

Improving Digital Services and Access to Collections at Library and Archives Canada

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Library and Archives Canada (LAC) has taken strides to address the current digital reality when it comes to providing client services. LAC formed from the merger of the National Library of Canada and National Archives of Canada in 2004.¹ Its mandate includes preserving and making accessible Canadian documentary heritage; facilitating cooperation among Canadian communities, and sharing knowledge; and acting as the memory of the Government of Canada.² LAC's extensive holdings include archival records from public or private individuals or groups in all media as well as published material by or about Canadians (e.g., books, serials, movies, music, theses, microfilm).³ Providing easy access to LAC's holdings has to start with a proper online presence. Today's users expect more online and, although creating these services is not rocket science, putting the building blocks in place is not simple. LAC has struggled for some time to determine how to offer a sign-in application that could provide similar services to what a client experiences at a physical location. Much work devoted to the effort using traditional project development methodologies did not yield substantial results for almost 15 years. By contrast, the Digital Access Agile team created this product in only four months releasing it to the public in February 2022.

The Agile Methodology: How It Works at LAC

The Digital Access Agile team consists of a marriage between two separate divisions. The application developers, scrum master and an agile coach/technical lead contribute from the "IT/Digital side". The product owner, user experience (UX) designer, UX researcher, and product data analyst contribute from the "business side." This interdisciplinary team structure is well designed to support its suite of

¹ *Library and Archives Canada Act, Statutes of Canada 2004*, c.11, <https://laws-lois.justice.gc.ca/eng/acts/L-7.7/>.

² Library and Archives Canada, "Our Mandate," date modified October 7, 2022, <https://library-archives.canada.ca/eng/corporate/about-us/mandate/Pages/mandate.aspx>.

³ Library and Archives Canada, "Who We Are and What We Do," date modified October 6, 2022, <https://library-archives.canada.ca/eng/collection/basics/Pages/who-we-are.aspx>.

products. This includes a series of public-facing applications for digital access to LAC's collection and related digital services. We support bridging across organizational areas to bring together the right group of people to ensure the success of the products being developed.

The main goal of assembling the Digital Access Team was to break away from the traditional waterfall project approach in order to increase the frequency, consistency, and quality of support to our products, and by extension, to offer better services.⁴ While there was an appetite and support at all levels to make this transformation a reality, it was difficult to get the footing to sustain this transformation in a lasting manner. Being successful involved finding a way to make space for this new method with what we could afford to put together, while combining it with existing processes that are often seen as rigid with prescriptions and expectations.

One of the pillars of a successful agile transformation is establishing a solid foundation. We started with what we considered as the bare minimum for the basic vision at the working level. First, we established the target products. Second, we assembled the team: an agile coach, four developers, a scrum master, a product owner, and a fledgling UX designer. Third, we defined and scheduled the rituals that would support and reinforce our new methodology (i.e., daily scrum, iteration reviews, retrospectives, and planning sessions). From there, we collectively practiced this new mindset and methodology as a team, gradually improving together through knowledge sharing and experimentation.

For over a year, we made substantial changes and improvements to a handful of our core products such as Collection Search and Co-lab. However, it became increasingly apparent that LAC needed to revisit what the transformation to agile methodology meant at both the team and wider organizational project management levels. If we wanted to improve how we served our products, the team would require better access to UX research resources. If the team was to cement itself at LAC, we needed to better demonstrate how we could integrate with our project management office to adequately report on our work, while working in tandem with enterprise processes to ensure organizational alignment.

There remains plenty of overall integration work ahead of us on our transformation journey. We recognize that ongoing review and monitoring of transformation progress will help ensure long-term success. Fostering a change of methodology and culture of this magnitude at the institutional level in the public sector takes time.

What It Means to Fully Embrace the Agile Methodology

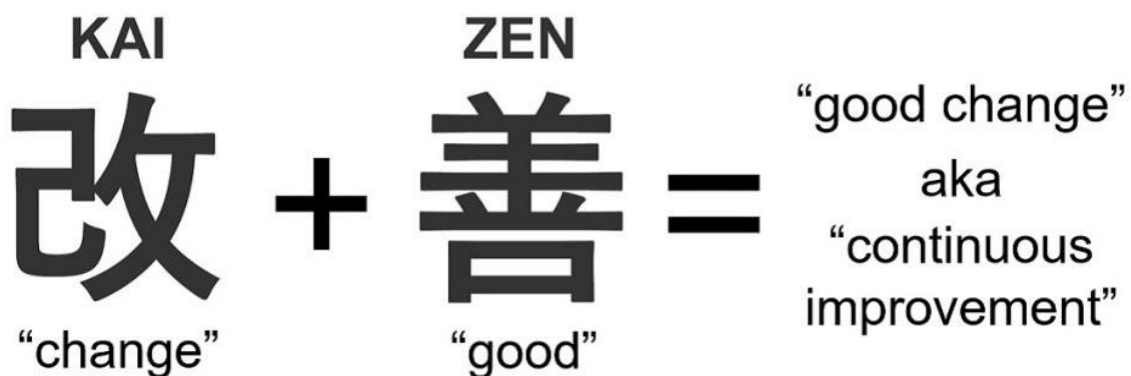
Moving from a project-based mentality to a product-based mentality is perhaps one of the hardest cultural changes to manage. It involves moving away from a focus on reporting on schedules, deadlines, and budgets that relate to various top-down levels of the overall public organization funding and planning models. Instead, agile methodology favors empowering individuals who know the product best at the working level. They autonomously generate and manage the direction, growth, and maintenance of the products. Even with increased autonomy for product management at the operational level, we still work within the broader administrative structures for project management, funding, and reporting at LAC. Part of this has required collectively determining how to accommodate the “light on documentation” agile methodology within a “documentation first” waterfall project environment. This fulfills the organizational need for overseeing and reporting on work.

⁴ Waterfall project methodology typically involves detailed, linear project planning with each phase depending on the previous phase. The scope and requirements are defined at the start of the project, and the client is typically only involved at the start and end of the project. See: Jason Fair, "Agile versus Waterfall: [Which] Approach is Right for My ERP Project?" (paper presented at PMI Global Congress 2012—EMEA, Marseilles, France), <https://www.pmi.org/learning/library/agile-versus-waterfall-approach-erp-project-6300>.

In the face of such dramatic changes, education became a key component for success. This includes learning the foundational notions of agile methodology and its mechanics, as well as professional skills required to fulfill team needs. Time investment up front is worthwhile and effective in preventing problems down the road while also increasing the quality of work. We fostered a culture of continuous learning in the team by assigning a minimum amount of time for learning each iteration, leveraging less expensive online self-directed course formats, and building and coordinating a curriculum across the team with our agile coach and product owner.

Another foundational component was embracing and integrating the principles of UX design and research. Our team’s approach involves investing in user research to hear from clients directly. Different tactics like design sprints, workshops, consultations, interviews, surveys, and studies, all help us move from subjective assumptions to having more objectivity about our products. This has helped validate ideas to eliminate or confirm doubts, save time, and increase the likelihood of overall positive user experiences and the delivery of something valuable to the end user.

Further solidifying our move away from the waterfall project cycle was eliminating the notion that the product needed to be “perfect” from the start. Embracing the agile methodology means that, for a multitude of benefits, one must accept the need to frequently revisit and iterate on a feature or product. As long as the minimum viable product (MVP) delivers the base value to end users, one can keep adjusting and building to increase the viability to users while continuing to receive feedback before, during, and after, the initial delivery.⁵

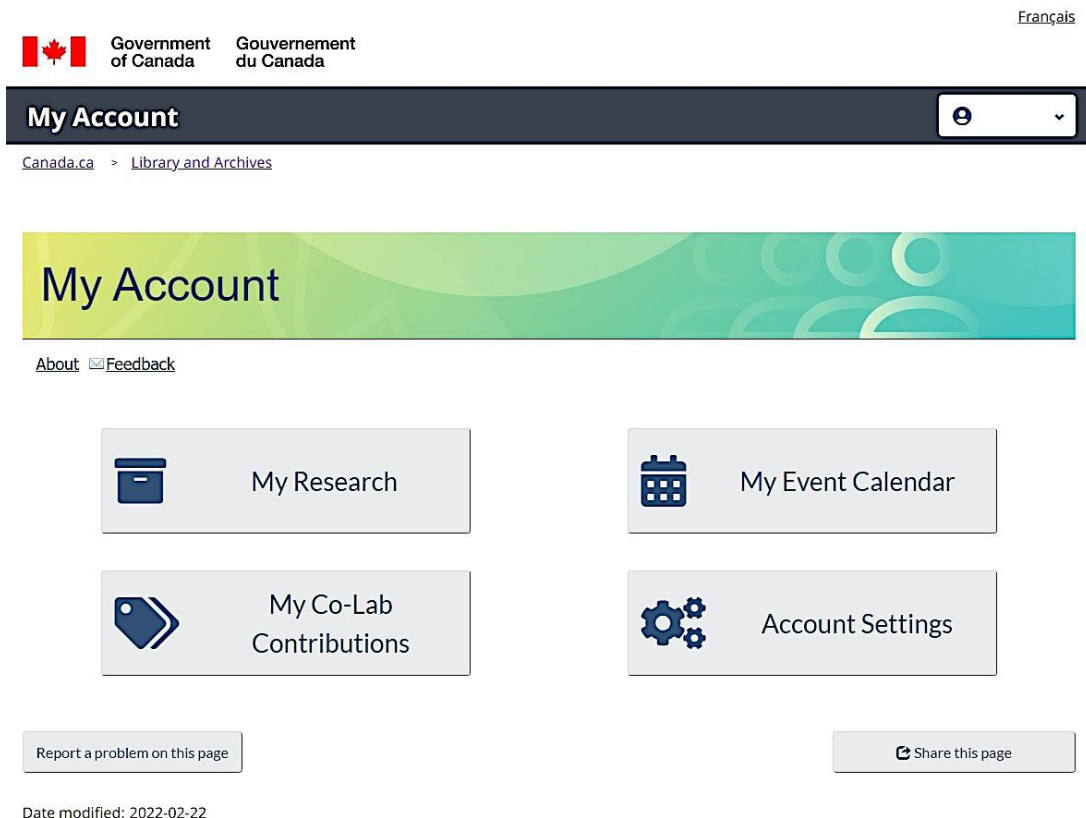


One of the concepts underpinning agile methodology is the Japanese concept of *kaizen*, where one seeks to improve oneself with consistent, small, incremental changes. Most agile methodologies prescribe certain rituals to guide and coordinate the work and simultaneously provide a built-in way to help the team iteratively improve not only their product, but also themselves. As an example, the iteration retrospective has provided the team with the opportunity to share honest feedback, to learn about one another, to trust one another, and ultimately to learn how to better work together to set team growth-oriented goals. This and other rituals, such as the daily scrum, review, and iteration planning, require ongoing commitment. They contribute to not only the regular work cycle of an agile team, but also provide a positive feedback loop that helps with continuous improvement and increased likelihood of a successful transformation over the long term.

⁵ A minimum viable product (MVP) is a product with enough features to present to clients for their validation early in the development cycle. Validating and iterating products in response to user feedback is a core component in agile methodology. See: ProductPlan, "Minimum Viable Product (MVP)," 2023, <https://www.productplan.com/glossary/minimum-viable-product/>.

While undergoing an agile transformation, it is important to recognize that other teams may not be working in the same manner. When connecting with a team working in a waterfall manner, one may need to coordinate around schedules and be patient. These interactions can provide an opportunity to be transformation leaders and help others better understand the benefits that agile methodology could bring to their own teams.

Using Agile Methodology for My Account

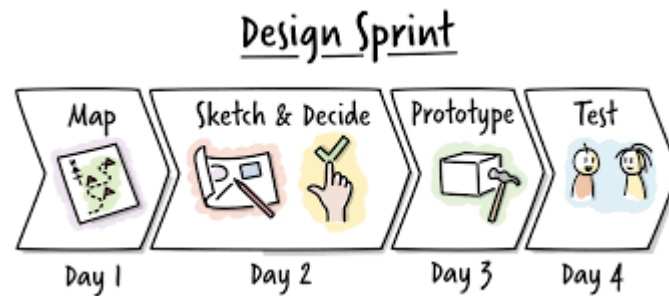


While a well-defined project with a clear endgame can benefit from a waterfall methodology, it does not always work for larger endeavours. My Account is one of those big creations that needed a different strategy. Previous attempts focused on listing everything a client would be able to do after signing in but without articulating the technical details. Essentially, LAC was looking at the top of the mountain but could not figure out how to get to it. The way the Digital Access Agile team approached the idea was fundamentally different. My Account is not a project, but rather a product first created on a small-scale. It could then grow to provide more online features, and eventually be retired when it no longer meets client needs. The product is maintained in an ongoing fashion in relation to evolving client needs.

This perspective shift opens many possibilities, like focusing on small, frequent and, most of all, achievable improvements. We are no longer aiming for a perfect product on Day One. Instead of solely focusing on the top of the mountain, we take it one base camp at a time and reassess at each interval. We understood early on that integrating different types of forms used by clients in My Account, like reproduction or consultation requests, was ultimately necessary. However, this feature could not be the first thing tackled by the development team if there was no hub to host the solution. It was imperative for our team to create a solid foundation for the product itself that could be easily migrated when necessary. With that in mind, what was the envisioned foundation and how did it enable the creation of the MVP?

The Foundation and MVP

Our first goal was to figure out, as a team, where we would start. We already had two products using the same sign-in module, but nothing was interconnected. When a client connected to Co-Lab,⁶ our crowdsourcing tool, the credentials were not transferred to My Events,⁷ our event registration tool. This was our starting point. Create a space for clients where credentials would be shared between products. This common understanding fuelled our next step, the design sprint.



The design sprint exercise helped us plan the work ahead. The team spent a week brainstorming to create a prototype that could be shared with stakeholders. Figure 1 depicts one of the original sketches, figure 2 shows the mock-up from the design sprint, and figure 3 presents the product currently available to clients. While not every feature came to fruition out of the prototype, it helped focus where more investigation was needed or where pressure points might arise.

⁶ To explore our crowdsourcing tool, please consult <https://co-lab.bac-lac.gc.ca/eng>.

⁷ To sign up for future events at LAC, please consult <https://library-archives.canada.ca/eng/services/public/events-exhibitions/pages/events.aspx>.



Figure 1: My Account design sprint progression: step 1 – the sketch.

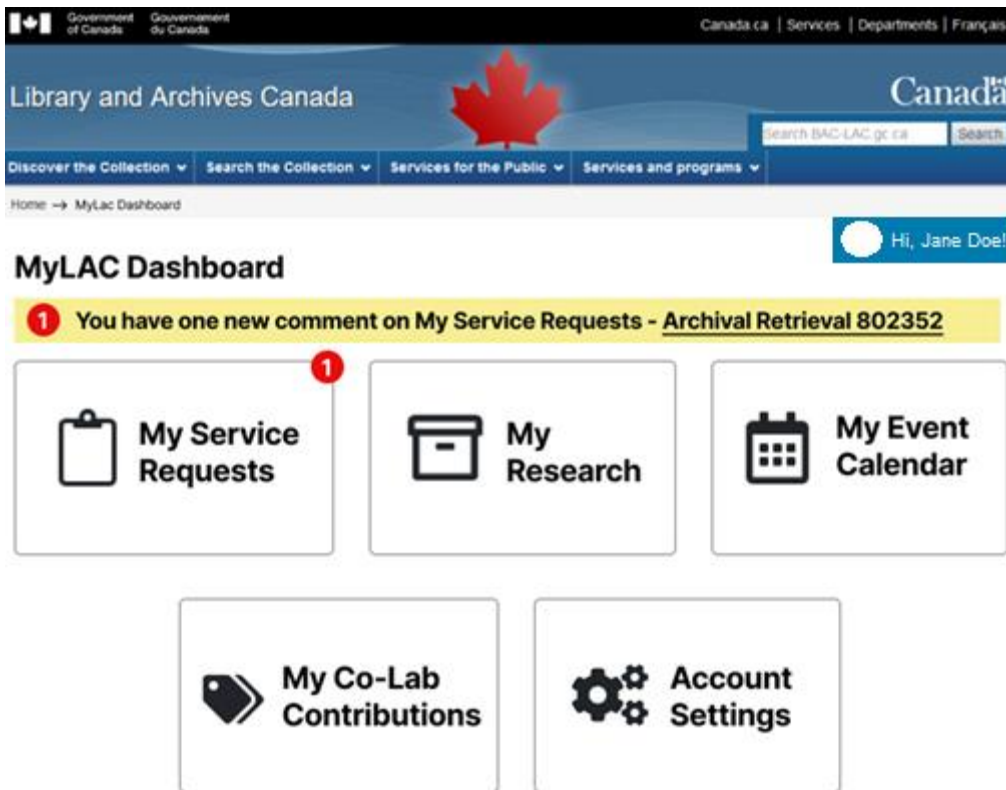


Figure 2: My Account design sprint progression: step 2 – the mock-up.

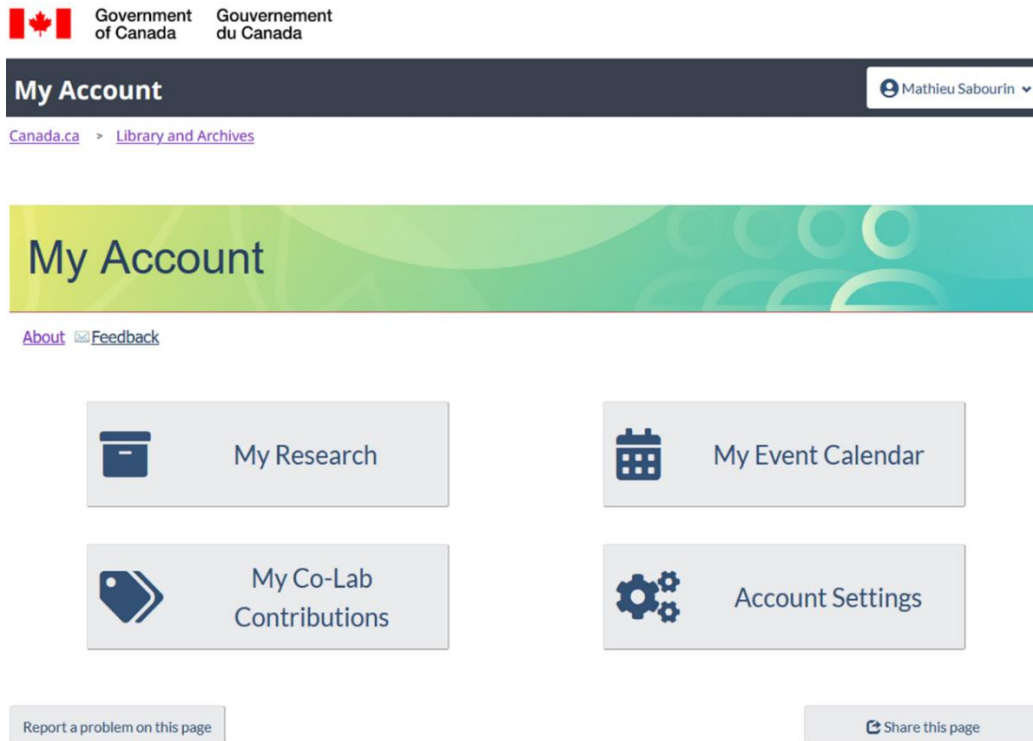


Figure 3: My Account design sprint progression: step 3 – the prototype product.

Our initial goal was small, but attainable. Our intent was to go to production with a simple offering. Not offering much might be seen initially as a risk, but it is part of the agile development process. UX researchers within our team could test the initial solution to see if it matched our clients' expectations. If we did not meet them, we would not have to go back to square one. If failure is unavoidable, it is better to fail small.

The MVP was a step in the right direction, but the work is not over. In fact, the definition of "finished" has had to be reassessed at LAC when dealing with online products such as My Account. Online services and products need continual maintenance. Client needs are ever-changing. There are increasing expectations that services should be easily available online. This is particularly the case with cultural heritage institutions dealing with vast archival and library holdings. In reality, it is a monumental challenge for a federal department that does not have the same type of resources as the private sector to address client expectations.

Our goal with My Account was to create a simple and useful product for clients and that is what we did. For the time being, My Account is small, but it has a strong foundation. Clients can use a single sign in. They have access to their crowdsourcing collaboration in Co-Lab and their research lists in My Research. They can sign up to future events organized by LAC. What is next, though? How can we make sure that the product can grow and help our clients get better services by using My Account?

What's Next for My Account?

The point of a multidisciplinary team is to have the right players around the table to bring their vast knowledge together. They can then make the best decisions with client needs as a focus point. This implies asking tough questions to subject matter experts (SMEs), reviewing existing workflows, and often critiquing the status quo. The future of My Account is exactly that: review aging analogue processes and see if better alternatives can be created.

Let's focus in on one specific service: how to order archival material for in-person consultation purposes. Many issues affecting this service are also observed elsewhere, mainly with reproduction requests and Access to Information and Privacy (ATIP) requests.⁸ They were all originally conceived as paper forms that were moved online without much modification. Today's clients are expecting to have comprehensive online forms with a way to track sent requests. While this seems simple enough, developing such tools with existing back-end systems can become complex quickly.

Since the initial launch of My Account, the team has been working on My Circulation Request. Clients will have access to their personal archival retrieval history. They will be able to track in real time if their ordered material is available at a LAC service point. We approached the problem the same way as before: we sketched a desired mock-up based on comments from clients and the consultation staff. We then explored how to retrieve the correct metadata from our internal circulation management system. Finally, we tested the first draft and started coding with the intent of speaking often to stakeholders to tweak the emerging product.

⁸ The *Access to Information Act* gives Canadians and residents of Canada a right to access federal government records that are subject to the *Act*. The *Privacy Act* grants everyone the right to access their personal information held by government institutions subject to the *Act*. Formal requests for information can be made under each act. See: Treasury Board of Canada Secretariat, "How Access to Information and Personal Information Requests Work," date modified August 12, 2022, <https://www.canada.ca/en/treasury-board-secretariat/services/access-information-privacy/access-information/how-access-information-personal-information-requests-work.html>.

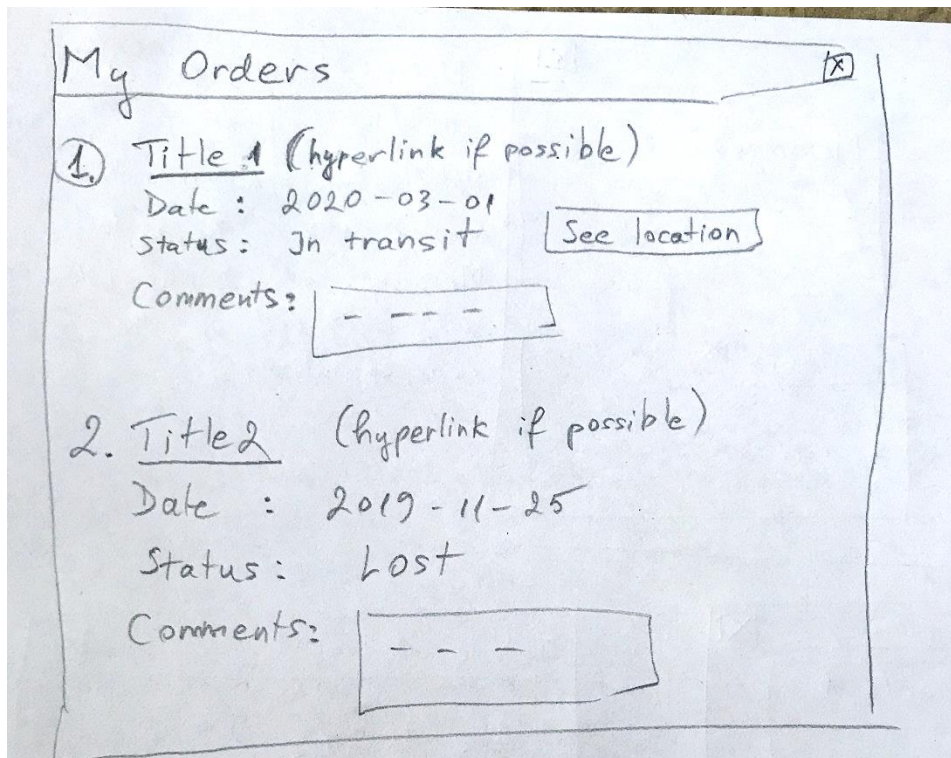


Figure 4. My Circulation Request design sprint progression: step 1 – the sketch.

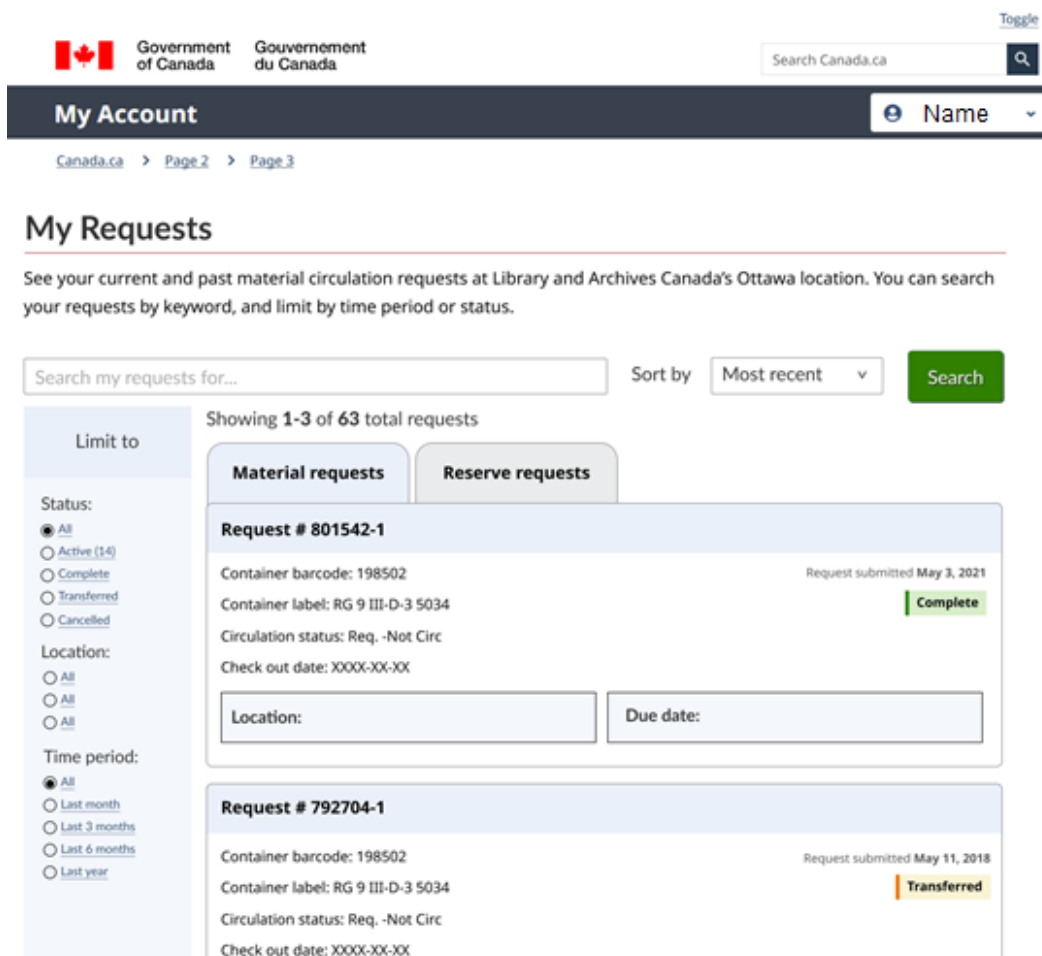


Figure 5. My Circulation Request design sprint progression: step 2 – the mock-up.

My Requests

See the history of your material circulation requests at Library and Archives Canada's Ottawa location. You can search your requests by keyword, and limit by time period or status.

Order Asc Search

Limit to

Time Period:

All

Last month

Last 3 months

Last 6 months

Last year

Status:

All

Active

Complete

Transferred

Cancelled

Showing 1-10 of 75 total request

Request #: 888222-1

Container barcode : 196234
Request submitted : 2022-08-30

Container label : RG2 1863
Cancelled

Circulation status : In Storage

Check-out date :

Location

Main, 395 Wellington, Ottawa, Third Floor, Rm 354

Due date : 2022-10-14

!

Request #: 850343-1

Container barcode : 11667
Request submitted : 2019-11-18

Container label : RG24 12345
Cancelled

Circulation status : In Storage

Check-out date :

Location

Main, 395 Wellington, Ottawa, Third Floor, Rm 354

Due date : 2019-12-27

!

Figure 6. My Circulation Request design sprint progression: Step 3 – the product in development.

As seen in Figures 4, 5 and 6 we have improved at making mock-ups. This is the result of investing in the right type of talent and in people when forming multi-disciplinary development teams. The MVP of this new feature does not include the form itself. When exploring the problem, we quickly realized that integrating the form and its back-end components would require a significant amount of effort. Integrating forms into My Account is a clear need that we will be exploring soon. In the meantime, clients must still ask LAC's staff for their information, which creates a service bottleneck. The team made the decision to aim at a smaller target, but one that would have the maximum impact on clients.

Conclusion

Client services start on the web. Having a platform like My Account is no longer a nice-to-have. It is a necessity for offering effective services to Canadians. Our goal is to make My Account a place for clients to start their journey into LAC's holdings with the least number of unknowns. Agile methodology at LAC has shown its merit by underpinning the success of My Account. The Digital Access Agile team's approach is responsive to evolving client needs in its iterative approach to managing its suite of products, including My Account. Agile methodology has provided the framework to allow effective integration of business and IT staff, particularly through ongoing and regular communication. The foundation of digital access services is more and more solid now at LAC, so let us build the rest of the house together.