Digital Inclusion in Montgomery County Public Libraries
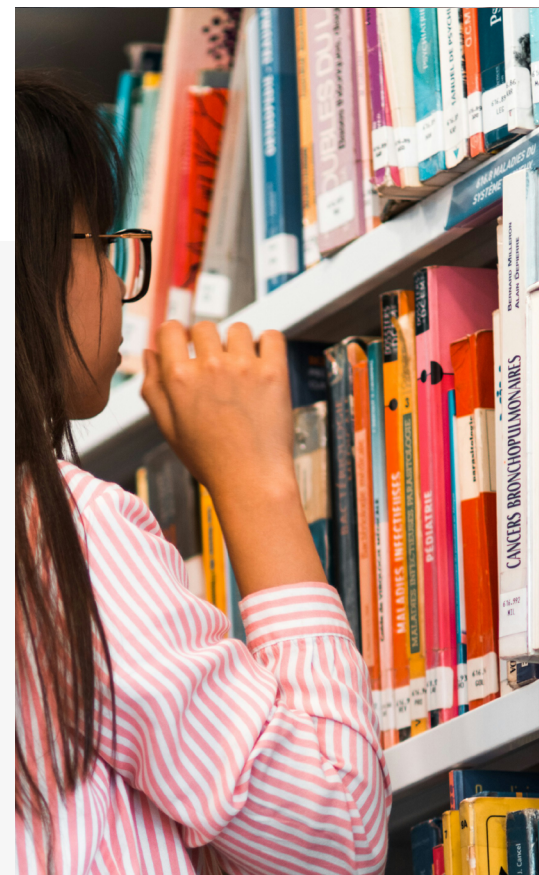*A Digital Service Network Spotlight*

DSN Spotlights are short-form project profiles that feature exciting work happening across our network of digital government practitioners. Spotlights celebrate our members' stories, lift up actionable takeaways for other practitioners, and put the examples we host in the Digital Government Hub in context.

Background

As the COVID-19 pandemic unfolded, public library systems across the United States demonstrated agility, impressive outreach, and rapid digitisation to continue serving patrons. Prompted by these pandemic-era demands, Maryland's Montgomery County Public Library (MCPL) system renewed its emphasis on digitally-inclusive service delivery. They redesigned the library website's information architecture, created a digital library card, and developed a mobile library application to increase access to and use of library services for the communities they serve.

To learn more about MCPL's efforts to advance digital service delivery and inclusion, the Digital Service Network (DSN) spoke with Head of Digital Transformation Maddie Hines Schellhardt, Web Developer Raymond Bryson, and Systems Developer Emily Lamancusa from MCPL's Digital Transformation team.

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MCPL's investment in digital inclusion

MCPL oversees a network of 21 library branches serving more than one million residents. In March 2020, MCPL Executive Marc Elrich's Office of Legislative Oversight published a [report](#) on the role of libraries in overcoming the inequities in digital access.

Motivated by this report, MCPL staff developed a [strategic plan](#) to promote greater digital inclusion, which launched an extensive user experience research effort to understand challenges and pain points of patrons' experiences. This research ultimately led to a redesign of MCPL's website, a new online process to become a member, and a mobile library application.

Understanding the digital experience of MCPL patrons

In-depth user experience research guided MCPL through reshaping its digital portfolio and advancing digital inclusion.

In surveys, patrons reported clunky pathways between the main MCPL website and catalog subsites, poor performance on mobile devices, and a time-consuming in-person experience to verify residency and become a library member.

Website analytics revealed that patrons navigated seven to eight touchpoints on average before arriving at their desired destination. This suggested a disparity between what patrons were looking for and what staff believed patrons were looking for as they placed content on MCPL's site. In response, the Digital Transformation team led an activity for library staff to guess which links on the library homepage were most and least used.

"Staff were surprised that customers use certain resources as much as they do. For example, we have an interlibrary loan service, and it's a popular program. But we assumed it wasn't as important as it is, so that service lived buried under lots of content on various subsites. Our user research challenged our assumptions and helped us make decisions about updates to the site," Hines Schellhardt recalled.

The MCPL team also created heatmaps visually illustrating how patrons engaged with the website to inform decision making about what information and resources should be prioritized:
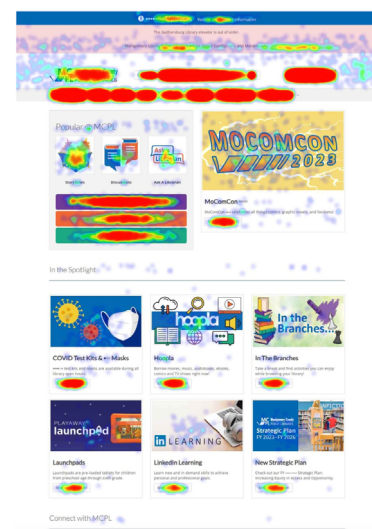
Prompted by user research findings, the need for remote-access materials during COVID-19, the overwhelming number of users interacting with the library on mobile devices, and the library system's overarching digital accessibility goals, the MCPL Digital Transformation team prioritized redesigning the library website, creating a mobile app, and developing a digital library card to animate these new features.

Redesigning the MCPL's website

Informed by their user experience research, MCPL's Digital Transformation team set out to develop a suite of changes to their website and maintenance strategy, including:

+ Placing the most-clicked resources, like the interlibrary loan program, in the most prominent locations;

+ Building a "discovery layer" to enable patrons to use third-party library platforms and software through an interface that mirrors the look, feel, and functionality of the main MCPL site;

+ More targeted subsites, including dedicated sites for kids and teen; and

+ A content management strategy to develop and maintain plain-language content for maximum navigability.

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MADDIE HINES SCHELLHARDT
Head of Digital Transformation, Montgomery County Public Libraries

Because they were included throughout the process, Hines Schellhardt maintains that librarians and other key staff were less hesitant about changing the site. "When you include internal stakeholders from the beginning, they are less likely to resent it or find problems with it down the line. Instead, they try to resolve problems and work with you to iterate. That's really how we approach our work," she emphasized.

As an example, the digital team put together content committees for various groups—teens, children, older adults, and more. These committees collaborated with Hines Schellhardt, Bryson, and others to decide which materials should be advertised on the website and how.

Bryson considers their content management process an essential component of any government digital service transformation: "I would highly encourage any government group to develop a legitimate content review infrastructure that links your content experts to your web content and includes a regular review cycle."

Continuous iteration of the site is a priority for MCPL. Site analytics drive ongoing insights for the design and development teams to ensure patrons can access their priority content and resources. Strong relationships and constant back-and-forth communication between the digital team and the library's core administrative staff is the cornerstone of a sustainable, user-focused website.

Launching a digital library card

Another key factor in promoting digital inclusion meant ensuring more residents could take advantage of MCPL's offerings by signing up for a membership.

Patrons must verify their residency in Montgomery County in order to become a member, a process that historically required an in-person visit to a library branch and residency-proving documents. Staff and residents alike found the process time-consuming and cumbersome, reporting wait times anywhere from 10 minutes to an hour. The pandemic also brought about a sense of urgency for an alternative to in-person verification.

In response, MCPL built an online residency verification tool. The tool uses a combination of email verification, IP address syncing, and a geographic information system (GIS) map to verify a new member's eligibility. The process takes about 30 seconds, compared to the 10+ minute in-person process (which doesn't even take into account patrons' travel time). From an accessibility and equity standpoint, the tool also increases access to library membership for county residents with constraints like mobility-limiting disabilities, limited access to transportation, or multiple jobs.

Since the launch of this initiative, 7,900 customers have signed up using the digital card service, which accounts for 33 percent of 23,400 new library accounts created during this time period. A further 1,400+ existing customers added digital copies of their library card to their digital wallet, and 3,200 checkouts and 1,800 renewals of physical materials have been made on full-access digital cards.

Optimizing a mobile library experience

MCPL's user research revealed that many patrons use mobile devices to access library resources. Although the team invested in improving the site's mobile experience, they also developed a dedicated app to optimize a number of library functions for mobile-first users. The application centers around an easy-to-navigate menu to become a member, access your digital library card, renew books, and more.
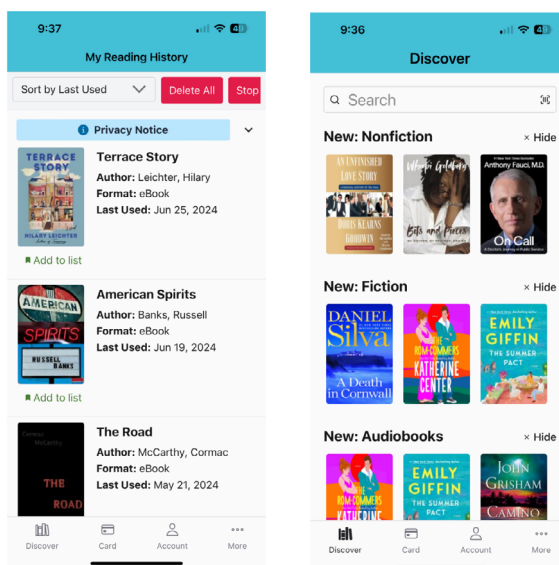
The app incorporates several key accessibility considerations including screen reader compatibility and a one-handed interface, among other features. Bryson underscored the importance of challenging assumptions regarding universally accessible design. Although such features should center users with disabilities, accessible design benefits everyone, regardless of need. For instance, one-handed capabilities enable a patron to engage while holding a child or a cup of coffee, as well.

Investing in open-source

From a development standpoint the MCPL team prioritized open-source solutions—the library's catalog software, discovery layer, and mobile application software are all open-source.

Investing in open-source solutions enables MCPL to draw on the capacity and ideas of other developers and learn about existing tooling that could benefit their system. It also helps MCPL gain efficiencies and better manage technical debt.

"The open-source community has been great. Part of my role is to develop and submit patches and be part of that community for our software. This gives us an 'in' to push for the things we need from these tools. We can also have technically-informed dialogue with the community to gain clarity and precision on refining our understanding of what we need, and to learn about what other open-source solutions might already be out there to fill those needs," Lamancusa shared.

Lessons learned

Enterprise-wide strategies can be wielded as key enablers of digital transformation. Savvy digital service practitioners in government capitalize on county-wide priorities to muster resources and executive support for their work, and they hold themselves accountable to county mandates and guidelines to ensure digital transformation efforts are undertaken in service of constituents.

Staff are essential stakeholders. Incorporating staff into the early stages of any digital delivery overhaul is key to challenging expectations, building enthusiasm for new ways of doing, and ensuring that their critical expertise is captured.

Open-source solutions are a powerful tool for government digital service delivery. Open-source solutions are developed in an information ecosystem that can enable government practitioners with limited resources to tailor products for their needs. When an open-source tool has an active and dedicated development community, patches, notes, new features, and more are freely shared, agnostic of profit motive, allowing governments to benefit from the collective knowledge and investment of the entire community.

Accessibility considerations benefit all users. Inclusive government digital delivery demands close and careful attention to the needs of certain groups. But when you design for these groups, there are many users who benefit downstream from this investment. Designing for accessibility benefits everyone.

Resources

To see how this work was put into practice, explore the following assets in the Digital Government Hub:

+ [MCPL Website Redesign General Plan document](#)

+ [MCPL Website Redesign Drafts](#)

+ [MCPL Top Library Content staff engagement exercise](#)

+ [MCPL User Survey materials](#)