



# Digital access for all

## Equity in digital service delivery

Michele Causey, Mahesh Kelkar, Arindam Guha, and Mohamed Malouche

**T**HE COVID-19 PANDEMIC accelerated the shift to digital government as doctors' appointments, school lessons, and employment services, all hurriedly moved online. The move eased access for many—but made things much more difficult for others and, in fact, highlighted how deep-rooted the digital divide was and how unprepared we were to bridge it.

Schools moved online, but often, students without home internet access or their own tablets or computers were unable to access classes. Hospitals and clinics set up telehealth services, but those who lacked reliable internet connections or were unfamiliar with various website interfaces struggled to make appointments. Ensuring universal digital connectivity is just one part of the digital equity challenge.

Rickety infrastructure is another contributor. As public agencies moved to digital service delivery, constituents faced outages and difficulties tracking

their applications and uploading documents and rejections due to incomplete forms. While some services and processes were already set up as digital-first, many were constructed in an analog era, with online options added as an afterthought. Unprepared online environments were suddenly forced to handle a torrent of users. The traffic on some government websites, such as unemployment benefits portals, increased exponentially in early 2020; many systems—and the staff who operated them—were unable to keep up.<sup>1</sup>

Many government agencies are now aggressively trying to catch up.

But after nearly two years of trying to patch together online systems and communicate more effectively with constituents, government leaders are all too aware that even the best-in-class digital platforms cannot ensure equitable and inclusive access to services. Complicated processes and policies, antiquated systems, and inconsistent

requirements—which legal scholar and government-systems specialist, Cass Sunstein, calls *sludge*—continue to pose hurdles. These challenges include lengthy wait times, multiple application requirements, and confusing rules, which often impart hardships on the most disadvantaged populations.<sup>2</sup>

The strain of the pandemic revealed that many so-called digital government services were merely inferior online replicas of physical services. For instance, the US Temporary Assistance for Needy Families program has long allowed online applications, but even now, many states don't allow applicants to update information or track their application status online.<sup>3</sup>

Governments need to relook at digitization through an equity lens to build the “digital access for all” landscape that they are aspiring to in the postpandemic world. It includes improving broader access to digital connectivity, applying human-centered design approaches to both digital and in-person environments, and developing robust digital and data infrastructure to ensure smoother operations.

## Trend drivers

- **Digital acceleration:** The pandemic prompted a quantum leap into online and digital environments, which is likely to become the new normal.
- **The broader equity debate:** The long-simmering debate over diversity, equity, and inclusion is refocusing government energy on building equitable and accessible services for constituents.
- **An evolving design mindset:** The shift to “digital-first” requires extensive improvements in service design.

## Trend in action

The Netflix series *Maid*, based on Stephanie Land's memoir, opened many viewers' eyes to the problem of administrative challenges.<sup>4</sup> It's the story of 29-year-old Alex and her two-year-old daughter; she's trying to flee an abusive relationship while navigating a labyrinth of government social care systems and processes.

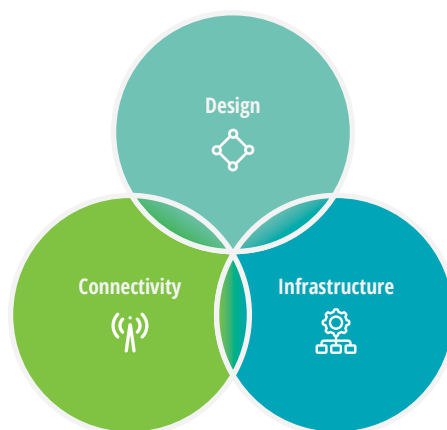
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Many of those accustomed to frustrating interactions with government systems found the series uncomfortably familiar.<sup>5</sup> Alex needs to show proof of income to be approved for day care vouchers but has nowhere to temporarily place her daughter if she wants to take a job. A housing voucher requires a landlord to approve and accept it.<sup>6</sup> Government systems, however well-meaning, often saddle users with cumbersome burdens—and many pandemic-era constituents can communicate with systems and representatives only by smartphone.

Universal digital access is impossible without universal digital connectivity, improved design of digital services, and a robust and flexible digital infrastructure (figure 1).

FIGURE 1

## Improving digital access



Source: Deloitte analysis.

### EQUITABLE DIGITAL CONNECTIVITY

Around the globe, governments are making big strides toward plugging the accessibility gap, primarily by ramping up investments in connectivity infrastructure. They are making large investments in fiber networks, creating free public Wi-Fi zones, rethinking spectrum policy and pricing, and funding digital literacy programs<sup>7</sup> (read more in “[Closing the digital divide](#)”<sup>8</sup>).

The US Congress recently passed the US\$1 trillion Infrastructure Investment and Jobs Act to boost public infrastructure spending (see figure 2), including a US\$65-billion broadband expansion focusing on digital equity, rural broadband, middle-mile infrastructure, and affordability.<sup>9</sup>

Seattle has led significant efforts toward technology access and adoption. In 2017, the city began providing grants to nonprofits for digital literacy skills training programs, affordable devices, and low-cost internet options.<sup>10</sup> In 2021, it funded 15 projects with a total of US\$480,000, including a

technology loan program for older adults and laptop donations to underserved communities.<sup>11</sup>

Rural areas represent a particularly difficult challenge for reliable high-speed internet. In 2012,<sup>12</sup> India launched a National Optical Fiber Network project to connect 250,000 villages, ensuring a minimum speed of 100 megabits per second (Mbps), at an estimated expense of US\$8.24 billion. More than 180,000 villages have been covered so far.<sup>13</sup>

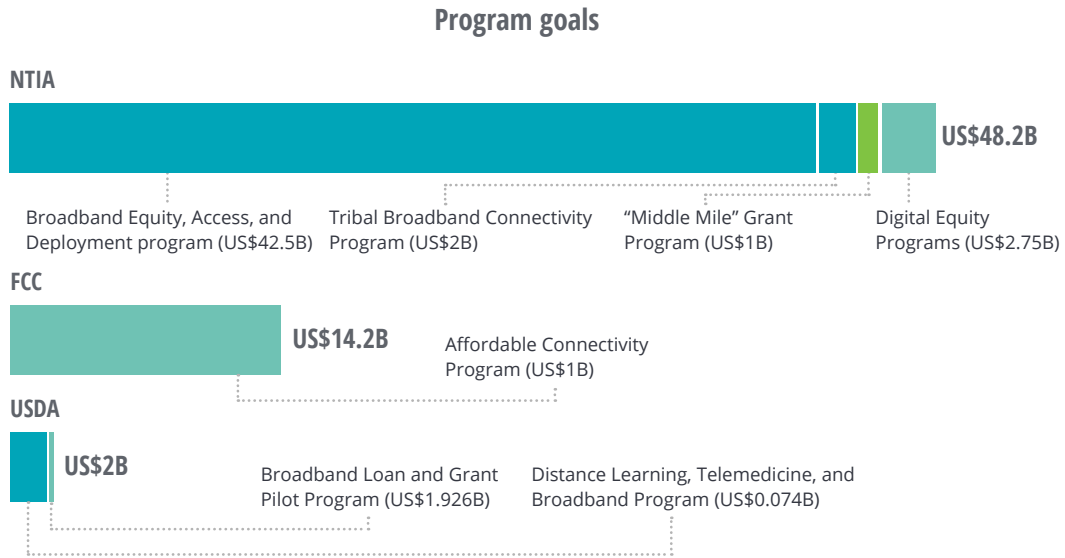
Since it often makes little economic sense for private internet service providers to build infrastructure in rural markets, agencies and nonprofits are working to establish decentralized, community-driven networks. In Uganda, for example, the nonprofit Battery-Operated System for Community Outreach (BOSCO) converts bandwidth from fiber optics to wireless and transmits it through a small network of 13 towers to rural communities up to 90 kilometers away, powering its equipment with solar energy. BOSCO operates 55 community centers, serving nearly 60,000 residents.<sup>14</sup>

FIGURE 2

## New US federal funding for broadband

Dramatic increase in federal spending on broadband with the passage of the Infrastructure Investment and Jobs Act

■ Infrastructure and digital inclusion ■ Infrastructure ■ Digital inclusion



Source: John Cassidy et al., *Closing the digital divide: How states can expand broadband access*, Deloitte, December 1, 2021.

Such innovations, as well as wireless technologies such as satellite-based internet, can improve access in hard-to-reach geographical areas. In 2020, the nonprofit Internet Society reported more than two dozen new and existing community networks around the world in regions including Argentina, the Galapagos Islands, Ethiopia, Georgia, Ghana, Nigeria, Uganda, and Zimbabwe.<sup>15</sup> Governments realize rural connectivity is a priority, but there is still more to do in this area.

### DESIGNING SERVICES FOR EQUITABLE ACCESS

Many government processes seem to be designed for their operators' ease of use rather than for constituents'. This is not surprising, as staffers interact with the systems daily, while users pop in

only occasionally—to file for unemployment insurance or apply for a passport, for instance.<sup>16</sup> But, as the UK National Health Service website lead designer, Dean Vipond, says, "Working at speed is no excuse for cutting corners with usability and accessibility of a project."<sup>17</sup> Making these services truly *user-friendly*—particularly for those who lack digital literacy or high-speed access—requires a dramatic shift in service design.<sup>18</sup>

Consider the United States' Earned Income Tax Credit (EITC) program. For nearly 50 years, it has been a particularly effective antipoverty program, lifting nearly 5.6 million people out of poverty in 2018 alone. But more than a fifth of eligible taxpayers failed to file EITC claims in 2018; most of them belonged to low-income, less-educated, and non-English-speaking households.<sup>19</sup>

The IRS has altered the program many times over the years to make it easier for taxpayers to use, but millions who could claim the credit still haven't. To identify hindrances to usage, New America's New Practice Lab partnered with the New York Department of Taxation and Finance. Using human-centered design principles, they identified barriers such as limited knowledge of the credit, a high dependency on tax prep software or professionals, and the perception that inquiries from the IRS could constitute an audit. The New Practice Lab suggested simple tweaks: add clear language in communications with recipients, improve the formatting and fonts used in forms, customize letters for various taxpayer groups, and offer forms in more locally spoken languages.<sup>20</sup>

Australia's Queensland government has created a plethora of human-centered design toolkits and resources for agencies, including guides for in-depth interviews, concept cards, and customer journey map templates.<sup>21</sup> This journey-mapping tool helped the Department of Housing and Public Works visually map services—such as computers, meeting rooms, and children's play areas—that a public housing office should provide.<sup>22</sup> In addition, the Customer and Digital Group within Queensland's Department of Communities, Housing and Digital Economy offers Queensland employees a free, two-day workshop on human-centered design.<sup>23</sup>

## DIGITAL INFRASTRUCTURE THAT SUPPORTS BROAD ACCESS

Governments are also looking to improve access by transforming back-end operations and associated digital infrastructure. A unique digital ID system (see the sidebar, "India's Aadhaar digital ecosystem"), for instance, can integrate client information across dozens of government systems. This, along with data-sharing, can reduce administrative challenges and enable the "once only" principle of human-centered design, where citizens and businesses need to provide

information just *once* to access multiple government services.

Germany's Refugee Digitization System, launched in 2016 to handle the arrival of more than a million refugees, collects relevant data (along with fingerprints as a legal identifier) at the first contact with a state agency and stores it in a central system. This system enables access to multiple services across government agencies, including housing, food assistance, and health care.<sup>24</sup>

## Moving forward

- **Begin with equity impact assessments (EIAs)**, which examine how policies and processes disenfranchise and discriminate against particular groups or communities. They can also be used to assess implicit and explicit biases in government programs.
- **Develop a design mindset.** Service design and empathetic, human-centered design should be an important part of creating new services or reimagining existing ones. Agencies should develop these skills within their teams to understand user challenges and remove roadblocks to access.
- **Promote community engagement.** Obtain the input of stakeholders representing marginalized and underserved communities. Develop strategies to promote inclusive community engagement and pilot their use among select departments: service, infrastructure, and planning.<sup>30</sup>
- **Use an omnichannel approach to ensure digital equity.** Government leaders can improve digital access by focusing on availability, affordability, and adoption, but digital-first doesn't mean digital-*only*—leaders should also consider how services can be delivered offline or in-person.

## INDIA'S AADHAAR DIGITAL ECOSYSTEM

The Unique Identity Authority of India (UIDAI) illustrates how national governments can boost equity and inclusion. India launched the program—commonly known as *Aadhaar*, meaning *support*—in 2008, to provide each Indian citizen with “a digital identity that is unique, universal, portable, and easily authenticable,” according to UIDAI’s CEO, Saurabh Garg.<sup>25</sup> The logic was simple: If citizens can prove their identities easily and safely, they face fewer complications in accessing government services.

The program is also intended to curb the growth of waste and fraud. In 2008, for example, more than a third of all grain earmarked for poor households was sold elsewhere; identification and delivery errors—both inadvertent and deliberate—waylaid 58% of grain shipments.<sup>26</sup> Fake identities plagued nearly every government welfare program.

At the time, India had overlapping identity systems for passports, voting, and tax, but none covered more than half of the population. Aadhaar, by contrast, provides every citizen with a unique, 12-digit identification number and authenticates their identities with fingerprints or iris scans. The program, now linked to hundreds of federal and state government programs, has enrolled 99.5% of all Indian adults. Those lacking digital access or literacy can use their Aadhaar IDs via a QR code, a downloaded XML file, mobile app, a physical card, or a printout.

Aadhaar has also transformed financial inclusion by linking to hundreds of millions of “Jan Dhan” bank accounts intended for low-income users. “Inclusion is a very basic fundamental principle for the Aadhaar program,” Garg says. “The digital identity should be universal, free of discrimination, and remove barriers to access and use.”<sup>27</sup> During the pandemic, the Central Government used Jan Dhan accounts to securely transfer cash to constituents.<sup>28</sup>

To further improve access to these funds, the National Payments Corporation of India, an organization led by India’s central bank, the Reserve Bank of India, joined with the Indian Banks’ Association to create an Aadhaar-enabled payment platform. This has allowed banks to install 5 million micro-ATMs in rural areas without brick-and-mortar bank branches. These devices allow account holders to withdraw cash from their Jan Dhan accounts using fingerprints for authentication.

What’s next? The government plans to provide Jan Dhan account holders access to microlending, investment, and insurance products. “Credit is really the basis of economic growth,” Garg says. “The Aadhaar ecosystem provides the basic digital infrastructure, and now the banks and other financial institutions have to leverage it.”<sup>29</sup>

**MY TAKE**

**Rachel Hope**, deputy director  
at the UK Department for  
Education

***Closing the digital divide needs sustainable, long-term investment and a clear mission***

The pandemic had an unprecedented effect on children's education, with nationwide school closures from March 2020 and again in January 2021 as well as periods of self-isolation resulting in many children learning from home for months. This disruption was felt disproportionately by pupils from disadvantaged families with less access to devices (laptops, tablets, or a computer), the internet, or a suitable home-learning environment.

In the Department for Education, we delivered more than 1.7 million laptops and tablets to disadvantaged children. We provided 4G routers and partnered with mobile network operators to provide free data allowances and set up nearly 6,000 schools on Google or Microsoft education platforms for remote and blended learning. We funded a network of "demonstrator" schools and colleges to support others in using technology effectively and to provide advice on remote teaching.

The Get Help with Technology program was a welcome rapid injection of support alongside many great local initiatives.

But what comes next?

Technology can have benefits inside and outside the classroom. In education, it's about how school and college leaders use technology to save time, access the best curriculum content available, target learning interventions at vulnerable or disadvantaged pupils, support inclusion, communicate and engage with parents, and, ultimately, realize the potential of every child and learner. When applied with skill, technology offers huge opportunities for the educational sector, but it hasn't been universally embraced.

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## About the authors

**Michele Causey** | [michelecausey@deloitte.com](mailto:michelecausey@deloitte.com)

Michele Causey is the leader of Digital Government Transformation for Deloitte's US-based Government Public Services sector, driving service delivery across government that elevates the human experience with intuitive and equitable solutions. As a former member of the US Federal Senior Executive Service, she has a deep awareness of the challenges and opportunities facing decision-makers across government. She brings strategy, customer experience, technology, and innovation skill sets built over her more than 20-year career leading digital transformation initiatives in the public and private sectors.

**Mahesh Kelkar** | [mkelkar@deloitte.com](mailto:mkelkar@deloitte.com)

Mahesh Kelkar is the smart cities research leader for the Deloitte Center for Government Insights. His research focuses on understanding the impact of technology, innovation, and policy on the future of cities. He closely tracks the federal and state government sectors and focuses on conducting in-depth research on the intersection of technology with government operations, policy, and decision-making.

**Arindam Guha** | [aguha@deloitte.com](mailto:aguha@deloitte.com)

Arindam Guha leads the Government & Public Services practice for Deloitte in India. He has over 27 years of experience and focuses on economic growth, government policy and service delivery reforms, and infrastructure advisory including innovative public-private partnership arrangements. In addition to supporting various ministries in the government of India and multiple state governments, Guha has also advised several bilateral and multilateral development agencies. He has worked across sectors/areas including cities and urbanization, agribusiness, health, education and skills, and MSME development. In addition to India, he has worked on engagements in China, Singapore, Russia, Malaysia, Singapore, Bangladesh, Nepal, Bhutan, Maldives, etc.

**Mohamed Malouche** | [MoMalouche@deloitte.tn](mailto:MoMalouche@deloitte.tn)

Mohamed Malouche is a partner in Deloitte Afrique, the business leader of the public service/donor practice, and responsible for activities related to the modernization of the public sector in Francophone Africa. He has more than 20 years of experience (including 13 at Deloitte Consulting US) in the implementation of public transformation programs, particularly in governance, country competitiveness, digital transformation, institutional capacity-building, support for economic development actors, and entrepreneurial ecosystem-strengthening.

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#### **Michele Causey**

Managing director | Strategy and Analytics Practice | Deloitte Consulting LLP  
+ 1 234 567 8910 | michelecausey@deloitte.com

Michele Causey is the leader of Digital Government Transformation for Deloitte's US-based Government Public Services sector, driving service delivery across government that elevates the human experience with intuitive and equitable solutions. As a former member of the US Federal Senior Executive Service, she has a deep awareness of the challenges and opportunities facing decision-makers across government.

### The Deloitte Center for Government Insights

#### **William Eggers**

Executive director | Deloitte Center for Government Insights | Deloitte Services LP  
+1 571 882 6585 | weggers@deloitte.com

William Eggers is the executive director of Deloitte Services LP's Center for Government Insights, where he is responsible for the firm's public sector thought leadership. His latest book is *Delivering on Digital: The Innovators and Technologies that are Transforming Government*.

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