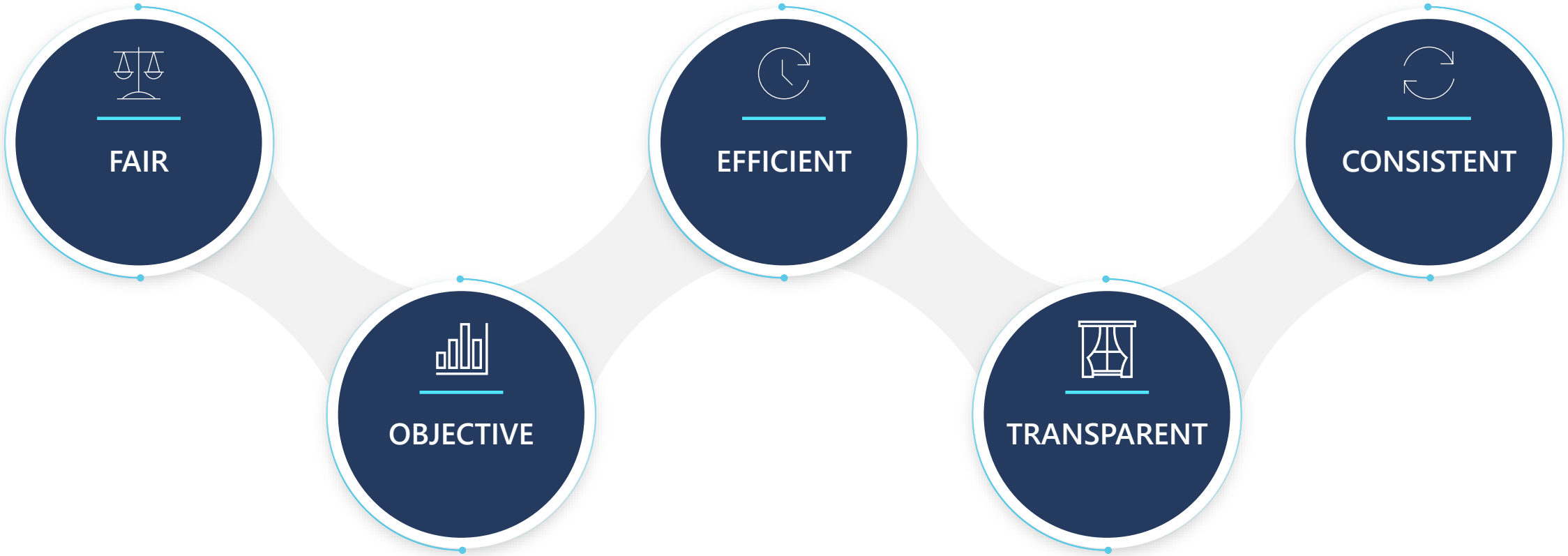
Longstanding disparities in access will not be eliminated overnight

Recommendation

Manage public expectations regarding timing and execution of the plan

Guiding principles for state broadband offices

Programs and administration processes to award funding should be



Critical elements for success in state execution

1. Clarity regarding relevant federal and non-federal requirements (what is required, what is permitted, what is not allowed), the level of need, and cost to address those needs
2. Ability to design a plan with measurable outcomes and performance measures
3. Utilization of an open and transparent competitive process to select and administer sub-grants
4. An effective programmatic and financial risk management system in place
5. Adequate records and documentation of desired outcomes, with a process in place to verify goals are met
6. Continuous self-assessment of progress towards achieving digital equity, allowing for mid-course corrections as needed

Good data and tools to manage the data are critical to achieving the desired outcome – Access for all

The lifecycle of state grant programs

Program Design

Application Process

Evaluation & Award

Post-Award Oversight

Whether a particular program is designed to address availability, affordability, or effective utilization of broadband – there are four general phases of implementation.

Program design: First steps

Planning is a critical prerequisite to program design

Broadband Office

Create the capacity to administer new programs (legislative authorization and appropriations; additional hiring authority for existing state broadband office or creation of a new broadband office; adequate contracting authority)

- Provide adequate resources (staff, technical expertise, training)
- Utilize sufficient tools (information management systems) to perform the necessary tasks

Mapping

Leverage multiple data sets, including demographic data, subscription rates, and actual usage, when developing the state action plan

- See, e.g., NTIA's Indicators of Broadband Need Map: https://aka.ms/BroadbandNeedMap
- The Infrastructure Investment and Jobs Act (IIJA) encourages states to prioritize funding to areas with persistent poverty
- Benton (at 11) highlights the efforts of states such as California, Minnesota, Georgia, Maine, and Virginia to improve mapping to better target funds

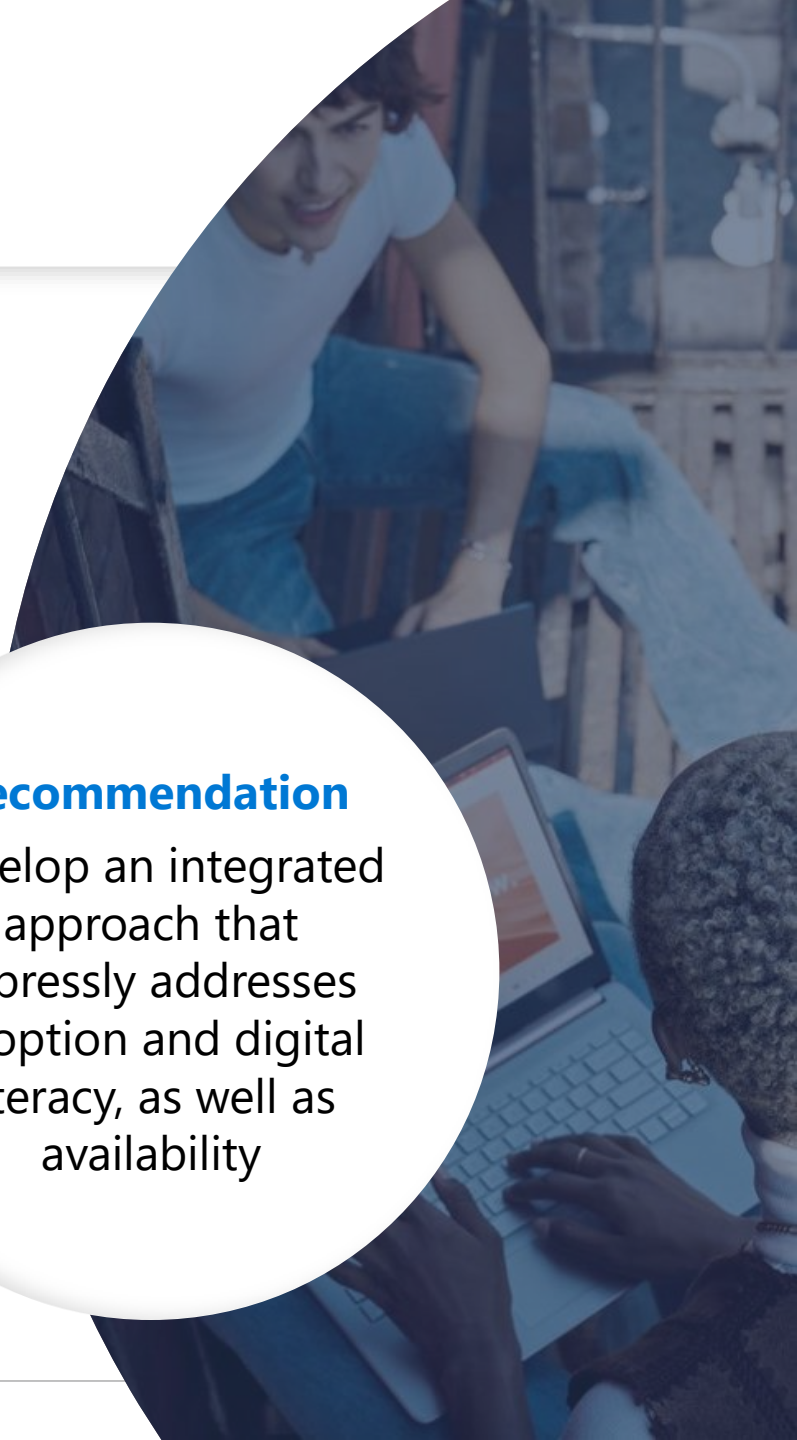
Engagement

Conduct meaningful and equitable public engagement with all stakeholders to obtain input on priorities and implementation of new broadband programs

- Benton (at 17): Effective programs encourage private companies to seek local input, develop solutions that address local considerations, and collaborate with local public and nonprofit entities
- "Even with IIJA funds, the federal government will once again fail to address digital disparities without a clear definition of the problems being solved and a lack of substantive feedback from local stakeholders who understand the conditions of their communities, Dr. Nicol Turner-Lee, Brookings Institute

Program design: Establish priorities

- Establish broadband goals and priorities
  - Define success metrics for digital equity – What is the desired outcome, and how will it be measured?
  - Recognize that finite funding requires decisionmakers to balance competing objectives (such as expanding broadband availability, making service affordable, and prioritizing effective utilization)
  - Be transparent about policy choices
- Prioritize those projects that will advance multiple objectives in a holistic fashion (availability, adoption, job creation, community involvement, sustainability)
- Encourage public-private partnerships with strong input from local stakeholders
  - Benton recognizes the best state funding programs include a critical role for local government and communities, working in collaboration with private partners, to solicit local input and bring to bear local assets and resources



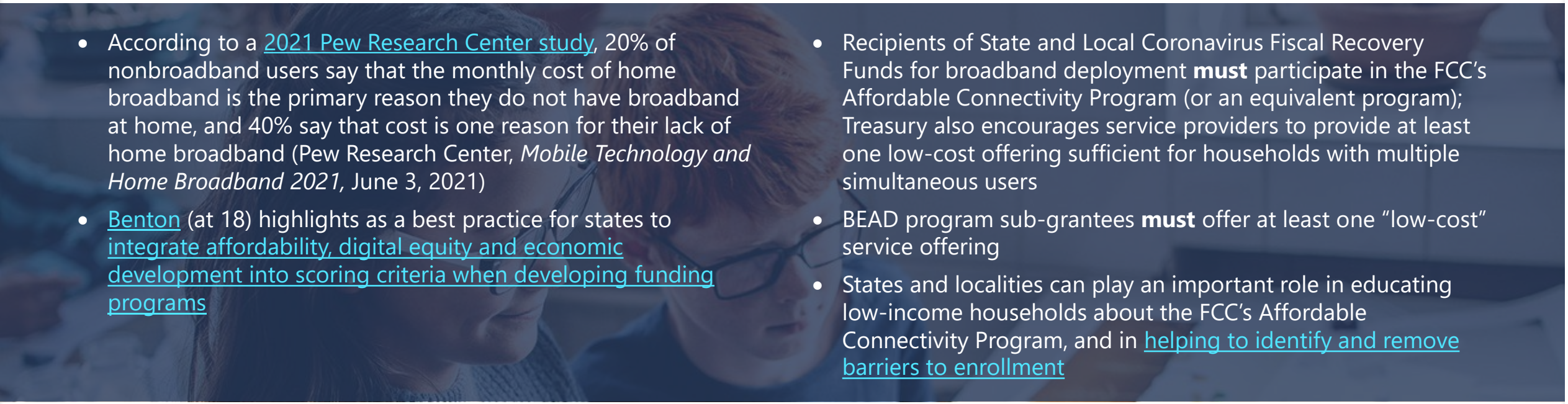
Recommendation

Develop an integrated approach that expressly addresses adoption and digital literacy, as well as availability

Program design: Make affordability integral to all programs

According to recent research conducted by the Benton Institute, affordability remains a critical barrier to adoption

- **40%** of low-income households cannot afford to pay anything for home internet high-speed subscription
- **46%** found it "very" or "somewhat" difficult to build their monthly internet bill into their budget
- Only **25%** were aware of free or discounted internet offers
- Of those who were aware of such programs, **28%** found it difficult to sign up



- According to a 2021 Pew Research Center study, 20% of nonbroadband users say that the monthly cost of home broadband is the primary reason they do not have broadband at home, and 40% say that cost is one reason for their lack of home broadband (Pew Research Center, *Mobile Technology and Home Broadband 2021*, June 3, 2021)
- Benton (at 18) highlights as a best practice for states to integrate affordability, digital equity and economic development into scoring criteria when developing funding programs

- Recipients of State and Local Coronavirus Fiscal Recovery Funds for broadband deployment **must** participate in the FCC's Affordable Connectivity Program (or an equivalent program); Treasury also encourages service providers to provide at least one low-cost offering sufficient for households with multiple simultaneous users
- BEAD program sub-grantees **must** offer at least one "low-cost" service offering
- States and localities can play an important role in educating low-income households about the FCC's Affordable Connectivity Program, and in helping to identify and remove barriers to enrollment

Program design: Structure and processes

Timeline

Provide clarity in advance on timeline for grant process

- Benton (at 17): "The best funding programs provide ample notice of their application processes and feature either a yearly application cycle or a clear forecast of the next opportunities to participate."
- Potential applicants need time to develop strategic partnerships, as appropriate, with other entities to submit successful applications

Transparency

Provide transparency for potential applicants, communities, and other stakeholders

- Publish maps and other tools showing potential eligible areas, state priorities, and existing recipients of federal or state funding
- Adopt and publicize objective selection criteria and processes for selecting sub-grantees

Oversight

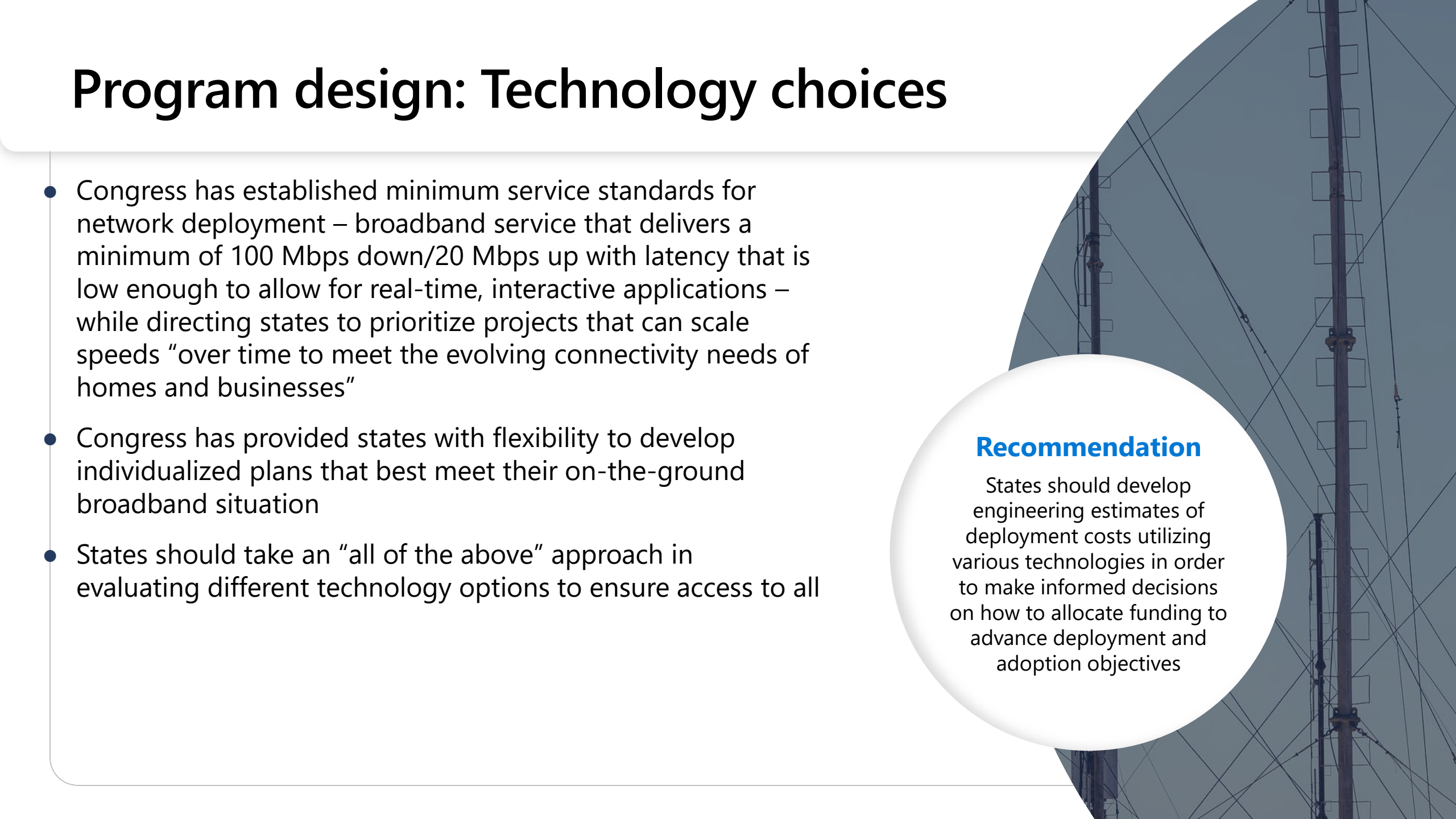
Create clear expectations regarding accountability and oversight

- Define metrics that will be used to track and monitor performance, preserving program integrity without being overly burdensome
- Anticipate some failures: establish in advance processes to rescind or modify funding awards proportional to the level of non-compliance

As recognized by Pew, well-designed competitive grant programs include an evaluation of economic need and demonstrated community support, and clear accountability measures to ensure funded proposals achieve their intended purpose

Program design: Technology choices

- Congress has established minimum service standards for network deployment – broadband service that delivers a minimum of 100 Mbps down/20 Mbps up with latency that is low enough to allow for real-time, interactive applications – while directing states to prioritize projects that can scale speeds "over time to meet the evolving connectivity needs of homes and businesses"
- Congress has provided states with flexibility to develop individualized plans that best meet their on-the-ground broadband situation
- States should take an "all of the above" approach in evaluating different technology options to ensure access to all

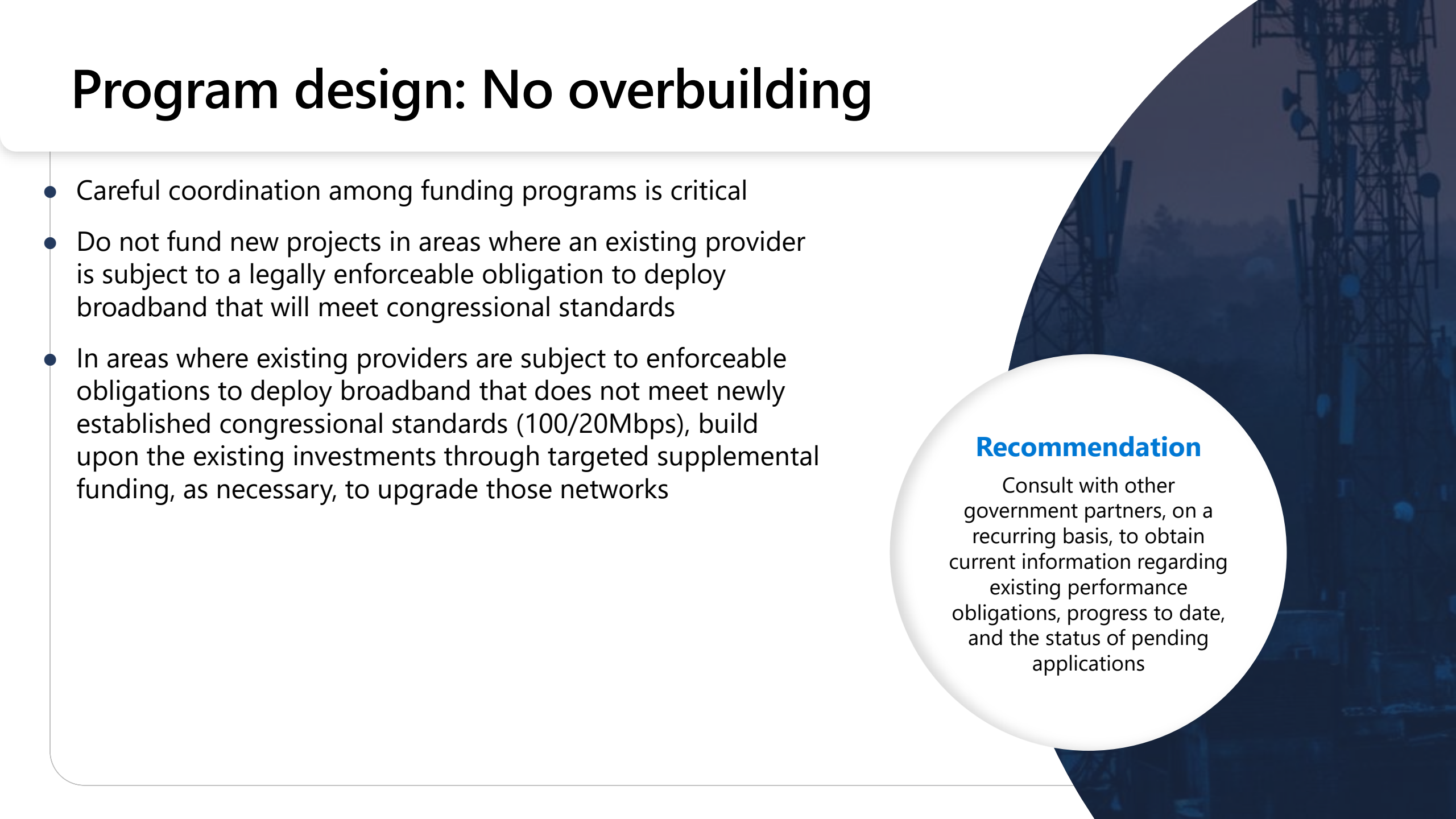


Recommendation

States should develop engineering estimates of deployment costs utilizing various technologies in order to make informed decisions on how to allocate funding to advance deployment and adoption objectives

Program design: No overbuilding

- Careful coordination among funding programs is critical
- Do not fund new projects in areas where an existing provider is subject to a legally enforceable obligation to deploy broadband that will meet congressional standards
- In areas where existing providers are subject to enforceable obligations to deploy broadband that does not meet newly established congressional standards (100/20Mbps), build upon the existing investments through targeted supplemental funding, as necessary, to upgrade those networks

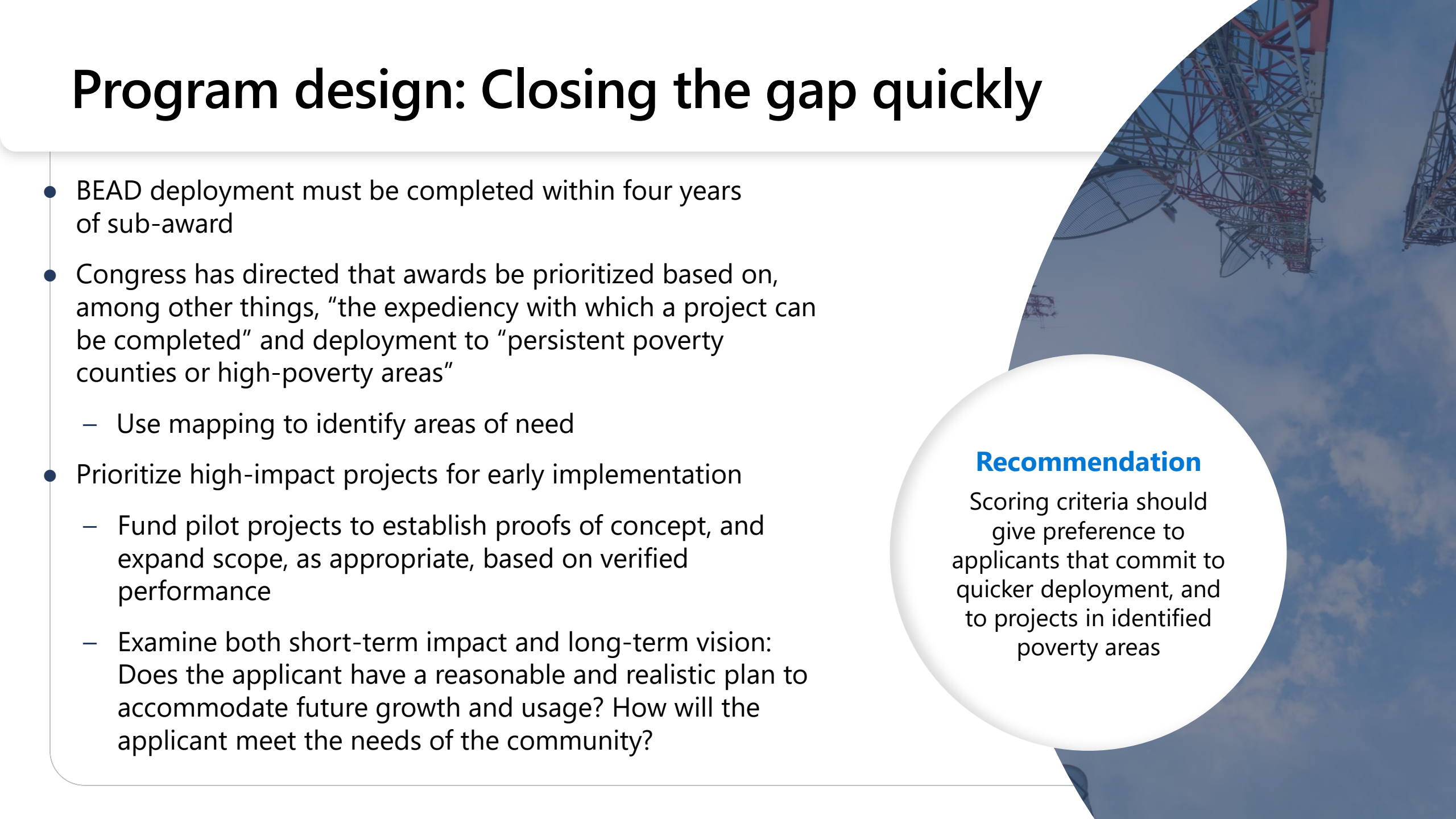


Recommendation

Consult with other government partners, on a recurring basis, to obtain current information regarding existing performance obligations, progress to date, and the status of pending applications

Program design: Closing the gap quickly

- BEAD deployment must be completed within four years of sub-award
- Congress has directed that awards be prioritized based on, among other things, “the expediency with which a project can be completed” and deployment to “persistent poverty counties or high-poverty areas”
  - Use mapping to identify areas of need
- Prioritize high-impact projects for early implementation
  - Fund pilot projects to establish proofs of concept, and expand scope, as appropriate, based on verified performance
  - Examine both short-term impact and long-term vision: Does the applicant have a reasonable and realistic plan to accommodate future growth and usage? How will the applicant meet the needs of the community?



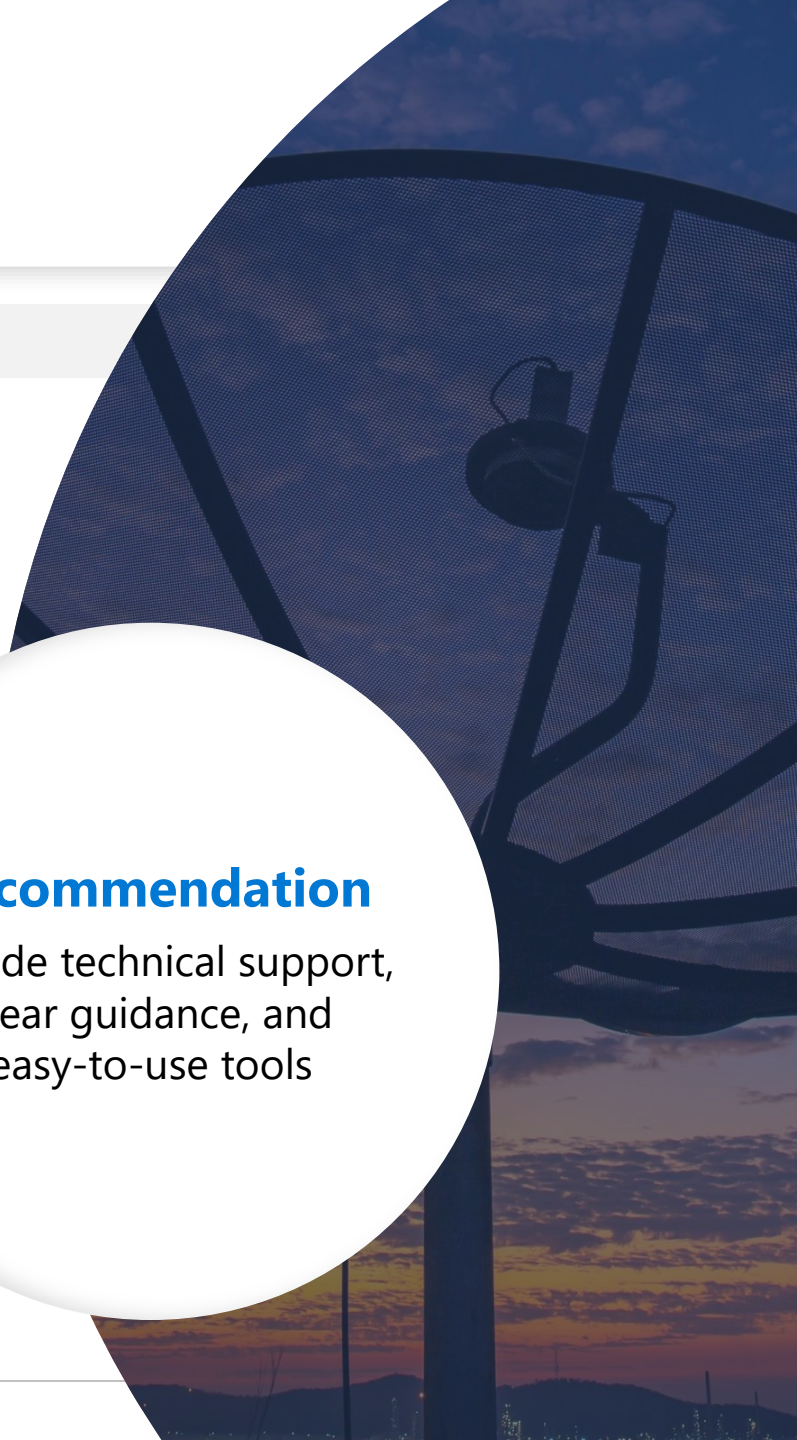
Recommendation

Scoring criteria should give preference to applicants that commit to quicker deployment, and to projects in identified poverty areas

Application process

During the application process, the State Broadband Office should:

- Identify resources for technical support (mapping, engineering, business case development) to potentially interested applicants
- Educate the applicant community early and often about the application process and the requirements of the program
  - Post timelines, checklists, guidance, and FAQs on public websites
  - Benton (at 12): "The best state programs proactively engage with small-and medium-size providers early on to ensure that providers of all sizes are aware of funding and deployment opportunities"
- Create an easy-to-use application portal
  - Automate error checks to ensure all necessary information has been submitted
  - Provide the ability to import and pre-populate data from other sources
  - Create a user-friendly application format, accessible to those without deep expertise in grant writing
- Establish a dedicated team to respond to ad hoc inquiries from the applicant community
  - Standardize communications protocols to ensure consistency and fairness to all applicants



Recommendation

Provide technical support, clear guidance, and easy-to-use tools

Evaluation and award

During the application review and selection process, the State Broadband Office should:

Implement a defined process to review, calculate, and track applicant scores

- Establish clear, objective scoring with defined parameters:
  - Financial stability
  - Management capability
  - History and performance
- Provide supervisory review of initial scoring to ensure consistency across reviewers (quality control)

Require disclosure of any potential conflicts of interest, if external reviewers are used to supplement government staff

Establish a process to request clarifications and additional information from applicants, if needed

Provide transparency for applicants, awardees, and communities

- Create public dashboards showing applications filed, in progress, approved
- Establish and announce targeted internal processing timelines

Post-award oversight

Post-award, the State Broadband Office should have the necessary resources, staffing, and tools to:

Automate program management

Provide ongoing oversight from award to completion, and beyond, utilizing objective metrics

- Validate and verify deployment
- Test actual service availability

Provide transparency for awardees and communities

- Create public dashboards showing construction progress
- Crowdsource data from the affected community to monitor achievement of desired outcomes

Assess progress, and make mid-course corrections as necessary

> *States that integrate grant eligibility, application, and project award information, and updated deployment information using a mapping program can better track these performance patterns, while also more quickly identifying areas still needing assistance*

(Benton at 21)

Additional resources

- NTIA's Indicators of Broadband Need Map: Broadband Need Map
- R. Sherman, J. Horvis and J. Levin, Putting State Broadband Funds to Work: Best Practices in State Rural Broadband Grant Programs (published by the Benton Institute for Broadband and Society, June 2021)
- The Pew Charitable Trusts, 3 Key Components Define Effective State Broadband Programs (June 2021)
- CostQuest Associates and Quadra Partners, State Broadband Expansion Programs – A Primer (July 2021)
- The Pew Charitable Trusts, Which States Have Dedicated Broadband Offices, Task Forces, Agencies, or Funds? (downloadable data set, data current as of November 1, 2021)