



BROADBAND

FOR AMERICA'S FUTURE: **A VISION FOR THE**

2020s

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EXECUTIVE SUMMARY

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EXECUTIVE SUMMARY

Everyone in America should be able to use High-Performance Broadband in the next decade.

That's because High-Performance Broadband can help:

- **Grow the American economy**, transforming industries that are basic to everyday life, from farming to education to health care to energy and more.
- **Strengthen communities** by boosting economic growth and jobs and improving education, learning, health care, and civic participation.
- **Empower workers** by advancing skills training in a time of increasing income inequality and economic frustration.

In the Digital Age, robust, competitive broadband is the key to all of us reaching for—and achieving—the American Dream.

But today, too many people in the U.S. face barriers that keep them from maximizing the opportunities from fixed broadband connections that should run to everyone's home. To overcome these barriers, leaders—notably at the state and local level—are executing policies to boost:

- **Deployment** of networks where adequate broadband does not exist;
- **Competition** to increase choices and spur lower prices and better-quality service to their residents;
- **Affordability and Adoption** for those who wish to have broadband in their homes but lack the means or the skills to acquire it; and
- **Community Anchor Institutions**, such as schools and libraries, that increasingly serve their users wherever they are.

Where challenges to using broadband have not been solved, the result is obvious: people disconnected from continuing their education, gaining new job skills, finding employment, and participating fully in their communities.

I. Advancing Broadband Deployment

How should the United States ensure that robust, competitive broadband finally reaches the places that lack service today? The search for solutions leads to new entrants—rural electrical cooperatives, local governmental collaborations with private companies, and more.

First, policymakers and citizens need an accurate portrait of broadband deployment—not only where it is but what it is. We need to know not only the speeds at which High-Performance Broadband operates but also its critical performance criteria, including latency, monthly-capacity limits (if any), and pricing. To extend opportunity everywhere, this report urges the adoption of policies that provide all people in the United States with the opportunity to subscribe to High-Performance Broadband—that is to say, with the performance characteristics typically achieved by a fiber-based network, among them high actual speeds and low latency.

The first priority of deployment funding is to build to areas that lack broadband. But to ensure everyone can fully benefit, policymakers also must examine places where internet-access performance is inadequate.

There is a tendency to call the construction of new, competitive networks in a locality with an existing network “overbuilding,” as if it were an unnecessary thing, a useless piece of engineering. But what some call “overbuilding” should be called by a more familiar term: “Competition.” “Overbuilding” is an engineering concept. “Competition” is an economic concept that helps consumers because it shifts the focus from counting broadband networks to counting the dollars that consumers save when they have competitive choices.

Key Broadband Deployment Recommendations

(Additional recommendations and details found in Chapter 2)

Map Broadband Oases and Deserts

- The Federal Communications Commission (FCC) must move promptly to collect, verify, and release data that will allow policymakers at all levels of government to make real judgments on the extent to which broadband is actually available to every household location in America.

Deploy High-Performance Broadband

- Governments should promptly scrap obsolete performance standards, such as the FCC’s current 25/3 Mbps definition of advanced broadband.

Reach Unserved Areas (and Reject the Claim of “Overbuilding”)

- The focus should be on whether robust broadband is present—not on whether an area meets one of the multiple definitions of “rural.”
- Deployment and competition are good for consumers. The question for funding is not whether there is “overbuilding” but whether funding will be well-spent. In considering expenditures, federal (and, where applicable, state) agencies should consider among other factors:

- the benefits to consumers of increased deployment and competition, and
- the ability of network expansion to capture the advantages of network efficiencies in reaching these areas (and passing those savings along to consumers).

Deploy High-Performance Broadband on Tribal Lands

- Congress and the federal government should determine whether the particular challenges of Indian lands—that have left too many behind for too long—require specialized efforts.

Employ Reverse Auctions to Stretch Federal Dollars

- Where the federal government is spending significant sums of money to support capital expenditures for broadband deployment, reverse auctions can produce the most bang for the buck.

Establish Eligibility for Reverse-Auction Participation

- Provider participation should extend broadly to include new entrants like rural electric co-ops and private-public collaborations.

Establish Requirements for Funded Deployment

- Governments should ensure that middle-mile and backhaul facilities constructed with government support are open and available to multiple broadband providers.
- In addition to meeting performance standards (such as 100/100 Mbps symmetrical speeds) for new construction and employing interim measures to support access to lower-speed broadband where necessary, recipients of federal funding should be required to offer standardized tiers of service, including one for income-eligible individuals.

Increase the Effectiveness of Federal Efforts

- The National Telecommunications and Information Administration (NTIA), the FCC, and the U.S. Department of Agriculture (USDA) should publish a comprehensive map that demonstrates the eligibility of different areas of the country for different broadband programs, including those administered by the USDA and the FCC.
- Congress should provide guidance to NTIA, FCC, and USDA efforts on how best to synergize their respective expertise.

II. Promoting Broadband Competition

At the same time that income inequality has been growing in the U.S. economy, so too has market concentration. Too often just a handful of large businesses serve a single market. Market concentration adds to the importance of promoting competition, especially given the possibility that growing market power actually exacerbates economic inequality. In other words, lack of competition not only penalizes consumers in the manners traditionally expected (higher prices, lower quality, and slower innovation) but may also add fuel to the income-inequality fire.

Today, limited competition in the broadband marketplace threatens to harm consumers. With limited competition, it is perhaps unsurprising that Americans pay some of the highest broadband prices in the world. In fact, competitive choices have generally been declining over the years as broadband technologies—and consumers' bandwidth requirements—have evolved.

To the extent that lack of competition results in artificially high prices and/or lower quality, people in some areas are paying more than people in other areas for the same service, getting lower-quality service, or both. People and communities who are especially likely to be impacted by limited competition include middle-class households, rural America, and people with lower incomes.

In a handful of major U.S. cities, ubiquitous, competitive High-Performance Broadband markets in the 2020s are likely to emerge. These are broadband oases, places where competition between multiple networks drives the price of High-Performance Broadband lower and the features of broadband forward faster. However, these digital oases will be far from pervasive. Other places may find themselves in broadband deserts, with no broadband or with the limited competition that typically produces higher prices.

Public policy should rest on the proposition that more competition, especially beyond one or two providers, will benefit consumers by removing the shadow of artificially high prices (or lower quality or less innovation or all of the above) from consumers.

Key Broadband Competition Recommendations

(Additional recommendations and details found in Chapter 3)

Promote Broadband Competition at the Local Level

- Policymakers at all levels of government should encourage new entrants and the deployment of High-Performance Broadband to everyone in a community.
- Remove Limits on Local Decision-Making that Spurs Competition.
 - States should repeal and, if necessary, Congress should pre-empt current state laws that restrict municipalities and counties from experimenting with various ways of increasing High-Performance Broadband deployment. Whether these local governments and the communities do so or not should be left up to them.

- As a matter of federal and state law, municipalities should be able to negotiate pro-consumer, community-wide deployment of broadband networks as part of agreements that allow for the use of municipal resources.

Enact Stronger Federal Policies to Spur Broadband Competition

- Federal programs should be optimized to spur greater broadband choices for consumers. The FCC should eliminate exclusive multi-unit building contracts that require residents to pay for broadband services they neither want nor use.
- Pro-competition spectrum policies should be pursued.
 - To enable greater competition and maximize spectrum efficiency, the shared use of spectrum should be encouraged, including between governmental and private users, to improve broadband deployment in unserved and underserved areas and by smaller and new broadband providers.
 - More unlicensed spectrum should be provided to meet growing Wi-Fi demand.

Execute Additional Pro-Competition Recommendations Across the Board

- Large sums of federal funding should be allocated based on competitive processes, such as reverse auctions.
- When federal funding is used on infrastructure projects, such as highway construction, fiber strands should be installed and made available to multiple providers.
- To make Lifeline service more accessible, more entities, including community-based institutions, should be allowed to provide Lifeline services as Lifeline Broadband Providers.
- Deployments made to community anchor institutions should be subject to competitive-bidding processes, which lower the cost of procurement.

III. Encouraging Broadband Adoption

For many Americans, lack of broadband access means having less opportunity than their parents did. This is not just a digital divide—this is another America. An America whose finances are precarious—and disadvantaged by long-term tectonic economic trends. A place that is often isolated—especially in rural America. An America where the local fast-food restaurant and the public library may offer the best choices for broadband. It is an America with less opportunity.

Broadband's fundamental value doesn't come from connecting computers to networks; it comes from connecting people to opportunity, and society to new solutions. When a network is available but a person who wants to use it can't do so, then the network is less valuable to everyone who uses it.

Broadband adoption benefits people in concrete and practical ways. Children can do homework at home. Parents can become more involved in their child's school. Families can stream educational content. Adults can obtain digital skills training, including workforce skills, and create résumés. Americans with disabilities can establish better access to education, employment, health care, and community activities. Far too many people face practical barriers in using broadband service that they want and that is ostensibly available to them. Academic research has established that socioeconomic factors impact broadband usage.

Local leadership is crucial in both identifying digital divides and combating them. As a nation, we also must set long-term goals to ensure that High-Performance Broadband is fully and realistically available to everyone in America.

To achieve more equitable and effective broadband use, we review:

- The inability of lower-income people to afford broadband connections;
- Community efforts to increase the skills that people need to effectively use broadband connections; and
- The critical link between digital-inclusion efforts and broader economic and social strategies.

Key Broadband Adoption Recommendations

(Additional recommendations and details found in Chapter 4)

Create an Affordability Agenda

- The FCC should protect and strengthen the Lifeline program to ensure our most vulnerable populations are not left out.
- In addition to Lifeline, Congress should consider the creation of separate support for eligible low-income people to afford fixed-broadband connections, including those in need of special in-home services, such as health care.
- The FCC should consider requiring that recipients of federal deployment funding offer eligible, low-income individuals an affordable broadband service for \$10 per month.
- The FCC should educate and protect consumers, including through the use of the Fixed Broadband Consumer Disclosure Label, adopted by the FCC in 2015 but later rescinded.

Support Digital Skills

- As local governments around the nation have demonstrated, digital inclusion efforts are most successful when they enlist the community in order to reach people in convenient, trusted places.
- Deployment of federal and state resources takes many forms:
 - The federal government should support digital literacy efforts run by state and local governments.

- State and regional digital equity plans should provide financial support and identify purposes—such as improved education, health, and civic and social engagement—to which digital skills instruction can be targeted and content can be created.
- Digital skills programs should measure and monitor their results on an ongoing basis.

Incorporate Digital Skills Training in Regional Economic-Growth Strategies

- Applying the lessons of local and regional economic clusters, state and local governments should focus training on middle-skill and other jobs important to their local economies.
- Digital inclusion plans should recognize which local institutions can best reach the people who need to be served.

IV. The Special Role of Community Anchor Institutions

In the 2020s, public policy should recognize that bits are books, bits are blackboards, and bits are basic tools of medical practice. Community anchors’ missions are moving beyond their walls. Libraries no longer deliver knowledge that is housed only within their buildings or the covers of hardbound books. Public education today cannot exist separate from the ability of students and teachers to use broadband connections—both in and out of school. And health-care facilities see and monitor patients both in hospitals and in their homes.

With advanced communications changing how education, health care, and other vital services are delivered, we need an action plan to support the works of community anchor institutions in the 2020s:

- Community anchor institutions need competitively priced, High-Performance Broadband.
- Community anchor institutions need to reach people wherever they are—both within and outside the buildings that house these institutions.
- The High-Performance Broadband networks that connect community anchor institutions can be used as launching pads for new, community-wide service.

Each of these goals is important on its own.

In the coming decade, policymakers should help ensure community anchor institutions have access to affordable, competitively priced, High-Performance Broadband and connect to their users wherever they are. More competition is the answer. Expanding the ability of a broad range of community anchor institutions to purchase connectivity would lower the cost of broadband for all.

Publicly funded, middle-mile networks that connect community anchor institutions should be open to broadband providers willing to offer “last-mile” service to community residents and businesses.

One short-term answer to the lack of in-home broadband can be found in libraries across the nation that are experimenting with the lending, not just of books, but of Wi-Fi hotspots as well. Many schools have recognized—and are acting on—the same need.

There is no reason to wait any longer. Congress and the FCC should expand the E-Rate program to provide wireless access to students of lower-income families who do not have broadband at home. At current prices, \$100 million per year would support the full cost of LTE service to between two million and three million K-12 students.

Policymakers should also explore the possibility of lowering the cost of fixed-broadband connections to K-12 students and to vulnerable populations. For example, the aggregation of buying power by school districts might allow the subsidy of in-home broadband that would support educational uses at prices lower than normal residential retail rates.

In addition, policymakers should allow private companies to access, at their own expense, the broadband infrastructure used by community anchor institutions in order to lower the cost of deployment to residential customers. Community anchor institutions can serve as a launching pad for neighborhood broadband access and, in places where broadband has already been deployed, more broadband competition.

Key Recommendations Concerning Anchor Institutions

(Additional recommendations and details found in Chapter 5)

Establish Realistic Community Anchor Institution Connectivity Goals

- Periodically re-examine the goals set by the FCC for federally-funded connectivity to schools and libraries.
- Establish ambitious connectivity goals for all other community anchor institutions.

Support and Promote Competition to Drive Better Broadband at Lower Prices for Community Anchor Institutions

- Require competitive-bidding processes to yield the best terms for community anchor institutions and bring more fiber-based deployment into a community.
- Encourage new entry by broadband providers, and respect the results of competitive-bidding processes.

Empower Community Members to Access Community Anchor Institution Broadband

- Support expanding the E-Rate program to support wireless, off-premises access and hotspot lending programs.

- Provide low-cost, fixed-broadband connections to people who need to access broadband to receive critical social services, including health care.
- Maximize the opportunities to leverage telemedicine networks to improve health-care delivery to consumers.

Facilitate Comprehensive Broadband Strategies

- Encourage state research and education networks and bring institutions together to learn from one another.

V. Broadband and Democracy

The use of High-Performance Broadband will help America achieve both economic and social outcomes. This report stresses that one important means of improving access to broadband is to give consumers more and better choices by promoting greater competition. At a fundamental level, the ideas of a competitive market and the idea of democracy are woven from the same fabric of truth-seeking—the same idea from which science, technology, democracy, and competition all emerge.

High-Performance Broadband is a tool that can help support democratic society and the social justice it engenders because increasing economic growth and individual opportunity are the means for securing a foundation of support for democratic institutions.

How can we extend broadband’s reach to those who can benefit most, and how can we ensure that its potential can be harnessed to help more Americans climb up the economic ladder in a more fulfilling and sustainable way?

The strength of High-Performance Broadband is that it will—if fully accessible to all in America—help us solve some of our most critical societal challenges, meet people wherever they live and work, and help them overcome key barriers regardless of their background, community surroundings, or demographic characteristics. Imagine each community enabled to identify and build on its strengths and employ technology accordingly. That is a profoundly democratic vision.

As César Chávez said, “We cannot seek achievement for ourselves and forget about progress and prosperity for our community.”

About the Author

Jonathan Sallet is a Senior Fellow of the Benton Institute for Broadband & Society. His work on communications and technology policy includes serving during the Clinton Administration as head of the White House's first working group on education technology and of the office of Policy & Strategic Planning for Secretary Ron Brown at the Department of Commerce. From 2013-2016, Mr. Sallet served as Acting General Counsel and then as General Counsel of the Federal Communications Commission during the chairmanship of Tom Wheeler.

Mr. Sallet was as a deputy assistant attorney general in the Antitrust Division of the Department of Justice in the Obama Administration and President Obama appointed him to be a member of the Council of the Administrative Conference of the United States.

Earlier in his career, Mr. Sallet served as Editor-in-Chief of the Virginia Law Review at the University of Virginia and as a law clerk to Judge Edward Tamm of the United States Court of Appeals for the District of Columbia Circuit and to Associate Justice Lewis F. Powell, Jr., of the United States Supreme Court.

Mr. Sallet and his wife Lori divide their time between Virginia and the Eastern Shore of Maryland, where they own a certified-organic, working farm.

