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Improving Accessibility of Federal Government Websites

ASHLEY JOHNSON AND DANIEL CASTRO I JUNE 2021

Despite legislative requirements, many federal government websites are not accessible for people with disabilities. This creates obstacles for millions of Americans, especially as the COVID-19 pandemic has moved many government services online.

KEY TAKEAWAYS

- Section 508 of the Rehabilitation Act, as amended in 1998, requires federal agencies to follow modern standards of web accessibility for users with disabilities.
- The Justice Department submits biennial reports to the president and Congress evaluating agencies' compliance with Section 508, but it has not made these reports available to the public since 2012.
- ITIF tested the most popular federal websites and found that 30 percent did not pass an automated accessibility test for their homepage, and nearly half (48 percent) failed the test on at least one of their three most popular pages.
- One-third of popular federal websites did not have an easily discoverable page with contact information for users to report accessibility issues, and agencies are not required to collect or share data on the complaints they receive.
- Congress, the White House, and GSA should work together to increase transparency surrounding accessibility, expand the number of centralized accessibility resources, and encourage agencies to make web accessibility a priority.

INTRODUCTION

Over 40 million Americans have a disability, yet many organizations, including some federal government agencies, fail to prioritize or even consider accessibility when designing their websites. Though legislation requires federal government websites be accessible to people with disabilities, many are not, which makes it more difficult for certain individuals to obtain government information, access government services, and participate in civic activity. During the COVID-19 pandemic, many Americans have been unable to access government services in person, making web accessibility even more important.

"Accessible websites" are designed such that the barriers that prevent people with disabilities from using the Internet are eliminated, as web developers typically fail to take into account that not every user is able to see and hear content or use a keyboard and mouse to navigate their sites. As such, websites that rely only on those tools create issues for users with disabilities, particularly the 11 million American adults who are hearing impaired and 7 million with low-vision issues.[1]

Creating an accessible website entails adhering to accessible-design principles, such as using high-contrast colors, providing text alternatives to audio and visual content, avoiding the use of flashing animations that might cause seizures, and using labels for buttons so people using a screen reader can navigate the site. Not only does accessible design enable people with disabilities to navigate websites but it also helps all users navigate websites more easily.[2]

While some federal agencies do adhere to current web accessibility standards, most federal agencies could improve their web accessibility for people with disabilities. Indeed, this report finds that almost half of the most popular federal websites (48 percent) failed a standard accessibility test on at least one of their three most frequently visited pages. To ensure all citizens can access government services and important information online, the federal government should do the following:

- Create a federal website accessibility test lab.
- Launch a website accessibility "sprint" to fix known problems.
- Host a "hackathon" aimed at developing artificial intelligence (AI) solutions for web accessibility.
- Make reports on Section 508 compliance publicly available.
- Expand the Digital Analytics Program (DAP) to offer real-time accessibility testing.

BEST PRACTICES FOR ACCESSIBLE WEBSITES

The World Wide Web Consortium (W3C) has been developing accessibility standards since 1997, having published the first version of its Web Content Accessibility Guidelines (WCAG) in 1999. W3C creates web standards for developers that are drawn from global best practices and follow an iterative, multi-stakeholder process of working drafts individuals and organizations around the world are able to review. The end result is a set of standards designed to be understood by developers and implementable in a variety of websites, web content, and web applications.[3]

To develop WCAG, W3C's Web Accessibility Initiative works with industry, the disabled community, government, research institutions, and educators. The standards are cross-disability and include accessibility for users with visual impairments, hearing impairments, mobility or dexterity impairments, cognitive or neurological disabilities, and photosensitive seizure disorders.[4] W3C significantly updated its accessibility standards in 2008 with its publication of WCAG 2.0. It has since released updated standards in 2018 with WCAG 2.1, and plans to publish its latest version, WCAG 2.2, in 2021.[5]

WCAG 2.0 and its subsequent iterations lay out three levels of conformance to web accessibility standards: A, AA, and AAA. Level A is the minimum level of conformance, AA indicates a higher level of conformance, and AAA is the highest level. W3C recommends websites achieve Level AA conformance because it is not possible to achieve AAA for all types of content.[6]

Current Federal Accessibility Requirements

Federal websites are subject to the legislative requirements in Section 508 of the Rehabilitation Act of 1973, as amended in 1998, which requires the General Services Administration (GSA) to ensure federal electronic and information technology is accessible to people with disabilities, including federal employees and members of the public alike.[7]

The U.S. Access Board, established in Section 502 of the Rehabilitation Act, is tasked with publishing and updating standards for developing, procuring, maintaining, or using electronic and information technology. The Board consists of 13 members appointed by the president, the majority of whom must be people with disabilities, as well as the heads of each of the executive departments, the United States Postal Service, and GSA.[8]

The current Section 508 standards, which the Access Board last updated in 2018, use WCAG 2.0 Level A and Level AA success criteria and conformance requirements as the federal government's web accessibility standard.[9]

Section 508 also requires the Department of Justice (DOJ) to submit biennial reports to the president and Congress evaluating the extent to which the electronic and information technology federal agencies use is accessible for people with disabilities and making recommendations for improvement.[10] However, DOJ is not required to make these reports available to the public, and has not done so since 2012.[11]

METHODOLOGY

ITIF tested the most popular federal websites to measure agencies' compliance with Section 508's web accessibility standards. To identify the most popular federal websites, we used the "Majestic Million," a free online service that ranks the most popular websites in the world based on how many unique IP addresses refer to a particular domain. It publishes its "Fresh Index" daily, which ranks sites over a rolling 90-day period.[12] For this report, we used the dataset from the Fresh Index downloaded on March 1, 2021.

We first filtered the top 10,000 entries in the Majestic Million list with a .gov or .mil top-level domain. We then reviewed these sites and excluded those for state or local government from our analysis. We included only executive branch departments, sub-agencies, and bureaus while excluding legislative and judicial branch websites and those for independent agencies. Additionally, we excluded all subdomains of federal websites (except for the popular federal

website ncbi.nlm.nih.gov) and all federal government websites that either had been retired, failed to load, redirected to subdomains, or redirected to new pages whose domains were either unranked or we had already included.

Next, to ensure that we did not miss any popular federal government websites (including those without a .gov or .mil top-level domain, such as those that end in .org, .com, or .edu), we reviewed analytics.usa.gov—a GSA website that reports government website usage data for sites participating in the DAP).[13] On March 1, 2021, we downloaded data for visits to all domains over the previous 30 days. As none of the federal government websites ending in .org, .com, or .edu were for executive branch departments, sub-agencies, or bureaus that ranked in the top 10,000 entries in the Majestic Million list, none were included in the final assessment.

For this report, we identified 72 U.S. federal government websites, and used the "axe DevTools" browser extension, a tool that scans a webpage for common accessibility issues.[14] To avoid unfairly penalizing websites, the report only scores websites based on confirmed issues (which the extension lists as "automatic") and not potential issues (listed as "review"), and on issues that violated WCAG 2.0 Level A or Level AA standards, the current federal government standards for accessibility. Whenever axe DevTools found a confirmed issue that violated these guidelines, we reduced that website's accessibility score by 1 point per issue to produce a final score of between 0 and 100.

We first tested each of the 72 U.S. government websites' homepages. We then scanned their second and third most popular pages using the same extension. To identify these pages, we used Moz Link Explorer, which ranks a domain's top pages.[15] We did not include pages that were broken, inaccessible, archived, or were simply PDFs. As a result, not all of the websites were included in the assessments of second and third pages.

Because this automated accessibility test was only able to detect whether text alternatives to audio and visual content existed, and not whether those alternatives provided accurate descriptions of audio and visual content, we also conducted a qualitative assessment of both the top-scoring homepages (i.e., those that earned a perfect score of 100 in the technical assessment) and the bottom-scoring homepages (i.e., scoring 75 or lower). This entailed navigating these homepages using a keyboard and a screen reader, reviewing captions for video content, and checking for other accessibility issues such as flashing elements or low-contrast colors.

In addition to our technical assessment of federal government websites, we interviewed individuals representing stakeholders such as private-sector companies, disability advocates, and standards-setting organizations. We used the findings from these interviews to inform our policy recommendations for the federal government.

FINDINGS

After testing the 50 most popular nongovernment websites from the Majestic Million list, we determined that a reasonable benchmark for passing the accessibility test was a score of 90. Websites with this score may have up to 10 confirmed accessibility issues that should be fixed but are generally in close compliance with the WCAG 2.0 Level AA guidelines.

This report finds that 50 of the 72 federal websites (70 percent) passed the accessibility test for their homepage. Table 2 presents the score each website earned for its homepage. Of the 65 federal websites whose second and third most popular pages we scanned, 34 (52 percent) passed the accessibility test for all three pages. Tables 3 and 4 present the score each website earned for its second and third most popular pages, respectively. Table 1 shows the average score for each of the 65 domains, as well as whether all three of their pages passed an accessibility test.

Table 1: Popular federal government websites ranked by accessibility (2021)

Domain	Name	Average Score	Passed 3 Tests?
cdc.gov	Centers for Disease Control and Prevention	100	Yes
hhs.gov	Department of Health and Human Services	100	Yes
uscis.gov	U.S. Citizen and Immigration Services	100	Yes
whitehouse.gov	White House	100	Yes
doi.gov	Department of the Interior	99	Yes
nsa.gov	National Security Agency	99	Yes
us-cert.gov	U.S. Computer Emergency Readiness Team	99	Yes
usa.gov	U.S. Government Services and Information	99	Yes
bls.gov	Bureau of Labor Statistics	98	Yes
hrsa.gov	Health Resources and Services Administration	98	Yes
nih.gov	National Institutes of Health	98	Yes
nist.gov	National Institute of Standards and Technology	98	Yes
cbp.gov	Customs and Border Protection	97	Yes
cms.gov	Centers for Medicare and Medicaid Services	97	Yes
darpa.mil	Defense Advanced Research Projects Agency	97	Yes
fema.gov	Federal Emergency Management Agency	97	Yes
noaa.gov	National Oceanic and Atmospheric Administration	97	Yes
uscg.mil	U.S. Coast Guard	97	Yes
va.gov	Department of Veterans Affairs	97	Yes
ahrq.gov	Agency for Healthcare Research and Quality	96	Yes
samhsa.gov	Substance Abuse and Mental Health Services Administration	96	Yes
state.gov	Department of State	96	Yes

Domain	Name	Average Score	Passed 3 Tests?
trade.gov	Department of Trade	96	Yes
usda.gov	Department of Agriculture	96	Yes
uspto.gov	U.S. Patent and Trademark Office	96	Yes
dhs.gov	Department of Homeland Security	95	Yes
dol.gov	Department of Labor	95	Yes
ed.gov	Department of Education	95	Yes
energy.gov	Department of Energy	95	No
fbi.gov	Federal Bureau of Investigation	95	Yes
ncbi.nlm.nih.gov	National Center for Biotechnology Information	95	No
transportation.gov	Department of Transportation	95	Yes
tsa.gov	Transportation Security Administration	95	Yes
af.mil	Air Force	94	Yes
blm.gov	Bureau of Land Management	94	Yes
osha.gov	Occupational Safety and Health Administration	94	Yes
usgs.gov	U.S. Geological Survey	94	No
fws.gov	Fish and Wildlife Service	93	No
cisa.gov	Cybersecurity and Infrastructure Security Agency	92	No
fda.gov	Food and Drug Administration	92	No
investor.gov	Office of Investor Education and Advocacy	92	No
nps.gov	National Park Service	91	No
usmint.gov	U.S. Mint	91	No
atf.gov	Bureau of Alcohol, Tobacco, Firearms and Explosives	90	No
studentaid.gov	Federal Student Aid	89	No
bea.gov	Bureau of Economic Analysis	88	No
cancer.gov	National Cancer Institute	87	No
dea.gov	Drug Enforcement Administration	87	No
ustr.gov	U.S. Trade Representative	87	No
navy.mil	Navy	86	No
treasury.gov	Department of the Treasury	85	No
faa.gov	Federal Aviation Administration	84	No
usembassy.gov	U.S. Embassy	84	No
bjs.gov	Bureau of Justice Statistics	83	No
ice.gov	Immigration and Customs Enforcement	83	No
huduser.gov	Office of Policy Development and Research (PD&R)	82	No

Domain	Name	Average Score	Passed 3 Tests?
weather.gov	National Weather Service	79	No
acl.gov	Administration for Community Living	76	No
army.mil	Army	75	No
hud.gov	Department of Housing and Urban Development	75	No
census.gov	Census Bureau	71	No
energystar.gov	ENERGY STAR®	71	No
nhtsa.gov	National Highway Traffic Safety Administration	69	No
marines.mil	Marines	65	No
eia.gov	Energy Information Administration	58	No

Table 2: Homepages of popular federal government websites ranked by accessibility (2021)

Domain	Score	Domain	Score
cbp.gov	100	darpa.mil	95
cdc.gov	100	hrsa.gov	95
dtic.mil	100	osti.gov	95
faa.gov	100	fbi.gov	93
nist.gov	100	investor.gov	93
usembassy.gov	100	osha.gov	93
va.gov	100	uscg.mil	92
whitehouse.gov	100	weather.gov	92
acl.gov	99	trade.gov	91
bls.gov	99	uspto.gov	91
energy.gov	99	ahrq.gov	90
fda.gov	99	blm.gov	90
hhs.gov	99	dea.gov	90
justice.gov	99	ustr.gov	90
nih.gov	99	atf.gov	89
nps.gov	99	commerce.gov	89
nsa.gov	99	navy.mil	89
us-cert.gov	99	fws.gov	88
usa.gov	99	army.mil	87
uscis.gov	99	huduser.gov	87
usmint.gov	99	usgs.gov	87
fema.gov	98	bea.gov	86
noaa.gov	98	treasury.gov	85
smhsa.gov	98	ncbi.nlm.nih.gov	84

Domain	Score	Domain	Score
tsa.gov	98	defense.gov	82
dhs.gov	97	studentaid.gov	81
dol.gov	97	cisa.gov	79
ed.gov	97	census.gov	77
state.gov	97	ice.gov	75
af.mil	96	energystar.gov	74
cms.gov	96	nhtsa.gov	73
doi.gov	96	hud.gov	71
transportation.gov	96	cancer.gov	66
usda.gov	96	marines.mil	54
bjs.gov	95	eia.gov	34
bts.gov	95	irs.gov	20

Table 3: Second most popular pages of federal government websites ranked by accessibility (2021)

Domain	Page	Score
cbp.gov	cbp.gov/travel/trusted-traveler-programs/global-entry	100
cdc.gov	cdc.gov/coronavirus/2019-ncov/index.html	100
doi.gov	doi.gov/pressreleases/secretary-zinke-announces-plan-unleashing-americas-offshore-oil-and-gas-potential	100
hhs.gov	hhs.gov/ocr/complaints/index.html	100
hrsa.gov	findahealthcenter.hrsa.gov	100
ncbi.nlm.nih.gov	pubmed.ncbi.nlm.nih.gov	100
nsa.gov	nsa.gov/kids	100
uscis.gov	uscis.gov/i-9	100
usgs.gov	earthquake.usgs.gov	100
whitehouse.gov	whitehouse.gov/contact	100
ahrq.gov	ahrq.gov/prevention/guidelines/index.html	99
bls.gov	bls.gov/news.release/empsit.nr0.htm	99
cisa.gov	cisa.gov/publication/guidance-essential-critical-infrastructure-workforce	99
nih.gov	nlm.nih.gov	99
trade.gov	trade.gov/let-our-experts-help-0	99
us-cert.gov	us-cert.cisa.gov/ncas/alerts/TA18-074A	99
usa.gov	usa.gov/elected-officials	99
cisa.gov	cisa.gov/identifying-critical-infrastructure-during-covid-19	98
samhsa.gov	samhsa.gov/find-help/national-helpline	98
cancer.gov	cancer.gov/about-cancer/understanding/statistics	97
cms.gov	cms.gov/newsroom/fact-sheets/medicare-telemedicine-health-care-provider-fact-sheet	97

Domain	Page	Score
darpa.mil	darpa.mil/program/explainable-artificial-intelligence	97
uspto.gov	tsdr.uspto.gov	97
energy.gov	eere.energy.gov	96
fbi.gov	tips.fbi.gov	96
noaa.gov	nhc.noaa.gov	96
tsa.gov	tsa.gov/precheck	96
va.gov	ptsd.va.gov	96
fema.gov	fema.gov/national-flood-insurance-program	95
fws.gov	fws.gov/endangered/	95
ed.gov	fafsa.ed.gov	94
studentaid.gov	studentaid.gov/h/apply-for-aid/fafsa	94
usda.gov	planthardiness.ars.usda.gov/PHZMWeb/	94
nist.gov	nvd.nist.gov	93
osha.gov	osha.gov/coronavirus	93
transportation.gov	transportation.gov/smartcity	93
blm.gov	glorecords.blm.gov	92
dhs.gov	esta.cbp.dhs.gov	92
state.gov	travel.state.gov	92
usmint.gov	usmint.gov/kids	92
dea.gov	dea.gov/drug-scheduling	91
dol.gov	dol.gov/agencies/whd/pandemic/ffcra-questions	91
af.mil	usafa.af.mil	90
atf.gov	atf.gov/rules-and-regulations/national-firearms-act	90
ice.gov	ice.gov/news/releases/sevp-modifies-temporary-exemptions-nonimmigrant-students-taking-online-courses-during	89
investor.gov	investor.gov/financial-tools-calculators/calculators/compound-interest-calculator	89
nps.gov	nps.gov/grca/index.htm	89
bea.gov	bea.gov/data/gdp/gross-domestic-product	86
fda.gov	fda.gov/medwatch	86
treasury.gov	home.treasury.gov/policy-issues/coronavirus	85
ustr.gov	ustr.gov/countries-regions/china-mongolia-taiwan/peoples-republic-china	85
hud.gov	hud.gov/program_offices/fair_housing_equal_opp	76
huduser.gov	huduser.gov/portal/datasets/fmr.html	73
usembassy.gov	uk.usembassy.gov	72
navy.mil	blueangels.navy.mil	69
nhtsa.gov	nhtsa.gov/recalls	67
energystar.gov	energystar.gov/about/federal_tax_credits	65

Domain	Page	Score
bjs.gov	bjs.gov/index.cfm?ty=dcdetail&iid=245	64
marines.mil	pendleton.marines.mil	64
acl.gov	eldercare.acl.gov	61
eia.gov	eia.gov/state/	55
faa.gov	fly.faa.gov/flyfaa/usmap.jsp	51
weather.gov	water.weather.gov/ahps/	48
census.gov	census.gov/popclock/	43
army.mil	usace.army.mil	42

Table 4: Third most popular pages of popular federal government websites ranked by accessibility (2021)

Domain	Page	Score
cdc.gov	cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/diy-cloth-face-coverings.html	100
doi.gov	doi.gov/pressreleases/interior-department-releases-list-monuments-under-review-announces-first-ever-formal	100
faa.gov	faa.gov/uas	100
hhs.gov	ocrportal.hhs.gov/ocr/smartscreen/main.jsf	100
hrsa.gov	optn.transplant.hrsa.gov	100
ncbi.nlm.nih.gov	pubmed.ncbi.nlm.nih.gov/22571976/	100
nist.gov	nist.gov/cyberframework	100
state.gov	dvprogram.state.gov	100
uscg.mil	dco.uscg.mil/national_maritime_center/	100
uscis.gov	uscis.gov/humanitarian/consideration-deferred-action-childhood-arrivals-daca	100
whitehouse.gov	whitehouse.gov/openingamerica	100
ahrq.gov	hcupnet.ahrq.gov	99
blm.gov	blm.gov/programs/national-conservation-lands/utah/grand-staircase-escalante-national-monument	99
navy.mil	onr.navy.mil	99
us-cert.gov	us-cert.cisa.gov/ncas/tips/ST04-014	99
usa.gov	usa.gov/coronavirus	99
uspto.gov	patft.uspto.gov	99
cisa.gov	cisa.gov/identifying-critical-infrastructure-during-covid-19	98
darpa.mil	darpa.mil/program/insect-allies	98
dol.gov	dol.gov/agencies/whd/fmla	98
usda.gov	fsis.usda.gov	98
weather.gov	weather.gov/nwr	98
af.mil	usafa.af.mil	97
army.mil	usar.army.mil	97

Domain	Page	Score
cancer.gov	cancer.gov/about-cancer/causes-prevention/genetics/brca-fact-sheet	97
cms.gov	openpaymentsdata.cms.gov	97
fema.gov	usfa.fema.gov	97
noaa.gov	swpc.noaa.gov	97
nsa.gov	nsa.gov/careers	97
osha.gov	osha.gov/data/commonstats	97
trade.gov	travel.trade.gov	97
dhs.gov	dhs.gov/real-id	96
fbi.gov	fbi.gov/wanted/topten	96
fws.gov	fws.gov/endangered/laws-policies/	96
va.gov	benefits.va.gov/gibill	96
bls.gov	bls.gov/ooh	95
investor.gov	investor.gov/ico-howeycoins	95
nih.gov	nimh.nih.gov	95
transportation.gov	transportation.gov/briefing-room/dot-bans-all-samsung-galaxy-note7-phones-airplanes	95
usgs.gov	earthquake.usgs.gov/earthquakes/map	95
census.gov	census.gov/foreign-trade/balance/c5700.html	94
ed.gov	nces.ed.gov	94
samhsa.gov	findtreatment.samhsa.gov	93
cbp.gov	cbp.gov/newsroom/stats/southwest-land-border-encounters	92
bea.gov	bea.gov/data/income-saving/personal-income	91
fda.gov	fda.gov/drugs/drug-safety-and-availability/fda-cautions-against-use-hydroxychloroquine-or-chloroquine-covid-19-outside-hospital-setting-or	91
studentaid.gov	studentaid.gov/announcements-events/coronavirus	91
atf.gov	atf.gov/firearms/identify-prohibited-persons	90
tsa.gov	tsa.gov/travel/security-screening/whatcanibring/all	90
bjs.gov	bjs.gov/index.cfm?ty=pbse	89
energy.gov	science.energy.gov	89
huduser.gov	huduser.gov/portal/datasets/lihtc.html	87
nps.gov	nps.gov/yell/index.htm	86
ice.gov	ice.gov/sevis	85
ustr.gov	ustr.gov/countries-regions/americas/mexico	85
eia.gov	eia.gov/outlooks/steo/	84
treasury.gov	home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information	84
dea.gov	takebackday.dea.gov	81
usmint.gov	catalog.usmint.gov	81

Domain	Page	Score
usembassy.gov	mx.usembassy.gov	80
hud.gov	hud.gov/program_offices/fair_housing_equal_opp/disabilities/accessibilityR	79
marines.mil	lejeune.marines.mil	78
energystar.gov	energystar.gov/campaign/heating_cooling	75
acl.gov	ncea.acl.gov	68
nhtsa.gov	nhtsa.gov/risky-driving/distracted-driving	66

Our qualitative assessment of the top-scoring homepages found that for most of these websites, the text alternatives to visual content were largely accurate and the pages were navigable using a keyboard and a screen reader. However, one of these websites, faa.gov, shows a video, which displays images and text depicting and describing various items travelers are or are not permitted to bring on board airplanes in checked and carry-on bags. This information is accessible to hearing-impaired users but not to those with visual impairments using a screen reader. The information presented in the video exists in an accessible format elsewhere on the site, but this is not clearly communicated, as WCAG requires.[16]

Only one website that earned a perfect score in the technical assessment contains multiple accessibility issues. Four images on the dtic.mil homepage either are not accurately described in the site's text alternatives or have no text alternative at all.

A qualitative assessment of the lowest-scoring homepages revealed many more errors, as expected. Common issues include images and links that are not accurately described in their text alternatives, text alternatives that are repetitive or confusing, and images with no text alternatives. On the other hand, there were some notable successes across the board, including accurate captions on video content, the use of high-contrast colors, and a lack of flashing elements that might impact people with photosensitive seizure disorders.

Overall, our assessments reveal a large amount of variation in how agencies are meeting Section 508 requirements. Some agencies that have a large footprint—such as the Internal Revenue Service, the Census Bureau, the Department of Defense, and the Department of Education's office of Federal Student Aid—scored low in our accessibility test of their websites, indicating that people with disabilities may have difficulty accessing essential government services or information about these services online.

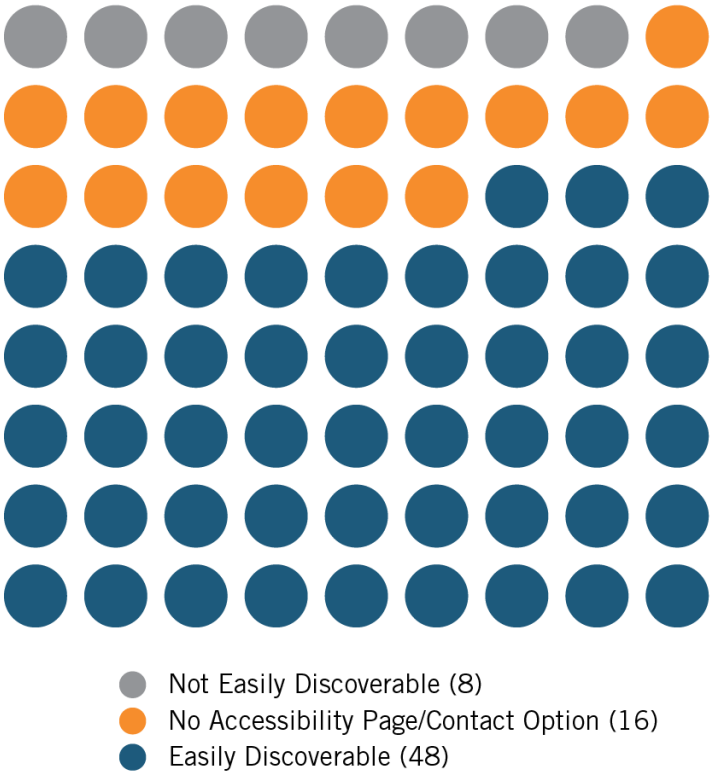
Many of the websites of agencies that are part of the Department of Homeland Security (DHS) performed well on the assessments. These include not only DHS itself (dhs.gov), but also U.S. Customs and Border Protection (cbp.gov), U.S. Citizenship and Immigration Services (uscis.gov), Transportation Security Administration (tsa.gov), Cybersecurity and Infrastructure Security Agency (us-cert.gov), and Federal Emergency Management Agency (fema.gov). One reason these agencies may have performed better than others is DHS has a dedicated Office of Accessible Systems and Technology that supports its Section 508 compliance efforts and is part of both the Office of Civil Rights and Civil Liberties and the Office of Chief Information Officer.[17] DHS has also created the "Trusted Tester Process"—a manual testing approach that adheres to GSA's web accessibility requirements. The goal of this program is to provide repeatable and reliable

conformance testing performed by individuals who have completed formal accessibility testing certification.[18]

Notably, the White House and the Centers for Disease Control and Prevention earned a perfect score in our accessibility test of all three of their pages, and also performed well in our qualitative assessment. The Biden administration has committed to adhering to WCAG 2.1 Level AA criteria on the White House website—a step above Section 508's requirements, which use WCAG 2.0.[19]

Finally, for each of the 72 federal government websites that we tested, we searched for an accessibility page with contact information or a contact form for users to report accessibility issues. Figure 1 shows how many of the websites had easily discoverable accessibility pages with contact information, how many had accessibility pages with contact information that was not easily discoverable, and how many had no accessibility page or whose accessibility page contained no contact information.

Figure 1: Easily discoverable accessibility pages with contact information for the most popular federal government websites



RECOMMENDATIONS

This report shows that of the federal government websites we tested, the homepage and second and third most popular pages of just over half passed an accessibility test for all three pages. There are several steps the federal government should take to ensure all Americans, including

those with disabilities, can navigate government websites and access government services and important information online.

GSA should create a federal accessibility testing lab.

The first step in determining what federal agencies need to do to improve their web accessibility is thorough, accurate accessibility testing. As this report demonstrates, thorough testing must go beyond automated tools that scan for accessibility issues. These tools are a good first step and can identify the majority of issues, but they overlook some problems that may prevent people with certain disabilities from navigating a website without unnecessary barriers or confusion. For example, automated tools can detect whether images on a webpage have text alternatives, but cannot judge whether those text alternatives accurately describe the images. Qualitative assessments are the next step to identify the issues automated tools may overlook and ensure websites are fully accessible for people with disabilities.

However, on their own, agencies may not have the in-house resources, or be able to afford hiring outside contractors, for this kind of thorough testing. GSA should create a federal accessibility testing lab that would centralize federal government web accessibility testing. The federal accessibility testing lab could both include dedicated in-house staff to evaluate particular high-impact projects with different agencies, similar to the 18F model, and create a one-stop shop for finding certified outside testers, building on the DHS Trusted Tester Process. By centralizing these efforts, the federal government would also ensure that the testing process is consistent across agencies.

The White House should launch a series of website accessibility sprints to fix known problems with the most popular government websites.

The Biden administration identified accessibility for people with disabilities as an early priority.[20] This commitment is evident in both the White House's high scores across the board in our accessibility test and its performance in our qualitative assessment. The White House website is an example of how prioritizing accessibility in the design process pays off.

To expand on its commitment and ensure all federal agencies make accessibility a priority, the White House should direct agencies to launch a series of "sprints" to address the known problems with the most popular government websites. These sprints should take place after DOJ publishes its biennial report on federal agencies' Section 508 compliance so agencies are up to date and aware of the accessibility issues on their websites, and be completed before the publication of the subsequent biennial report in order to track agencies' progress.

The White House should host a hackathon aimed at developing AI solutions for federal government web accessibility.

As technology develops, it reveals both new accessibility challenges and new opportunities to improve accessibility for people with disabilities. AI is one such technology that could accelerate accessibility, if implemented correctly. Through natural language processing, AI can automatically caption audio and video content for people with hearing impairments, while AI trained to recognize images could automatically add text alternatives for people with vision impairments. And machine learning can help developers test their websites faster and more easily through automated tools such as the one we used for our technical assessment.[21]

These applications are still in development, but as the accuracy of AI and machine learning algorithms improves, it will become easier for organizations such as federal agencies that may

have inadequate resources to dedicate themselves to solving accessibility challenges so they can deliver more accessible experiences to people with disabilities. To take advantage of these opportunities, the White House should host a "hackathon," (an event in which programmers meet to do collaborative computer programming), modeled after the Congressional Hackathons, that would bring together federal agency staff, disability advocates, AI experts, and accessibility experts from digital companies and standards-setting organizations to explore and develop AI solutions for web accessibility that federal agencies could implement.

Congress should require the Department of Justice to make its biennial reports on federal agencies' Section 508 compliance publicly available.

A common theme in our stakeholder interviews was the inadequacy of current Section 508 reporting practices. The lack of transparency makes it more difficult for disability advocates to hold agencies accountable and track their improvement over time. Federal agencies are required by law to make their websites accessible for people with disabilities, but this report demonstrates that many are not fully compliant. The lack of public reporting on agencies' compliance and progress is a disincentive for agencies to improve their digital accessibility, to the detriment of Americans with disabilities.

Section 508 requires DOJ to submit biennial reports to the president and Congress evaluating federal agencies' compliance and making recommendations, but it does not require DOJ to make these reports available to the public, and DOJ has not done so since 2012.[22] To increase accountability and allow disability advocates to track the federal government's compliance and progress, Congress should amend Section 508 to require DOJ to make all of its biennial reports publicly available.

As part of these reports, Congress should also require DOJ to collect and share data on the number of accessibility complaints agencies receive each year.

GSA should expand the Digital Analytics Program to include real-time accessibility testing.

While DOJ's biennial reports are useful, federal websites change often, and accessibility bugs should be fixed more than once every two years. To address this gap, GSA should expand its DAP, which many federal agencies already use to collect website metrics, to include automated baseline accessibility testing.[23] The goal of the automated testing should be to increase transparency on website accessibility performance both within agencies and to the public. The federal Chief Information Officer should work with any federal agencies that have websites that fail to meet minimum requirements to develop remediation plans, and then the Office of Management and Budget and Congress should hold senior agency officials responsible for successfully executing these plans.

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About the Authors

Ashley Johnson (@ashleyjnsn) is a policy analyst at ITIF. She researches and writes about Internet policy issues such as privacy, security, and platform regulation. She was previously at Software.org: the BSA Foundation, and holds a master's degree in security policy from The George Washington University and a bachelor's degree in sociology from Brigham Young University.

Daniel Castro (@CastroTech) is vice president at ITIF and director of its Center for Data Innovation. He writes and speaks on a variety of issues related to information technology and Internet policy, including privacy, security, intellectual property, Internet governance, e-government, and accessibility for people with disabilities.

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