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Are states ready to close the US digital divide?

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More than $100 billion in federal funding is being deployed to bring broadband to every American household as part of the largest public investment to connect Americans since the creation of the Interstate Highway System.

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US policy makers have long talked about the need to close the nation's digital divide. Congress has now translated that talk into action, appropriating more than $100 billion[1] to help states bring high-speed internet access to every American household, much of which is allocated directly to state governments to implement as part of the Bipartisan Infrastructure Law (BIL) and the American Rescue Plan Act.

Federal broadband funding through BIL marks one of the largest public investments in connectivity since the creation of the Interstate Highway System in 1956. This ambitious public work could spur innovation, create jobs, and launch the country toward a more

equitable and prosperous future. Yet it's unclear whether states have the administrative and planning capacity to take full advantage of this once-in-a-generation opportunity.

Throughout the country, broadband is primarily delivered through private-sector internet service providers (ISPs) that build infrastructure and price services based on strategic and financial considerations. But this approach has disproportionately left low-income households, the elderly, and people in rural areas and historically marginalized communities without high-speed internet access.

As things stand, 24 million Americans lack access to high-speed internet,[2] and many more cannot connect due to gaps in digital equity and literacy and/or because the service is priced beyond their reach.[3] In an effort to connect every household, Congress has tasked states with translating federal broadband funding into impact, with oversight from the US Department of Commerce's National Telecommunications and Information Administration (NTIA).

In the United States, 24 million people lack access to high-speed internet, and many more cannot connect due to gaps in digital equity and literacy.

Through the BIL, every state will receive at least $100 million to start via the Broadband Equity, Access, and Deployment (BEAD) Program. But there is much more money in the pipeline. A total of $42 billion in BEAD funding tied to coverage maps produced by the Federal Communications Commission (FCC) will be released, potentially setting up many states to receive more than $1 billion each. States are also eligible for a formula-based share of over $2 billion through the Digital Equity Act program and can compete for $1 billion in funding for middle-mile projects via the Enabling Middle Mile Broadband Infrastructure program.

Allocation of this much federal money to states for a specific objective without a long-standing local department or agency in place to ensure the funds are deployed wisely is rare (see sidebar “Why the Bipartisan Infrastructure Law is a broadband game changer”). Many states do not have a dedicated broadband team. If they do, it is often staffed by just a few people who are tucked inside another agency or staffed by a third party. Yet states are expected to administer federal broadband funds on tight timetables, across multiple agencies and levels of government, and with deep involvement from private-sector ISPs.

Global supply chain snarls, domestic labor shortages, and other pandemic disruptions could further complicate those efforts. And as new BEAD initiatives take flight, there is also the question of how programs launched under previous federal broadband programs will be managed.

States face a formidable task, so we’ve designed nine elements they could consider when developing their broadband programs. With digital equity serving as a North Star (see sidebar “Embedding equity at every turn”), the goal is to help states make the most of this historic funding and close the digital divide once and for all.

Nine steps for states to consider

Step 1: Stand up a well-staffed broadband program office

Achieving near-universal broadband access will likely necessitate implementing complex initiatives across a wide array of internal and external stakeholders. As a result, states may want to consider creating a “broadband program office,” a core entity to manage

stakeholders, drive the analysis needed to design an effective program, run a highly effective grant process, and ensure implementation.

States may need to decide whether to create an entirely new office or expand an existing broadband team. To stand it up quickly, the office could be modeled after an existing department like transportation, IT, or housing.

The talent mix is another consideration. Specialists in geographic information systems and mapping, digital equity, broadband infrastructure, and grant and financial management may be needed. States may also require a strategy to expedite recruitment and to determine whether roles should be filled by full-time employees or external workers. They may also consider outlining how the broadband program office will collaborate with other departments.

Step 2: Baseline the current state of broadband service and federal programming

Once it is up and running, the broadband office may want to take stock of any broadband programs that are already under way and conduct a baseline assessment of the current state of connectivity. This assessment could encompass the four drivers of the digital divide: existing infrastructure, affordability, accesses to devices, and digital skills.

To get a handle on unserved and underserved locations, states could leverage existing coverage maps such as those filed with the FCC via Form 477, the National Broadband Availability Map (NBAM), and maps produced by private firms. This may also be a good time for state broadband leaders to identify federal broadband programs that are already in place (including those under the FCC, the US Department of the Treasury, and the US Department of Agriculture).

A thorough understanding of existing federally funded broadband programs, their deadlines, requirements, deployment timelines, and how funding areas are defined geographically could yield several benefits. States could gain a better understanding of what it will take to close existing service gaps, as well as how much money might remain for other broadband initiatives such as deployment, equity, and affordability.

Step 3: Outline strategic goals and an integrated plan for using federal funds

Once state broadband leaders have a clear understanding of the status quo, they will likely be in a good position to outline their strategic goals. This could include how they plan to prioritize deployment, equity, and affordability and how they will translate those objectives into specific plans for each federal program.

Engaging key stakeholders, including public and private entities, nonprofits, and communities, could create valuable buy-in and build foundational support at this stage.

Once the goals are established, leaders could construct a timeline for harnessing federal programs to achieve them. A high-level plan for addressing coverage gaps through a combination of BEAD, American Rescue Plan, and other funds could help ensure that sufficient financial resources are available for all priority projects. These timelines could also take into account operational, institutional, and policy roadblocks, for example, a lack of hiring authority, conflicting or overlapping functional authorities, or permitting, legislative, and administrative processes that must be followed.

Step 4: Develop the location level map and key cost models

Due to the BIL's shift toward a more granular understanding of broadband footprints and coverage gaps, states may want to base their action plans and grant programs on location-level geospatial maps.

Best-in-class geospatial maps could draw from a range of data to capture existing wireless and wireline broadband networks and how they perform, as well as the demographics of populations who currently utilize these services and the areas that lack connectivity.

Broadband leaders may also want to gain a thorough understanding of the economics driving the digital divide in their state. With this information and best-in-class maps, they could start narrowing in on the subsidy needed to achieve near-universal access.

By understanding the economics contributing to digital divides, broadband leaders can start narrowing in on what's needed to provide better access.

It may prove beneficial for broadband leaders to conduct a full business-case analysis that measures not just the required investment but also cash flows. States could model scenarios for serving different locations based on assumptions about how federal funding is spent, the technology used, and other variables. This could help them gain valuable insights to inform how they design criteria for their own broadband grant programs.

States may want to consider including in their models key performance indicators that allow them to compare their evolving broadband landscape with other jurisdictions, both domestically and abroad. Adaptable models that are capable of processing new inputs could help track progress as programs are rolled out.

While states have experience conducting similar analyses for roads and quasimonopoly services such as water, doing this for a dynamic broadband market may prove more challenging.

Finally, given the very real possibility that FCC maps of unserved and underserved areas finalized with the NTIA may not align with local findings, states may want to establish a process for challenging the federal maps to make sure they don't miss out on their rightful share of funding. Although NTIA's rules will guide how funds can be used by states, the FCC's maps will determine how much each state receives.

Step 5: Create detailed action plans for BIL programs

With the maps and key models established, states may want to develop a comprehensive and detailed action plan to optimize broadband availability, adoption, and utilization through the BEAD, digital equity, and middle-mile programs. While these grant programs are distinct, states might consider designing all action plans together given the importance of equity considerations in all programs, as well as synergies between the middle-mile and BEAD programs.

A successful action plan could establish how the state plans to design its grant program to maximize the impact of federal funds. The plan could also address affordability considerations and may include detailed descriptions of how broadband investments will impact various sectors such as healthcare, education, public safety, and economic development. Finally, it may want to include references to potential obstacles, including material or labor shortages, climate resiliency considerations, or cybersecurity concerns. States could outline their mitigation strategies for each risk, with a focus on getting ahead of those risks in the early years of the BEAD program.

Step 6: Design and implement competitive grant programs

Connecting all unserved and underserved locations may hinge on designing an effective local grant program. To avoid wasteful oversubsidizing, states may want to determine the most cost-efficient price for any given project. Standing up knowledgeable project finance teams ready with tools and data to quickly evaluate the underlying economics of potential project proposals could help identify optimal price points.

Establishing thoughtful grant processes that are responsive to local needs, facilitate stakeholder input, and ensure enough competition takes place among potential bidders may also help states obtain the best possible subsidy for their needs. Traditional "single round" grant applications could prove insufficient, because they may necessitate more complex and technical grant programs that states have no prior experience designing.

Step 7: Create a project delivery function to ensure goals are met efficiently

As states develop and launch requests for proposals and programs, they may want to consider how they will monitor progress once those grants are awarded. For example, they could institute tracking and reporting requirements to ensure goals are being met, while avoiding waste, fraud, and abuse of taxpayer funds.

This tracking and reporting function will likely need to meet state and federal requirements. But by defining clear and relevant requirements across programs, the state could prevent potential delays stemming from litigation, administrative issues, or abuse of funds, while driving a high-performance culture of accountability.

Step 8: Engage communities and other stakeholders

Engaging communities and other stakeholders early and often may help to create buy-in and support for programs. Keeping that dialogue going through the program development process may continue to pay off.

Processes could be designed and roles and responsibilities designated to identify critical communities and stakeholders in unserved and underserved areas, school districts, health facilities, and other key institutional broadband users. Routine meetings, as well as marketing and communications plans, could be established to keep the lines of communications open.

These efforts could facilitate an ongoing dialogue among government departments, agencies, and political leadership about how programs are progressing against designated timetables. They could also help political stakeholders and local municipalities coordinate to accept formal feedback prior the first and final rounds of local grant submissions. These outreach initiatives are not optional: the BIL requires states to engage local stakeholders on broadband project planning. Through these engagements, states may also design technical support for broadband initiatives, including public-awareness campaigns to potentially enhance adoption or negotiating volume discounts for local governments and nonprofits.

Step 9: Establish a robust program performance management system

Keeping the broadband program on track, on time, and within budget will likely require disciplined execution and coordination coupled with the ability to be dynamic. Establishing a project management function could help achieve this. This function could be staffed by the most qualified people and adopt the most fitting processes and technological tools to harmonize initiatives across departments, agencies, and entities. Sponsorship from senior state leaders, such as governors' offices, could help establish its authority. The function could gradually build a high-performing culture of accountability to accelerate the broadband program's progress and drive it to success.

With over $100 billion in federal funding allocated, states could realize the goal of near-universal broadband access and launch the nation on a more innovative, equitable, and prosperous path.

But there's a lot of work to be done. If states don't adequately consider and dedicate resources to their broadband program efforts, they could fail to secure all the funding they deserve or make the most of the money they receive. And it's not just individual states that could pay the price of failure. The future of the nation, its competitiveness, and its promise to its people hang in the balance.

1. Roughly $65 billion in federal funding for broadband is allocated under the Bipartisan Infrastructure Law, including approximately $44 billion that will be directly allocated to states as part of the BEAD and State Digital Equity Capacity Grant programs. More than $20 billion has been allocated under the American Rescue Plan Act (inclusive of both Capital Projects and State and Local and Fiscal Recovery Funds), and roughly $20 billion has been allocated under the Rural Digital Opportunity Fund.
2. Broadband Serviceable Location Fabric, CostQuest Associates, site accessed May 2022.
3. Estimates of locations with speeds below 100/20 Mpbs, based on CostQuest's Broadband Serviceable Location data.
4. BTOP was a $4 billion grant program administered by the National Telecommunications and Information Administration as part of the American Recovery and Reinvestment Act of 2009.
5. American Community Survey, US Census Bureau, 2019.
6. Emily A. Vogels, "Some digital divides persist between rural, urban and suburban America," Pew Research Center, August 19, 2021.

ABOUT THE AUTHOR(S)

Danielle Hinton is an associate partner in McKinsey's Washington, DC, office, where **Adi Kumar** is a senior partner and **Sara O'Rourke** is a partner; and **Kunal**

Modi is a partner in the Bay Area office**. Blair Levin**, a senior adviser at McKinsey, is a former chief of staff of the Federal Communications Commission; **Anne Neville-Bonilla**, a senior adviser at McKinsey, is a former head of the National Telecommunications and Information Administration's (NTIA) State Broadband Initiative; **Larry Strickling**, a senior adviser at McKinsey, is a former administrator of the NTIA; and **Jon Wilkins**, a McKinsey alumnus, is a partner at Quadra Partners**.**

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