The changing Digital Divide: Connected Nation's evolving mission
Part 2 of 2: The pain points that remain and the divides to come

The first part of this article described how a quarter-century of network buildout, culminating in the federal Broadband Equity, Access, and Deployment (BEAD) program, has largely closed the rural bandwidth gap that long defined the Digital Divide. Drawing on the National Telecommunications and Information Administration (NTIA) Internet Use Survey, it also mapped who remains offline: a residual population shaped mostly by age and income, concentrated among the elderly poor and, to a lesser degree, among rural households, though many non-users fit none of those descriptions. Offline living is on track to becoming very rare and may by now be as much a lifestyle choice as a form of privation.

But the Digital Divide remains a problem, in new forms. The concept needs to evolve, as many people simultaneously make progress and fall further behind an advancing frontier. Not everyone needs to be a tech-savvy early adopter, but there are ways that people and regions fall short that look problematic, and that policy or civil society effort should seek to address.

The screen-size divide

As the first part of this article showed, mobile-only internet use is concentrated among lower-income households. Behind that statistic lies a subtle divide between households that reach the internet not only through a smartphone with mobile data but also through a computer on a home broadband connection, and households for which smartphones and mobile data are the only gateway to computing and the internet. Smartphone penetration now clears 90%, well ahead of desktop and laptop computers at approximately 73%, so this is a large population.

As noted in industry commentary (e.g., "Smartphones and Digital Literacy," January 2026), smartphone ecosystems train users to navigate simplified, closed apps, whereas professional environments require foundational knowledge of file systems, operating systems, and productivity suites. Tsetsi and Rains (2017) are among those who argue that relying solely on smaller smartphone screens creates a new "device divide," leaving lower-income and minority users with an inherently limited internet experience compared with desktop broadband. Because small-screen interface constraints hinder essential, capital-building tasks like applying for jobs or conducting complex research, mobile dependence risks deepening existing digital inequalities.

In the workforce, individuals who are functionally "digitally native" on a mobile interface can remain unprepared for computer-based knowledge work. While smartphones and mobile data meet many online needs, they are oriented toward consumption activities such as entertainment, shopping, and social media, while computers' extra screen real estate and foregrounding of the operating system open up greater possibilities for production activities like making documents, spreadsheets, and software.

Society needs to be wary of backing into a stratified economy where employers take for granted that young people are our computer-savvy “digital natives,” when actually, for some, the

convenience of smartphones is crowding out the skillsets of click-and-drag, navigating folders and desktops, and using Microsoft Word, Excel, and other computer applications on which offices still rely.

The affordability divide and internet insecurity

Even though most non-subscribers say they simply don't need home broadband, and even though in Connected Nation's (CN) Mind the Gap study, cost ranked only third among the reasons they gave, the close empirical relationship between subscribership and income strongly suggests that affordability is a problem for some.

Stated need and economic constraint are not the same thing. For an affluent household, the felt need can be slight, and the connection is bought anyway because the cost is negligible. For a low-income household, the same slight felt need is weighed against a bill that competes with rent and groceries, and "I don't need it" becomes the description of a decision that affordability has already shaped. Internet insecurity — the periodic lapses in service that CN's "Stuck in the Middle: Internet Insecurity in Rural America" report documented — is that same constraint seen over time.

Low-income people struggle to make ends meet on many different fronts, and must sometimes, unfortunately, go without some things that other people take for granted. Lack of home internet has now become one of the forms that poverty takes.

Programs are available to help the poor afford food (SNAP), housing (down-payment assistance, Section 8 housing vouchers, LIHTC), medical care (Medicaid, CHIP), heating (LIHEAP), and other necessities. The now-defunct Affordable Connectivity Program (ACP) added broadband to the list, as indeed the Federal Communications Commission (FCC) Lifeline program still does on a very small scale.

Arguably, renewing robust subsidies for home broadband for income-constrained families would be disproportionately beneficial because of the positive externalities that broadband subscribership gives rise to. This is a policy space to watch in the coming years.

Of course, unaffordability of home broadband service can feed into the screen-size gap. A poor household that forgoes home broadband and computers to make ends meet is likely to raise kids who aren't comfortable using a computer.

The digital literacy social contract

Having a broadband connection without devices or digital skills is like having a kitchen without knowing how to cook or possessing any cookware. It's not much use. While nearly everyone has picked up at least *some* digital skills by this time, formal schooling is still catching up, and most people left school before smartphones, QR codes, or artificial intelligence (AI) chatbots existed. As a result, there has been a harsh sink-or-swim logic to the digital age. Most people

have managed an ongoing DIY makeover of habits and skillsets to thrive or survive amid all the new technology, but others have struggled or been left behind.

As society retires many pre-internet ways of doing things, digital literacy isn't just about unlocking new opportunities, but about surviving. Physical bank branches are scarcer. Many local newspapers have closed. Some vendors prefer digital payments such as Venmo to cash. People who relied on paper and brick-and-mortar often see their options narrowing and their lives becoming more difficult, even as the internet and AI deliver ever more convenience and variety to the tech-savvy.

A 2026 op-ed co-authored by CN and the National Digital Inclusion Alliance ("Fifty billion dollars, and patients who can't log in") framed the solution as a **"digital literacy social contract,"** a shared obligation to backfill digital skills as baseline technological expectations rise, so that people will have a fair chance to flourish in an increasingly digital society.

For example, CN has tried to do its part in closing the digital skills gap, by providing more than 1,800 digital skills workshops to over 35,000 individuals in 2025 alone through programs including **Teens Teach Tech, powered by AT&T,** and **Digital Works**. These grassroots efforts dovetail with the digital inclusion planning support that CN has provided to many states.

The future Digital Divide: AI and latency

If screen size, affordability, and skills are the divide as it exists today, two more are taking shape for tomorrow. Neither is yet visible in surveys like the NTIA's, but both are already legible in the technology's trajectory.

The AI divide

AI rewards cognitive curiosity, advanced education, and professional baseline fluency. AI stands ready to help with digital inclusion directly, serving as a patient, lucid tutor to explain digital concepts, but that only works if people use it. Current adoption patterns show it widening existing socioeconomic divisions as it disproportionately supercharges highly educated knowledge workers while often leaving the digitally disadvantaged disengaged and confused.

A recent Organisation for Economic Co-operation and Development (OECD) study found 21 percentage point gaps in AI use based on education:

CN's emerging response to the AI divide includes an **AI Literacy Resource Hub** (launched November 2025), sustained **public advocacy and commitment**, e.g., CN signed the National AI Pledge, and the integration of "AI in Your Life" modules into Teens Teach Tech, powered by AT&T.

The latency divide

As bandwidth capacity escalates, latency — the round-trip time data packets take to travel across a network — is becoming the front line in connectivity.

Excessive latency was the main reason why **geostationary** satellite internet has been eclipsed by low-Earth orbit (LEO) satellites. Geostationary satellites orbit at the same speed the Earth rotates, remaining fixed in the sky. While convenient for network design, physics dictates these satellites sit 22,000 miles up. That introduces nearly half a second of irreducible latency as radio signals — even traveling at the speed of light — make two round trips, adding up to 88,000 miles.

It takes a fleet of thousands of satellites to collapse satellite latency by reducing this journey to a few hundred miles. Satellites flying in low-Earth orbit move faster than Earth rotates, and therefore continually move across the sky, necessitating frequent handoffs. Tens of billions of dollars in investment was justified by the need to reduce the latency of satellite broadband to a level comparable with terrestrial broadband for mostly remote, otherwise underserved locations. This shows how much latency matters. While large files are still bottlenecked by bandwidth, latency is the speed that matters for most interactions with the internet today.

Geostationary satellites aside, the “last mile” that connects to specific homes is not the major contributor to latency. Latency, unlike bandwidth, depends mainly on the long data journey, often hundreds of miles, through “middle mile” and “backbone” fiber. And that journey length depends on the larger structure of the internet, including middle mile and backbone. Content delivery networks (CDNs) helped with that, reshaping the internet in the 2010s by parking the most frequently accessed content far closer to users.

Today, available network latencies largely meet current needs, but advanced AI technologies in the pipeline may change that. For example, applications of AI that involve a remote “brain” navigating a physical environment in real time are likely to have much lower latency requirements to simulate physical presence. Latency, therefore, is already emerging as a key bottleneck.

The CN white paper, “From Megabits to Milliseconds,” traces where this bites hardest, and the answer varies sharply by task. Driverless cars can currently tolerate substantial latency, but robotics, and the safety systems that keep robots and people apart in a shared workspace, are far less forgiving. As industries shift toward edge-first architectures that avoid reliance on either distant data centers or expensive, heavy on-device compute, geographic advantage will increasingly track proximity to **internet exchange points (IXPs)** — the neutral facilities where network providers interconnect.

IXPs currently exist in dozens of U.S. metropolitan areas but are absent in many others, leaving 14 states and three territories completely without a local exchange. In these IXP deserts, data must travel hundreds of redundant miles, creating an invisible "time tax." Through Connected Nation Internet Exchange Points (**CNIXP),** a joint venture with Newby Ventures, CN is building carrier-neutral exchange points in underserved markets, targeting 125-plus facilities across 43

states and four territories. The first facility, located in Wichita, Kan., developed in partnership with Wichita State University and DE-CIX, launches operations in 2026 to anchor a regional AI-inference ecosystem.

Looking forward

The Digital Divide of the past quarter-century was a story about rural areas left out of normal internet participation for lack of wires. That chapter of the Digital Divide is starting to close. What remains is more varied and, in some ways, harder to see: a gap in the devices people use, in what they can afford, in the skills they carry, and, increasingly, in their access to AI and to the low-latency networks the next generation of AI will require. The divide is not ending so much as changing shape.

What ties these strands together is what is finally at stake in all of them. Getting online was never the point. The point is what a connection makes possible — work, learning, health care, community, a full part in a common life — that is now lived, in no small measure, through screens. Each of the divides described here is ultimately a divide in the chance to flourish. That is why closing the bandwidth gap, however historic, cannot be the end of the mission.

CN continues to adjust its operational footprint to meet these challenges. Its early focus on broadband infrastructure deployment has given way to a more multifaceted mission of cultivating long-term digital inclusion and digital flourishing.