Providing an Accessible and Inclusive Digital Library Experience

BIBLIO COMMONS
Love your online library

Why It Matters

According to the **World Health Organization (WHO)**, "over 1 billion people are estimated to live with some form of disability. This corresponds to about 15% of the world's population, with up to 190 million (3.8%) people aged 15 years and older having significant difficulties in functioning, often requiring healthcare services. The number of people living with disability is increasing, in part due to ageing populations and an increase in chronic health conditions."

Digital accessibility ensures that people with disabilities can access digital tools such as a library's online catalog, app, and website without any barriers. The **definition of 'disability'** is, "a physical, mental, cognitive, or developmental condition that impairs, interferes with, or limits a person's ability to engage in certain tasks or actions or participate in typical daily activities and interactions." It's important to note the usage of the word 'typical' in the definition because disability can be contextual. A person with a seizure disorder might not identify as having a disability, depending on the severity of the condition and if they use public transportation; however, the same person if in a rural area might identify as having a disability if they can't have a driver's license.

Accessibility legislation, standards, and principles exist, and it's up to software vendors and software customers, like public libraries, to place value on accessibility and make every effort to create inclusive digital environments. Afterall, accessibility improvements that are made for those with disabilities, result in improved usability for everyone.

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World Health Organization

Accessibility Principles

How people experience disabilities and accessibility barriers varies from person to person. For this reason, accessibility barriers are often grouped into four accessibility principles known as POUR: Perceivable, Operable, Understandable, and Robust.

Most digital accessibility obstacles can fall into one or more of the **POUR principles**.

Perceivable

The user can identify content and interface elements in ways they can perceive. Perception can be visual for some users (simpler layouts, braille, closed captions, or sign language) or through sound for other users (text to speech.)

Operable

The user can use controls, buttons, navigation, and other necessary interactive elements. Operability can include making an interface keyboard accessible, designing content in a way that doesn't cause seizures or physical reactions, and providing ways to help users navigate and find content.

Understandable

Understandable technology is consistent in its presentation format and is also readable and predictable. It contains input assistance to help users avoid mistakes.

Robust

Robust digital experiences are designed to be interpreted by a wide variety of users and assistive technologies. They should be compatible with websites, online documents, multimedia, and other information formats.

What We Are Doing About It

Public libraries serve their communities by being welcoming and providing inclusive environments both in-person and online. As a digital service provider, BiblioCommons profoundly understands and believes that the online experience must always be welcoming and inclusive to people with a wide range of abilities. This includes those who rely on assistive technology to access online services, in addition to individuals with cognitive and digital-literacy challenges.

We continually invest heavily in accessibility compliance, including testing, training, and the implementation of industry best practices that are tailored for library-specific digital use cases.

WCAG 2.1 Level AA Standard

BiblioCommons uses the Web Content Accessibility Guidelines (WCAG) 2.1 level AA standard defined by the World Wide Web Consortium (W3C) to guide the development of all of our product offerings. The Guidelines serve as an internationally accepted measure of success for websites and online applications. BiblioCommons uses them to evaluate our services and make changes and adjustments to make our products accessible for people with disabilities.

Developer Training and Quality Assurance Testing

Accessibility is not an afterthought in the product development process. It is considered and applied from the ground up — from the initial concept stages to the design process, from the development to the testing phase — for the entire BiblioCommons product suite. BiblioCommons product managers and product designers include accessibility in mock-ups and accessibility is incorporated into the BiblioCommons Design System. All BiblioCommons developers are trained to follow accessibility best practices. Developers that build user interfaces take a **web accessibility course** that provides hands-on experience and explains the intricacies of making online applications accessible to users. Developers also attend accessibility conferences. BiblioCommons quality assurance engineers test for accessibility by running color contrast, keyboard accessibility, high contrast, and screen reader tests.

Additionally, BiblioCommons has an internal accessibility committee, where team members can share resources and ask questions.

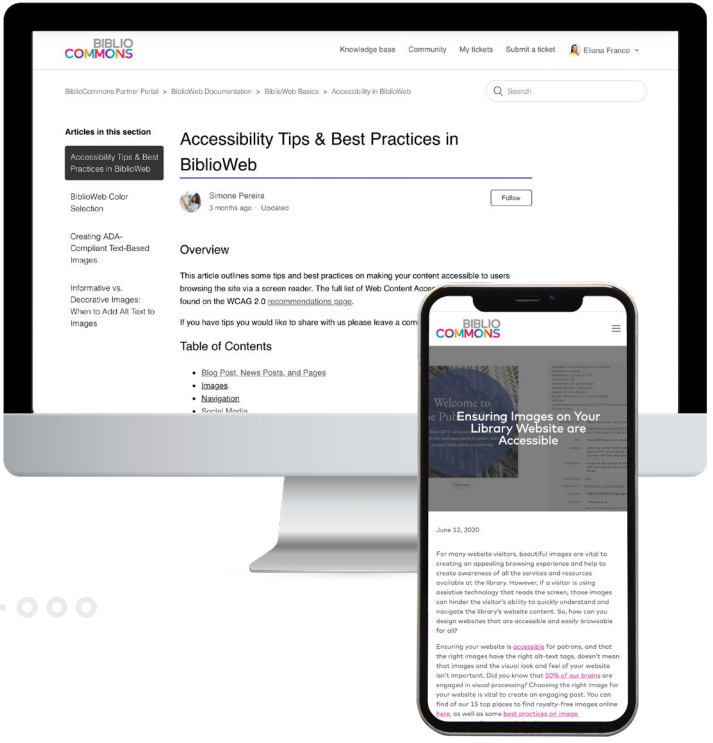
Accessibility Consultancy

As part of our design and development process, we work with third-party experts to review our online products, identify accessibility goals based on WCAG, and create plans to meet those goals with every product release. In 2017, BiblioCommons hired an accessibility consultancy, **Level Access**, to do a full audit of our products and provide in-house training sessions with BiblioCommons team members. Since then, Level Access has been on retainer to provide accessibility feedback on all new development. This collaboration between BiblioCommons and Level Access ensures that key product workflows are accessible and that new features are designed and validated with accessibility in mind.

Accessibility Support

Library staff have access to the **BiblioCommons Partner Portal**, which includes guidelines and best practice articles. Some of the content in the accessibility articles includes how to treat heading hierarchy, when to add alt text to imagery, and what labels to use for links. More information can also be found on the BiblioCommons website, in the **resources section**, the **blog**, and **webinars**.

BiblioCommons supports public library staff by providing a homepage design review, which includes an accessibility audit. Additionally, we do a check on site color selections, to ensure they are contrast compliant. There is also a library of templates provided in BiblioWeb, the website builder tool, that are accessible and contain prompts for following accessibility principles, making it easier for staff to create an accessible website.



Aligning With Accessibility Guidelines

BiblioCommons has the most accessible public library digital products on the market. We actively aim for solutions that align both with the WCAG 2.1 AA Guidelines and with more broadly defined principles of usability. We also work with library partners to identify specific issues that their community members experience and address solutions for those issues.

Some accessibility methodologies that are incorporated in BiblioCommons products are:

Site Structure
Ensuring that appropriate headings are used so that people can use the site with assistive technology.

Color Contrast
BiblioCommons actively works to ensure that color use on the websites does not compromise text legibility.

Design and Review
Design and review procedures that align future features and development with WCAG 2.1 AA.

Text Equivalents
Ensuring that informative images are accessible to people who use screen readers and other assistive technology by using appropriate alternative text.

Magnification
Making certain that the main workflows used in BiblioCommons sites can be used by people with screen magnifiers.

Keyboard Access
Actively working to improve keyboard access for non-mouse input devices, including ongoing projects: to open modals, overlays or dialogs with the correct focus; to make it easier to navigate headings, lists, paragraphs, links and buttons; and to ensure that forms are fully accessible.

A Closer Look at the Digital Offering

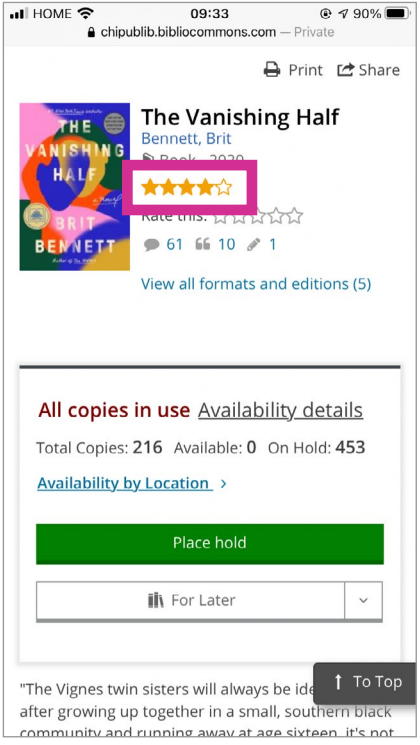
Libraries that subscribe to **BiblioCore**, **BiblioWeb**, and **BiblioApps** benefit from continual product updates. The most recent updates demonstrate BiblioCommons' ongoing commitment to accessibility.

BiblioCore

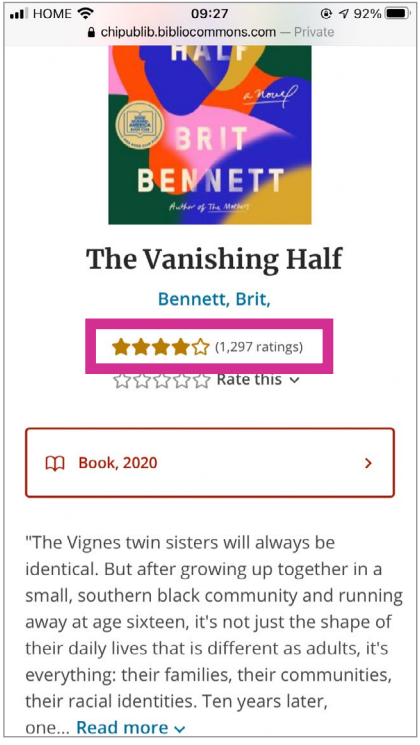
BiblioCore users who rely on assistive technologies had a functional but less than ideal experience when browsing, discovering, and learning about titles in the library's collections while using the former Title Record Page. Key areas of focus for accessibility on the Title Record Page redesign were:

- Logically presenting information on the page.
- Structuring content under meaningful headings.
- Implementing contrast-compliant colors and not relying on color or iconography to communicate important information.
- Improving focus management for modals and overlays.
- Ensuring that all functionality on the page is available to screen reader users and applying meaningful roles and labels to elements on the page.
- Allowing text on the page to comfortably increase to 200% without loss of legibility.

For example, on the former Title Record Page, a title's rating was being announced by some screen readers as "Unpronounceable." On the redesigned version of the Title Record Page, all screen readers can correctly identify the rating, now reading "Title rated 4 out of 5 stars, based on 1,297 ratings."



Old Title Record Page with a focus on a title's rating.



New Title Record Page with an enhanced rating experience.

BiblioWeb

BiblioWeb V3.0 brought with it enhanced design flexibility, new page builder modules, and a revamped taxonomy structure. During the redesign, all content cards and modules were assessed for accessibility. Key areas of accessibility enhancements on BiblioWeb are:

- Semantically structured heading hierarchies.
- Improved screen reader support, with intuitive language and visually hidden text for additional context.
- Implementing contrast-compliance (including consideration for high contrast themes in Windows.)
- Including non-color designators (for low vision users), such as underlines on hyperlinks in paragraphs.
- Improving focus management for card carousels.
- Added support for alt-text on informative images.
- Allowing text and images on cards to render properly at 200% zoom.

For example, on BiblioWeb V2, when the browser zoomed to 200%, this would result in text overlapping the image. On the redesigned card modules, the height of the card automatically adjusts to allow images to move down below the text.

BiblioWeb V2 with browser zoom at 200%

BiblioWeb V3 with browser zoom at 200%

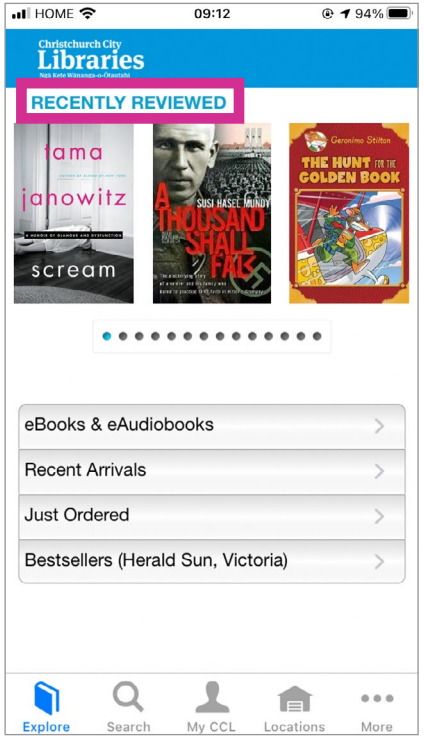
BiblioApps

BiblioApps for iOS and Android leave behind the former BiblioMobile codebase. The redesigned app uses modern development tools and has a new visual design. This new approach allowed BiblioCommons to incorporate users' needs for an accessible mobile experience from the initial design and planning phases of both the iOS and Android apps.

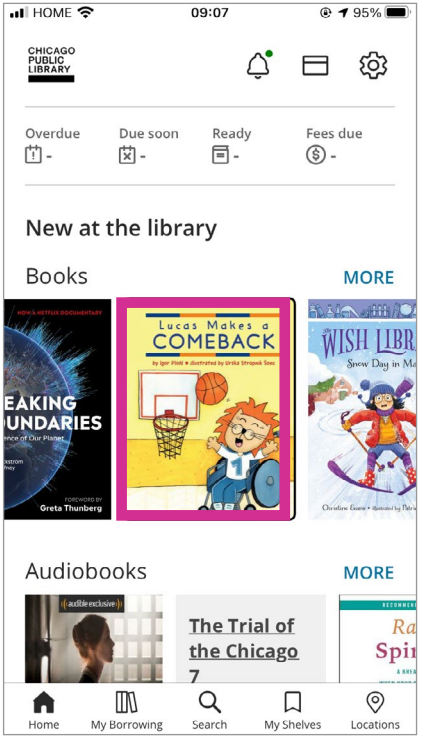
Taking this 'ground-up' approach has led to a more cohesive and accessible experience for all users. The key areas of focus for accessibility on BiblioApps for iOS and Android were:

- Ensuring that all functionality in the apps is available to screen reader users and applying meaningful roles and labels to elements on the page.
- Allowing text on each screen to comfortably increase to 200% without loss of legibility.
- Implementing contrast-compliant colors and not relying on color or iconography to communicate important information.
- Maintaining UI consistency with iOS or Android interface guidelines to build on a user's learned experiences.

BiblioCommons also addressed known accessibility issues on the former BiblioMobile apps. For example, the Home screen on the BiblioMobile iOS app did not let screen reader users browse titles in carousels (it skipped over them). On BiblioApps for iOS and Android, screen reader users can now browse titles at the library the same way that non-screen reader users would be able to.



Home screen on the former BiblioMobile iOS app.



Home screen on BiblioApps iOS app.

A Commitment to Accessibility

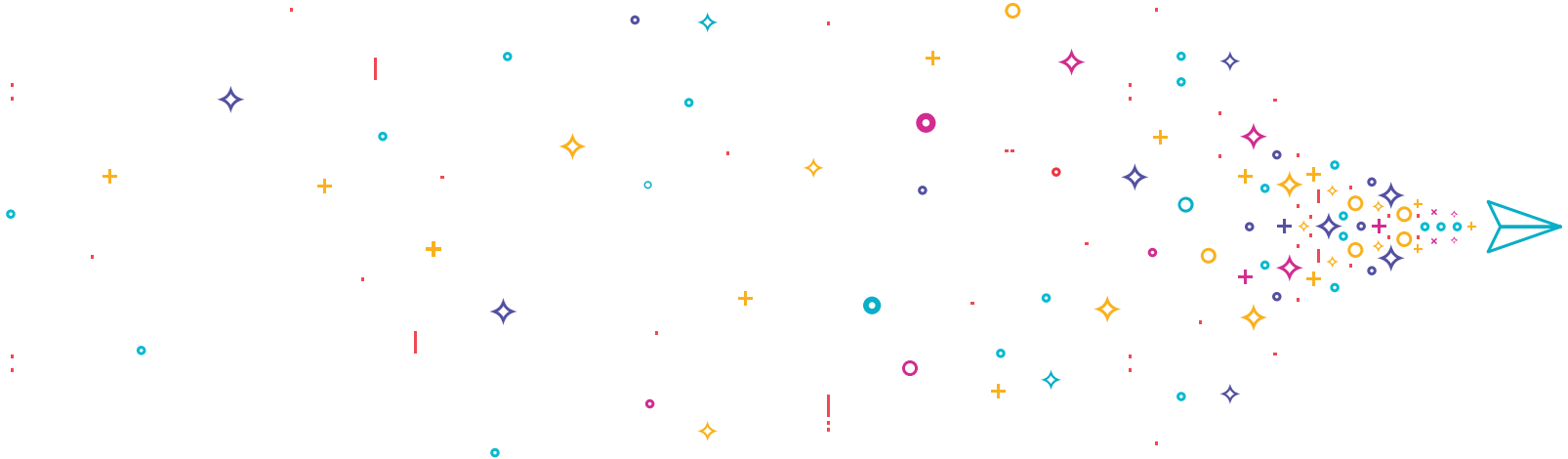
BiblioCommons is committed to being a leader in the space by providing the most accessible public library digital product on the market. We openly approach accessibility as a journey that requires continual attention and dedication. We believe that as new modules and standards evolve, it's important to focus on the ever-changing trends and user needs.

All BiblioCommons product offerings follow a Software as a Service (SaaS) model which ensures that all customers get access to regular product updates and enhancements. For example, below is a list of product releases that included functionality updates in the last two years:

	BiblioCore	BiblioWeb	BiblioEvents	BiblioApps
2020	10	12	5	4
2021	7	13	8	5

BiblioCommons is also committed to providing transparency about our accessibility practices to library patrons. The **BiblioCommons Commitment to Accessibility** statement is available via the footer across all our products.

For more information about how BiblioCommons approaches accessibility, contact us.



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