Digital accessibility and inclusive design in government

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Overview

While most government organizations provide digital experiences that are compliant with respect to legally defined disabilities, this does not mean that those experiences accommodate people with other barriers. In fact, those compliant solutions often do not meet basic usability expectations.

Government organizations should design for a better user experience that considers a wide range of digital barriers such as digital accessibility, broadband connectivity and other barriers (e.g., limited digital literacy, English as a second language) and should implement a framework to measure if their solutions are meeting customer expectations.

Since the dawn of the internet in the 1980s, our digital capabilities and means of connection have evolved rapidly over time. The general public has now come to expect a seamless digital experience, but not everyone has been able to keep up with these expectations. Government and public services have often fallen short when it comes to digital infrastructure and design. While all government and public services are required to adhere to The Rehabilitation Act of 1973 Section 501 compliance for accessibility, not all services are rendered usable solely because they meet compliance standards. In fact, about 3 in 10 federal – and 2 in 10 in state and local – respondents say the need to meet regulatory requirements is the primary driver of their approach to design – suggesting many agencies may still lag in meeting emerging digital access needs. Government services must go beyond mere legal compliance to account for a wide range of digital barriers such as accessibility, broadband connectivity and digital literacy.

EY research shows that government agencies are not meeting or prioritizing constituent needs, with only 39% of state and local and 43% of federal respondents viewing digital accessibility as a top priority among agency leadership.

In brief ...

▸ **Over 40 million** people in the US have a recognized disability.[1]

▸ **25%** of the population **does not have home broadband internet connection.**[2]

▸ **Only 62%** of adults with a disability say they **own a desktop or laptop** compared with **81%** of people without a disability.[3]

▸ **30%** of the most popular **federal websites did not pass an automated accessibility test** for their homepage, and **48%** of those sites failed the test on at least one of their three most popular pages.[4]

Our goal is to introduce important user experience considerations that are often an afterthought when creating digital tools and platforms. If the topics discussed in this paper are of interest to you and your teams, please reach out to our EY team to find out more about how we design and develop seamless digital experiences.

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[1] "Americans with disabilities less likely than those without to own some digital devices," Pew Research Center website, www.pewresearch.org/fact-tank/2021/09/10/americans-with-disabilities-less-likely-than-those-without-to-own-some-digital-devices, 10 September 2021.

[2] "Mobile Technology and Home Broadband 2021," Pew Research Center website, www.pewresearch.org/internet/2021/06/03/mobile-technology-and-home-broadband-2021, 3 June 2021.

[3] Ibid.

[4] "DOJ fails to report on making federal websites accessible to disabled people," NPR website, https://www.npr.org/2022/06/30/1108737968/federal-websites-accessible-disabled, 30 June 2022.

Digital accessibility is often viewed as a compliance exercise

Digital accessibility entails that websites, applications and digital content can accommodate people with a diverse range of sensory, motor, cognitive and language abilities.

Citizen expectations are increasing for government and public services, as commercial digital experiences continue to raise the standard for user experience. As more organizations move services online, digital services must provide a better customer experience, meet future legislative requirements, expand the available touchpoints with their constituent base, and avoid risks such as lawsuits or noncompliance.

The US government has been paving the way for individuals with disabilities by creating legislation that is inclusive and supportive of creating connectivity to government websites and resources (Figure 1). While the legislation provides good guidance, solely relying on this guidance does not constitute providing a good experience.

Figure 1: Government standards for accessibility

Legislation	Section 508 Compliance	Americans with Disabilities Act (ADA)	Executive Order 14305
Description	On January 18, 2017, the U.S. Access Board published a final rule updating accessibility requirements for information and communication technology (ICT) covered by Section 508 of the Rehabilitation Act and Section 255 of the Communications Act.	The ADA is a federal civil rights law that prohibits discrimination against people with disabilities in everyday activities. The ADA prohibits discrimination on the basis of disability just as other civil rights laws prohibit discrimination on the basis of race, color, sex, national origin, age and religion. The ADA guarantees that people with disabilities have the same opportunities as everyone else to enjoy employment opportunities, purchase goods and services, and participate in state and local government programs.	President Joe Biden's Executive Order to advance diversity, equity, inclusion and accessibility (DEIA) establishes a government-wide initiative to advance DEIA in all parts of the federal workforce. A key aspect of the order seeks to advance equity in the workplace for individuals with disabilities.

# The legal risks of ignoring barriers

With the increase in the number of regulations, there has been an increase in lawsuits for noncompliance.

In almost every state there are numerous charges against corporations or service providers that failed to comply with one or another regulation, and the number will only keep increasing as legislation continues to evolve to address additional barriers. Additionally, the COVID-19 crisis drove people who had never engaged digitally to use those experiences, and the usability issues are most acute for people who are not digital natives.

Throughout the past decade, numerous services have become available on the web, with many organizations prioritizing self-service to reduce call center and other internal operating costs. Governing bodies at the federal and state levels have developed processes and legislation in an attempt to keep up

with the fast-paced progress and ensure equal access can be granted to the users of the world wide web. However, with the increase in legislation has come an increase in lawsuits as various customer groups realize the digital services don't adequately serve their needs.

Between 2010 and 2020, the US saw exponential increase in ADA Title III lawsuits; 2013 resulted in only 2,722 lawsuits, while numbers soared in 2020 reaching 17,020 Title III lawsuits.[5] A new trend is emerging backed by the increased regulations for web accessibility. An increase in lawsuits surrounding accessibility took place in the same decade, with web accessibility lawsuits jumping from 262 in 2016 to 11,664 in 2020.[6]

ADA Title III lawsuits breakout
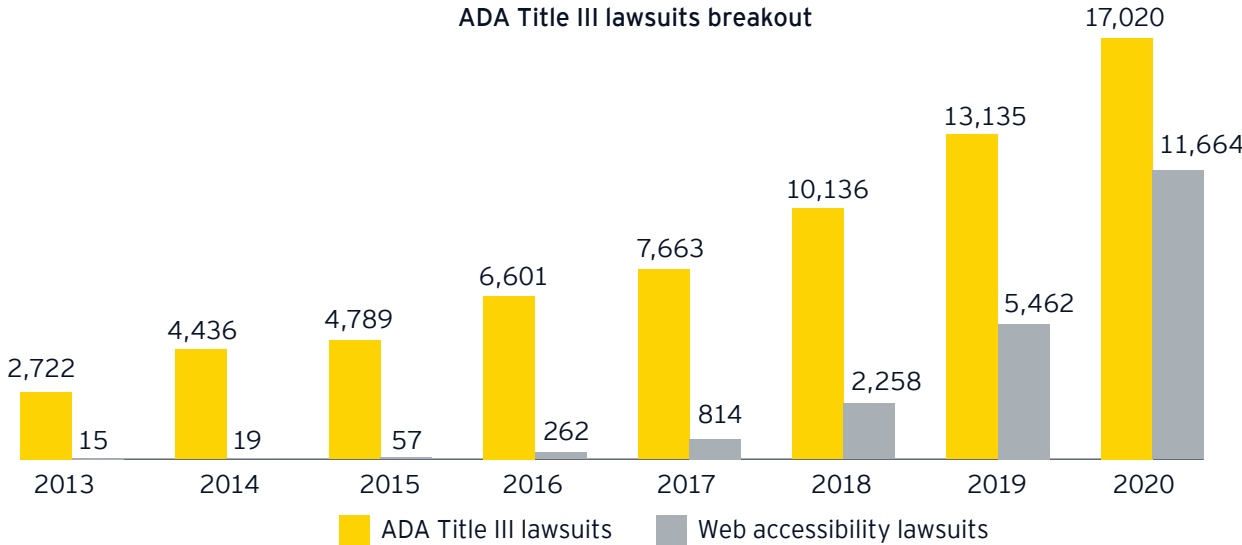
Source: Bu, Minh N. ADA Title III Website Accessibility Lawsuits. Seyfarth Shaw LLP. 13 March 2022.

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[5] "U.S. Access Board Issues Advanced Notice of Proposed Rulemaking For Self-Service Kiosks," *ADA Title III website,* https://www.adatitleiii.com, 3 October 2022.
[6] Ibid.

The compounding effect of other barriers

The COVID-19 pandemic alone has played a large role in shaping constituent expectations about the quality of digital services provided by the government.

The pandemic has led many more user groups to utilize digital services, both commercial and government. There is often a stark contrast between the usability provided by private enterprise and that provided by government agencies, but expectations are shaped by the great experiences.

Therefore, on top of the current legislation and regulations for those with varying abilities, there is now a compounding expectation of the quality of the web experience delivered by the government. Research conducted by the EY organization, "How can digital government connect constituents without leaving the disconnected behind?," discovered that "69% of constituents firmly believe that technology is essential to the future of their experience with government and private sector services."[7] As the world transforms and online services become inevitable in commercial and public sectors, now is the time to focus on addressing the public needs.

As agencies look to provide more digital services to constituents, they need to make sure they are designing experiences that not only accommodate those with legally recognized barriers like disabilities, but also those with increasingly recognized barriers like lack of broadband access, or lack of access to adequate technology. Twenty-five percent of the US population lacks connectivity to internet and those audiences likely also have other barriers, further exacerbating the service gap between digital natives and the rest of the population.[8]

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[7] "How can digital government connect citizens without leaving the disconnected behind?" *EY website,* www.ey.com/en_gl/government-public-sector/how-can-digital-government-connect-citizens-without-leaving-the-disconnected-behind, 24 February 2021.

[8] "Fast Facts & Figures About Social Security, 2020," *Social Security website,* 1 January 2021, www.ssa.gov/policy/docs/chartbooks/fast_facts/2020/fast_facts20.html, accessed 2 February 2023.

Improving experience for those with barriers improves the experience for all customer segments
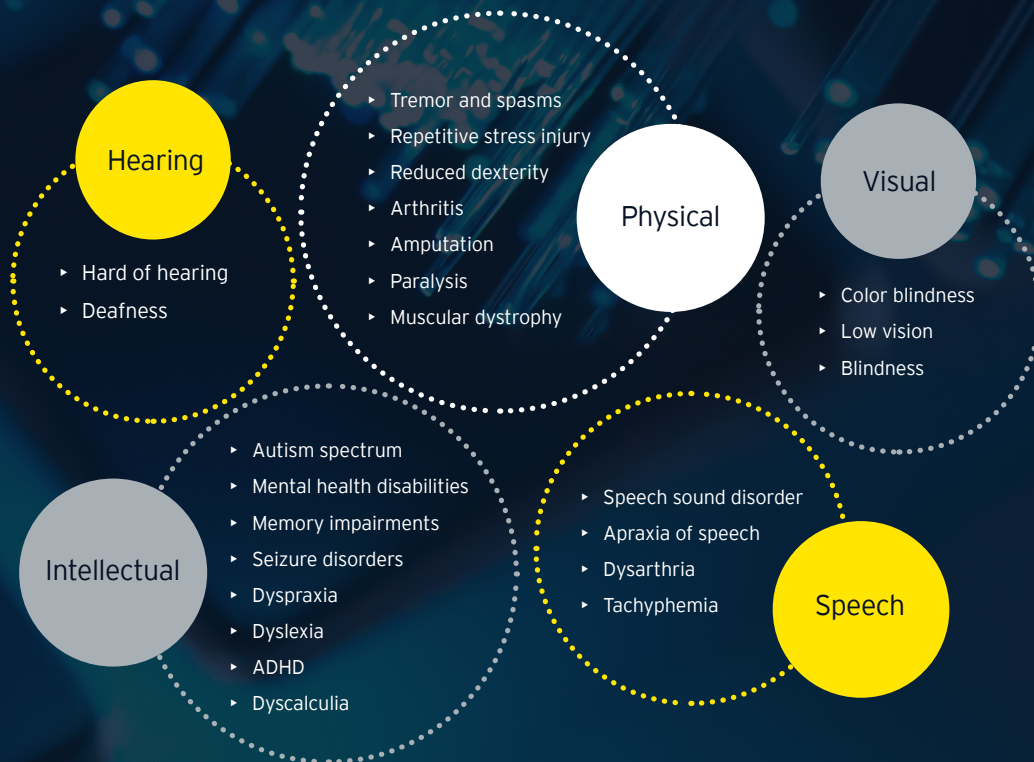
Ensure public services are accessible for all

Making public services accessible and versatile is the first step to tearing down the barriers many public users face. Additionally, what may benefit one group has the potential to benefit other groups. The concepts of universal design, curb cut effect, and persona spectrums bring to light how accounting for permanent constraints significantly improved the experience of those with temporary ones. The curb cut effect is an example of how implementing sidewalk ramps for wheelchair users now benefits everyone using the sidewalk such as parents with strollers and travelers with suitcases.

The whole spectrum of people who benefit from this intervention is a testament to how creating solutions that are universally beneficial and by design made for the most people expands usability.

To design for these groups, we need to empathize with the barriers they are facing and involve individuals who face these barriers at every step of the process.

Solution tip: Try creating diverse user personas to get a better idea of the demographics you are serving!

Some of the groups you should consider are as follows. More information about these groups can be found on the Web Accessibility Initiative website.[9]

Hearing
- ‣ Hard of hearing
- ‣ Deafness

Physical
- ‣ Tremor and spasms
- ‣ Repetitive stress injury
- ‣ Reduced dexterity
- ‣ Arthritis
- ‣ Amputation
- ‣ Paralysis
- ‣ Muscular dystrophy

Visual
- ‣ Color blindness
- ‣ Low vision
- ‣ Blindness

Intellectual
- ‣ Autism spectrum
- ‣ Mental health disabilities
- ‣ Memory impairments
- ‣ Seizure disorders
- ‣ Dyspraxia
- ‣ Dyslexia
- ‣ ADHD
- ‣ Dyscalculia

Speech
- ‣ Speech sound disorder
- ‣ Apraxia of speech
- ‣ Dysarthria
- ‣ Tachyphemia

[9] ''Diverse Abilities and Barriers,'' *Web Accessibility Initiative website,* www.w3.org/WAI/people-use-web/abilities-barriers.

Ensure connectivity to digital tools is feasible for all users

Many Americans do not have access to reliable home broadband or internet connection. This consideration can be addressed in a number of ways, whether it is starting with a mobile-first design, putting data protections in place in case services are accessed from a local resource such as a public library, or allowing for a family member to act as a proxy when a user has low digital literacy. Implementations will need to be tailored to the program and citizen base being served.

Designing for potential connectivity challenges can help alleviate issues that would become apparent in unconventional situations. For example, designing for those who do not have reliable connection (living in rural areas), take public transportation daily, are traveling abroad (relying on Wi-Fi or constant carrier switches), or lost their phone can have a lot in common.

Solution tip: Try out the EY Design Thinking Approach. It is important to incorporate the idea of designing for connectivity issues throughout all stages of design, as it is not something that can be easily retrofitted. During your research phase try to **Emphasize** and meet with the users of the product to forecast future issues, **Define** the types of connectivity that can be solved for to understand technical limitations, **Ideate** an experience that adapts and provides maximum value to users, **Prototype** by creating mockups of your ideas, and **Test** those prototypes with your users to see what can be improved and what factors may impact the end-to-end process.

Connectivity
‣ Limited local internet connectivity
‣ No home broadband available
‣ No access to a desktop or laptop device

Additional digital barriers

Furthermore, we need to consider how to design for users with additional barriers like limited technical fluency, language barriers or other challenges that prevent full utilization of a digital experience. In these cases, a design thinking approach should include handoffs to other channels like the phone or an in-person experience but do so seamlessly so that a user can start their journey in one channel and pick it up in another without having to restart the process.

Solution tip: Usage of icons, when done correctly, could improve the experience and increase the intuitiveness of the design. The thoroughly tested solution should function coherently, and usage of icons and effects should be consistent. When designing for someone who could require additional help, whether it is translating or interpreting the system request, it is important to beware of the information that appears on the screen and can be unintentionally shared with the "helping" party.

Other factors
‣ English as a second language
‣ Low digital literacy/needing assistance from a family member

What are the needs, objectives, behaviors and frustrations of the people we are here to serve? Let's examine the persona below and determine how we can more effectively deliver those services.

Name: Rebecca

Age: 72

Status: waiting to receive housing voucher

First touchpoint: online application

Disabilities: blind and lives in rural area with little access to bandwidth

Core needs: ability to reach state staff quickly and easily by phone, empathetic and understanding staff

Enabling resources: access to voucher by mail or ability to pick up voucher, phone-based assistance

Touchpoints: phone, in person, assisted proxy to help fill out forms

Hypothesis: Rebecca is a woman living in rural North Carolina who needs a housing voucher to move into a new accessible apartment. She currently lacks internet access and cannot access the form on her mobile phone. If the proper services are available to her then she should be able to work with a proxy to join a phone call with the housing office to fill out the proper paperwork and receive a physical housing voucher without ever using the internet.

EY Design Thinking Approach to mitigating barriers

If we stopped simply at satisfying the legal requirements of accessibility for digital, there is still the possibility of creating a clunky user experience. For example, providing alternative text for an interactive map may satisfy some of the Web Content Accessibility Guidelines, but this may not help a constituent with vision impairments find the right building for their appointment. Furthermore, while it is possible to learn and immerse yourself in the accessibility tools many rely on every day, this pales in comparison to the depth of knowledge and experience of those who live with and understand their own challenges on a personal level. Therefore, taking a human-centered design approach is crucial in creating experiences that are not only legally compliant, but also highly usable. We do this by following the Design Thinking Approach that is made up of the Empathize, Define, Ideate, Prototype and Test phases.

In the Empathize phase, conduct user research with a diverse set of real users. This will help you to Define user personas and problem definitions based on the users' pain points. Continue to involve users in the Ideate and Prototype phases by inviting them to brainstorming workshops and design meetings to foster a collaborative relationship with your users and gain feedback in real time. After creating high fidelity prototypes, return to users and Test your prototypes to ensure that they are solving and addressing the challenges and pain points that were defined. Throughout the Design Thinking Approach, you will be continually returning to different phases of the work. This process is meant to be nonlinear, and the different phases help refine each other.

It is important to note that co-creation and user collaboration is not inherently embedded into the Design Thinking Approach. It is imperative to involve a diverse set of users throughout the Design Thinking Approach and incorporate collaborative methodologies such as field studies and interactive workshops in your process. In the words of disability rights activist James Charlton, "nothing about us without us."

Some additional examples of activities during each stage of the Design Thinking Approach

Empathize	‣ Understand and empathize with the needs of all users, their pain points and issues. ‣ Create a research plan that includes generative research methods for people with various abilities and access.
Define	‣ Define explicitly the problem that you are trying to solve. ‣ Define diverse personas, scenarios and journeys for that problem.
Ideate	‣ Brainstorm various solutions and ways of alleviating the defined problem with consideration for the diverse set of scenarios defined.
Prototype	‣ Prototype a tangible design to share with users. ‣ Regularly assess accessibility while in the design process by consulting an expert and evaluating accessibility of components.
Test	‣ Test the prototypes with a diverse set of users in the unique contexts they would be deployed and iterate based on feedback. ‣ Perform accessibility assessment of current and proposed service.

How to get started

Now that you've been made aware of the case for considering connectivity and digital accessibility, it is time to set up the foundations and frameworks to make accessibility integral to every step of your service implementation process.

1

Understand
your legal obligations surrounding digital accessibility and usability.

Ask: what compliance is relevant to my work?

2

Get to know
your users and pay attention to their emerging needs.

Ask: what barriers do my users face?

3

Evaluate
your current state in terms of usability and accessibility.

Ask: what improvements are needed to the current state?

4

Ask for help:
If you are a public sector organization, then broadening your accessibility and access scope will create a larger and more inclusive audience for your services. If you have questions, reach out to the EY team.

Summary

With the exponentially increased use of the internet as a means of providing public services, now more than ever, there is a need to address accessibility, internet connectivity, and usability across the web. Pioneering change in this field allows services and programs to address the latest changes in litigation, as well as stay up to date on the expectations of an increasingly demanding constituent base. Government agencies need to serve two generations of taxpayers and voters who have conducted every aspect of their lives online, and who know what good usability looks like from an organization that is truly trying to provide assistance around digital barriers. Government agencies need to make certain that the capabilities they provide are not only compliant, but highly usable by all user segments.

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