



COLORADO

**Governor's Office of
Information Technology**

Improving Statewide IT Accessibility for the Blind & Visually Impaired

CATEGORY:
Information Communications Technology Innovations

STATE:
Colorado

PROJECT INITIATION DATE:
October 2018

PROJECT END DATE:
December 2019
(and ongoing)



Brandi Wildfang Simmons | Chief Communications Officer
brandi.simmons@state.co.us | 303.764.6897

Executive Summary

The Americans with Disabilities Act (ADA) stipulates that public entities at all levels must be accessible to individuals with disabilities, yet state systems over the decades have been developed or procured with very little consideration to whether these requirements have been met. Although the current and historical record for these concerns has been dismal at best, Colorado legislators have made great efforts to provide mandates that the situation is improved. In 2017 the legislative recommendation for the “Staff-Initiated Technology Accessibility for People with Disabilities” was passed in the Long Bill (state budget), granting OIT funding for a singular role, Technology Accessibility Coordinator, to begin addressing the nearly insurmountable degree of work that is needed to improve the situation.

As codified in C.R.S. § 24-285-103, OIT is obligated to maintain nonvisual access standards for information technology systems employed by state agencies and to consult with state agencies and representatives of individuals who are blind or visually impaired in maintaining nonvisual access standards. This statute also requires the head of each state agency to establish a written plan and develop any proposed budget requests for implementing nonvisual standards for its public facilities.

This is a very tall order, yet one that OIT has endeavored to embrace fully. The establishment of the Accessibility Coordinator has indeed allowed OIT to make significant impacts in the pursuit of technology accessibility, making improvements to contract diligence, vendor management, technology standards, and even organizational awareness and support. As a result of this role and the OIT Technology Accessibility Program, we have improved websites, trained employees, and accessible mail-in ballots.

Project Narrative

Concept

In accordance with the legislative mandate, the OIT Technology Accessibility Program was created within OIT's Office of Enterprise Architecture. This program office established the following principles and guidelines, asserted by the Accessibility Coordinator and the Technology Accessibility Advisory Board, which is comprised of experts from both public and private sector to guide the program.

1. **Accessibility is the right thing to do to promote an inclusive culture.** Eighteen percent of the U.S. population has one or more disabilities. The community of blind and visually impaired (BVI) in Colorado alone is over 100,000. Unless comprehensive programs are instituted to assure compatibility with assistive technologies, this group will be specifically excluded from an equality of access.
2. **State services must be available to all residents including those who use assistive technology to receive services.** In accordance with C.R.S. § 24-85-103, we are obligated to maintain nonvisual access standards for information technology systems employed by state agencies. It is the responsibility of state government to provide equality of outcomes for all residents. An assessment of three commonly used state websites found accessibility ratings to average 61%.¹
3. **Accessibility is required under Section 508 and other international laws and regulations.** Section 508 is the law that governs sales to the U.S. government and anyone who receives federal money (e.g., states, municipalities, hospitals, universities, etc.). There has been an increased frequency of litigation recently concerning accessibility complaints, and the vast majority of the lawsuits are being decided in favor of those plaintiffs with disabilities. In addition, there is a risk of losing federal funds if we fall short of meeting the Web Content Accessibility Guidelines (WCAG) standards required by organizations that accept federal funding.
4. **Innovation and a Diverse, Inclusive Workforce** - It is essential that we successfully incorporate users with disabilities in user experience (UX/UI) research and design decisions. Exchanging ideas with other accessibility experts is a great way to incorporate other's thoughts about accessibility into the mindset. Volunteering with accessibility non-profits is another.
5. **Universal Design = Better for Everyone** - Designed around the needs of people with disabilities are one way to go above and beyond WCAG 2.1 Level AA. It generally takes people with disabilities using assistive technology three to five times longer to complete the same online function such as filling out a form as it does people without disabilities. By reducing the amount of required interaction, it is a simple convenience win for people without disabilities but it is a huge accessibility win for people with disabilities.

¹Governor's Office of Information Technology (<http://oit.state.co.us/>) = 58%; and the state's Broadband site (<https://broadband.co.gov/>) = 60%, and, most recently, the State's COVID-19 website (<https://covid19.colorado.gov/>) = 66%.

6. **Training and Awareness** - Training and awareness is foundational to all other priorities. These goals will be much more difficult to attain and success will be short-lived without the necessary training for product managers, designers, engineers, and QE teams who need to understand accessibility.

By following these principles, the OIT Technology Accessibility Program has served its state agency customers and Colorado's residents by ensuring that state services are created with all residents in mind, including the disabled population who rely upon assistive technology.

Significance

The state's Accessibility Program aims to provide Colorado's residents equal access to all state services in accordance with state statute to maintain nonvisual access standards for information technology systems employed by state agencies. Achieving these programmatic goals will be through the outcomes of:

1. Accessibility compliance built into business process in all agencies from the start.
2. Mobile testing.
3. Engaging with procurement contracts and evaluations for all software, hardware, and printers.
4. Automated and manual testing since automation picks up only 30% of WCAG violations.
5. Measuring and tracking most used web sites for WCAG violations metrics.
6. Remediation and proactive training.
7. Technical support for Jaws, Fusion, and Dragon Naturally Speaking.

Some websites for state services are designed without all residents in mind and not following universal design and code. State software is purchased without regard or evaluation from our blind and visually impaired employees.

By focusing on its principles and objectives, the program has executed on opportunities for Colorado state government to be proactive and remediate websites and state services that are currently noncompliant, instituting processes and training to assure better user experience and compliance across a broad spectrum of previously ignored areas. Here are examples of just a few results:

- Established standards to be applied to all applications and websites, and published those standards on the state's website.
- All new contracts updated with specific ADA requirements.
- Nearly two dozen major projects receiving hands-on Accessibility Assessment and Testing, requiring acceptance/approval before go-live.
- Provided online training courses, with more than 1,000 uses/completions.

Of additional significance, the Technology Accessibility Advisory Board, led by Accessibility Solutions Architect, collaborated with the National Federation of the Blind of Colorado (NFBCO) and Colorado's Secretary of State on [Senate Bill 19-202](#). The bipartisan passage of this bill provides a

secure and accessible solution for people with disabilities to mark a mail-in ballot privately and independently using the nonvisual access, low vision, or other assistive technology with which they are most familiar. We are thrilled to have had a role in such important legislation and provide the blind and visually disabled community with accessible mail-in ballots.

Impact

Under the efforts of the OIT Technology Accessibility initiative, we have made many strides in promoting awareness, establishing best practices and standards, as well as establishing ongoing outreach and organizational improvement to address the challenges and goals of the program.

One of the most fundamental achievements was the OIT Architecture Review Board (ARB) adoption of the technical standard based upon the Web Content Accessibility Guidelines (WCAG 2.0 AA) to align with Section 508 of The Rehabilitation Act. This standard was established and published in 2017, but has received significant revision and continual advancements under the ownership of this program. The result is a clear and concise set of guidelines providing regulation and requirements for accessibility across all organizational contracts, services, and activities, soon to move to WCAG 2.1.

With that foundation set, the program has also instituted the addition of a standard web page footer on all colorado.gov websites (managed by the [Statewide Internet Portal Authority \[SIPA\]](#) / Colorado Interactive) for accessibility support. The program is currently in the process of including the same footer for agency intranet sites. These informational links then provide direction on how to provide feedback and receive support via the program's own Accessibility Support mailbox and ticketing process, which leverages either the vendor's SLA-inclusive support or OIT's shared Service Desk Manager platform.

Additionally, to promote the awareness of the programs and help state agencies and their partners ensure that web content meets the accessibility compliance standards, OIT encourages supplemental training and has provided brown bag sessions. To date, state employees have used the online training resources more than 800+ times. We expect that number to grow exponentially now that a contract has been secured to provide unlimited access to training resources.

Next, the program has worked extensively for improved accessibility on the Google G Suite platform. G Suite is the state's enterprise collaboration platform and, thereby, a vital piece of the day-to-day productivity and function of business across state agencies. Ensuring and improving the usability of its broad set of products, features, and tools adds accelerative value to all that rely upon it. Some of the great improvements made under this Program include:

- Established a public-private partnership alliance with Google and two local Colorado businesses (Blind Institute of Technology [BIT] and Techy Joe) to provide hands-on training, assistance, and online materials to aid in G Suite usage and learning.
- Established strong coordination with Google's Lead Program Manager of G Suite Accessibility to provide direct feedback on needed enhancements to the G Suite platform,

as well as gain NDA-priority insight to the product feature and enhancement backlog planning within Google’s product delivery teams.

- Provided direct consultation to Google account management and central leadership on customer expectations concerning accessibility. We are told that the addition of roles and personnel, as well as creation of new processes and procedures within development teams at Google have been highly informed by our engagement and feedback in this area.

Finally, the OIT Technology Accessibility Advisory Board was established per the “Staff-Initiated Technology Accessibility for People with Disabilities” that was passed in the Long Bill, and per OIT’s original recommendation on this subject. The OIT Technology Accessibility Advisory Board is a group of 20 professionals representing both residents using public-facing applications and state employees who use internal applications. Experience and expertise represented by members of the group include engineers, ADA specialists, procurement experts, etc. This group drives the goals for accessibility for the state and meets once a month to review initiatives, which include:

- Accessibility on the Google G Suite platform.
- Automated and accessible tools for development and test teams.
- Revised procurement contracts model and boilerplate language, clearly stating 508 law and explicit expectations from vendors, as well as remediation processes if vendors are not compliant.
- Training, change of culture, and Standard Operating Procedures (SOP) for projects to include accessibility resources in the beginning of the project, similar to how cybersecurity governance is instituted today.
- Accessible HR documents using DocuSign.
- Assessment of websites both public facing and internal.
- Community outreach, collaborating with national accessibility advocacy groups to promote more inclusion and hiring of individuals in the blind and visually impaired (BVI) community, as well as presentations and workgroups at local events.
- TechU² Accessibility Forum - internal footer for support, FAQ, videos, etc.
- Accessibility courses offered on the learning management system (LMS) for all state employees.
- Individual training for state employees and Board members on Google platform.
- Accessible Mail In Ballots - 2019.

While the goals and challenges of the OIT Technology Accessibility Program remain ongoing and sometimes seemingly insurmountable, the impacts that have been achieved have already been significant. In the short time that the program has been active, there has been a transformation in the entire organization’s approach and awareness of the challenges and the endeavor to solve them.

² TechU is a site created by OIT for state employees to obtain information, training, and other resources about their state-provided technology