



NUCLEUS
RESEARCH

THE INTERNET IS UNAVAILABLE

ANALYST

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THE BOTTOM LINE

The digital divide still exists: not just socially or geographically, but because the Internet is largely inaccessible to people with disabilities. Nucleus conducted in-depth interviews with 73 adults who are blind to understand the realities of Internet accessibility for a subset of the larger disabled population. With their assistance, we analyzed hundreds of Web sites and found that more than 70 percent of Internet sites—from top retailers to presidential campaign sites to the sites of sitting elected officials—all have critical accessibility blockers, rendering the prime directive of those sites inaccessible. For Internet retailers alone, denying full access to consumers who are blind is leaving as much as \$6.9 billion annually to a handful of accessible alternatives.

OVERVIEW

Studies on the digital divide (lack of access to the Internet due to social, economic, and other inequalities) have made clear the impact of Internet access on health, education, and financial welfare. However, few have considered the challenges of Web accessibility: how those with disabilities such as vision impairment can access and fully take advantage of the Internet.

To better understand the impact of Web site inaccessibility, Nucleus focused on one group particularly impacted by the digital divide: individuals who are blind or have severe visual impairment. We conducted in-depth interviews with 73 blind adults (mostly in North America) to understand the challenges they face using the Internet. With their assistance, we also analyzed hundreds of Web sites—from news sites to top retail sites to political and elected officials' official sites—to assess their accessibility.

Inaccessible e commerce retailers are losing out on \$6.9 billion in annual revenues.

KEY FINDINGS

What we found was astonishing: more than 70 percent of Internet sites are inaccessible, wrought with the presence of critical accessibility blockers that render the prime directive of that site inaccessible. Other key findings included:

- Internet users who are blind abandon two Internet transactions a month because of inaccessibility; two-thirds of their transactions, on average, end in abandonment.
- Internet users who are blind call a company's customer service department once a week on average because of Web site inaccessibility. Ninety percent of interviewees reported that they regularly call customer service multiple times to report an issue, even though they have already abandoned the transaction—and made the decision to use another company where possible
- Fewer than one in three of the Web sites we analyzed had clear contact information or means for a consumer who is blind to report accessibility challenges or request

assistance, meaning consumers had varying level of success in reporting (and far less in resolving) accessibility issues.

WHAT DOES ACCESSIBILITY MEAN?

Simply put, Web accessibility means the ability to independently gather information, complete transactions, or communicate (by joining newsletters, contributing to surveys, or participating in social media sites) on the Internet. We found most Internet users who have visual impairment access the Internet via assistive technologies—either screen readers or screen magnifiers—that render Internet sites perceivable and operable for the user who is visually impaired. However, for those technologies to be effective, Web sites have to be architected to be accessible. Basic capabilities such as screen zooming, labeled fields, and text descriptions for pictures are required to make Web sites “readable” to users who are blind.

In assessing inaccessible Web sites, we found a number of common themes:

- Partial accessibility. Although some areas or pages of a Web site may be accessible, certain features or areas are not. In the case of e-commerce sites, for example, catalog pages and ordering capabilities are accessible while the checkout function is not.
- Accessibility regression. While a Web site may have initially been created to be accessible, upgrades or changes render it inaccessible. More than 50 percent of users had experienced accessibility regression.
- Common features are inaccessible. Users cited, for example, CAPTCHA—a common feature designed to distinguish humans from bots—as inaccessible, as well as many Web surveys.

More than 70 percent of Internet sites are inaccessible to users who are blind.

Lack of accessibility obviously had a detrimental impact on users’ ability to transact business, gain information, and access services via the Internet.

Although standards for Web accessibility are clearly defined, many organizations clearly don't build accessibility into their Web site and application design plans, either because of lack of awareness, willingness, or ability.

THE CULPRITS

In assessing the accessibility of Web sites, we looked at three main categories: popular e-commerce sites, news and information sites, and sites of elected officials and presidential candidates.

E-COMMERCE SITES

In looking at the top e-commerce sites in terms of revenues, we found that Amazon, Best Buy, and Target were relatively accessible, but that two-thirds of the top 10 retailers by revenue had serious accessibility issues ranging from missing labels for searching and password fields, to lack of support for zooming, to lack of CAPTCHA alternatives.

NEWS AND INFORMATION SITES

In assessing the top-trafficked news and information sites, we found that eight out of 10 sites had critical issues which made them inaccessible to users who were blind. Foxnews.com, NBC.com, WebMD.com, and others had multiple critical flaws that would render them unusable with screen readers.

GOVERNMENT SERVICES

In interviews with Internet users who are blind, we found that seven out of 10 people had faced challenges in accessing government services or making their voices heard because of lack of Web accessibility:

- *"All their Web sites are challenging. Most aren't labeled properly."*
- *"My own Medicare Advantage program I can't access—and there's no way to tell from the Medicare site which sites are accessible and which aren't."*
- *"It's so frustrating—they send me e-mails and send me to sites that are inaccessible. When you call to tell them, they act concerned, but usually nothing happens."*

THE ECONOMIC IMPACT

According to the US Department of Commerce, e-commerce revenues in North America totaled approximately \$517 billion in 2018, accounting for 10 to 15 percent of total US retail revenues in 2018.

Based on our interviews and data gathered from blind advocacy groups, Nucleus estimates that 2 percent of total e-commerce transactions are completed by people who are blind, representing a total market of \$10.3 billion annually. The 2 percent is assuming that less than half of the blind population (which is 5 percent of the total population) are normal ecommerce shoppers and contribute that 2 percent share of total e-commerce.

What we also found was that, despite the fact that an average of two-thirds of e-commerce transactions are abandoned by people who are blind because of lack of accessibility, those consumers don't abandon those purchases entirely—they buy elsewhere, from accessible sites. This means that companies without accessible sites are losing \$6.9 billion a year to competitors whose sites are accessible. To put this figure in context, HomeDepot.com reported \$6.94 billion in revenues in 2018.

CONCLUSION

Although the digital divide presented by Internet accessibility today may seem small, the number of people in the United States alone who will have a visual impairment is expected to double by 2050 as the population ages. It is much more cost effective to build a site with accessibility as a core principle than to remediate it later. In the case of e-commerce, as sites continue to struggle against Amazon, investing in accessibility is a way to tap into a \$10.3 billion—and growing—market. Enabling customers to complete transactions without having to abandon purchases is not only the law, but makes good business sense.