



Missed Opportunities

Lack of adequate broadband continues to constrain American prosperity in many parts of the country, particularly in rural areas. Since 2000, the Federal government has spent \$95 billion to address this need, sufficient funding to build fiber-to-the-home in all but the most remote frontier areas. Yet tens of millions of rural and low-income urban households still rely on decrepit, 1950s-era copper cables that no longer support reliable telephone service, let alone high-speed broadband. In effect, we paid for a superhighway but wound up with a goat path.

This brief demystifies the puzzle and charts a common sense solution that utilizes robust specifications, protects consumers, and requires accountability.

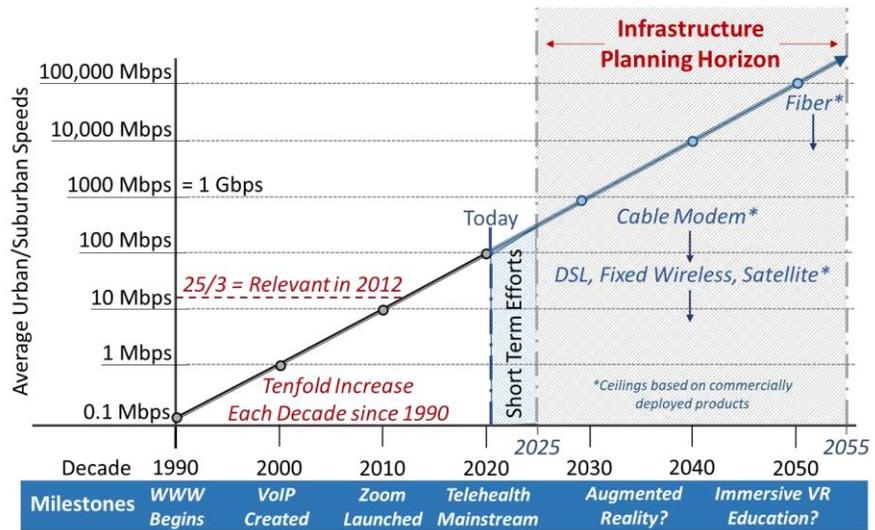
Thinking Long-Term

We must deploy infrastructure that will support projected growth for at least thirty years.

A “future-proof” network with capital subsidies to ensure long term profitability costs much less over its lifetime than short-lived, incremental solutions.

Deploying future-proof infrastructure is likely to take four years, so a 30-year planning horizon stretches from 2025 to 2055.

With demand increasing tenfold per decade, we need networks capable of reaching speeds of 100,000 megabits per second (see figure above). While this sounds extraordinary, the pace of technological change continues to accelerate. As demand for applications like augmented and immersive virtual reality increase, so will the need for faster upload speeds.



In densely populated, high income locations, the private sector has made significant investments, with multiple ISPs competing to offer advanced services. However, deploying broadband to low density, low income regions requires government subsidy of capital costs. Largely missing from such programs, though, have been robust requirements and rigorous enforcement, leaving rural America and some urban areas behind. Fortunately, three common sense solutions can address these shortfalls.

Three Principles for Broadband Expansion

A. Invest in Robust Broadband Infrastructure

- Focus on “future-proof” networks with robust specifications that can deliver 30-40 years of growth.
- Address unserved and underserved areas by prioritizing locations with less than 100 Mbps down and 20 Mbps up (the average residential speed in well-served areas in 2020).
- Award funding to yield the best value based on capacity and reliability rather than lowest cost.
- Require subsidy recipients to reach 100% of households, businesses, and anchors in the service area within four years, and require recipients to offer an affordable residential package with all rates public and transparent.



- Promote public-private partnerships through investment in last-mile networks, middle-mile networks, neutral localized peering facilities, and community points-of-presence.
- Support physically diverse and electronically redundant connectivity for critical community anchors like healthcare facilities, libraries, and K-12 schools.

B. Encourage Competition to Spur Innovation and Protect Consumers

- Government broadband expansion programs create de facto monopolies when they block subsidies based solely on individual provider's often-overstated coverage claims. While some industry members express concern about overbuilding, underbuilding is a much bigger concern. New programs should encourage competition. Otherwise, prices will rise while performance and reliability fall.
- Require open networks that let providers compete on an equal footing with enough capacity up front for non-discriminatory, timely access (e.g. more fiber strands than a closed network would require). To encourage compliance, prioritize proposals that include at least one public partner.
- Intentionally encourage broadband investment that spurs innovation and competition. Investment should not be limited based on a single provider's service claims.
- Accept proposals from any entity with the capacity to deploy broadband. Status as an Eligible Telecommunications Carrier (ETC) should not be required. Examples include: councils of government, local governments and employment centers, schools, libraries, healthcare providers, ISPs, institutions of higher ed, electric co-ops, non-profit research and education networks, and broadband co-ops. Prioritize public/private partnerships with rural last-mile experience.

C. Require Accountability and Transparency

- Reverse the burden of proof for service area challenges. Require the objecting party to provide pricing, subscriber information, and end-to-end performance testing results.
- Release funding in tranches based on public partner or third-party inspections to verify completion of milestones.
- Require full transparency from funding agencies and recipients, including detailed project schedules and quarterly reporting of locations passed/served.
- Require providers to meet pre-determined service level commitments for capacity, reliability, and end-user support. Verify compliance with end-to-end performance testing based on national standards and methods.
- Levy substantial penalties to providers who overstate availability and/or performance.

Promote Maximum Flexibility

In addition to expanding the reach of broadband, programs should also fund:

- Local broadband needs assessment and project development
- Digital literacy programs and low-cost connectivity
- Availability mapping down to individual service locations

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