Broadband Infrastructure

Critical infrastructure for the 21st century and beyond

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What is Broadband?

Broadband Definition

Broadband in telecommunication means a wide bandwidth which can **transport multiple signals** over a broad rage of frequencies and support different internet traffic types, allowing **multiple data streams** to be sent at once.

Broadband Speed Benchmark

The Federal Communication Commission has established the benchmark at **100 Mpbs/20 Mpbs for fixed service**, with a long-term goal of 1 Gpbs/500 Mpbs. **No official metric for mobile** but evaluated on various metrics. Highest measure mapped at **5G 35Mpbs/3Mpbs.**

Common Technology Mediums

Fiber Optic

Coaxial Cable

DSL

Satellite

Wireless

Assessing the Digital Divide

Infrasturcture availability is only one aspect in viewing the digital dive. Americans must have the **financial means** to sustain an internet subscription, a **device to use** the technology, and the **digital skills** necessary to leverage its capabilities.

Millions of Americans lack access to both 100/20 Mbps fixed service and 35/3 Mbps Mobile 5G service

Fixed Broadband Service[1]

94.6% of serviceable locations in America have service at 100/20

Urban and Rural Disparities
- Urban: 98.2% have service
- Rural: 82.4% have service

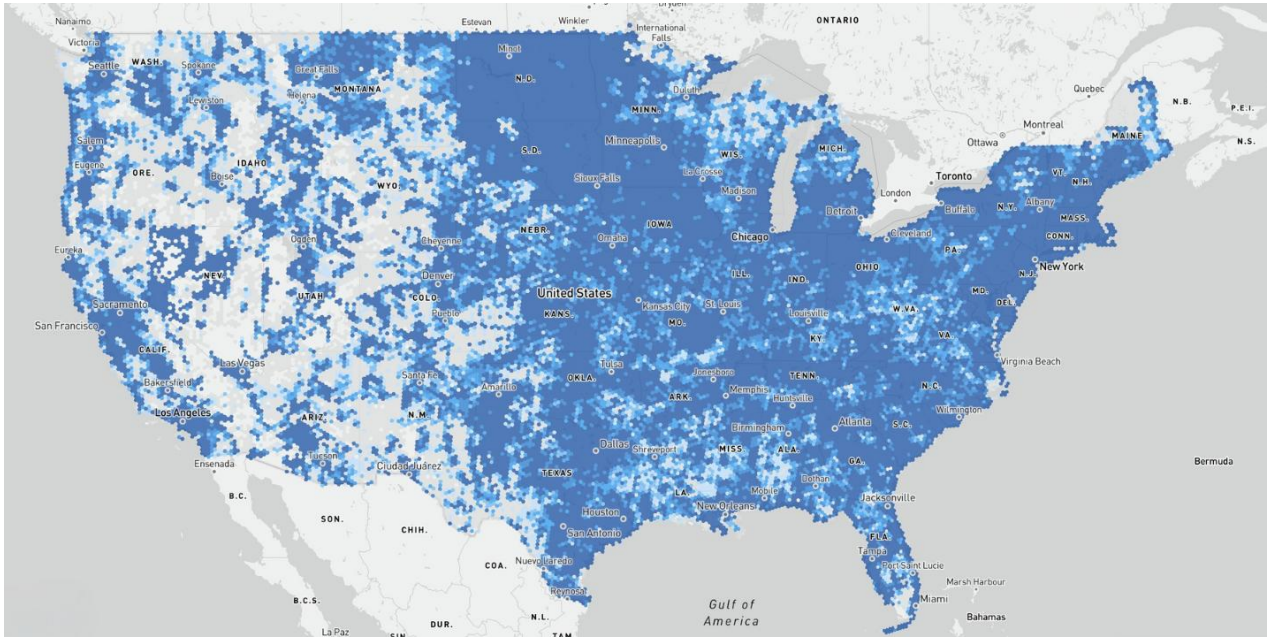
60% of serviceable locations can access 1G/1G

Mobile Service[2]

Majority of Americans have access to 4G service. Western US, Appalachia, and Rural parts of the Northeast do not.

50% of Americans have access to 5G service as measured by FCC

2025 FCC National Broadband Map



Note: Satellite service removed
Source: Federal Communications Commission

Opportunity: FCC map is commonly viewed as overstating coverage. Communities may submit challenges to the FCC map to improve accuracy. See: broadbandmap.fcc.gov

1 & 2. FCC National Broadband Map

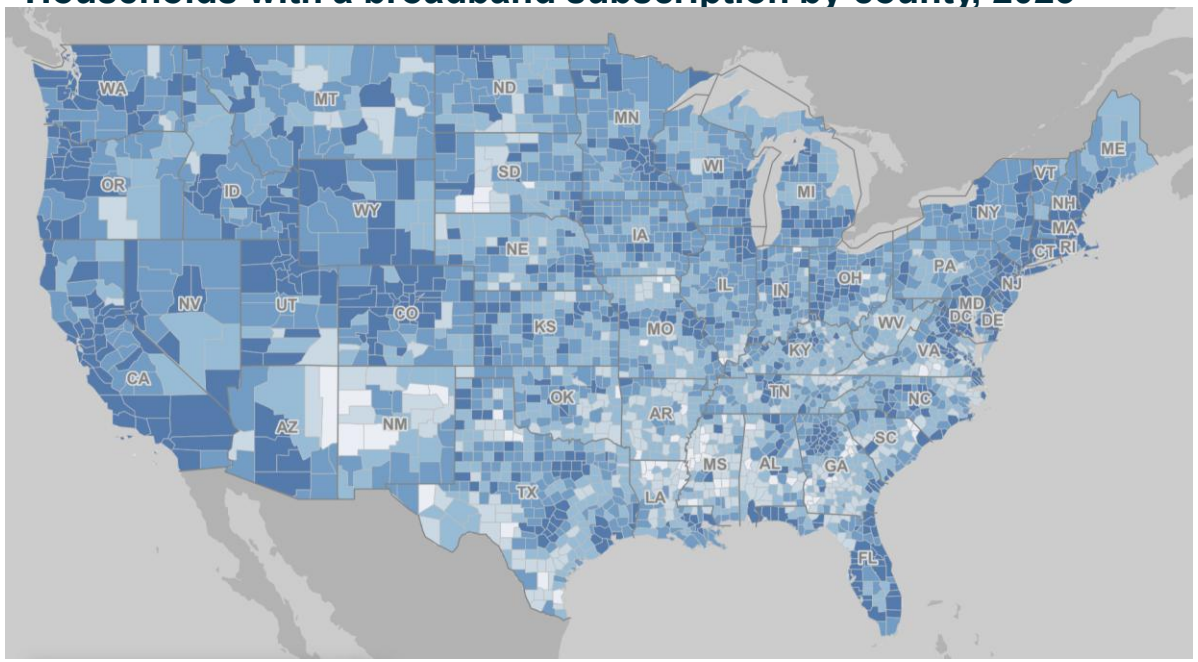
Despite infrastructure improvements, millions of American households do not subscribe broadband

Nearly **9 million households** do not have a broadband subscription
Progress from 16.4 million pre-pandemic (2019)[3]

Households with incomes of **$30K-$69K were more than 4 times likely to not subscribe** to service than $100K households[4]

$100 is the median cost for 100/20 broadband service; **$38 to $80 is the median cost** for 30 GB mobile service for 1 to 4 lines, respectively[5]

Households with a broadband subscription by county, 2023



Source: American Community Survey

3. American Community Survey, 4. Pew Research Center, 5. FCC Section 706 Report

Devices and digital skills are necessary to fully utilize broadband service

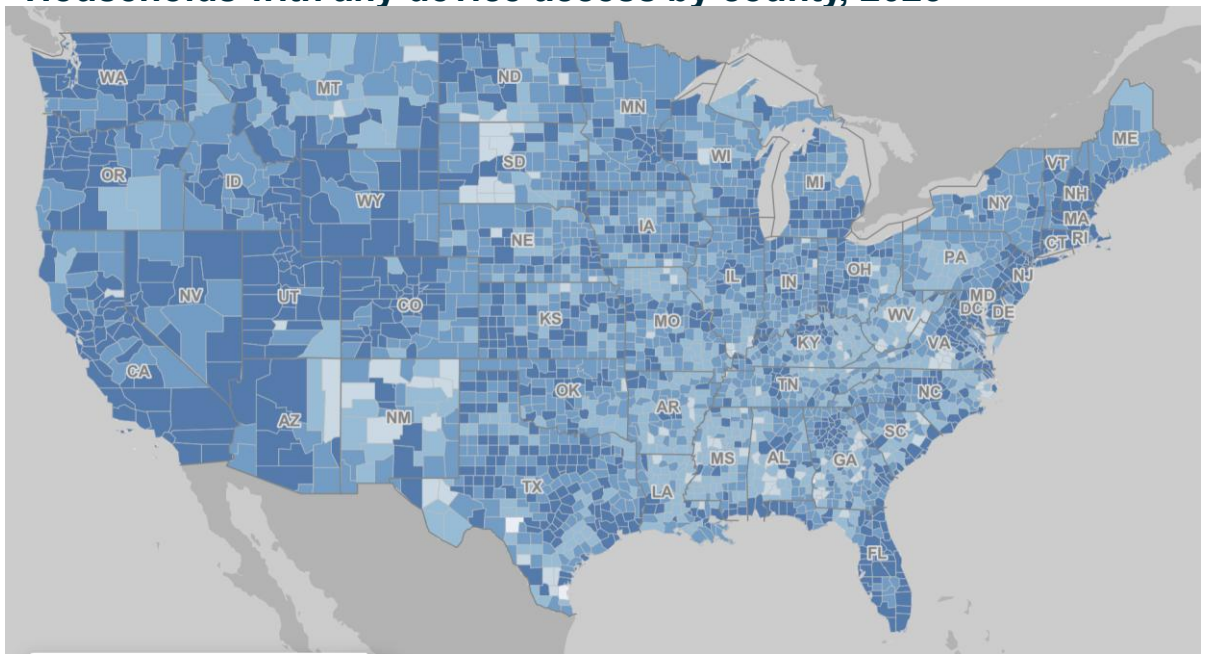
4.5 million households have no device to use the internet[6]

At 54% that have a device, Latinos are less likely to have a device than any other ethnicities[7]

- **25% of Latinos are smartphone only** users (*highest among all ethnicities*)

Nonprofits and Community Anchor Institutions are spearheading digital skilling programs across the country

Households with any device access by county, 2023



Source: American Community Survey

6. American Community Survey, 7. NTIA Internet Use Survey 2024

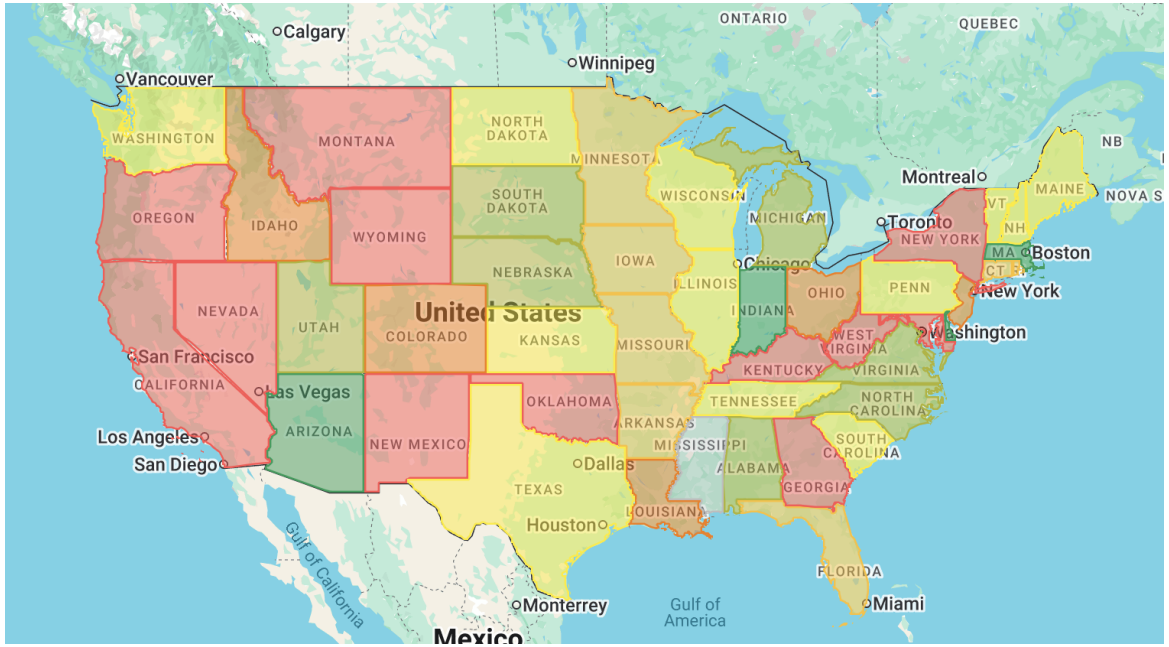
Next Generation 9-1-1 implementation is critical for public safety and emergency preparedness

NG9-1-1 provides the opportunity for **data (i.e. photos, video, maps, etc.) to inform response** efforts by public safety professionals

Broadband infrastructure is a **key component** for deploying NG9-1-1

Lack of funding has been a major challenge for states in deploying NG9-1-1

NG911 Deployment Status, 2025



Source: National Association of State 911 Administrators

Broadband infrastructure funding and support is a collaborative effort across governments and the private sector

Opportunities

$13 billion from Broadband Equity, Access and Deployment Program – Billions remain in limbo for states that have met their BEAD obligations. Funds may be used to complement infrastructure build outs, such as emergency preparedness, but guidance is stalled at the federal level.

Refresh climate resiliency plans focused on Broadband – In 2024, all 56 states and territories completed a climate risk assessment for broadband networks. Engagement with State broadband office staff to build on insights and findings.

NextGen911 Funding – Funding to support the deployment of NG9-1-1 is needed to ensure communities receive the necessary support during emergencies.

Cybersecurity Plans and Audits – Agencies and governments must ensure their cybersecurity plans are updated and audits are conducted to mitigate against attacks.

Leverage data center developments for community benefits – data centers supporting AI are emerging across the country, targeting land rich localities. These developments could be an opportunity for redundancy deployments.

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