TALENT CLOUD
RESULTS REPORT

It's been a tremendous privilege to have been able to work on a project like Talent Cloud. Through this Results Report, the team is grateful for the chance to share findings, insights, and further ideas on crafting a digital talent engine optimized for the Government of Canada.

The team would like to thank the many users, project partners, communities, and voices that have made this research what it is. We hope it brings value to Canadians and those around the world working to make government more inclusive, efficient, and responsive in the digital age.

Jump right in:

This is a long report. The Table of Contents on the next page lays out everything in detail. But for those who know what they want, and are hoping to skip ahead, we thought we'd leave our users a quick map on where to find what you're looking for.

Interested in the **project's vision and ideas for the future**?

Interested in **diversity and inclusion**?

Interested in how to **set up a project like this in Government**?

Interested in **streamlining the hiring process**?

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Executive Summary

Talent Cloud has been an unusual initiative for the Government of Canada.

The team took a unique approach to testing ideas on optimizing the hiring fit between talent and team, increasing inclusion and diversity in recruitment, and reducing time to staff in the Government of Canada. Talent Cloud went so far as to build a full staffing platform where new ideas could be tested from concept, through hiring, and all the way to on-the-job performance.

The platform is for externally advertised, competitive processes and is open to the public. The project itself is open by default and strives to embrace the GC Digital Standards[1] in all aspects of decision making, design, and development. The initiative was built through extensive user testing, and engagement with partner departments, international experts, and equity-seeking groups, including Indigenous communities.

Talent Cloud has been built from the margins in. Every assumption, every process, every value was turned around and viewed from other angles... many other angles. The idea was to build for the edge cases and then scale towards jobs and groups that are already well supported by the government system, rather than to build for what is easy and known, and then try to scale a standard model to include new types of work and underrepresented groups. Talent Cloud is a platform intentionally optimized to recruit, for example, a black or Indigenous developer with leading edge skills and unconventional education, and provide opportunities in emerging and hard-to-fill areas of need. The platform was built to attract a new group of applicants to a new type of role in the Government of Canada. Inclusion by design, not by accident.

The platform was also engineered to support a talent model optimized for the digital age, including actively enabling project-based work (Talent Cloud recruits for term positions, but the platform could theoretically be used more broadly). Significant effort went into behavioural interventions and process redesign related to the applications themselves. To be more specific, Talent Cloud aimed to reduce the overall volume of applications per process to save time and energy, while increasing both diversity and the percentage of high-performing applicants in the pool. Fewer people, better outcomes. This meant targeting a shift in application behaviour patterns - not through recruitment drives, but through interventions on the platform itself.

In the digital age, a project-based position can't take longer to staff than the position is needed for. A responsive and agile government must be able to secure rapid access to high-performing talent, and attract those with in-demand and emerging digital skills. To be competitive with industry, Talent Cloud set the target of building a platform that would produce a highly ambitious 30 day time to staff (plus security clearance time, which was outside Talent Cloud's scope).

In the past three and a half years, the Talent Cloud team and its partner departments have crafted new behavioural and business processes, built and launched a live staffing platform, and run more than 50 staffing processes to test ideas and measure outcomes. In the end, the results were impressive.

While Talent Cloud's initial staffing processes took approximately as long as the Government of Canada average, two years after the platform launch the average time for an externally advertised process (from job advertisement to verbal offer) is down to ~40 days (plus the standard 1-2 months for security clearance and HR finalization). Several processes in 2020 reached a verbal offer in ~20

days. Including security clearance, this means the time to staff on the Talent Cloud platform is now down to ~3 months... a savings over the Government of Canada average time to staff by almost half a year.[2]

On average, ~9% of all applicants in Talent Cloud processes have been deemed fully qualified (qualified to receive an offer) at the time a job process closed, which is significantly higher than the industry average of ~2%.[3] In processes conducted in 2020, this number has been over 10%, as the platform continues to release improvements in optimizing the hiring outcome. Managers interviewed 1-2 years after their hire was made indicate overwhelming satisfaction with the quality of the hire and the fit-to-team. ~95% of these hires (according to managers interviewed) remain in government, even after some having required term renewal, and ~80% are still with their original team. Qualitative research shows that the platform is attracting strong applicant diversity, and that this is transferring through into the final hiring result. Research with applicant groups shows that the deliberate efforts Talent Cloud has made are working: the platform is reaching new audiences, including those in equity-seeking and underrepresented groups, and user feedback on the experience is positive.

In addition to producing hires, Talent Cloud also generated research findings. For example, the team learned that factoring work environment, team culture, and management leadership style into the design of the job advertisement significantly improved the talent-to-team match. The team also found that making positions remote work accessible substantially improved the chance of a successful hire. Talent Cloud tested 20 different points of intervention related to reducing time to staff, and identified the 5 that were the most influential. The team ran experiments on the usefulness of applicant self-assessment, optimizing the number of selection criteria, and ways to reset the defaults to promote diversity and inclusion.

It's important to remember that Talent Cloud is only just completing the experimental stage - it hasn't been resourced as a full scale solution. As a result, the majority of its features have been released as minimal viable products. This means that the platform has a few bugs and glitches, and has never had the force behind it for adoption that an enterprise solution would have. Yet despite having been built from a lean startup approach, with minimal influence, the experiment worked. However, confirming whether or not the model would work at a larger scale would require a new approach.

The question now is what will the Government of Canada do with the insights gained and the lessons learned?

SECTION 01

Operations and Overview

A Caveat to Begin: Who are "We"?

This report represents the findings, ideas, and opinions of the Talent Cloud team in the Digital Change Sector of the Office of the Chief Information Officer for the Government of Canada. (For those unfamiliar with the Government of Canada's hierarchy, that means we're in the part responsible for digital change, not human resources.)

The content of this report shouldn't be considered to be the official position of the Government of Canada (in any regard). It represents work undertaken outside the Office of the Chief Human Resources Officer and the Public Service Commission. While the work itself was developed in a way that was policy compliant, the findings, recommendations, and ideas in this report should not be read as representing the approval or policy position of these organizations.

This report is simply the story of an experiment.

When we tell the story, those of us on the team writing this report use "we" and "our" when we're sharing theory and research findings. And we do mean exactly that. Don't let all the fancy formatting fool you. This is simply the write-up of the ideas and research of one tiny team in the vastness of the Government of Canada. And a grassroots project at that - one with relatively little influence, and entirely without the power and authority of an official HR mandate holder. Talent Cloud is a project team that only has the authority to present ideas, just like any other public service team. It doesn't have the authority to set direction for the Government of Canada, and it certainly doesn't have the authority to compel other government teams to change behaviours or adopt new processes, particularly in relationship to human resources.

Ultimately, we're just a small collection of innovation and tech nerds who became enamoured with the idea of testing some new digital age talent models for government. We found like-minded leaders across the Government of Canada who supported the initiative.

We undertook this work because we believe deeply that it has strong value for Canadians - now and into the future.

It's our pleasure, and part of our commitment to open government, to share these findings and ideas with you. The sample sizes are small, and the conclusions are more of a compass bearing on where to do further research rather than a final answer, but we're glad to share them.

Thanks for reading.

Contact Us!

On the web: https://talent.canada.ca/

By email: talent.cloud-nuage.de.talents@tbs-sct.gc.ca

On Github: https://github.com/GCTC-NTGC/TalentCloud

On Twitter: @GC_Talent

Problem Statement

Context: A Look Back at 2017

When the Talent Cloud project first launched, the rise of the digital age was a big subject of discussion, and the economic impact of companies like Uber and AirBnB was only just beginning to be understood.[1] In 2017, "gig" or project-based work was estimated to account for ~20-25% of employment opportunities in Canada[2] and was the fastest growing type of employment.[3] The "platform revolution" was underway, but its trajectory was uncertain.[4] How would the platform revolution change business, and with it, the nature of work? Would the rising "gig" economy continue to grow until the majority of jobs were project-based or micro-contracting employment opportunities or would it hit a ceiling and level off... or was it just a passing economic fad?

Alongside this, there was (and still is) an increasing global dependency on technology to complete a wider range of tasks, including those in industries that had previously been relatively untouched.[5] Globally, this was leading to fierce competition over people with the skills required to drive organizations forward in the digital age. Added to this were predictions about demographic labour market changes[6], and a growing social movement towards greater inclusion and diversity, represented across organizations and in positions of authority.

Problems to Focus on

For many organizations, their human resources models were designed in and for earlier times. The Government of Canada is no exception.[7]

Many of the foundational pieces of legislation for government human resources date to the 1980s, and much of the policy is rooted in decisions made in the 1990s. To put this time period in perspective, many Government of Canada departments were still in the process of replacing analogue paper processes and giving employees computers and internet access. Understandably, much of this legislation and policy didn't envision a scope that included the rise of the gig economy and the digital age, and the policy suite was therefore not optimized to support government operations during these socio-economic and technological developments.
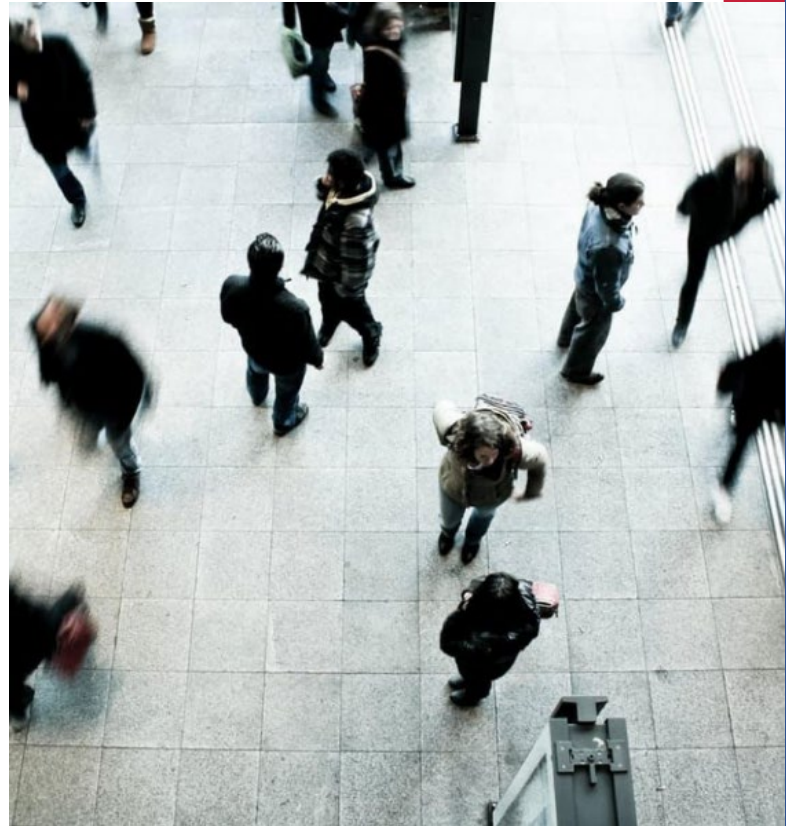
The broad problem Talent Cloud was interested in was how to develop a digital age talent engine to bring employees with digital skills into government.

But more specifically, Talent Cloud was concerned with how long timelines and labour intensive HR processes were impacting the Government of Canada's ability to remain competitive in the digital skills talent market. Government was heavily invested in a workforce that was largely made up of permanent (indeterminate) employees in an economic ecosystem where a rising number of workers reported wanting more self-directed career choices and greater job mobility.[8] That said, the broader gig economy didn't widely support workers' rights, like pension, benefits and union representation, which opened the door to an economic engine where the vulnerable were made more vulnerable.[9]

Talent Cloud wanted to work on the problem of how to build a functioning "gig" or project-based ecosystem for the Government of Canada, complete with workers' rights - a model that moved fast enough to be competitive against the private sector and was attractive to top digital and tech talent.

Vision for the Future

Talent Cloud imagines a future for the Government of Canada where...

1 — Government will be able to secure as much high performing talent as it needs to advance the digital government agenda, including recruiting those with rare, in-demand, and emerging digital age skills

2 — The talent engine will be able to recognize and support the upskilling of those with greater potential

3 — The fit between the incoming talent and the team will be optimized to the work environment and organizational culture, ensuring rapid onboarding, strong performance, and high productivity

4 — Project-based work will be fully supported by the government's talent model, including rapid team assembly to support new priorities in a fast evolving ecosystem

5 — Talent will be able to move in and out of government easily, with their credentials recognized and portable between organizations

6 — More citizens will have a chance to work for the Government of Canada on project-based opportunities at some point in their careers, promoting a richer diversity of ideas inside government and increasing citizen awareness of government operations

7 — The talent engine that supports digital government will be a strong, ethical system that supports workers' right and benefits for "gig" or project-based work

8 — The talent engine will support not only increased representation, but also the advancement of meaningful equality for all those in Canada who are underrepresented in the current government talent ecosystem (including tackling anti-racism and inclusion priorities such as visibility, narrative ownership, safety and support, and equal influence to define and occupy positions of influence and authority)

Project Vision

(July 2017 – March 2021)

Talent Cloud's vision is to create a talent engine that can move as swiftly as needed to ensure that the Government of Canada has access to all the digital talent it needs for project-based work. Talent hired will have access to union representation, pension, rights, and benefits. The talent engine will be designed in such a way that it illuminates the skills and stories of those who are underrepresented and unseen, and will encourage hiring authorities to place value on these experiences, leading to greater diversity in hiring outcomes and a hiring experience for all that is validating. Driven by portable digital credentials, the talent engine will bring a rich set of data on the skills ecosystem available to the Government of Canada, allowing for more optimized recruitment and mobility targeting existing gaps and emerging priorities.

Mission

(July 2017 – March 2021)

Develop and test bold new recruitment and mobility approaches for digital talent in the Government of Canada, respecting fundamental principles that promote workers' rights, embrace user experience design and Digital Standards, and advance equity, inclusion and diversity.

Mandate

(July 2017 – March 2021)

As an experimental platform run by the Digital Change Sector in the Office of the Chief Information Officer, Talent Cloud has a mandate to help ensure that the Government of Canada has the digital talent it needs to deliver on government priorities and commitments to Canadians. This means helping to ensure that high performing talent, with in-demand digital skills, is available when needed. Working with partner departments who have the authority to staff on a hiring platform of their choice (assuming links to the job advertisement are also posted to GCJobs), Talent Cloud has a mandate to explore issues that are preventing partner departments from getting the digital talent they need, and to work collaboratively towards potential solutions through testing and research.

Project Deliverables and Performance Objectives

Project Deliverables

Talent Cloud produces three distinct "products":

Real hires for real jobs

Data and research findings

Future-facing theory

Performance Objectives

Complex problems are a target rich environment for choosing performance objectives. To make progress against them, it's important to clearly identify specific targets to move towards and a way to measure progress.

When Talent Cloud was first being scoped, the team ran a series of workshops to better understand how current staffing practices were viewed by employees and the public. Participants were asked to identify elements in a high performing government hiring model. Workshop participants then identified a list of problems and blockers that were preventing that vision of the staffing experience from becoming a reality.

The team then analyzed this list to identify whether or not there were any critical dependencies that were running throughout all issues. Two clear underlying themes came to light. **Firstly, long times to staff were causing a cascade effect of adverse issues that couldn't be substantially mitigated unless time to staff was improved. Secondly, unless the hiring process resulted in a strong hire who worked well with the team, the whole point of the effort was undone.** Once these two core issues were identified, Talent Cloud then cross-referenced the findings with rich data from the Government of Canada's Blueprint 2020 analysis to validate and learn more about these issues before proceeding.
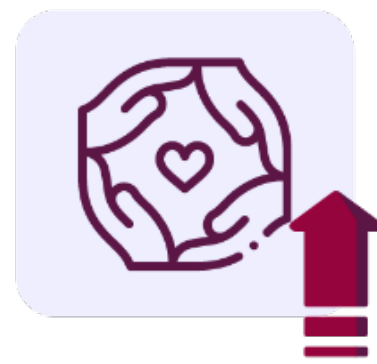
Performance Objectives

Reducing Time to Staff

Optimizing Talent-to-Team Match

Strengthening Diversity and Inclusion Outcomes

Time to Staff

To address the issue of time to staff, Talent Cloud set the extremely ambitious performance objective of a 30 day time to staff, measured from the closing date of the job advertisement to the selection of the final candidate. (This count didn't include any additional time required for security clearance, because interventions in this mandate area were out of scope for the Talent Cloud project and could therefore not be impacted by the experiment.) This meant that the solution would need to reduce the average time it took in government to identify the top candidate and initiate the final stages of a hiring process by more than 100 days. For this performance objective, it was simply a run against the clock, testing numerous points of intervention against a single goal.

Fit-to-Team

The performance objective on identifying a hire with strong talent who was also a strong fit to the team proved far more complex in terms of setting clear performance objectives. **Two sub-components of "fit-to-team" were identified: optimizing the talent-to-team match and ensuring that the process advanced**

meaningful diversity and inclusion in hiring outcomes. Because both sub-components were critical to achieving success in the talent-to-team matching process, each then became a research objective for the experiment. Where possible, quantitative measures were set to analyze outcomes, but the majority of the research related to these performance objectives came through qualitative analysis.

For optimizing the match, performance measurements related to the level of manager and applicant satisfaction at the time of hire, and long after, as well as the ratio of high calibre applicants versus industry norms.

In relation to the performance objective on diversity and inclusion, Talent Cloud aimed to increase the diversity of the initial applicant pool, as well as the final hiring outcomes, and to do so in a way that humanized the entire process. Experientially, success would mean that applicants and managers felt seen, valued, and validated in a process they believed was fair, respectful, and compassionate. As one might expect, this is less of a target where one crosses a finish line, and more of a continuous migration towards the Government of Canada's vision for equality.

Partnerships, Governance and Collaboration

A Home in the Office of the Chief Information Officer

Talent Cloud was a bit of a renegade project when it first started - an experimental theory on staffing with a focus on digital talent. It wasn't an easy fit to the existing government organizational structure, and people weren't sure where it belonged (or if it should belong anywhere).

It's not an exaggeration to say that Talent Cloud wouldn't have existed if it wasn't for the Chief Information Officer of Canada in 2017 - Alex Benay - standing up to make a home for the project and giving it a focus. When Talent Cloud initially came to the Office of the Chief Information Officer, it was little more than a proposal and a small grassroots start-up. There wasn't even any certainty that the project would (or should) belong in the organization long term.

But for anyone who's worked in start-ups, you know how critical those early champions are. Our project was fortunate enough to have several, including the Chief Information Officer, the Deputy Clerk of the Privy Council, and an Executive Director who believed in the potential of the experiment.

Over the years, there have been a number of changes in these leadership roles, but Talent Cloud has been supported by a succession of champions who continue to promote the research. The Office of the Chief Information Officer (Treasury Board Secretariat) has also been the project's largest funding supporter in each of its years of operation.

Partnership Structure

Talent Cloud was funded through contributions from partner departments who wanted to support the experiment's research direction and use the platform itself for hiring term appointments. These agreements were made on an annual basis in the form of Memorandums of Understanding.

It was challenging to run a project like Talent Cloud with the variable nature of the funding that comes with this type of partnership structure, but there's simply no way the project would have ever existed without the aid of these partner departments. While not all partner departments funded all years of the project, it's impossible to overstate the importance

of their participation. Without the support, intellectual curiosity, passion, and

Talent Cloud's Partner Departments

- Canada Border Services Agency
- Department of Justice
- Department of National Defence
- Employment and Social Development Canada
- Environment and Climate Change Canada
- Fisheries and Oceans Canada
- Global Affairs Canada
- Health Canada
- Innovation, Science and Economic Development Canada
- National Research Council Canada
- Natural Resources Canada
- Public Services and Procurement Canada
- Royal Canadian Mounted Police
- Shared Services Canada
- Transport Canada
- Treasury Board of Canada Secretariat
- Women and Gender Equality Canada

perseverance of our project partners, Talent Cloud would never have made it past the early planning stages.

The partnership model was also only able to cover approximately half the costs of operations in later years as the project grew into a full platform. The Office of the Chief Information Officer has absorbed approximately half the operating costs of the project in recent years. (This is an important factor for those looking to run similar experiments. Funding instability has been a significant challenge for our project operations. While our experience may not represent that of others, we've found it difficult to raise resources for a medium size experiment, with a funding requirement that's too small to require a Memorandum to Cabinet, but too large for a single organization to fund alone.)

Governance Structure

Talent Cloud established three layers of governance, in addition to its standard hierarchical reporting to the Chief Information Officer of Canada.

Governance Structure

External Advisory Board

Signatory Departments Advisory Committee

HR Superusers Working Group
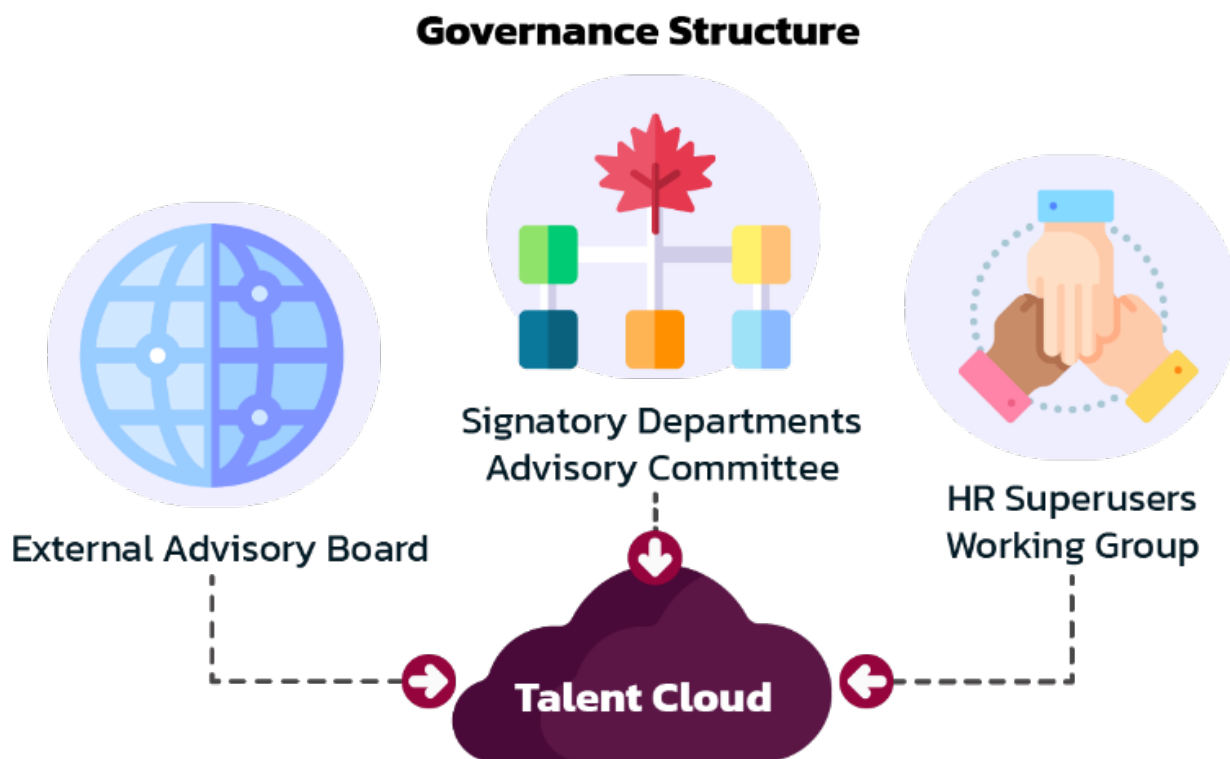
Talent Cloud

External Advisory Board

The purpose of the External Advisory Board was to provide insight and guidance on the direction of the GC Talent Cloud initiative, including shaping its performance objectives, advancing cross-sector engagement, and providing advice on its longer-term operating model. Board members also contributed ideas on connecting Talent Cloud to broader trends on the future of work, with a central discussion selected for each meeting. Discussion topics included concepts such as data self-sovereignty, the future of workers' rights, portable benefits, Indigenous inclusion, next generation

employment equity, bias reduction in staffing, credential recognition, A.I., blockchain, and digital identity.

Board members represented a diverse range of perspectives, user groups and areas of expertise related to the future of work, public sector transformation, employment equity and human rights. They were considered leaders in their fields, and came from private, not-for-profit, government and academic sectors.

While the External Advisory Board met several times a year in the first two years of Talent Cloud's operations, it was difficult to maintain momentum with all the other components of the project underway. As a result, the board has been inactive since late 2019.

Signatory Departments Advisory Committee

As part of their Memorandum of Understanding with Talent Cloud, each partner department appointed one Director General to sit on an advisory committee. This governance body made critical decisions on feature prioritization, received reports on early research findings, and previewed upcoming platform releases and products.

Advisory Committee members brought diverse, deep level expertise of government operations to the project. They shared perspectives that challenged, shaped, and improved the GC Talent Cloud initiative so it could continuously strive to deliver the best possible results for Canadians.

HR Superusers Working Group

As part of their Memorandum of Understanding with Talent Cloud, each partner department appointed one (or more) HR advisors to be part of a working group. Superusers received training on the Talent Cloud platforms operations and experimental objectives, and were asked to observe and report back on how features and tools were functioning in real staffing processes.

As on-the-ground experts, the HR superuser group was an invaluable source of information for the Talent Cloud project. Meetings were generally opened with the question, "Based on the Talent Cloud features your department has tested since the last meeting, what's not working for you? What needs improving?" HR advisors would then share stories and offer insights on ways to fix what wasn't working and add what was missing. These findings were then summarized and shared at each following Director General-level Advisory Committee meeting, helping to inform discussions.

HR superusers also acted as user testers in the design of features for the HR Advisor Portal, and provided policy expertise on rules, policies and best practices for the project as a whole. They were an amazing source of guidance, insight and support.

Policy Guidance and Oversight

Over the years, the Talent Cloud team has benefited from the policy guidance and expertise of many mandate holders and authorities in government. Without collaboration, we couldn't have moved the project forward.

The Public Service Commission has provided reviews of our work to ensure policy compliance and has collaborated with Talent Cloud to test an alternative approach to the Priority Screening Process. We would also like to recognize the policy and oversight roles of the Office of the Privacy Commissioner of Canada and the Office of the Chief Human Resources Officer.

Treasury Board Secretariat's own Human Resources Division, Social Media and Ministerial Affairs, and Information Technology Division were instrumental in moving the project forward. The team would never have been formed, launched a government IT platform or found a way to share our stories if it wasn't for their tremendous and ongoing support.

The Support of Deloitte
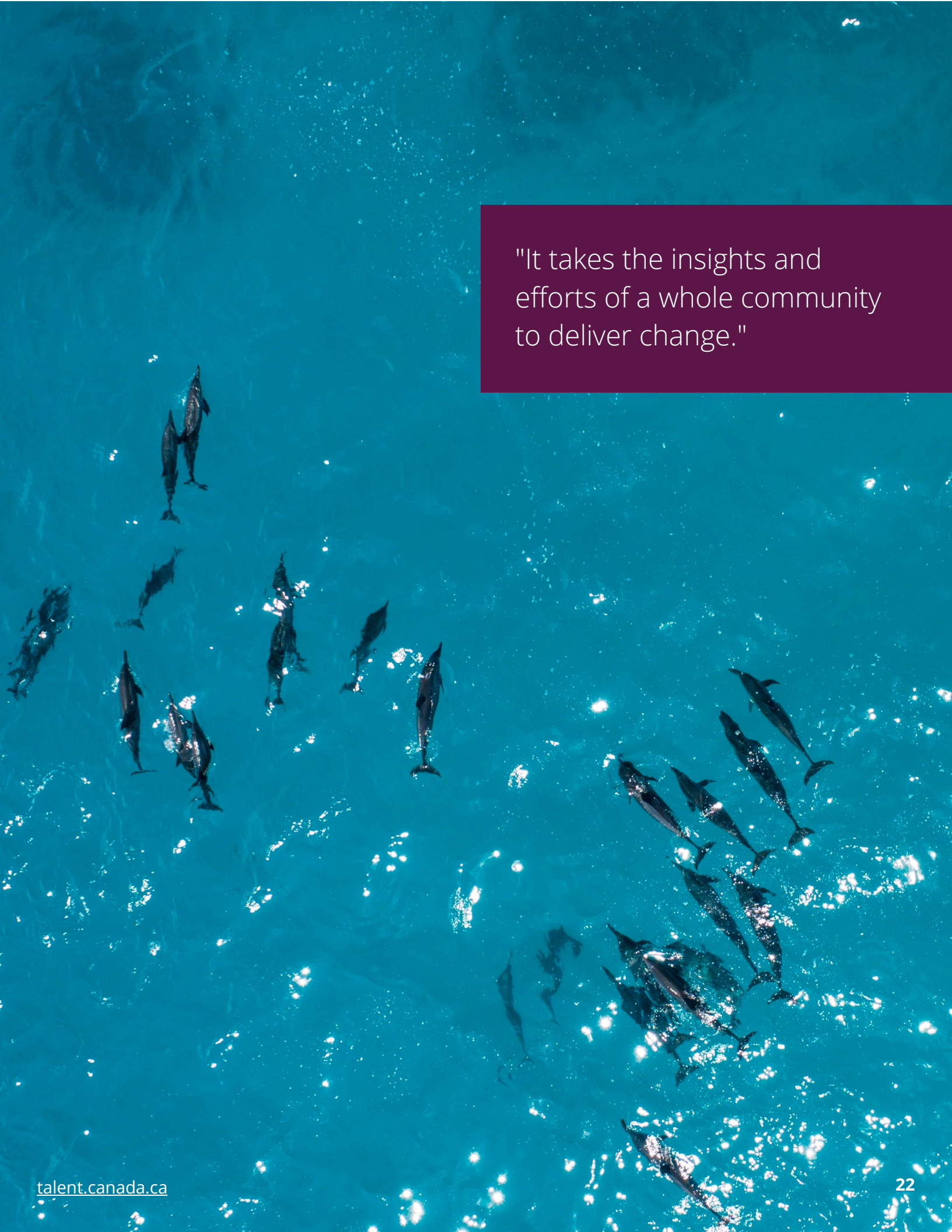
Many of the ideas on digital age talent repositories for government were first proposed by a breakthrough theory paper by Deloitte, entitled GovCloud. Talent Cloud and Deloitte shared many discussions on this topic, as well as broader conversations on the future of work. Deloitte's thought leadership in this area was inspiring.

When Talent Cloud first began, resources were very short, and the team didn't have enough to fund a full coding team in the first year. Deloitte, eager to see someone move to test the GovCloud concept in practice, donated the time of some of its coders and an expert in Agile methodologies to help the team move forward towards proof-of-concept in its early days. The collaboration was all open source - both teams contributed to a common project on GitHub. It did not involve any financial relationship (explicit or implied), and all the code developed from this collaboration was available to the public. To ensure transparency, Talent Cloud and Deloitte also published a Statement of Collaboration on GCcollab.

While little of that early code remains in the platform today, two significant contributions from Deloitte have lingered. Firstly, the organization believed in the project at a time when few did, and their thought leadership and enthusiasm continue to inspire us. Secondly, the knowledge Deloitte shared on how to set up to run an agile product team in government is used daily by our team. We're not sure we would've cleared all the hurdles we needed to in those early days without this show of support.

External Collaboration and International Interest

Talent Cloud has benefited enormously from ideas sharing with private, not-for-profit, academic and government organizations both here in Canada and internationally. While these knowledge collaborators are too numerous to mention here, it's important to acknowledge that a project like Talent Cloud can't be built in a vacuum (unless it plans to spend the rest of its life operating in the vacuum.) The future of work is actively being shaped by thought leaders around the world, and we're grateful for the insights and research shared.

"It takes the insights and efforts of a whole community to deliver change."

The Digital Standards in Practice

The Digital Standards were officially released by the Office of the Chief Information Officer in 2018. But for those working on government innovation and digital initiatives, they'd long been considered best practices for achieving meaningful results. To get different outcomes, you must adopt different business processes. To get citizen-centric, digital age results, that means embracing the Digital Standards in all aspects of the work.

For the Talent Cloud team, the Digital Standards act as a foundation. But unlike a physical foundation, our ability to work in line with the Digital Standards is dynamic. That means the foundation of our team can actually get stronger if we actively maintain what we're doing well and challenge ourselves in the areas where we can do better. Here's just a snapshot of how the Digital Standards have helped to shape the project and its outcomes.

Iterate and improve frequently

Our team uses the Agile method, working in two-week sprints. At the end of each sprint, the teams (back end, policy and design) show their progress and look for feedback. New input from live testing and any changes from emerging priorities are integrated into the forward plan the next day. This creates tight feedback loops that help us stay responsive to user input and maintain momentum as we develop and improve features.

Work in the open by default

Talent Cloud is an open-by-default project, with information posted publicly on our website and under the group "Talent Cloud" on GCcollab.ca. This includes wire frames, prototypes, user stories, and blog posts. The team's code and workflow are available on the open source site GitHub.

Use open standards and solutions

Talent Cloud is an open source project and is a pioneer at TBS for using an Open Source software stack (e.g., PHP, Apache, Linux, React, Postgres, Docker, Storybook, Redux, SASS, Formik, Snyk) for hosting sites in a protected environment.

Talent Cloud follows a "Mobile First" approach to design and development to ensure it can be easily used across various platforms. It uses common web standards to enable the greatest interoperability.

Address security and privacy risks

Talent Cloud was one of the first protected applications in the Government of Canada to move into the cloud. To do this we had to pioneer a new approach to privacy that allowed for iterative improvements to the platform.

We're always in the process of updating our Privacy Impact Assessment (the ultimate government privacy document for applications). As we scope new features that will require collection of new data or handling the same data differently, we are also updating our privacy documentation. Currently we're working on our third Privacy Impact Assessment, and we intend to keep it evergreen.

Be good data stewards

People are tired of always being asked for the same information. This consistent feedback from users drove our commitment to making reusable skills central to our platform. By breaking up job requirements into individual skills, we allow applicants to only describe those skills once and re-use the same descriptions for future job applications.

But that only scratches the surface of what candidates are asked for during the hiring process. To push this idea further, Talent Cloud is working to pilot the use of verifiable credentials. This work would generate trusted records that replace the need to repeatedly assess the same requirements.

Design ethical services

Designing an ethical staffing platform is the core philosophy of the team. We sum this up as 'making the good road the easy road' for our users, and taking the right path to get there as a team, no matter how long or difficult it is in the build phase. This means diving deep into the way policy, product and human nature intersect. It requires working through the complexities of bias reduction, behavioural psychology, and intended and unintended outcomes, and carefully monitoring the outcomes for users.

Empower staff to deliver better services

The team operates in a high trust environment that allows for open communications, where ideas are challenged in a productive way. Team members are accountable to each other for progress, which is reported openly through sprint cycle planning and results discussions.

Senior management is supportive of the principle of experimentation, which creates an ecosystem in which the team can pursue data-driven results and challenge the status quo.

Design with users

Talent Cloud designs for and with three main user groups: job applicants/employees, hiring managers, and HR Advisors. Our product development cycle includes workshops and early theory testing, followed by wire frame testing sessions with potential users. Once the product is live, we test again with real users, and observe findings over time (not just in the first release.)

Build in accessibility from the start

Talent Cloud has taken a number of steps to advance accessibility beyond meeting WCAG AA standards. One of the team's earliest hires to the development team was someone with accessibility expertise. This has ensured that accessibility considerations have been part of all of our proposed features at an early stage of design - not as a retrofit of a predetermined feature. We also work with Fable Tech Labs who help coordinate testing of our products and features real people who require assistive technologies to access the web as early as possible during development. While WCAG AA provides a baseline, audits from real users lets us deliver a quality above and beyond the minimum requirements, because we want to make sure everyone has a pleasant experience on our platform.

Collaborate widely

Talent Cloud is a partner funded experiment, which makes collaboration a core part of our governance and operating model. Over the course of the experiment, fifteen departments and agencies from across the GC, including those not under the *Public Sector Employment Act*, making the platform a truly horizontal initiative..

Beyond working with our partners and users, The team also collaborates widely on a national and international basis, sharing best practices and learning from experts around the world working in areas related to digital age service delivery, staffing modernization, the future of work, and citizen-inclusive design. The team engages with other governments at the working level, academia, not-for-profits, Indigenous communities and policy wonks keen to talk about reimagining government talent engines.

"Designing with users" is key to modern service delivery. But it's not only the engagement in design that matters. It's also essential that government teams push themselves to think critically about the diversity of their product's user base, and whether or not the users who come forward to help with product testing are reflective of that diversity. If not, the product may not perform as well as intended once it hits the real world... or worse, it may perform to the advantage of some user groups at the cost of others. "Designing with users" comes with responsibility. After all, we're talking about real humans.

Talent Cloud's user testers are drawn from a community that includes (among others) people from a multitude of life paths and regions, Indigenous users, and people with alternative accessibility considerations. Our team is also reflective of this diversity.

Canada is a community of communities. Responsible user-centered design must meaningfully embody that diversity all the way through product development - not as an afterthought or an add on. While this isn't always easy, it's an ethical imperative and the only way to get a truly high quality product.

Results and Delivery

Many staffing experiments in government begin with broad goals, like reducing time to staff or improving diversity, but few set concrete targets at the start of the project against which all interventions and features are measured. As a result, few of these experiments and initiatives deliver the results they hope to achieve.

Highlighting the value of targets and measurement is one of the many valuable things the Results and Delivery work championed by the Privy Council Office set out to address. We heard them. We've built Results and Delivery not only into how we measure our project's performance, but also into the design of the staffing process itself. (For more on this, take a look at the Impact-Driven Staffing design our team tested with managers.)

In the beginning, Talent Cloud set ambitious targets for reducing time to staff and improving diversity and culture fit. The first was measured in time, the second two were measured in qualitative analysis. The first was intended to deliver a new process; the second two were intended to deliver a new methodology that would generate a different outcome.

Once set, we concretely tied these performance objectives directly into the configuration and operations of the platform itself. They were not seen as a separate departmental responsibility. Instead, every form field, every operation on the platform was questioned, user tested and measured against its ability to advance these aims, while complying with all applicable government policies and requirements.

Dozens of experiments were run related to these performance objectives on all elements of a staffing process that could be influenced by Talent Cloud. This included components such as the design of posters, the HR-to-Manager communication relationship, applicant experience and online tools to help with key tasks. (Notably, this did not include elements residing exclusively with authorities outside the influence of both partner departments and Talent Cloud, such as language testing and security screening.) These experiments never met the standard for a Randomized Control Trial - we never had the volume of applicants to do this. So all the results in this report should be read as signals rather than as solutions. Nevertheless, the findings are encouraging, and are consistent with private sector and academic research findings.

Everyone Wants it Different

When we started, it became rapidly apparent that no two HR shops in government did things exactly the same way. Some left managers largely to their own devices, while some ran a full service staffing model. Some pushed pools as the solution, while others expected managers to individually staff positions with very specific merit criteria. Some partners were under the *Public Service Employment Act (PSEA)*, while others had increased flexibility and different processes altogether in key areas. Some departments even had "universal criteria" for every job advertised in their department, regardless of classification, and we carefully built these requirements into the default settings for specific departmental users to keep the process smooth and service-oriented.

Because of this variety (which is never going to go away) Talent Cloud was designed as a process that works for a wide variety of HR cultures in small and large departments, inside and outside the PSEA. This was the bar that was

set for all features, and something we tested against rigorously. And not all tools are perfect in this regard - many are still in the process of getting upgraded to the model that came from live testing, where we did secondary testing on the things that worked for some but not for others. But in all cases, we found there was a way forward - it just took time, meticulous attention to departmental needs, and perseverance to get to a solution.

Ecosystem Approach

When departments take care of their own mandates, they provide service to citizens that is adequate. When departments collaborate, they provide service to citizens that is better than adequate. But when departments invest in the excellence of other departments, raising the quality of the ecosystem as a whole, that is when they provide service to Canadians that is truly exceptional. Because in doing so, each team, each department, works to achieve more than it could alone, and in turn is accelerated through the knowledge and growth of other teams and departments.

Service components connect as teams connect. When each department looks to the health and strength of the total ecosystem as its primary goal, it is the ecosystem that becomes high functioning and capable of greatness. And for citizens, nothing less than a high-functioning ecosystem in government will serve them well in the digital age.

So how does all this relate to Talent Cloud? Because the problems associated with staffing touch more teams across government than you can imagine. Talent Cloud was designed as an experiment to accelerate the talent engine of government, tackling problems at the heart of the ecosystem as interlocking parts of the whole. We looked at the totality of impacts, from the stress and time invested in crafting a poster through to how a hire was doing after a year on the job. We looked at manager procrastination behaviours and IT security

considerations in the configuration of designs. We thought about what would waste a single mom's time on a Friday night, and what keeps a Deputy Minister up on a Saturday night, thinking about unmet skills gaps in the organization. We thought long and deeply about who gets the job and why, and whether some of these reasons needed a rethink if departments are really committed to diversity and inclusion.

Talent Cloud's progress against reducing time to staff and improving diversity and culture fit in hiring is a direct result of viewing technology, people, operations and policy as part of a seamless ecosystem. All intended outcomes must be successfully navigated across all barriers and throughout all components. **It's the team's belief**, based on our research and external data from other models, both domestic and international, **that no meaningful progress can be made against these specific performance objectives if the staffing exercise is viewed as a relay race where the baton is passed from authority to authority, rather than as a ecosystem.** If individual actions and processes do not adhere to the concrete performance target that has been agreed to, the process as a whole will not achieve it.

Notably, this is not a question of changing any authorities as defined by policy and legislation - it's a design problem. **Government authorities must do more than meet the policy requirements of their mandate. Each must look to the downstream consequences of every choice**, every action, every form field added in an application or process step created. Each design component must interlock seamlessly to serve the intended outcome. It must be tested with real humans, and not be considered complete until the outcome of the testing meets requirements. **User testing without changing the product based on results isn't user testing; it's pre-training a small handful of people before the product is released.**
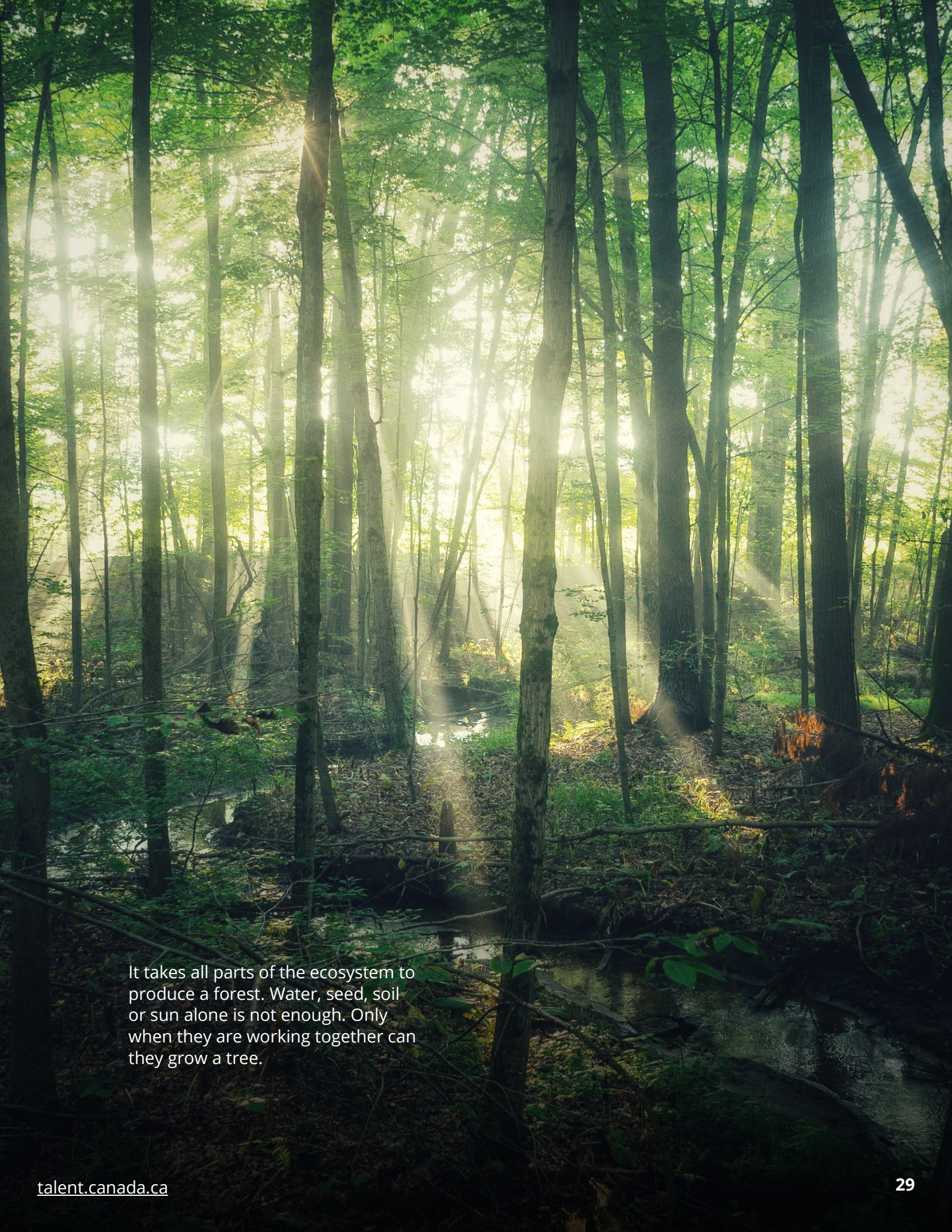
It takes all parts of the ecosystem to produce a forest. Water, seed, soil or sun alone is not enough. Only when they are working together can they grow a tree.

Empower Service Delivery · Collaboration · Work in the Open

The Talent Cloud Feature Pipeline: As a team, we used a five-step reinforcing feedback loop to develop and iterate on features for the platform:

Research findings and analysis

1. Policy Shop

Purpose/Role: Research complex problems and promising directions, develop theory, frame hypotheses for experiments, ensure policy compliance, analyze findings, provide presentations and advice on findings, see the whole system and wayfind the best path.

Classification: EC

Skills: Research and analysis, systems thinking, strategic thinking, writing, presentation skills .

2. UX Design

Purpose/Role: Translate business requirements into potential digital solutions for testing. Perform research, collect data, and use these insights to efficiently design the platform's layout , content and features in a way that meets the needs of government and applicant users alike. Advocate for our users, improve accessibility standards and reduce bias in hiring.

Classification: CS (UX)

Skills: Research Methods, Data Analysis, Prototyping, Usability Testing, Design Tools, Communication.

3. Front-End Development

Purpose/Role: Bridge design and development by highlighting possible interface improvements and/or pitfalls. Ensure designs are coded into responsive, accessible, and consistent interfaces. Verify that interfaces function on supported browsers and devices. Develop and maintain the product's component library for fast and easy interface development.

Classification: CS (Programming)

Skills: Web Languages (HTML, CSS, JavaScript), Critical Thinking, Responsive Design, Accessible Web Programming, Communication.

4. Back-End Development

Purpose/Role: Work with designers and front development to turn prototypes and interface components into working solutions. Support forward planning by providing technical advice and time estimates for the development of new features. Ensure the talent.canada.ca site is up and running as designed.

Classification: CS (Programming)

Skills: PHP, Cyber Security, Azure, Git, Critical Thinking, Automated Testing.

5. HR Concierge/Project Coordination

Purpose/Role: Work with partner departments to move hiring processes through the experimental platform, engage with users (HR advisors, managers and applicants), observe and analyze interactions, recognize patterns in findings, recommend options and areas in need of further investigation to policy and UX.

Classification: AS, EC

Skills: Project coordination, client services, observation and analysis, industrial psychology, behavioural psychology, framework and tools development.

Why a Multidisciplinary Team is Mission Critical

To build a modern digital product, you need support from people with many different skill sets, which in government are classified as belonging to different occupational groups. At the same time, you don't have the time to find external people and onboard them to the specific context of your product. Too much depends on the details of what you are building for external experts, who are not intimately familiar with the product, to be able to contribute significantly. (Not to be confused with engaging users, which is a constant outreach and engagement effort.) This means that to build a high quality, timely product, that expertise needs to be on your team.

In practice, our team is constantly bouncing ideas and work around between policy, project operation, design, development and client services. Designers regularly check-in with the policy team to ensure what they are proposing will work from a policy perspective. Project operations need to regularly check in with the developers to get details on new features being released. Our product development cycle is a constant loop that travels through multiple occupational groups. This is a daily collaboration, requiring dedicated resources from different occupational groups working together in a continuous feedback cycle of creation and iteration.

This multidisciplinary collaboration between team members is at the heart of what we do and we are constantly benefiting from it. To keep things moving at a pace that is fast enough for a product to maintain its relevance in a rapidly changing world, we think this is the only way to work (at least for these types of service-based products involving design, development and user testing.) In essence, the team's structure allows for both the product owner (decisions on what needs building) and the product team (doing the actual building) to operate on the same team, improving flow for fast, insightful product iteration.

Although the Government of Canada has issued a bulletin to the heads of HR confirming that there is no policy barrier to multidisciplinary teams, in practice it remains difficult to put these types of teams together, especially for smaller units. This is particularly true in cases where a highly efficient team model would call for cross-classification supervision. In a tradition government hierarchical structure, this would rarely be needed. But this structure is commonplace in multifunctional agile teams in the private sector because of the nature of the work, which requires designers, developers, anthropologists, and client services working together to deliver a product. When governments want to build like this, using agile methods, it means that teams like this will be increasingly required. With some careful classification work and the flexible use of temporary "term" arrangements, Talent Cloud was able to set this up, but it's not guaranteed that other teams will be able to do the same.

What We Mean by "Agile"

Saying that a team uses "agile" in government has become a bit controversial because there are so many different versions of what teams and leaders mean by the term. While its sudden popularity is evident (bordering on ubiquitous), few agree on a concrete definition or a minimum bar for being able to legitimately claim use of the practice. Nevertheless, we're sharing some of the "agile" concepts we use in our 2-week sprint cycle.

(For a real view of this, check out our code and content on GitHub.)

Story Points

As is common in agile builds, we use story points to talk about how difficult or complex something is for the development team. Before

we decide to work on a specific task, the developers estimate how many story points it will take to complete; it doesn't really matter if a story point usually takes an hour of a developer's time to complete, or a full day. What's important is that the story point becomes a useful way to communicate to the rest of the team how complex (and potentially time consuming) something will be to implement.

For example, we looked at a feature that interrupts someone who is completing a job application if the deadline for submitting it has passed. Without that interruption, you might waste some time completing an application, but when you hit the submit button, you would get an error message indicating the submission deadline was passed. It's a desirable feature, though only a tiny fraction of users would ever benefit from it. The devs estimated this as 8 story points. In a good sprint, we can only complete about three tasks of that complexity. And given that so few users would benefit from this work, the team was able to make the call that it wasn't worth building. Instead the dev time was spent on building higher value features that would impact more users. But if the "cost" of this had been one or two story points, we might have chosen differently.

Daily Stand-up

For our distributed team, the daily stand-up has become central to how we work. Each day at 11:00 the development team and designers join a zoom call and briefly describe:

- What they worked on since yesterday (naming the issue or prototype they are working on is usually enough)
- What they will be working on today
- Any blockers they might have

We've managed to keep these stand-ups under 15 minutes in length, even with 9+ people. If discussions start breaking out, we can usually ask people to stay on the call after stand-up to

finish their chat and move on. Stand up is great for making sure everyone is working the right things. With the designers there as well, it helps increase interaction between them and the developers, which is something we have been trying to improve.

With many people working from home, stand-up can sometimes be the only direct interaction you have with other humans in the work day. The format of stand-up is straight forward, each person briefly says what they worked on since the last stand-up, what they plan to work on until the next one and what blockers (if any) are preventing them from making progress. This also helps increase human interactions more by allowing the team to point out when two people should discuss their work. There's always a balance to strike between keeping everyone involved and having enough focus time on our own.

Sprint Review

At the end of each 2-week sprint, the development team leads a demo session where they show what they've completed. Because we're not really building for a client though, we don't stress too much about what we're committing too at the beginning of a sprint. Instead, the developers work hard to advance things as much as possible. If something is not complete, it can be saved for the next sprint review. Except in special circumstances there's no rush with developers doing overtime to complete tasks.

To even things out a little, so it wasn't always the developers presenting their work, and so the developers were better kept in the loop for what the rest of the team was doing, we started doing a "policy team" sprint review on alternating weeks with the developer sprint review. (For reference, the "policy team" is the research, policy and client interaction side of Talent Cloud, which uses a Trello board to track work, and tends to have different timelines and pressures than the dev team.) We're still

iterating on the exact format of policy team sprint review, but the goal is to give everyone a sense of what tricky things the policy team has had to deal with recently and remind everyone of that we're building towards a longer term vision. Typically, we try to pick one or two artifacts that the team has completed, or made significant progress towards and have the person that worked on them present it to everyone else. Examples are design prototypes, presentations (decks), research, reports or some other tricky theory work like our tenth version of the skills framework at the heart of the recruitment model.

Running a Distributed Team

The Talent Cloud team has been a distributed team since 2017 with members in cities across Canada including Halifax, Toronto, Montreal and Edmonton. This also means that team members in the Ottawa main office have always been able to work from home at their discretion, including our Indigenous Community Liaison, who works half time from her community farther north.
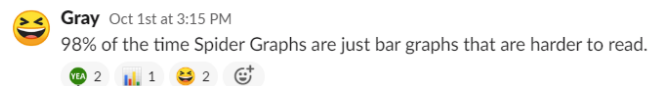
In March 2020, when offices shut down and governments around the world struggled to adapt to the new reality under COVID-19, this really just meant that our team took their computers home on a Friday and worked from home afterwards. Everyone was able to continue their work uninterrupted (with the possible exception of kids-not-at-school causing mayhem in the background).

It's interesting, but distributed teams actually get easier the fewer people who are together in one place. With only one or two people out of the office, it's easy to keep office-centric practices as the default while those in the regions just work around and fit in however they can (which is a habit our team spent a lot of time consciously trying to break out of.) But when half or more of the team are remote, you really just don't have a choice.

Digital tools become extra important when working on a distributed team. For our developers this has been GitHub to collaborate on code and plan development sprints. Our designers have been making use of Adobe Creative Cloud to build and share designs, while everyone has been collaborating on documents using Google Drive.

Most important though, is a good messaging app because it becomes the main method of communication and culture hub for the team as a whole. Sharing photos, links and random thoughts becomes the replacement to watercooler conversations. Emoji become the replacement to seeing smiles on your colleagues faces.

Several people reacted in **#general**

Gray Oct 1st at 3:15 PM
98% of the time Spider Graphs are just bar graphs that are harder to read.

Messaging platforms also allow for improved productivity as team members can "leave" to do focused work and then return to the conversation where the whole history of it is preserved so they can jump right back in. It also helps keep track of what decisions were made and why, especially for key design components where multiple options were considered, particularly when messaging apps are paired with tools like Trello to track taskings and progress.

rosita 12:37 PM
hi **@channel** - we are planning a team holiday party on Wed, Dec 19, that'll involve lunch + onesies + movie - more details to come but i'll send you all a calendar invite
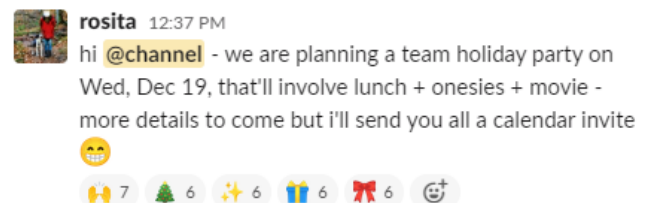
Our Research Engine

This section describes our most commonly used methods of collecting data, the types of data that we collected, how we used it, and some important constraints to consider, particularly when interpreting our research questions. It also looks at how we arrive at our research questions to begin with, and what we do with our research findings.
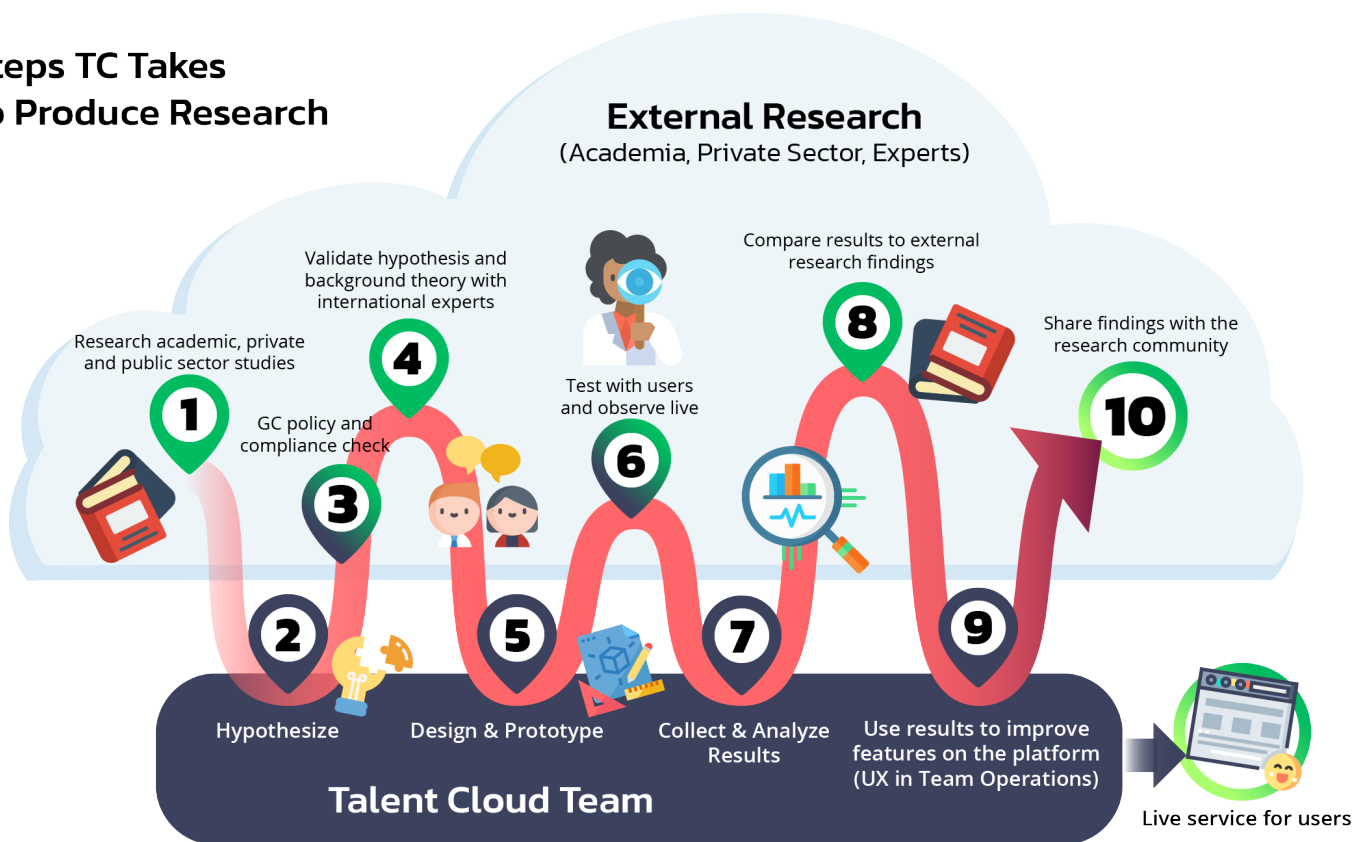
You hear a lot about breaking down silos in the public sector. Often in government, research is done by a separate team than those leading on experimentation, which are both separate from the development cycle of actual product delivery.

While breaking down silos between these areas if work is important, at Talent Cloud we went in a different direction, by putting each of the components of our development cycle in one place (see our Team Operations section). This helps us to work efficiently, keeps us on the same path, and promotes accountability across the whole product team.

So how does the research cycle map into the team's development cycle? Here's how our research cycle works, beginning with looking up what's out there beyond government and ending with contributing findings back to the broader community.

Steps TC Takes to Produce Research

External Research
(Academia, Private Sector, Experts)

Research academic, private and public sector studies — **1**

Validate hypothesis and background theory with international experts — **4**

GC policy and compliance check — **3**

Test with users and observe live — **6**

Compare results to external research findings — **8**

Share findings with the research community — **10**

2 Hypothesize

5 Design & Prototype

7 Collect & Analyze Results

9 Use results to improve features on the platform (UX in Team Operations)

Talent Cloud Team

Live service for users

Research Methodologies

The platform and features that make up Talent Cloud can be broken down into a series of experiments. Each of those experiments began with external research. Sometimes there were widely adopted practices or standards that we could use, but sometimes the answers weren't so easy to find.

With our initial desk research in hand, we moved on to running pilot projects with real people and job processes to test our hypotheses, all while running compliance checks against government policies. While we haven't had the sample size to run randomized controlled trials, there are many, albeit less powerful, research methods available for this type of work. We also didn't lean on a single approach, but instead adapted to identify the best tool for the job. Our methodologies draw from behavioural psychology, lean process re-engineering, human-centered design, and old school qualitative and quantitative research methods.

Once we had our pilot results, we went back to external data to validate our findings. Comparing or benchmarking results is always important, but it's especially so when you're dealing with very small sample sizes, as we were with jobs posted to the site. It also helped us better understand the machinery and behaviours that shape staffing and talent recruitment.

Qualitative Data

Over the course of the project, we collected a huge amount of qualitative data. We conducted workshops with every user group before we started to design anything. Once we started to design, we tested wireframe prototypes early and often, observing whether people were using features the way we thought they would, and then talking to them about what they liked or didn't. We also took them to presentations with us, when we were talking to our partner departments, or to the general public, and asked people to tell us what they thought.

We also didn't stop collecting qualitative data on features once they were launched. Our Project Coordinator observed how the platform was being used, and flagged lots of issues that we were able to fix quickly, because we were watching. They also regularly compiled emails from users where patterns were identified and sent them to our user experience designers.

We also tried really hard to talk to everyone who used the platform, to get their thoughts. A lot of these were semi-structured interviews. Fairly early on, we developed an interview guide to help to focus the conversation of some of our key questions, but we left lots of room to digress and follow our participants' train of thought.

We also sent out surveys both to managers that posted jobs on the site, and the applicants to those jobs. While there were some quantitative questions on these forms, we got some of the richest information from the open text boxes.

Quantitative Data

GC HR authorities collect a significant amount of data on the hiring process, which helps the GC understand trends and priorities. That said, when we looked at our two primary research goals (time to staff and diversity/culture fit) a lot of the questions that we had related to issues where data was either not collected or we weren't able to easily access findings (e.g. through the Open Government Portal).

Data about real staffing processes that were run on Talent Cloud was an important line of evidence that we used to test our research questions. To do that we collected data on staffing that wasn't readily available at this level of detail anywhere else in the GC. We kept track of how long every single step of the hiring process took, as well as the number of

applicants that passed each phase of the assessment process. For example, we looked meticulously at things like how many times a job advertisement draft is passed back and forth between HR advisors and managers, how many applicants applied on the last day of a job advertisement, and how machinery steps like translation and data entry impact the order and timing of approvals.

Detail In, Detail Out

All of this data was logged manually in a seperate database by the system administrator. (Image 1) (Our plan had been that once the platform covered the staffing process end-to-end, this process would be automated using log files.) Having access to this detailed information helped us identify where processes bog down, and what required process improvements versus behavioural interventions.

Weak Signals

Because of sample size constraints (53 jobs were posted since the platform went live, across many departments, classifications, and levels) conducting statistical analysis of the data is not yet possible. So, when we talk about our results on job processes, keep in mind that we're talking about weak signals. We try to mitigate this by looking at multiple lines of evidence, and benchmarking our data whenever possible.

However, on the applicant side, we passed the 1,000 applicant mark, which is beginning to approach the volume that we need for statistically significant results. Here, too, our ability to test some of our research questions has been limited by the information we can collect. Without a Protected B server, we aren't able to do things like collect Employment Equity data on the site, pushing our research on diversity into the qualitative data realm.

> We don't want to oversell our findings. We're a small scale experiment and we don't have a statistically sound sample size for running randomized control trials. While we're cross-referencing external research with our quantitative and qualitative findings, our research results should be considered weak signals, not definitive solutions.

Dept		Poster Live			Screening Plan Development				Assessment Tool Development				Assessment						
		Priority + Post	# of Days	Poster Close	Manager	# of Days	HR	# of Days	Manager	# of Days	HR	# of Days	Application screening	# of Days	Exam	# of Days	Interview	# of Days	Micro-reference
Dept	CS-01	Oct 16	6	Oct 22									Nov 8	13	Dec 6	11	Dec 18	1	
Dept	CS-02	Oct 16	9	Oct 25									Nov 8	13			Dec 11	3	
Dept	CS-02	Oct 25	14	Nov 8	Dec 5	2			Jan 8	28	Feb 5	758	Dec 7	27			Feb 20	51	
Dept	AS-04	Nov 14	15	Nov 29	Dec 11	37			Jan 29	3	Feb 1	38	Feb 14	20			Apr 16	0	
Dept	EC-05	Nov 16	15	Dec 1					Jan 28	3			Jan 11	4	Feb 5	22	Feb 27	12	Mar 4
Dept	CS-04	Nov 21	14	Dec 5					Feb 7	22			Dec 18	36			Mar 21	35	Mar 4
Dept	CS-02	Dec 5	8	Dec 13	Jan 23	34			Feb 21	27			Jan 11	39	Apr 18	43	May 31	26	
Dept	AS-07	Feb 6	22	Feb 28	Mar 8	26			Apr 10	5			Mar 5	18			Apr 16	10	
Dept	CS-03	Feb 19	15	Mar 6					Apr 3	26	Apr 29	1	Apr 1	2			May 2	12	
Dept	IS-04	Feb 25	17	Mar 14	Mar 7	12			Apr 10	16	Apr 10	16	Mar 18	23	Apr 26	27	May 23	21	
Dept	AS-05	Mar 4	8	Mar 12			Mar 13	8					Mar 13	12	Apr 1	14	Apr 12	18	
Dept	AS-06	Jun 5	15	Jun 20	May 17	19	May 17	0	May 17	19			Jun 21	20	Jul 15	10	Jul 18	7	
Dept	CS-01	Aug 14	14	Aug 28									Aug 29	5	Sept 4	47	Oct 24	27	

Image 1: Pilot data tracking sheet used to collect data throughout each job process. (Full tracking sheet includes 135 columns of data and calculations.)

The Value of Hunches

You can't create evidence-based policy without a foundation of evidence. That was the goal of Talent Cloud.

When we present our results, we usually see a room of people nodding along. Whether they're managers or HR Advisors, we find we're confirming a lot of the things they've known for years but didn't necessarily have numbers or stories to back it up. Often we hear the comment, "We knew that already. So what's the next step?"

While nodding from a crowd isn't a valid quantitative data point for confirming results, we follow up with interviews, group discussions and live testing of new features, which helps us validate the hard-to-validate hunches - long recognized but statistically unproven - at play in the GC staffing space.

After all, often "hunches" are just multi-year pattern recognition coming forward from experts on the ground, like HR advisors and seasoned managers. And we take time to listen to these hunches and explore the behavioural psychology and systems design behind the issue, hopefully leading towards potential solutions.

The COVID Chilling Effect on Research

Like the rest of the world, COVID had a significant impact on Talent Cloud operations. When employees were sent home to telework indefinitely in mid-March, staffing all but ground to a halt. We had 10 job advertisements from April through June in 2019, but we didn't post a single job during the equivalent time period in 2020. We also saw the job processes that were in the assessment phase slowed significantly, and we saw a greater proportion of jobs cancelled due to financial constraints by the department. (One side note to this: the few new jobs that did launch during the summer 2020 period were able to take advantage of platform upgrades, and as a result, we saw time to staff continue to come down significantly with these processes.)

2020 was the year we planned to significantly scale up, and get the sample sizes that we needed to put some statistical power behind our results. Instead, we wound up pivoting quickly to try to help facilitate internal talent mobility across the GC as government organized to support people, businesses, and shifting internal needs (Read more about GC Talent Reserve in Section 5 of this report).

A Platform Based on Portals

Applicant Portal

Who: General public and Government of Canada employees seeking job opportunities

What can they do: View jobs, apply to jobs and manage profile

Features: User centric job advertisements, real-time display for number of applicants, skills based merit criteria, honesty pledge, reusable skills and experience, step-by step guidance for job application

Launched
October 2018

Manager Portal

Who: Managers in partner departments

What: Create job advertisements, manage profile, create assessment plans, view applications, track applicants

Features: Job advertisement builder tool, skills taxonomy, work environment description tool, pre-sorted applicant list, job applications available as soon as they are received

Launched
January 2019

Indigenous Talent Portal

Who: Indigenous applicants

What can they do: View jobs designated for Indigenous talent, Apply to Jobs, Manage Profile (including Indigenous identity information), Connect to the Indigenous Community within the Government of Canada

Features: Job advertisements tailored to the Indigenous Community, Community affiliation self-declaration tool, Additional guidance for managers

Not Yet Released

Talent Cloud Platform

HR Portal

Who: HR advisors in partner departments

What can they do: Claim job processes, review job advertisements and assessment plans, track applicants

Features: Departmental view of job processes, approval system for job posters, access process and priority clearance numbers, commenting system for communication with managers

Launched
January 2020)

Admin Portal

Who: Talent Cloud team

What can they do: Publish approved job posters, manage skills taxonomy, approve new managers and HR advisors

Features: Resources page to share info with managers and HR

Launched March 2019

Yes, Talent Cloud is Policy Compliant

Once in a while we come across rumours about Talent Cloud, like if you hired on our platform you could do whatever you wanted... or because Talent Cloud was an experiment, we didn't follow the rules that other teams in government had to follow.

Being an experimental project didn't mean we ignored the rules. On the contrary, it meant that to be seen as legitimate, we had to be meticulous in our level of compliance, even when testing new ideas. We engaged with policy experts on all aspects of the theory and design, and paid close attention to ensure that the Talent Cloud process and platform were policy-compliant. We went through the work to ensure that the platform was approved by all the necessary authorities.

All platform content is bilingual and accessible

All site content, from jobs to features, was translated professionally and reviewed by a professional translator. Accessibility was embedded in the development pipeline to ensure everything on the platform was built to be accessible. (You can learn more by reading Accessible by Choice and by Design in Section 3 of this report.)

All jobs were classified and approved by HR advisors

Before a job advertisement went live on the Talent Cloud platform, we confirmed with the HR advisor that the correctly classified position had been created. Talent Cloud also required final approval of the job advertisement by both the departmental HR advisor and the manager before it went live for applications.

All essential education requirements were policy compliant

Talent Cloud sought the review and approval of the platform's alternative text for essential education from the appropriate HR authorities. They confirmed that while the language used to explain the essential education could be made more user friendly, the education standard for each classification must remain unchanged, as it is a policy requirement and one of the factors that determines which classification is used for each position.

All jobs were posted to GC Jobs

As all postings on Talent Cloud were external advertised positions, the opportunities were also posted on jobs.gc.ca as alternative recruitment advertisements.

All jobs obtained priority clearance numbers

We tested an alternative approach to priority screening with the support of the Public Service Commission. (Details about this approach can be found in Integrated Priority Screening in Section 4 of this report.)

Approved Privacy Impact Assessment

Before the platform was launched, a full Privacy Impact Assessment was completed, approved, and submitted to the Office of the Privacy Commissioner of Canada (OPC). We then continued to liaise with the OPC to proactively address any privacy considerations as the platform evolved, including submitting updated iterations of our Privacy Impact Assessment with each major platform transformation.

Approved IT security protocols

Throughout the development of the platform, we worked closely with the IT security and the cybersecurity teams at Treasury Board Secretariat to ensure appropriate protocols were put in place to safeguard the platform's security.

Approved authority to operate

Talent Cloud took all the required steps to obtain an Authority to Operate before launching the platform, including receiving approval for the pilot from the Government of Canada's Enterprise Architecture Review Board. When the Privacy Impact Assessment was updated, the Authority to Operate was renewed.

TBS-approved online content

Content on the platform was approved through the appropriate channels at Treasury Board Secretariat before being published online. While the Talent Cloud platform's look and feel didn't receive formal approval, it was part of an experiment to test more inclusive colours, fonts and features. Talent Cloud has shared its design system with authorities at the Treasury Board Secretariat as part of a larger, multi-department discussion on design systems for communications.

PCO-approved social media

Despite having a black unicorn as the avatar, the Talent Cloud twitter account (@GC_Talent) was approved by all the required authorities as an official Government of Canada account. We also worked with the communication experts at Treasury Board Secretariat to ensure the content was policy compliant.
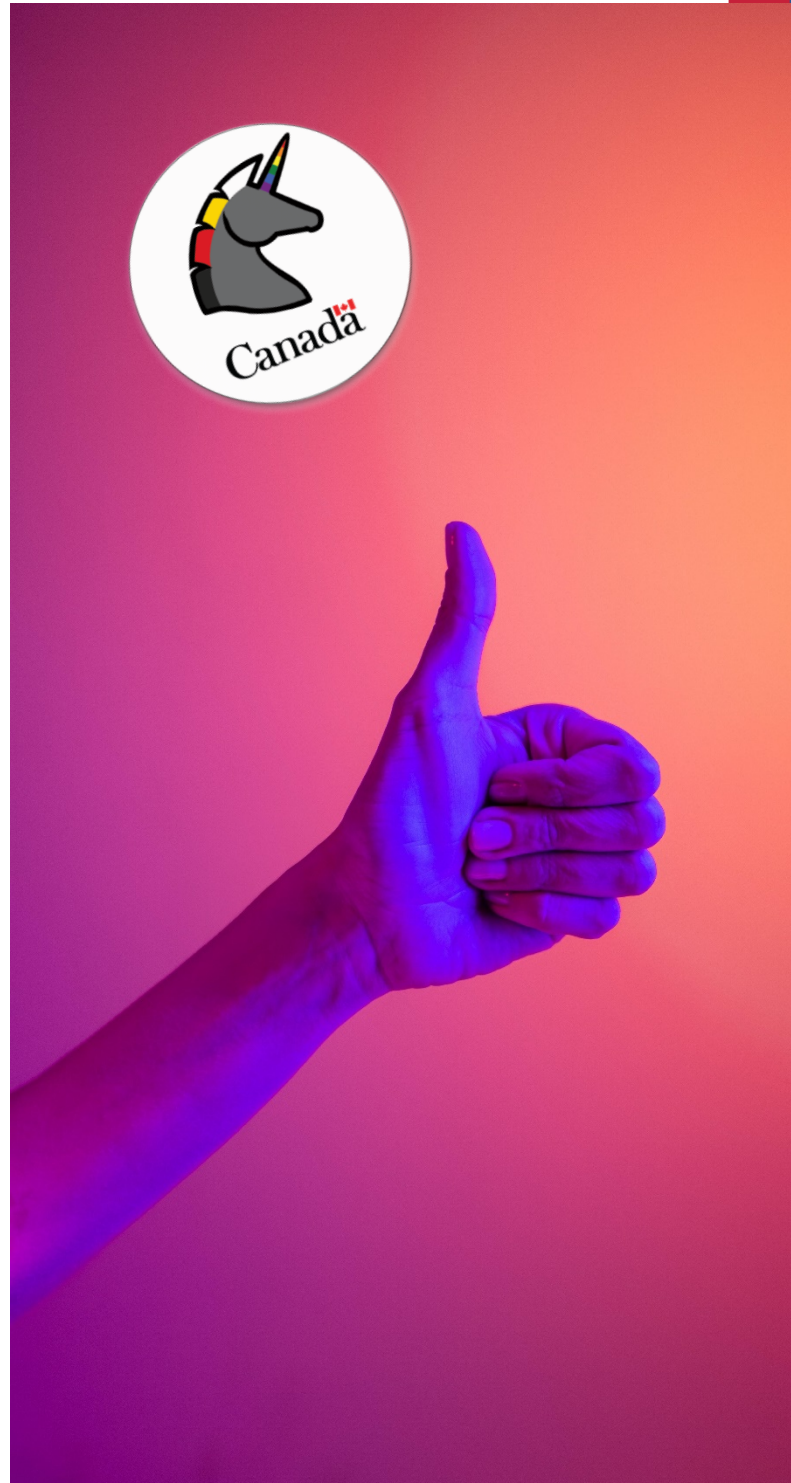
Typical GC Staffing Process

This section looks at how a typical GC staffing process maps against a typical staffing process using Talent Cloud. It's important to note that there are always variations in each GC staffing process, and the description below is not meant to convey, as an absolute, what always happens. That being said, the description of a typical GC staffing process is consistent with what we heard over and over again during user-testing with applicants, hiring managers and HR advisors. It is also consistent with departmental findings reported under Blueprint 2020, as well as the extensive mapping and research work of the Red Tape Reduction Team that explored the issue of time to staff from 2014-2016.

In a typical GC staffing process, we heard that managers usually started by using an existing Statement of Merit Criteria (SOMC) for the same classification and level, provided by their HR team as reference in drafting their own SOMC. Often, the same list of criteria were used in the new SOMC, as the previous SOMC, even in cases where the specifics of the job varied. Most of the criteria specified years of experience as a requirement. Other information about the job (e.g. team culture, key tasks, etc.) was usually minimal or non-existent.

During the application process, we found that applicants were often asked to provide detailed examples on how they meet each of the criteria. Applicants usually provided long responses and used keywords from the job advertisement to maximize the likelihood of being screened in. Many processes also required applicants to submit their resume.

We heard that it was quite usual for a staffing process to receive hundreds or even thousands of applications, which many HR advisors and managers described as overwhelming. Some departments used various methods, such as random selections, to reduce the volume before reviewing the applications. The applications were downloaded as a single PDF file by the HR advisor and shared with managers. (In processes where the number of applications was very large, several dozen applications would be included in each file, and managers would receive several files.) Managers needed to use their own method to keep track of the applicants.

Many departments required managers to develop an assessment plan and assessment materials before having access to the applications. During the assessment process, whether candidates received communications on their status depended on individual managers and HR advisors. Support for managers varied significantly across departments when it came to developing assessment materials, assessing applicants, and communicating results to applicants at different stages.

Once a candidate was selected, depending on the position, they might need to undergo official language evaluations. All selected candidates needed to obtain the appropriate security clearance. Second language evaluations could only be scheduled by HR advisors, whereas the security clearance process varied by departments.

To finalize the staffing process, the HR advisor gathered all the required documents from both the candidate and the manager to obtain internal approval. The list of required documents varied slightly across departments, so was the internal approval process. These documents were usually submitted in a package while the candidate was undergoing second

language evaluation and security clearance. The Letter of Offer was issued once internal approval was obtained, second language evaluation was completed, and security clearance was granted.

What is different about Talent Cloud?

Questioning and testing every element

All aspects of the Talent Cloud site are rigorously tested with users. Collectively, these independent elements impact time-to-staff and hiring results.

We placed a strong focus on elements facing external applicants. For many, this is their first introduction to GC hiring, and the look and feel of a site has a huge influence on whether or not top talent decides to apply. Many users infer

that the organization will be much like the platform itself, particularly when it comes to recruiting digital and tech talent.

We worked with users to question everything - and we do mean everything - that went onto the site. We looked at everything from colour scheme to reading level to gender review of

language to ease of use for those with alternative accessibility considerations. Indigenous communities and underrepresented groups were engaged in the design process, and provided amazing insights into elements of language, process and platform configuration that enabled or blocked them from feeling included and applying for jobs.

In addition to all that, we tested the simple courtesy requirements of hiring: do applicants feel the process is fair, understandable, inclusive, responsive, and timely?

Talent Cloud also significantly reimagined the process by which managers arrive at the Statement of Merit Criteria (SOMC), introducing impact-driven staffing design and a new bias-reduction methodology that emphasized skills over years of pre-determined experience. Both the theories and the implementations involved looking at every step throughout the job poster crafting process.

Changing what and how information is shared

When Talent Cloud went live in October 2018, it standardized the inclusion of the following components in a job advertisement: impact statements, key tasks, skill requirements, information on the team culture, manager profiles, and whether or not remote work, flex hours and telework were permitted in the role. These were novel additions at the time for a Government of Canada job advertisement. Talent Cloud also designed its platform to publicly show the number of applications received in real time on each job advertisement.

The platform includes tools for crafting a job poster that would be optimized to yield the best hiring result and an assessment planning tool (but not the assessments themselves). By linking the list of criteria to the assessment plan, managers and HR advisors can have informed discussions on how the choices made on the job advertisement could impact the time for

assessment. All tools were developed to deliver a focus on reducing time to staff, increasing diversity of applications, and honing in on the best candidate for the position, taking into account both hard skills and culture fit.

Paying attention to human behaviours

Many of our interventions seek to encourage desirable behaviours or remove pain points for our users. The application process is divided into different sections to make it easier for applicants, especially those who have never applied to government jobs, to navigate. There are behavioural-based instructions throughout the process to encourage applicants to carefully consider whether they are a good fit for the position, but also guidance on how to submit a good application. We have also specifically designed an integrity pledge to nudge applicants in submitting truthful information.

In designing, we paid close attention on how to make the staffing process easier for managers (while still meeting HR requirements), including examining the roles procrastination and communication played in determining the average time to staff. Interventions range from auto-completing some job poster fields based on the manager's selection, to presorting applications by priority, veteran, and citizenship status.

Similarly, when there are desirable behaviours from managers and HR advisors that could contribute to reducing time-to-staff or improving the quality of hire, we built in nudges throughout the process to encourage those behaviours. For instance, managers are nudged to support remote work and flexible hours. They are also reminded of optimizing selection criteria for best results. In addition, Talent Cloud created separate HR and Manager portals with time tracking features, allowing all involved in a process to know exactly who had the next step in moving the process forward, and what any hold ups might be.

What is not different about Talent Cloud?

Out of all the parts of the hiring process, finalizing the hire is the area in which Talent Cloud has the least influence. Interventions here were minimal. Notably, this is also the element of the staffing process that Talent Cloud was almost entirely unable to influence in terms of reducing time to staff (see section on experiments related to Reducing Time to Staff.)

That being said, we tried to provide all relevant information to applicants so they can be prepared in advance. We also worked with managers and HR advisors to rethink how some of the steps (e.g. second language evaluation and other assessments) could occur in parallel. We've done extensive work on finalizing the HR record. Notably, we only release the related features in stages, with alpha and beta versions. Not all features (such as time tracking and the record of decision tools) have been fully released yet.

For security clearance, we worked with the security office to design and build an online reliability clearance form as a prototype.

Posting a Job

Step 01
Optimized Job Poster

PROCESS INTERVENTIONS

- ✓ Impact-driven design
- ✓ Skills-based requirements
- ✓ Education and equivalent experiences
- ✓ Optimizing selection criteria for best results
- ✓ Nudging managers to support remote work, flex hours
- ✓ Auto-complete fields with flexibility to edit

Step 02
Assessment Plan

PROCESS INTERVENTIONS

- ✓ Mapping selection criteria to assessment process
- ✓ Accelerating the manager-HR conversation
- ✓ Predicting the minimum timeline for hiring and reassessing
- ✓ Evergreen skills database with option to add specifications related to the position

Step 03
Approvals and Posting

PROCESS INTERVENTIONS

- ✓ All approvals in place
- ✓ Link posted to GC Jobs
- ✓ Priority clearance and policy compliance
- ✓ Tracking of job poster status and responsible party
- ✓ Interaction through manager and HR platforms to reduce email traffic
- ✓ Ongoing monitoring of application rate

Applying to a Job

Step 04
Browse Jobs

- ✓ Advertisements display information on impact, key tasks, team culture, operating context, and leadership style

- ✓ Targeted outreach to applicants

- ✓ Number of applicants and countdown to closing date clearly displayed

- ✓ Clarity on whether remote work, telework, and flex hours are allowed

Step 05
Craft an Application

PROCESS INTERVENTIONS

- ✓ Accessible by design, inclusive by design

- ✓ Behaviour-based instructions and navigation

- ✓ Evidence against skills requirements

- ✓ Testing the effectiveness of self-assessment

- ✓ Integrity pledge

Step 06
Profile & Skills

PROCESS INTERVENTIONS

- ✓ Reusable skills narratives and applications

- ✓ How profiles were (and weren't) used

- ✓ Profile fields

Assessing the Applicants

Step 07
Application Volume

PROCESS INTERVENTIONS

- ✓ Application language designed to alter application rates
- ✓ Reviewing applications in real time (as soon as they're submitted)
- ✓ Interventions to manage application volume

Step 08
Application Screening

PROCESS INTERVENTIONS

- ✓ Layout, text, and flow to reduce procrastination
- ✓ Integrated priority screening
- ✓ Applicant pre-sorting by priority, veteran, and citizenship status
- ✓ Automatic sorting as managers make screening decisions

Step 09
Assessments

PROCESS INTERVENTIONS

- ✓ Email templates
- ✓ Reminders on next steps
- ✓ Record of decision templates
- ✓ Excel exports for HR use

Finalizing the Hire
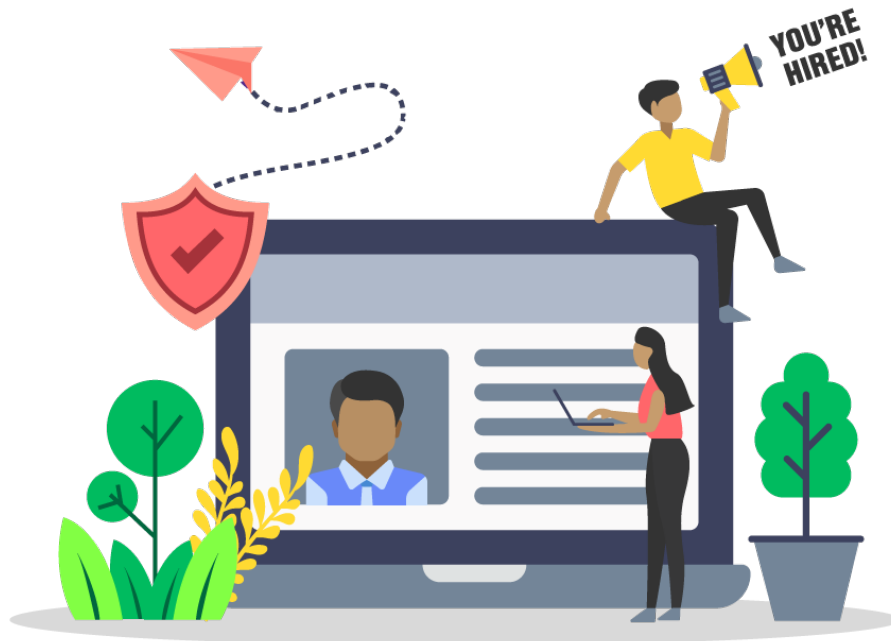
Step 10
Language Evaluation

PROCESS INTERVENTIONS

- ✓ Building in language that applicants understand
- ✓ Recommendations for early second language evaluation (SLE)

Step 11
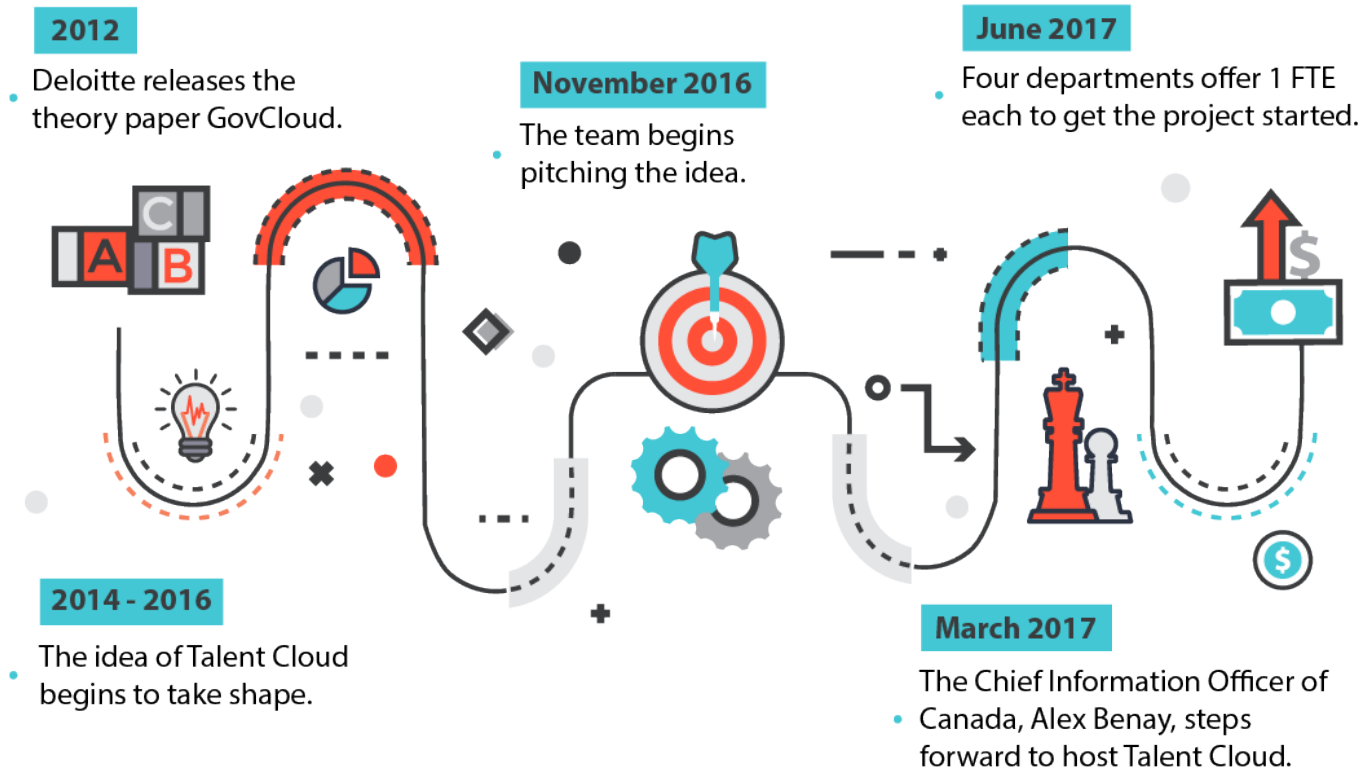### Security Clearance

PROCESS INTERVENTIONS

- ✓ "Out of Country" criminal record check
- ✓ Online security form for reliability clearance (testing-only)

Step 12
Final Staffing File

PROCESS INTERVENTIONS

- ✓ Priority clearance number in place
- ✓ Support in documentations
- ✓ Record of decision tool (designed, tested, but not released)
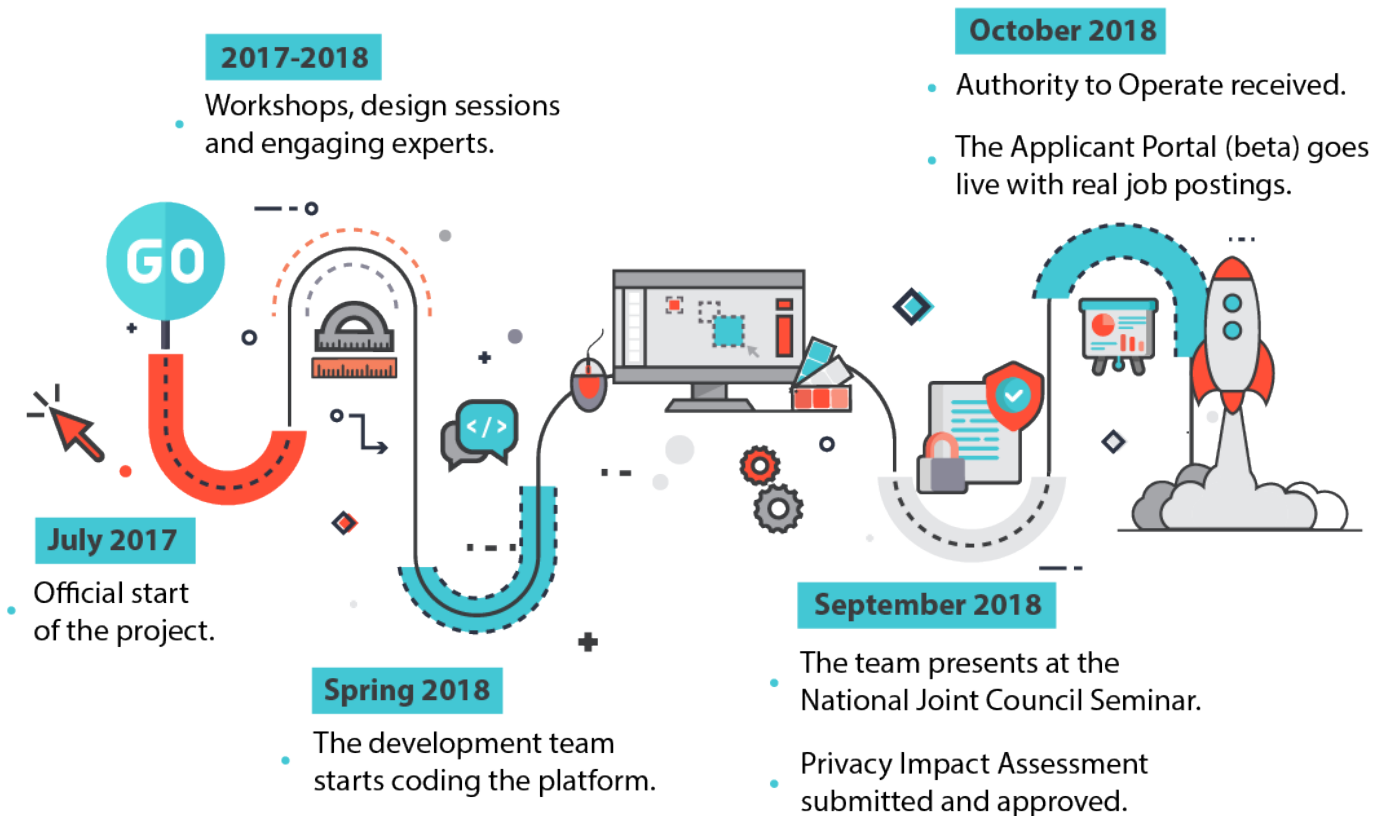
The Road to Talent Cloud

2012
Deloitte releases the theory paper GovCloud.

November 2016
The team begins pitching the idea.

June 2017
Four departments offer 1 FTE each to get the project started.

2014 - 2016
The idea of Talent Cloud begins to take shape.

March 2017
The Chief Information Officer of Canada, Alex Benay, steps forward to host Talent Cloud.

The initial team that started Talent Cloud previously worked together at the IN·spire Innovation Hub at Natural Resources Canada from 2014-2017, where we ran a number of experiments on talent mobility, including some of the earliest Government of Canada work on micro-missions and portable digital credentials (open badges).

The team also designed and launched the original Free Agents program, along with a fifth team member who became the first program manager. Free Agents grew into an initiative in its own right, but it was strategically designed as an early test of several of the concepts Talent Cloud was hoping to develop at a larger scale, including research on the psychological impact of project-based work on employees. As a commitment to do no harm, the Talent Cloud team wanted to make sure it wasn't about to build something that would save time and generate efficiencies at the cost of employee mental health. Before we could figure out if Talent Cloud *would* work, we first had to consider whether or not it *should* be built at all. When the results from Free Agents were positive, the team that became Talent Cloud got to work raising money and pitching the new project to senior leaders.

Once the idea of Talent Cloud began to take on concrete parameters and performance objectives, the team decided to try to raise the resources for something unusual: a multi-year grassroots start-up inside government, aiming to build something experimental at the leading edge of theory on the future of work.

From Start–up to Platform Launch

2017-2018
Workshops, design sessions and engaging experts.

October 2018
- Authority to Operate received.
- The Applicant Portal (beta) goes live with real job postings.

July 2017
Official start of the project.

Spring 2018
The development team starts coding the platform.

September 2018
- The team presents at the National Joint Council Seminar.
- Privacy Impact Assessment submitted and approved.

Talent Cloud initially launched as a project in July of 2017, but it took another 15 months before there was a minimal viable live platform. Initially, the team was only able to raise money for 4 FTEs - and only for terms. The team was so committed to the vision that all four initial members gave up their indeterminate status and moved into term positions in a new department. Then we began the process of researching what the platform should look like, and how to test points of intervention in service of the project's three performance objectives.

New fiscal year, 2018-19, brought more funding and the chance to a UX designer and our Indigenous Community Liaison. We also hired three developers - a front end developer, an accessibility expert, and a back end developer. The platform launched six months later, in October 2018. Needless to say with our scarce staff compliment, our minimal viable product was very minimal. But it was enough to run real processes and start testing numerous interventions on job advertisement design and volume of applications.

The Ups and Downs of Running an Experiment in Government

January 2019

- The first employee is hired using Talent Cloud.
- The Manager Portal goes live.

Summer 2019

- First full prototypes of the Indigenous Talent Portal are user tested.

January 2020
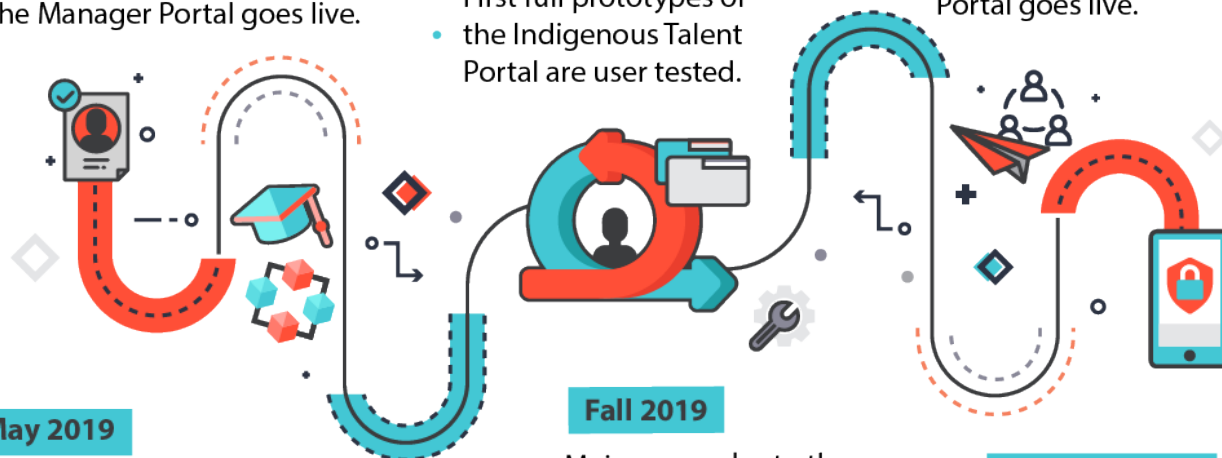
- The HR Advisor Portal goes live.

May 2019

- Blockcerts pilot launched, in collaboration with Free Agents.

Fall 2019

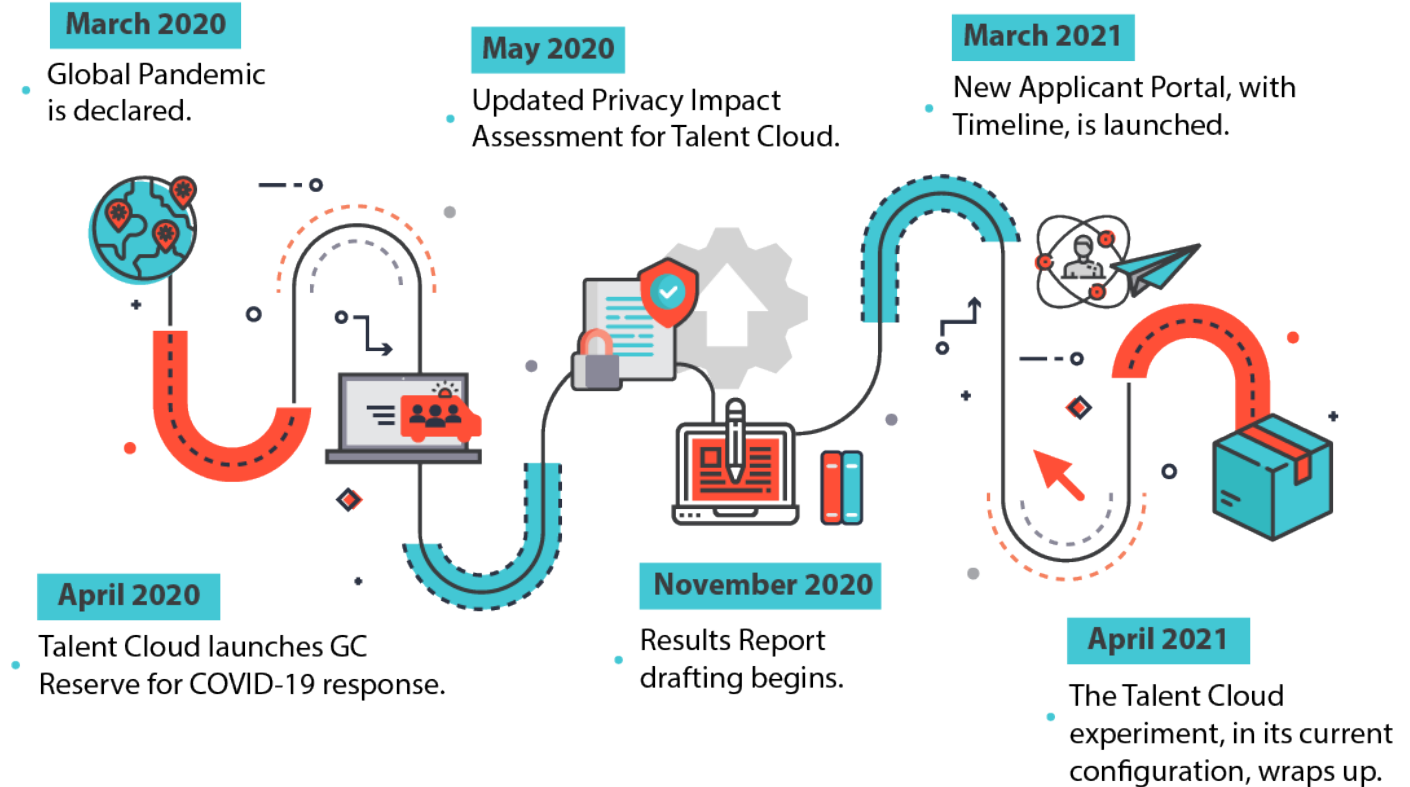- Major upgrades to the Manager Portal, including new tools.

February 2020

- Two-Factor Authentication is added to the site.

After the platform went live in October 2018, the Talent Cloud team had a period of growth. More people were hired, including a behavioural scientist, an industrial psychologist, and more developers. The initial four team members were converted from term employees back to indeterminate status. New partner departments joined the venture. Jobs were live on the platform, and the time to staff was slowly but steadily ticking down, as we tested and refined our interventions. Hiring managers were finding unique talent (when they stuck with the process as designed), and applicants were sending us emails about how great their experience was, even when they weren't the person who got the job.

But there were also challenges. Hiring managers and HR advisors weren't always used to working with minimal viable products and experiments. No matter how we tried to frame this, government users were often disappointed that the platform wasn't already fully developed. Partners wanted to fund the end product, not the development phase. We also wanted to accelerate the development timeline, but this is hard to do with only a handful of developers. Talent Cloud found it difficult to secure resources for an experimental project that cost more than a department could fund on its own, but less than a reasonable value for requesting a Memorandum to Cabinet. Basically, we needed medium size money from a stable source, and two years of experiment lead time, and that's not something the Government of Canada innovation ecosystem is set up to easily provide.

Disruption and Evolution: COVID–19 to Now

March 2020

Global Pandemic is declared.

May 2020

Updated Privacy Impact Assessment for Talent Cloud.

March 2021

New Applicant Portal, with Timeline, is launched.

April 2020

Talent Cloud launches GC Reserve for COVID-19 response.

November 2020

Results Report drafting begins.

April 2021

The Talent Cloud experiment, in its current configuration, wraps up.

Just as Talent Cloud was hitting its stride - with the new applicant timeline ready to launch, multiple hires emerging from single processes, and time to staff way down - COVID-19 hit. Almost as though someone had thrown a switch, Talent Cloud saw an almost total shutdown of recruitment for externally advertised term staffing on our platform. Experiments became a nice-to-have as the entire government shifted into response mode to meet critical needs. The significance of the historical moment wasn't lost on the Talent Cloud team. In mid-March 2020, the Government of Canada sent its National Capital Region workers home for an unprecedented period of extended mass telework. The same day, Talent Cloud launched into repurposing its site to deliver an internal mobility platform, which went live three weeks later. The project was called GC Reserve and lasted 4 months (see the write-up in Section 5).

Talent Cloud faced funding issues in 2020-21, and the team was forced to shrink. In November, the team began writing up this report and preparing to transition out. Then, just as the report was almost complete, a handful of departments came forward asking to post term jobs on the site. So Talent Cloud rapidly dusted off the development work that was set aside during the pandemic, and launched a brand new application process, with an improved design to promote diversity in hiring outcomes and create a better screening experience for managers and HR advisors. While we won't get much chance to gather a large sample size before our project funding runs out at the end of March 2021, we have four job advertisements running live on the platform using the new model. And we're happy to report that, thus far, it's doing what we'd hoped.

From Start-up to, well, some sort of Halfway Point

When planning the public release of Talent Cloud's Minimal Viable Product (MVP) in 2018, the GC had just put in place the first cloud procurement vehicles for unclassified sites/information. Unclassified sites include public websites with no login, or any other collection of information. As soon as you need to collect anything - even names and emails - you need to be in a protected environment. And as an experimental staffing platform, we needed to collect a lot more than names.

In 2018, the process was underway to replicate the unclassified cloud procurement vehicle but for protected sites/information (up to the classification of Protected-B). This is really what we needed, but without a clear timeline we were looking for other options. Luckily government projects were provided with a route to request permission for collecting some of the least sensitive Protected data (referred to as Protected-A) on the unclassified cloud environment in the interim.

We were able to get approval for our site to go live in October 2018 at this "Protected-A" level.

While the solution at the Protected A level allowed us to run our platform and run several experiments, there were a few significant components of the project that we were unable to launch without access to a Protected B server solution. Talent Cloud has been working with the appropriate authorities since 2018 to secure access to a Protected B cloud server environment at Treasury Board Secretariat that would support the team's open source code stack. This is now available, and Talent Cloud is in final stages of approvals and migration to this new Protected B cloud environment.

A Few Things Talent Cloud Planned, But Couldn't Do Without a Protected B Server Environment

1. **Collect employment equity (EE) information from users that volunteer it.** This would help us more objectively determine if our bias reduction interventions were having the intended impact.
   a. This impacted the direction of our Bias Reduction work, and limited our ability to collect quantitative data to complement our qualitative analysis.

2. **Capture assessment results** of individuals going through a hiring process and provide them with a record of assessments they had passed.
   a. This impacted our ability to launch and use verifiable portable credentials as part of a searchable, interoperable talent repository.

3. **Launch the Indigenous Talent Portal**, built for (and designed by) Indigenous employees, which requires self-identification under an EE category.
   a. This impacted our ability to post jobs tailored for Indigenous applicants on the portal, and work with the community to develop and test bias reduction approaches.

"The pace of evolution for government IT often dictates the level of innovation that's possible elsewhere in government."

SECTION 02

Optimizing the Talent-to-Team Match

Optimizing the Talent–to–Team Match

What's in this Research Section?

This section summarizes our research results from experiments connected to Talent Cloud's performance objective on improving fit-to-team. (Because of close connections between "team culture fit" and diversity and inclusion, this section should be read in conjunction with Research Section 3 on improving hiring experiences and outcomes for equity-seeking groups.)

Here, you'll find our research experiments, theory, and results on how to get to a high quality hire who works well with the team. This research views hiring as a continuum, where we look at influences and outcomes from the time of recruitment until 1-2 years after the initial hire is made.

To consider a hiring process successful, the employee has to do more than simply fit into a team. Success means that the team has found a strong, sustainable, high performing fit that merits the effort invested in the hiring process and, ultimately, the cost to Canadians.

The "fit-to-team" research shared here includes considerations such as rethinking the job advertisement as a recruitment tool, increasing the quality and number of top quality and qualified candidates per process, improving the culture fit as it pertains to onboarding speed (think of it as "pre-boarding"), and seeing how factors in recruitment impact the retention of talent on the team.

List of Experiments and Interventions

- Impact-Driven Staffing
- Five Factor Match
- Case Study: Manager and Applicant Survey Responses
- Enabling Remote Work
- Why Flexibility and Authenticity Matter
- Testing Self-Assessment of Skills by Level

Key Concept: Culture Fit Matters Because Humans are Human

One of the most significant differences between Talent Cloud and the standard GC hiring practices is the extent to which Talent Cloud focuses on the individual human to team fit. That requires that we consider a lot more than just how well a person's experience matches a list of experience requirements (which is the standard 2 factor match: applicant to job.) **To produce stronger hiring outcomes, we need to take into account how humans are human, even at work, and adjust our staffing practices accordingly.**

Talent Cloud takes the approach that because you're placing a person (an individual with a personality, perspectives and work styles) onto a team (many people with different personalities, perspectives and work styles) the extent to which they can successfully work together will be as important, if not more important, than the extent to which the person coming in can do the job itself. As a result, Talent Cloud operates on a 5 factor match: applicant, job, team culture, operating context and manager leadership style.

Key Concept: Never Waste a Single Mom's Time on a Friday Night

Job applications take time and energy, and for some people, that time and energy is in short supply. We want to be respectful of this reality for our applicants by making sure they have all the information they need when deciding if applying to a job on our platform is a good use of scarce personal resources. (Internally, the team refers to this as the "Friday night test" for feature development.)

Talent Cloud endeavours to provide maximum transparency to applicants, giving them details like how many other applications have already been received, whether or not flex hours and remote work are allowed, and what the manager's leadership style is like. If someone has to be able to pick up their kids at 3pm everyday, there's no reason they should have to go through a months-long job process, waiting until they're actually offered the job, before they can get the answer to this most basic and useful of questions, "Can I get flex hours in the afternoons?" It's a waste of everyone's time, and it shows a disregard of applicants (soon to be employees).

So wherever we can, Talent Cloud tries to design staffing processes that work for humans... humans who have to cook dinner, care for others, do their laundry, and somewhere in there find a little time to themselves to think about what they want to do with their life in terms of career. We want Talent Cloud to be pleasant, easy, and emotionally fulfilling for those who invest their time and energy on our platform.

Optimizing Talent-to-Team Match

Biggest Takeaways

1 To optimize the match between an applicant and a project-based job opportunity, managers should look to the specifics of the role (impact and key tasks), rather than to generic text associated more broadly with the classification of the job. Project-based work is less about filling vacancies in the organization and more about addressing gaps in delivering specific time-delineated work, often in high priority areas. Shifting from a broad job advertisement to one tailored to the role will aid in optimizing hiring outcomes for project-based opportunities (and aids in speeding time to staff).

2 Factoring in the work environment, team culture and manager leadership style into the job advertisement and the job requirements makes a significant difference in creating a strong match between the chosen applicant(s) and their new team.

3 Authenticity and self-awareness are important assets for managers in the hiring process. Managers have more success attracting high-performing applicants who are a strong fit to their teams if they are accurate in their self-assessment of the work environment and team culture. If managers are self-aware and authentic in their representation of these elements when designing the job advertisement, our data suggests that they are more likely to attract applicants who will have the soft skills needed to succeed in the job and the work environment. Applicants are also more attracted to apply for job advertisements where they feel the manager profiles reflect authenticity, rather than perfection or generic government statements on values and priorities.

Impact–Driven Staffing

Research Summary

The Problem

The Government of Canada's HR system currently operates on a classification-based staffing model. The logic of this model is that departments have mandates, and they establish a hierarchy to support outcomes related to this mandate. Jobs are classified and fixed into the hierarchy with generic work descriptions (or in rare cases, specialized work descriptions). Managers fill "boxes" or vacant positions in the organizational chart of their unit, using the classification of the position and its work description to identify the experience required.

This standard GC approach is optimized for a workforce that is predominantly indeterminate. It's not optimized to serve the recruitment of talent for project-based positions where specific skill sets are required and the intended outcome of the position is time-limited.

At the time Talent Cloud first launched its live platform in 2018, impact statements and the inclusion of key tasks were rarely included in GC job advertisements - both of which appeal to applicants on the hunt for a new position. (Although in 2019 and 2020, we started to notice a few job advertisements on the GC Jobs site including this information.) Our early workshop findings indicated that the inclusion of impact statements and key tasks in a job advertisement would be a benefit in attracting high-performing talent, but how would managers be trained to develop a completely different type of job advertisement? And would HR advisors support the new direction?

The Hypotheses

- The inclusion of an impact statement and key tasks in a job advertisement would help attract high-performing talent.

- Managers were used to crafting job advertisements in a particular way. In order to get them to successfully craft a new type of job advertisement, a new type of workflow for crafting that advertisement would need to be developed.

- In order for managers to adopt the new behaviour pattern, the tools would need to present both a logical flow and be easy to work with.

- The methodology the Government of Canada was using to promote Results and Delivery could be used to help design the new logic flow for optimized job advertisements.

The Experiment

Talent Cloud explored the idea that the same logic model supporting departmental structures could be used, in microcosm, to help managers identify the impact individual applicants would have on Canadians. At a grand scale, departments have a mandate, and from this mandate flows intended outcomes. The hierarchy and job classification structure is then organized around delivering these outcomes. **To design a recruitment engine optimized for project-based work, Talent Cloud used the same cascade logic model seen in the broader Government of Canada structure, but we shrank it to focus exclusively on the local context of the job being advertised.**

> **Connecting Staffing to Results and Delivery**
>
> One of the project's best "ahah!" moments came from the exercise to refocus hiring around intended impact. In one of the workshops, a manager said she couldn't actually articulate the impact of the hire she had planned - filling a standard vacancy she had never questioned needed filling. She said she was going to go back to her management team for a discussion about rethinking their upcoming staffing needs, with a new focus on aligning the hiring plan with results and delivery.

To understand how managers and applicants would engage with the proposed model, Talent Cloud held a series of workshops in the summer and fall of 2017 where managers went through a paper exercise for both imagined and real job processes they had planned to test a new model for crafting job advertisements.

Managers were first asked to identify the intended impact on Canadians from the hire they intended to make. We then walked them through an exercise to articulate and prioritize what key tasks would be required to deliver this impact. Once the key tasks were identified, we asked them to articulate what skills would be required for an employee to succeed in delivering each key task. These skills were then summarized and prioritized, and formed the basis of a new way to arrive at the essential and asset criteria for a GC job advertisement.

In the workshops, we tested to see whether managers could complete the task with minimal instructions, and we tested to see if what they produced made sense to HR advisors.

Following the successful workshop testing of the new logic flow, our team created an MS word document which was used by managers to craft job advertisements for live job processes advertised on the platform in the fall and winter of 2018. Refinements were made, and the new process was programmed and became part of the Job Advertisement Builder Tool on the Manager Portal (see the write-up on this in Section 4 of the report.) Managers were interviewed about their impressions of the logic flow and the tools, and reported favourable impressions of the approach.

Talent Cloud also tested the flow of the job advertisement with applicants, interviewing people about their impressions of the usefulness and flow of information provided.

Impact–Driven Staffing

Research Summary

Platform Interventions

Check out the designs in the Job Advertisement Builder Tool in Research Section 4: Reducing Time to Staff to learn more about how the Impact - Key Tasks - Skills flow looked on the platform.

The Results

This component of the Talent Cloud project was an enormous success from a change management perspective. Managers reported that they found the new approach easy to use. This redesign of the job advertisement allowed managers to craft a high quality job advertisement in 1-2 hours. Notably, this was true for both seasoned managers who had learned the standard GC approach for drafting job advertisements, and new managers who had never staffed in government. This showed that not only could the new logic flow be used to change the approach of seasoned managers, it could also be adopted easily by new users.

In addition to being fast and easy for managers to complete, the new process met the approval of HR advisors. Talent Cloud job posters were routinely approved with very little intervention by HR advisors.

Applicants reported that the inclusion of impact statements and key tasks positively influenced their decision to apply when they felt they were a strong fit for the position.

Insights

One of the most interesting findings related to this platform intervention was the way in which managers were able to dramatically change their behaviours, easily adapting to a new workflow for producing a job advertisement.

Talent Cloud crafted this new process flow to better optimize job advertisements for project-based work, but there's no reason that it couldn't also be used for any job advertisement in the Government of Canada. While Talent Cloud's platform automates nudges related to optimizing the number of key tasks and skills on a job advertisement, there's no reason these lessons learned couldn't be manually adapted by any manager on any platform looking to craft a new type of job advertisement. (That said, to promote a consistent change in manager behaviours and job advertisement content, Talent Cloud found that standardized and automated platform solutions were an important component in delivering results.)

Most work isn't done in isolation. So why design hiring models like this?

Modern recruitment looks at human factors.

Standard Process: Two Factor Match

Applicant
Job

Talent Cloud's Process: Five Factor Match

Applicant
Job
Manager
Team Culture
Work Environment

Five Factor Matching

Research Summary

The Problem

Many of the managers in Talent Cloud's early workshops in 2017 reported that the hires they had secured through pool staffing processes in previous years had proved to be poor fits in the long run. This had led to frustration, further staffing gaps, and time and effort wasted.

Several managers mentioned in these same workshops that their preferred staffing process was through "internal networking" (basically, poaching talent from other departments using personal networks). Managers reported that this practice was common among peers. Significantly, it wasn't their preferred staffing method only because it was faster. It also allowed managers to get insights (before committing to a hire) about the soft skills and culture fit side of recruitment that was hard to come by otherwise. However, hiring managers and GC senior management who participated in interviews reported that the practice of internal poaching was unsustainable and harmful in large numbers; it was creating internal instability in teams requiring high-demand skills, and was failing to refresh the GC talent pool. This was particularly acute in digital talent and, ironically, HR related positions.

External applicants in workshops in 2017 reported frustration with applying for jobs where they knew nothing about the work environment or team they might be joining, and the absence of this information was a deterrent for highly qualified applicants with multiple employment choices. GC employee workshop participants who had previously been recruited to a team where the fit proved to be poor reported that they swiftly moved on to other positions (or intended to move on in the near future).

The Hypotheses

- Humans hire humans. This means that the person each manager or applicant is in a process matters to both the initial hiring decision and the longevity of the success of the hiring fit. It's not an accurate representation of the hiring process for a staffing model to be based on the assumption that a neutral widget hires another widget to fill an organizational gap with a specific set of criteria, without any behavioural, cultural, historical or ecosystem considerations in play.

- By changing the information on the hiring poster to account for human factors, we can improve the optimization of the talent-to-team match for both the initial hiring result and longer term outcomes, such as retention rates and performance on the job.

- By democratizing access to information (giving applicants more internal information about the organization than they normally get), more applicants who are a poor fit will self-select out of the process, leading to a higher overall quality of applicant pool for managers to choose from.

Five Factor Matching

- If managers factor human elements into the essential and asset requirements of the job itself, the final hiring selection will be more likely to result in a hire who can succeed in the role (not only doing the tasks of the job, but also working well with team members in a broader organizational context.)

- Factoring culture fit elements into the hiring process will function as a form of "pre-boarding", acting to accelerate the onboarding success of new hires long before the moment when the new hire actually starts in the job.

Note: The overarching hypothesis to factor in culture carries a risk - one that we had to not only be aware of, but also actively work to guard against. When staffing processes strengthen culture fit, there is also the potential for a model that facilitates the "like hires like" scenario, which exacerbates gaps in inclusion and diversity, and works against equity-seeking groups. Awareness of this risk led the team to develop bias reduction elements, working in tandem with elements designed to optimize the talent-to-team match. (See Research Section 3 on the team's diversity and inclusion theory and designs.)

The Experiment

To begin, Talent Cloud needed to first identify which "human elements" to choose to test in a new type of GC job advertisement. The team held a series of workshops in 2017 to identify promising elements.

Taking the top 10 components of a job advertisement that recurred most often in workshops, Talent Cloud then conducted a survey (as a subset of other workshops) with internal and external applicants in 2017-18. This was a simple form that asked people to rank the order of importance for information on the job advertisement. The top three factors in our research were key tasks of the job, team culture, and impact.

Because Talent Cloud was already separately working on testing the intersection of key tasks, impact, and skills required (see Impact-Driven Staffing in this research section), we expanded on the concept of team culture. In the end, **Talent Cloud elected to add manager profile, team culture and work environment to the job advertisement**.

Talent Cloud tested these elements in live job processes, and interviewed applicants about the influence of these factors on their decision to apply.

Talent Cloud realized that if the information about "human elements" was to influence the hiring outcome, it needed to also factor into the screening criteria at the heart of the hiring process. Otherwise, the new information being shared might influence an applicant's decision to apply, but it would fail to shape the other half of the equation: how managers decide on their final hire.

In order to connect the three human factors (team culture, manager leadership style and work environment) to the selection criteria, Talent Cloud tested the correlation between different workplaces and behaviours that were successful in different contexts. Talent Cloud ran a series of workshops in 2018 with managers, asking them to identify "the good, the bad and the ugly" when it came to GC workplaces, and then to work together to identify who succeeded in each of these environments. The results produced a "map" of sorts that Talent Cloud then used to design a semi-automated tool for managers in selecting

essential and asset criteria for the job advertisement.

For example, if in their checklist on the manager's job advertisement tool, managers identified that a workplace was high stress, resilience would be suggested to them as a soft skill to add to the job poster. This wasn't so much behavioural psychology as it was an exercise in giving individual managers the benefit of collective advice from their peers. Managers made the final decision on whether or not to include the suggested soft skills. Managers were also given draft text by the tool (based on what elements of the work environment they selected) to help them craft a work environment statement for the job advertisement. (We found that managers procrastinated with this task significantly - blank text boxes on culture were daunting - until we gave them some rough text to start with. Managers love to edit - it's what they're trained for. This resolved the procrastination issue and automated the acceleration towards stronger, faster job advertisement drafts for HR advisors to review.)

Following the mapping exercise in 2018, and live testing in 2018-19, Talent Cloud revalidated and refined the insights by repeating the exercise in 2019, as part of refining its taxonomy for transferable skills. A fuller automation of this work has been designed and is in early testing stages.

The Results

While small in sample size, Talent Cloud found the five factor matching model enormously effective. Talent Cloud boasts an impressive rate of 9% of all applicants being "ready to receive an offer". That's to say, they're deemed to be fully qualified for the position. In

comparison, the private sector average is 2-3%. (No statistics were available from the GC for a comparison.)

We also did follow-up interviews with managers 1-2 years after their initial hire to find out how the fit went, and what the long-term impact of the hiring approach had been for overall successful work delivery and government fit. The results were impressive. We were able to interview 55% of our hiring managers, many of whom had made multiple hires through the platform. Retention rates for the recruited talent were enormously high at 94% still in the Government of Canada 1-2 years after the initial term hire (bearing in mind that the initial term positions were for 6 months - 1 year). 77% of these hires were still on the same team, and many had already had a term extension or conversion into an indeterminate position. In all but one case, managers reported that they were happy with the hiring fit, and would repeat the approach.

Perhaps more importantly, managers reported that they thought the culture fit was strong and liked working with the employees hired. The applicants hired that we were able to interview

reported the same thing, expressing fondness and loyalty to the team, and a strong culture fit. The hiring approach produced both productivity and happiness, which are workplace outcomes worth having. (See also Case Study: Manager and Applicant Interviews in Section 2 of this report.)

External Research

In the academic literature on workplace recruitment and retention, there is strong consensus that organizational culture matters enormously. Whether an applicant is considering joining Google[1], a gig-based employer[2], the military[3] or the company that's been around for 100 years[4], the organization's stated cultural values (and their demonstrated reputation for upholding them) are key factors in an organization's ability to attract and retain the talent it needs to succeed. Consistently, the following things matter to applicants and employees: the work environment, who their manager and team is/will be, and what the overarching culture is in the organization.

One of the important things to note is that while there are certain leadership values that are consistently important (see Why Flexibility and Authenticity Matter in this report), there is significant diversity when it comes to successful organizational cultures. This is often dependent on the size of the organization, their mandate or product, and what they offer in terms of a value proposition to customers and employees. In this context, **it's not about promoting a single correct model for organizational culture - it's all about optimizing the fit between a diverse range of organizations and the employees they attract.**[5] Not all humans learn and work the same way, and neither do organizations. Organizations that succeed with recruitment and retention tend to

have a strong level of organizational self-awareness, and design their recruitment strategies to attract talent that will be a strong fit to their specific culture.[6]

Workplaces that wish to attract innovators and creative thinkers need to take special care to ensure that applicants are able to see themselves in the organization when being recruited, and that the organization is able to provide an environment where this type of talent can flourish.[7]

Insights

The effort to optimize the hiring fit between applicants and teams has led to numerous elements on the Talent Cloud platform, large and small. **As with many "solutions", it's not about any one feature; it's about adopting an approach that is considered in every feature.** For us, our approach says that a strong fit between an incoming individual and their team is critical to successful work delivery. To account for this, systems and process design should approach actors in the system as humans, with emotions, work styles, preferences and lives beyond their jobs... and the fit between these humans will be as important as the skills each possesses individually. This base assumption has led to a platform that is radically different in feature design and operations than the standard GC hiring approach.

While there are ways to achieve this success through various features and design choices, systems that wish to optimize the talent-to-team match will need to extensively user test their choices, and should strongly consider including a focus on work environment, team culture and manager leadership style.

Who Uses Profiles and When?

Talent Cloud introduced profiles for both managers and applicants. These profiles were voluntary. We wanted to see how they would get used and if they added value to the platform.

Interestingly, applicants reported that the presence of an authentic manager profile was extremely important to them in the application process, even if the profile was relatively brief. In the only two cases where a Talent Cloud hiring manager declined to provide a profile, the final qualified candidates accepted other positions after the interview phase, resulting in no hire being made. While this could also be a coincidence, we think not. We had an instance where a manager with a profile and a manager without a profile posting almost identical jobs in the same period. The manager with the profile received almost twice as many applications, and had twice as many qualified candidates after the interview stage, leading to multiple hires.

On the other hand, when it came to applicant profiles, managers reported almost never referring to them. Instead, they focused their screening efforts on the application itself. This showcased the importance of applicants understanding the need to include details about how they came to earn their skills in the application itself, and factored significantly into the Timeline design Talent Cloud released in early 2021. (See Skills, Not Experience in Research Section 3 for more information.)

CASE STUDY

Manager and Employee Responses

Manager and Employee Responses

Case Study

Talent Cloud was able to interview ~55% of managers about where their hires were 1-2 years later. Here's what we learned:

- ~95% of hires were still in the Government of Canada
- ~80% of hires were still on the same team
- 50% of those who were still on the same team had received extension:
  - ~30% term extension
  - ~20% moved to indeterminate position

Employee Perspective

We interviewed around 33% of the employees hired through Talent Cloud. Some of them were still working in the position they were hired for, while others have moved on to other opportunities within the government.

These interviewees applied to a job using Talent Cloud for a variety of reasons. Some of them were just looking for a job in general, while others intentionally searched for opportunities to join the government. There were also employees who were just passively browsing, but certain information in the job advertisement prompted them to apply. In particular, the impact statement, information about the team, and the manager profile were cited to be motivating factors in influencing their decision to apply.

"Being able to see the composition of the team helped me to know what I was getting into. It was not a blindsided decision. The platform really gives me a lot of information to make a decision."

~ **Employee**

"The write up on the manager was very important, and information about the team's working style was important. I wasn't a motivated applicant (not expecting to leave my previous job). That information definitely helped me decide to apply."

~ **Employee**

Manager and Employee Responses

Many of the interviewees reflected on how reading about the team culture helped them to make an informed decision.

The manager profiles also helped foster a human connection between these employees and their potential managers even before their first meeting at the interview. Being able to get to know about the person they were going to work with was one of the most mentioned positive experiences they had using Talent Cloud.

All interviewees (except for one whose skill set was in such a high demand that he was hired by another team whom he interacted with during the assessment process, so he never got to work on the job he applied for) reported that once they started working, they found the information provided on the job advertisement was an accurate representation of both the team and the work. They also reported being a good fit for the team.

One employee's story highlights various details that help applicants decide if the job is the right fit for them, and if they're the right fit for the job.

"I wasn't actively looking for employment when I found the job poster on Talent Cloud. I was curious about the types of jobs that existed for people with my specific skill set, so I was poking around online using one skill as a search term. When that skill popped up in a government job title, my interest was piqued. I had always had an interest in government and was surprised to see such a specific role posted for the general public.

I remember reading through the tasks and skills in the job poster and being impressed with how clearly everything was laid out. I also remember starting to get excited, because it felt like the criteria were written for me! I was pleasantly surprised to find information about the hiring manager and her leadership style, and a description of the team culture. By the time I got to the end of the poster I understood exactly what the job would entail, I was clear on the skills that would be needed to succeed in the role, I had insight into how my personality would fit on the team, and I knew I really wanted the job. There was only one problem - I lived in Toronto, and the team was based in Ottawa. I re-read the poster and noticed I had missed a detail - remote work was allowed! That sealed the deal, and I decided to throw my hat in the ring.

I've been in the role almost two years now and I couldn't be happier! I really enjoy the work I do, and love that I get to do it with a group of kind, fun, and talented people. I'm so lucky to have found that poster, and grateful that it made my decision to apply such an easy one."

Manager Perspective

Talent Cloud was able to interview 55% of managers who made a hire on our platform. These managers came from 8 different departments and accounted for the hiring of 18 employees through

Manager and Employee Responses

the Talent Cloud platform (some of which we didn't even know about until we went back to conduct interviews. Turns out, quite a few of our managers went back to get additional hires after the initial process data we tracked.)

These managers covered the entire time span between the launch of the platform to the most recent major feature release in 2020. (None had used the 2021 release of the Advanced Applicant Timeline screening feature.) While some of them had initially volunteered to participate in the Talent Cloud pilot, others did so at the request of their departments (volun-told to be part of this Talent Cloud innovation project their department was funding). The group of interviewees also included managers who ran the process from end to end, those who took over the process mid-way from another manager, and managers who were not involved at all (where their HR team had handled applicant screening and selection) and were assigned an employee at the end of the process.

All except one manager reported their hires to be a good fit for the team. Although there were learning curves and adjustment periods for some, especially for those who were from other sectors or joined during the pandemic, the managers reported that their hires worked well with the team.

Unintended Behaviours Resulted in Unexpected Observations

Amongst the managers we interviewed, some eventually made a hire that was not expected when the job was advertised.

As Talent Cloud job advertisements were designed to tailor for a specific job and team (read more about the Five-Factor Match), we asked them to advertise the jobs separately if they wanted to staff two positions that had different responsibilities or were in different teams, even if the positions were at the same classification and level.

If the positions were identical, however, managers could hire multiple candidates from the same process. In fact, we had a manager who made four hires (and counting) from a single process and reported that they were all a good fit. (A fifth hire from the same process was reported during the interview, but is still being finalized.) Read more about her story in the breakout box below.

On the other hand, there have been instances where managers found a candidate during the assessment process that they believed could help meet other needs vacant in their organizations. The candidate was eventually hired for a job that was different from what they had applied for. Significantly, in cases where hires were chosen for roles other than the one advertised, managers reported that it didn't result in a good fit. This was consistent with what we heard from managers who initially reported challenges in finding a good fit when using generic pools. This finding suggests the importance of the other factors in improving fit-to-team, in addition to the job requirement and the person's qualifications. This is one instance where failure actually confirms the theory, which is that the five factor match is an important component in producing strong, high performing talent-to-team matches.

Was Talent Cloud Worth It?

A Manager Story

When one hiring manager was asked by her department to use Talent Cloud for a selection process, she wasn't exactly eager to try a new platform for her hiring needs. "At first I was like, ugh...another one?" That feeling is understandable - selection processes aren't always easy for managers and can feel daunting. Managers are also often tasked with trying experimental new innovation initiatives, and sometimes they don't have a lot of free time and energy to be test subjects themselves.

The hiring manager trudged ahead and worked with Talent Cloud to get the process started. She put her effort into learning how to use the platform, reaching out whenever she had questions or needed assistance. "I appreciated the support I received from the Talent Cloud team," she remembers. "But when Covid-19 hit it took away some resources, and that was difficult." Even with the pandemic hitting in the middle of her selection process, she remained committed to her goal of finding high-quality candidates and pushed forward.

Her efforts were not in vain. The manager's poster garnered 56 applications, and after all rounds of assessment were completed she was left with a pool of 14 qualified candidates. Considering most processes end up with a fraction of that ratio of fully qualified candidates, hers is an incredible success story. "We had openings for and brought on four people out of the pool of qualified candidates. Managers are still pulling from that pool!"

When asked if each of the employees hired from her process were a good fit with their new team's culture, she said they've all integrated well. She also appreciates the positive contributions the new hires have made to their team. "The people who came in, they come from different areas, and they've brought diverse perspectives to the team. We got a good

> "[The hires] have brought diverse perspectives to the team. We got a good group. They're the right fit - the process worked."

group. They're the right fit - the process worked."

Thinking back on her experience, she said Talent Cloud was "a hidden gem" that she was glad to have used. "It took a little while to be convinced it was a good thing, but now that I look back and reflect on the whole experience, it was great!"
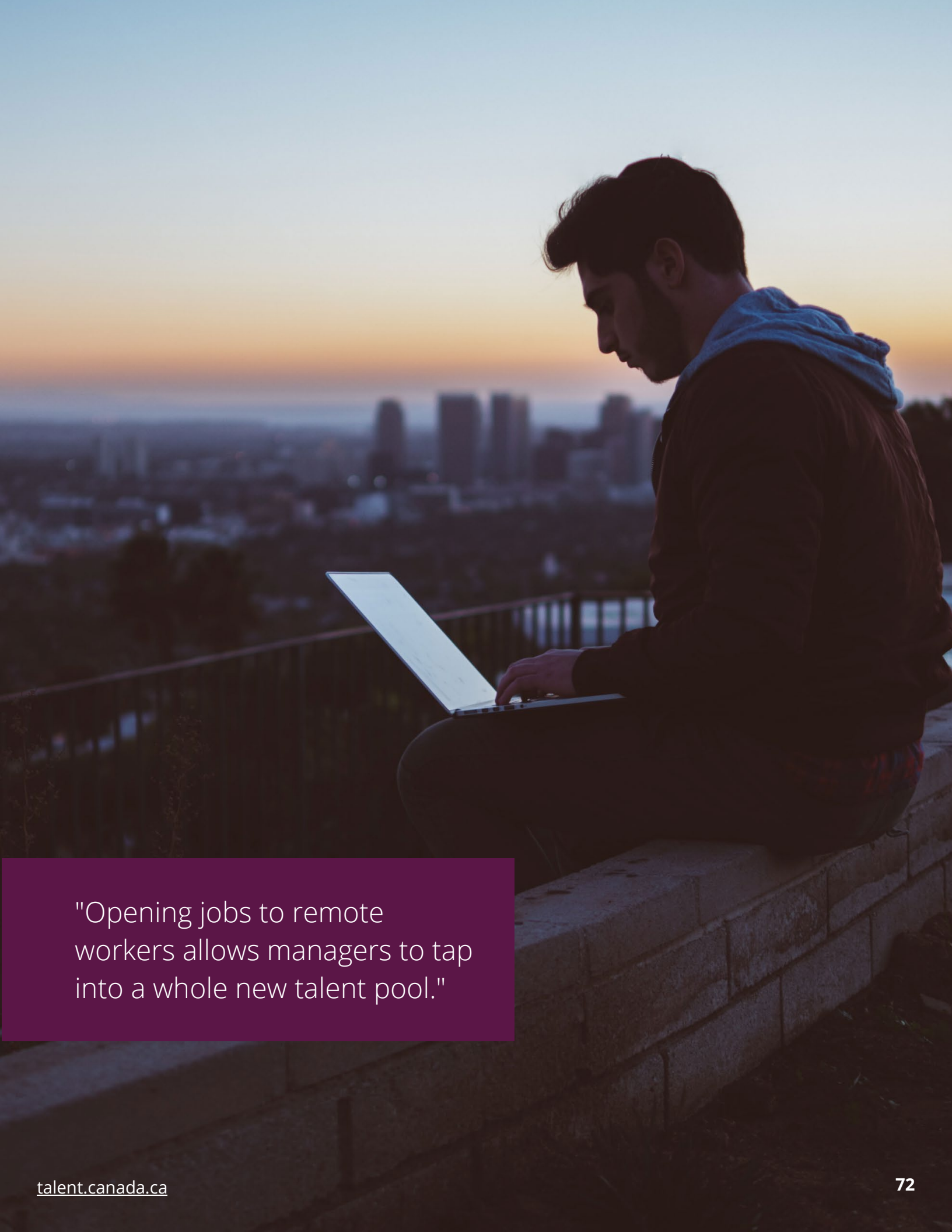
"Opening jobs to remote workers allows managers to tap into a whole new talent pool."

Enabling Remote Work

Research Summary

The Problem

The National Capital Region (NCR) accounts for only 4% of Canada's labour force, but 42% of the Federal Public Service works there. The ability to hire employees to work outside the location of the physical office is a policy flexibility that has not been traditionally used. (Based on workshops with managers and HR advisors, we suspect this was due to a combination of managers not being encouraged to offer this flexibility, and the GCJobs system default forcing the choice of specified location(s) of work based on government office.)

While many departments also staff positions in regional offices, "work from anywhere" was not a standard hiring practice when Talent Cloud first launched this as a platform-based staffing option in October 2018. (Notably, in January 2021, the Public Service Commission adapted the GC Jobs platform to include this option, largely in response to the impact of COVID-19 on the federal workforce. It's an exciting development for workers across Canada.)

The Hypotheses

- Talent is everywhere, and subsequently the talent government needs is likely to be regionally distributed across Canada, rather than occurring at a significantly disproportionately higher per capita rate in the NCR;

- Allowing applications from employees across Canada looking for a remote-work accessible position will increase the chance of finding people with rare or in demand skills;

- Managers who allow applications from remote workers will see an increase in the number of high quality applications;

- Given the choice of talent from remote and NCR applications, managers will choose to hire remote workers at least some of the time, resulting in greater geographic diversity in Talent Cloud hires than in standard "NCR only" or "regional office only" positions.

The Experiment

To promote remote accessible jobs, we engineered a hiring model optimized to allow employees to work from anywhere. The first step is to encourage managers to consider accepting applications from people from outside their geographic region.

Enabling Remote Work

Research Summary

Talent Cloud job advertisements tell applicants a lot more about the job than they would see on a typical poster. This includes information about 'workplace environment', such as whether the position allows flex hours and whether it is available for remote work.

When managers build a job advertisement, the default selection for remote work is that it is allowed. This is a nudge that forces managers to intentionally exclude remote workers and say that they only want to consider applications from people in their geographic region. In a traditional job process, the opposite has been true (where managers listed a government office location for work, and would have to draft additional text and justifications if remote work was allowed). We make sure to give managers the definition of what 'remote work' means right in the tool on the Manager Portal for building job advertisements, and we provide support to managers who choose to assess and/or hire remote workers.

Platform Interventions

1. **Make the Option Available:** The first and most important intervention Talent Cloud crafted in promoting remote work accessible jobs was making this an option in the selection menu that managers and HR advisors worked with while crafting a job advertisement on the platform's Job Poster Builder. Up until this time, managers reported that even when they wanted to offer remote work accessible positions, corporate opposition and difficulties in posting led them to back away from offering this option. When managers learned it was simply available, many readily adopted it without much persuasion.

2. **Make it the Default:** In government, managers are trained to accept the default. Managers reported that defaults meant corporate direction had been set, and opting for something other than the default not only required more work, but it also felt vaguely non-compliant. In this case, we reversed the trend that managers had been told for years (avoid remote work) and made it the new normal (promote remote work).

3. **Nudge to Keep the Default:** Ideally, we would have the numbers to run a randomized control trial to test different nudges and see how different interventions stacked up to create the strongest outcome. In this case, we simply added a line (see screenshot below) that connected allowing remote work to a higher quality of talent pool. While this was a nudge based on our hypothesis and supported by external research, it proved true. Those advertisements allowing remote work drew better talent and had a higher success rate in securing a top quality final hire. (This is one of three flexibilities that hiring managers using Talent Cloud were nudged to adopt. See the research section on Flexibility Matters for insights on how these flexibilities impacted the applicants' decision to apply. The "why" might surprise you - it surprised us.)

4. **Advertise Clearly to Applicants:** Job advertisements on Talent Cloud contained one of these two phrases: "Remote Work Allowed" or "Remote Work Not Allowed". In user testing, several managers expressed their discomfort with the clarity of this language. (Notably, applicants reported that they really appreciated the clarity.) Several managers requested that we simply advertise when it was allowed, and be vague about when it wasn't. Talent Cloud declined to make

this change because part of the research (qualitative and quantitative) was to determine if clear allowance (or non-allowance) of remote work made a difference to the application rates and final results. Turns out it does... Quite a big difference, in fact.

The Results

- 92% of the 53 jobs posted to Talent Cloud had the home office in the NCR.

- 36% of the jobs on the platform were advertised as "Remote Work Allowed"

- In cases where managers allowed remote work they received 63% more applicants than those that did not allow remote work.

- For CS positions, allowing remote work increased the number of applicants by 83%.

- All job processes allowing remote work had qualified candidates in the applicant pool.

- Only five Talent Cloud job posters failed to attract qualified candidates, and four more saw the qualified candidates decline the position. None allowed for remote work.

- When presented with a candidate pool that included remote applicants, more than half of managers selected a remote worker as the hire, including some from small communities. This indicates that there is a wide, largely untapped pool of talent across Canada.

- Managers who made remote hires reported during interviews that they would consider applications from remote workers in the future.

Remote work allowed job posters

63% Increase all applications

83% Increase CS applications

100% Included a qualified candidate

36%

64%

NCR only job posters

Applicants reported lower levels of interest

15% Did not attract a qualified candidate

15% Had a top candidate turn down the offer

Research Summary

External Research

Because of COVID-19, remote work is commonplace, so it is easy to forget that before the pandemic remote work was one of the most desirable perks that an employer could offer, with One study showed that 57% of the workforce said that the option to work remotely is their most prefered perk.[1]

Workers have also been able to assign a dollar-figure to being able to work from home. A 2017 study from Stanford study showed the average worker would be willing to give up 8% of their income to work from home.[2] Remote employees are also able to work from anywhere, and have been shown to relocate to regions with lower costs of living[3], allowing them to stretch their income further.

Supporting remote work also helps to keep the top talent that you already have! One study showed that 74% percent of knowledge-based industry workers in the United States would quit their job for one that offers remote positions, and that 26% had already left a job for that reason.[4] These findings were supported by another study that showed companies that support remote work have a 25% lower employee turnover rate than those that don't.[5]

Insights

By using a small nudge on the job poster builder, many managers were persuaded to change long-held behaviours and chose to accept applications from remote workers. This gave them access to more talent and made it more likely that they would make a hire.

Government is a huge employer. If this model was applied across GC hiring, it could be a high value social impact at scale and pave the way towards regionally representative diversity in government employment. At the community level, this could aid in accelerating distributed economic recovery.

Government is a huge employer. If this model was permanently applied across GC hiring, it could be a high value social impact at scale and pave the way towards regionally representative diversity in government employment. At the community level, this could aid in accelerating distributed economic recovery, and improve the quality of the Public Service's talent base.

While the Talent Cloud experiment yielded promising signals, it's still very small in scale. We're hopeful there will be larger scale research from other GC HR authorities on the impact of the 2021 change to the GC Jobs platform allowing remote work. We look forward to comparing notes and findings.

Is remote work allowed?

Want the best talent in Canada? You increase your chances when you allow those in other parts of Canada to apply. Regional diversity also adds perspective to your team culture. Make sure to discuss this in advance with your HR Advisor.

Select a remote work option: Required

- ○ Yes, I'm willing to supervise employees anywhere in the world.
- ● Yes, I'm willing to supervise employees in any province or territory in Canada.
- ○ No, I require the employee in this position to be in the same geographic location as the office.

How often is telework allowed?

Demonstrate that you trust your employees and you have a positive workplace culture. Allow telework as an option.

Select a telework option: Required

- ○ Never
- ○ Occasionally
- ○ Sometimes
- ● Frequently
- ○ Almost Always

How often are flexible hours allowed?

Want to support a more gender inclusive workplace? Studies show allowing flex hours is a great way to improve opportunities for women and parents.

Select a flexible hours option: Required

- ○ Never
- ○ Sometimes
- ○ Occasionally
- ● Frequently
- ○ Almost Always

Why Flexibility and Authenticity Matter

The Problem

When we started this experiment in 2017, the Government of Canada only supported flex hours, telework and remote work accessible jobs in rare cases, and these flexibilities weren't included on job advertisements. We didn't even know if this was a problem, but it seemed inefficient to recruit people who might potentially need these flexibilities to jobs that didn't allow them. We wanted to know if a problem even existed, and if it did, whether or not it was impacting application rates and quality-of-fit.

The Hypotheses

We had a theory that a number of things that weren't currently on a standard Government of Canada job advertisement might actually have a big influence on attracting high performing talent to apply. We also thought some of this information might help applicants self-select as a good/poor fit for the job and the team. So we set about trying to get a better understanding of what those things might be, and whether or not they mattered.

The Experiment

In 2017, Talent Cloud ran an experiment where we attempted to identify what types of statements might influence an applicant's decision to apply. We built a list of ~60 sentences or sentence fragments. These were drawn from various components of the draft job advertisement design we were testing, including job impact, manager profiles, work environment, types of technologies used, workplace amenities, team culture, operating context and details such as whether or not flexible work and remote work were permitted.

In a series of workshops, we asked applicants to individually sort statements into piles according to:

- Things that would make me want to apply for a job I wasn't interested in
- Things that would deter me from applying to a job I was interested in
- Things that wouldn't impact my decision either way

The workshops were framed this way to map what types of information and statements would alter the decisions of the applicants. We didn't just want to know what they liked or disliked - we wanted to know what would change their behaviour patterns.

The Results

Following the sorting of statements by each individual participant, we asked them to compare their decisions in a facilitated discussion. Some patterns became immediately apparent, but there were two in particular that surprised us.

Universally, across the workshops, applicants placed "flexible hours allowed", "telework allowed" and "work from anywhere" into the column for "wasn't interested in applying, but now i might". No huge surprise there. But when we asked how many people in the workshops actually required these flexibilities or planned to use them, only ~5% of participants reported needing flex hours (for example, to do school pick up).

So why did a factor that applicants admitted they didn't need have such an influence over their behaviour pattern? Because **applicants in the workshops universally equated managers who allowed these flexibilities with managers who trusted their employees, and who would be more likely to support innovation and creativity elsewhere in the work.**

The other surprising result from the workshops was also a finding related to the way in which applicants were "coding" the statements. More than 2/3rd of participants placed government-style "motherhood" statements, such as "The Government of Canada values diversity and inclusion in the application process," into the "now I don't want to apply" bucket. This actually shocked us, because why wouldn't that be something applicants wanted to see?

Applicants explained that broad motherhood-style statements in the job advertisement seemed impersonal and disingenuous. They equated the inclusion of these types of statements with a compliance-driven workplace and a manager that said the things they were supposed to say, not the things they really felt. Applicants reported that they in no way believed that the inclusion of these motherhood-style statements meant the manager actually cared about them or would uphold them in practice. Some even reported that they found these statements "just annoying noise" or offensive to the intelligence of applicants, like a "poorly done magic trick" trying to stop people from looking deeper at what was going on.

As a result of this finding on adverse applicant reactions to broad, motherhood-style statements in job advertisements, we ran a second series of targeted qualitative analysis experiments. These were done with real managers, but not for real job processes in the initial experiment. We asked them to start with a broad corporate statement they might usually include in a job advertisement. Then we encouraged them to personalize the sentiments behind the broad corporate statements, and

Sometimes showing your imperfections is a more perfect option.

Why Flexibility and Authenticity Matter

Research Summary

include this on a manager profile. For example, instead of a broad statement on diversity and employment equity, managers wrote things like, "I believe in a workplace that supports Indigenous inclusion. While I'm not Indigenous, I try to always encourage my scientists to consider Indigenous traditional knowledge in their field studies, and I try to always keep learning from Indigenous colleagues and peers so I can be a better manager."

We then took these real sentences, produced by real managers, and tested them again with applicants.

The shift from broad statements to personal commitments was so successful in beta testing with applicants that we wrote nudges towards authenticity right into the job advertisement builder that we coded for the platform, and included a manager profile. Ongoing qualitative analysis with applicants for real job processes in 2018-2020 showed that this type of information remained an important factor in influencing applicant behaviour favourably towards managers and job applications. This proved particularly true when managers admitted imperfections and proved bluntly honest phrases, as these things generated a sense of trust in the manager despite applicants never having met them. It made people want to work with these managers.

We also helped managers see the value of flexibilities in the recruitment process by setting new defaults in the job advertisement builder around flex hours, telework and remote work (which was discussed in detail in the previous write-up in Section 2 of this report.) To see a screenshot of these nudges and default settings on our platform, check out the page before this write-up.

External Research

It was a surprising research finding for us to see the extent to which applicants used small phrases and keywords to draw much larger conclusions about managers, departments, and workplace cultures. But it probably shouldn't have been a surprise at all. This observation is directly in line with an increasing body of behavioural psychology and cognitive sciences research produced in the last two decades that looks at the ways in which the brain interprets fragments of information. In short, it seems the human brain is wired to jump to conclusions.[1]

Humans have a strong tendency to benchmark information based on their personal frame of reference, regardless of the extent to which they have awareness of the context from which the information fragment emerges.[2] (This is also one of the behavioural tendencies that enables racism and discrimination.[3])

That means that our applicants' tendency to scan for "code words" that would reveal insights about the broader work environment was right on par with what one might expect based on behavioural psychology research. But it's not only the applicants' tendency to extrapolate information that managers should care about when looking to improve their recruitment strategy; it's also learning what "code words" motivated high-performing talent to apply.

Research shows that it's not perfection, but authenticity, that employees value in leaders.[4] This includes leaders having self-awareness, being willing to show vulnerability, and being true to their word without being self-promoting - what some have referred to as "quiet transparency".[5] Employees also value leaders who show trust in their employees, and share authority for decision making where possible.[6] Research shows that the level of autonomy at

Why Flexibility and Authenticity Matter

work is actually a better predictor of happiness than salary[7], so it's not surprising that applicants would be looking for "code words" that implied managers showed trust in employees. On the other hand, generic company-generated expressions of value (that didn't connect to concrete examples of action) did more than fail to inspire employees, they actively generated distrust[8], and were associated in some cases with micro-management and compliance driven leadership styles.[9] In extreme cases, the failure of authenticity in leadership has even been identified as a leading cause in the financial collapse of industry giants... just as the introduction of authentic leadership has been identified as a core component of financial recovery.[10]

Insights

This point of this research insight isn't to initiate a debate over whether applicants should or shouldn't infer so much from so little in a job advertisement. The point is that if that's what's happening, managers who want strong job advertisements need to factor this applicant behaviour pattern into their recruitment strategy.

This is more than a matter of adding a few keywords in key places. If managers were to become formulaic about always adding the same words, applicants would likely begin to simply disregard this standardized information and look for other indicators that were unique to each job advertisement.[11] In our research we found that there's no recipe for a strong fit except for honesty, and that requires careful reflection and self-awareness when it comes to articulating the manager's leadership style, work environment and team culture.

The sample size for these workshops wasn't large enough to be considered statistically significant - we only engaged ~120 people in total in the initial workshops, plus the follow-up qualitative analysis, and the study of applicant behaviour patterns in the live job processes. But the findings were so consistent from the initial workshop series, we decided to go ahead and build the lessons learned into the platform in the form of default settings and nudges.

While we made changes to our platform to promote these behaviours, they come down to language choices. So there's no reason these approaches can't be easily applied in any job application process.

The most important take-away for HR advisors and managers is that applicants will scan every piece of information in a job advertisement for clues about the work environment and the manager, and they behaviourally code this information. They think, "Is this where I want to work?"... and in the absence of direct, transparent sharing from managers, they will draw inferences and conclusions based on very little information. Authenticity and personalization in the job poster therefore become critically important in attracting a top candidate.

More broadly, the Government of Canada might want to run a research study to better understand and confirm or refute these findings. Motherhood-style statements are almost ubiquitous in government job advertisements and as part of recruitment drives. If that's as big a problem as we suspect, there's a lot of high-performing talent out there that might be nudged away from ever applying... without the Government of Canada even realizing it was happening. And that's a loss for Canada.

"Authenticity matters in the hiring process."

Self–Assessment of Skills by Level

The Problem

One of the goals of the job advertisement and job application process is to make it evident to potential applicants whether or not they are qualified. Ideally, only those who are qualified will apply for the job. But the reality is that in most Government of Canada application processes, there are a significant number of people who apply and are not deemed qualified, even at the initial screening phase of the process. Screening applicants who aren't qualified contributes to the length of time managers spend on a staffing process.

The Hypotheses

- Not everyone who applies will be qualified, and some applicants knowingly stretch the truth to get their application seen by a hiring manager.

- Rather than stretch the truth, some applicants would prefer to (more accurately) describe themselves as not meeting the required skill proficiency levels, as long as the manager will still get a chance to review the application they submit.

- Separating out these applicants would save managers time because they could skip this group if very large numbers of applications were received.

- Some of these applicants may be incorrect in their own self-assessment, and might actually be qualified for the job.

- Managers would prefer to screen an applicant pool where a higher percentage of applicants proved to be fully qualified.

In the context of designing this cascading hypothesis, the team was also aware of external research indicating that there are gender and diversity considerations when it comes to self-assessment. In particular, there is data suggesting that men are more likely than women to self-assess favourably when it comes to issues of job readiness.[1] Any research design that Talent Cloud developed would need to factor in awareness of this risk, and ensure that equity-seeking groups weren't unconsciously disadvantaged by the design.

The Experiment

Talent Cloud decided to include an active step in the application process, where applicants had to self-assess and indicate their level of skill proficiency for each skill. Our thinking was that this active step would reduce the number of people who falsely claimed they had the required skill proficiency.

Self–Assessment of Skills by Level

Research Summary

However, we were worried that this could bias the pool of applicants by disproportionately affecting equity-seeking groups who might be more likely to self-assess below the required level.

For this reason, we decided to accept all applications regardless of the skill level the applicant indicated. It's common practice in web forms to block the submission of applications until the user has indicated they meet all requirements. In this case, we made the deliberate decision not to force candidates to claim that they had the required levels just to submit their application.

This effectively created a new group of applicants that we separated out for managers before they started their review (as part of the sorting in the Applicant Tracking System developed by Talent Cloud on the Manager Portal). This new group could be skipped by managers when many applications were received, but could also be used to explore our hypothesis that some applicants would incorrectly self-assess, and should in fact be considered for the job. If managers regularly thought the candidates had under-rated their skills (and were in fact well qualified), then it would be plausible that this step was introducing undesirable outcomes, and we would need to investigate further.

Platform Interventions

1. **Introduce a scale for skill proficiency levels**
   Before candidates could self-assess their skill proficiency level, we had to describe what those levels were. For an initial test, we separated skills into **hard skills** (technical and occupational) and **soft skills** (behavioural and transferable) and described levels of proficiency for each. For hard skills, increasing levels of proficiency meant you were able to complete tasks of increasing difficulty with decreasing levels of supervision or support (Image 1). For soft skills, however, we wanted a separate scale. You don't have "advanced resilience" as a soft skill. Instead, resilience is something you have to demonstrate over a long period of time in various situations. So for soft skills, our increasing levels of proficiency meant you had demonstrated the skill with increasing consistency, under increasingly difficult or stressful situations.

2. **Introduce self-assessment step for each skill**
   For each skill we added a simple drop-down for applicants to enter their own skill proficiency level. This forced applicants to actively indicate the level of proficiency they thought they had.
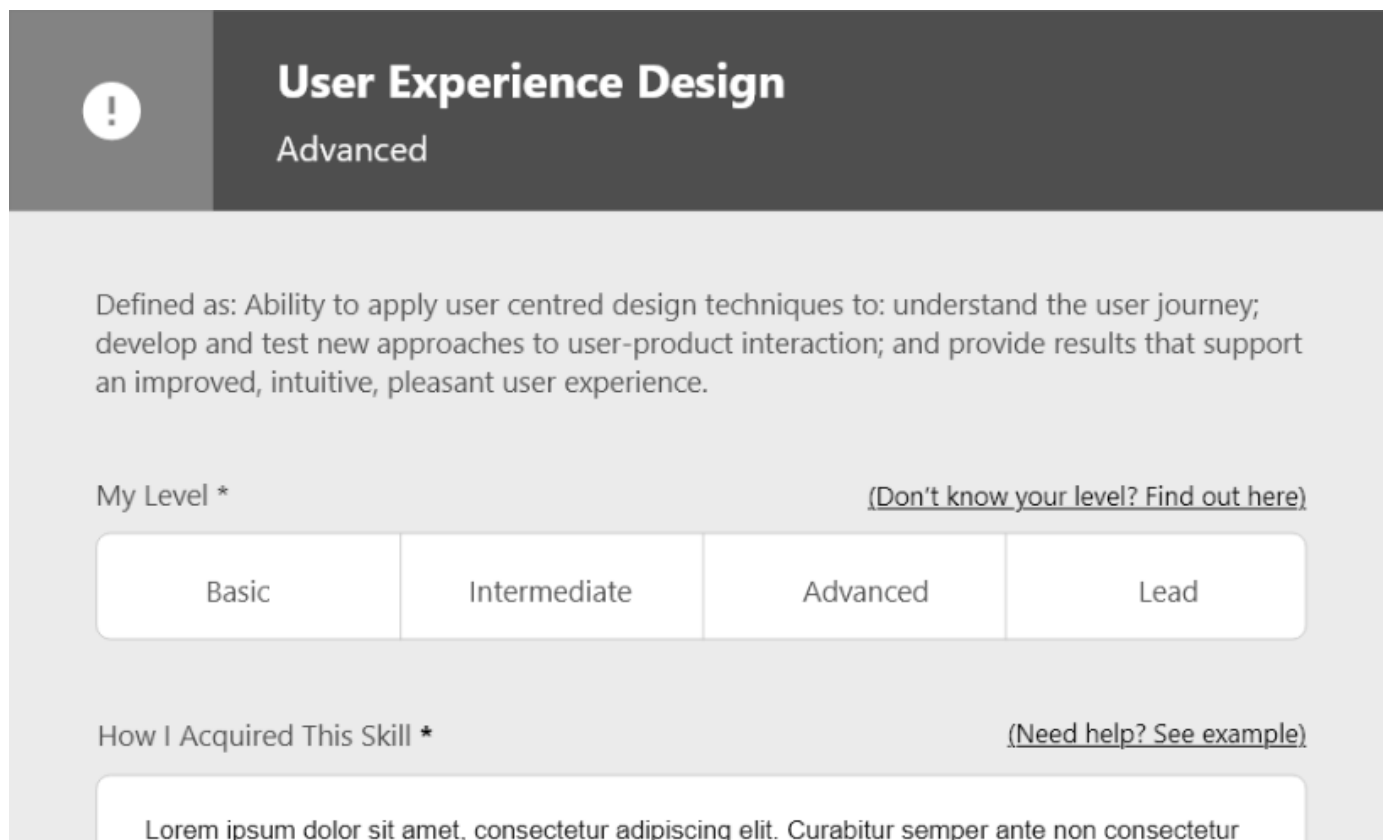
3. **Do not require the required skill level in order to submit applications**
   To monitor and correct for potential bias being introduced by this step, we allowed applications to be submitted, even if the applicant indicated their skill level was below the required proficiency level. This gave managers an opportunity to review these applications anyway and correct for possible inaccuracies introduced by the self-assessment process.

Self-Assessment of Skills by Level

Research Summary

Image 1: skill proficiency levels.

The Results

Roughly 15% of all applicants (155 out of 1004) indicated that at least one of their skill levels were below the required level. Looking at the breakdown between hard and soft skills, only 16 of those 155 were for soft skills.

In **all cases** where managers reviewed these applicants (and Talent Cloud was able to follow up with them), the manager was in agreement that applicants didn't meet the required skill level, and those applicants were not invited for further testing.

Several applicants interviewed who did indicate lower skills levels shared that they knew they did not meet the requirements, but wanted the manager to see their application anyway. This indicates that, at least in those cases, the applicants were not accidentally submitting erroneous data, and that the platform intervention was functioning as designed.That said, the addition of this requirement in the application process also created an additional step for applicants - one that caused some to delay submission of their applications due to uncertainty over the skill level they should self-select. Applicants reported that they were often unsure of their level, and this led to procrastination in

Self–Assessment of Skills by Level

submitting the application. (And of course, we can't see who didn't end up applying because of this feature.)

Given the constraints on the data Talent Cloud was permitted to collect on the platform, we weren't able to cross-reference quantitative Employment Equity data with applications submitted claiming a lower level of skill proficiency than the job required. In order to correct for this absence of data, the team ran a deeper qualitative analysis of applicants for a small number of processes run on the platform. While the sample size was small and results are definitely inconclusive, there was no overt trend on the platform towards equity-seeking groups being more likely to self-assess at a lower level.

(Further study would be required to confirm this finding, and to look into whether or not the bias-reduction design in the skills model was a factor in ensuring that equity-seeking groups weren't over-represented in self-assessing at a lower skill level. Our platform values and showcases different life paths for acquiring skills, and there could be a potential connection to the way in which equity-seeking groups self-assess in this new ecosystem, compared with more traditional application processes. See also Skills Instead of Experience in Section 3 of this report.)

Insights

On the surface, a 10-15% reduction in the applicants to screen would seem to be helpful to managers. But this is only part of the story. Of the remaining applicants, roughly half were eliminated by hiring managers at the initial screening, indicating that a majority of applicants were still overestimating their skill level. Because of time savings and other volume management components on the Talent Cloud platform, managers estimated that this 10-15% reduction in applications only saved 1-2 hours of time in the initial screening phase. Applicants, on the other hand, expressed that in some cases this element of the application process created uncertainty and anxiety about accuracy in self-reporting, and delayed the submission of applications.

While there may be many cases where self-assessment is a useful tool in advancing the applicant selection process, Talent Cloud didn't find that it was as useful a component in the initial application phase as we had hoped it would be. This held true for both hard (occupational) and soft (behavioural) skills.

As a result, this component of the application design didn't make it into the massive overhaul of the application process (called Timeline) the team released in 2021. (For more on the new model, take a look at Skills Instead of Experience in Research Section 3.) Instead, we're moving more in the direction of helping improve the three-way conversation between managers, applicants and HR advisors around what "qualified" looks like for a given skill, and what information applicants need to provide to help managers make screening decisions that value diverse life paths for acquiring and demonstrating skills.

SECTION 03

Research Results on Changing the Default to Support Diversity

Advancing Diversity and Inclusion

What's in this Research Section?

Section 3 summarizes the second half of our research results connected to Talent Cloud's main performance objective on improving fit-to-team. Section 2 looked at broad practices for getting to a great hire that was a strong fit-to-team. In Section 3, we're honing in on the diversity and inclusion components of the concept of "fit-to-team", exploring issues such as cultural coding and systemic bias in process design, rethinking the existing GC default settings, and changing the choice architecture that shapes how managers assign value in staffing. It gathers all our thinking on diversity and inclusion into one location for easy reference.

There is one significant research limitation that we need to note up front: we're relying on qualitative data and manager-based reporting. Because of the privacy requirements associated with the IT system, we haven't had controls in place to collect quantitative Employment Equity data from applicants. (See the summary of our quest to secure server space in a Protected B environment.) Talent Cloud is in the final steps of the certification and authorization process

that would allow a larger experiment to be conducted on the platform to confirm (or disprove) the theory. Such an experiment would include a statistically valid sample size and quantitative data collection. But until then, the ideas here should be seen as signals and indicators based on qualitative research and small scale testing, validated against external research and theory.

The results are promising and point to a new direction in the theory for those looking for options to advance inclusion and diversity in hiring. But they are far from definitive. It's best to think of them as the start of a path that is heading in a different direction than the theory directions that have previously been applied in government hiring. But it is only the start of exploring this new path forward. Whether or not the path is viable, and where it will lead, are still unknown.

Key Concept: No "Culture Fit" without an Anti-Bias Approach

Talent Cloud has designed a model that attempts to optimize fit-to-team by taking into account human factors like team culture, work environment and management leadership style. But we can't talk about optimizing the hiring

List of Experiments and Interventions

- Accessible by Choice and by Design
- Skills Instead of Experience, and the Significance of this Choice
- Indigenous Talent Portal
- Case Study: Changing the Defaults on Essential Education
- Applicant Story: Getting through the Door
- Building Towards #FreeToBeMe: LGBTQ2+ on Talent Cloud
- Why Not Use Anonymized Recruitment?

outcome and strengthening the "culture fit" in a staffing process without ensuring that our model includes corresponding checks and balances against bias against equity-seeking groups. **A staffing model that produces a fast process and a strong hire must not create these outcomes at the expense of advancing diversity and inclusion. The model can't become a vehicle for a "like hires like" solution.** And correspondingly, we can't promote meaningful diversity and inclusion in government staffing without considering the many ways in which culture, operating context, and individual values shape hiring decisions. If we want deep level change, we need to look into the interlocking machinery of process, policy, common practices, history and human behaviour.

To reach a different outcome, we have to apply a different approach. Talent Cloud is a project in pursuit of two significant different outcomes - namely, faster staffing and an optimization engine that produces a strong fit-to-team. To do this in a socially responsible way, we need to design differently, so that the platform is experientially inclusive for all groups, particularly marginalized and equity-seeking groups. We also need to make sure that the actual hiring outcomes, not just the "packaging" on the platform, advance meaningful diversity and inclusion. There must be ethical balance amongst the project's three performance objectives in the pursuit of results.

When We Change the Value Equation, We Change the Outcome

At the heart of Talent Cloud's diversity and inclusion approach is a very simple principle: when people change what is valued in a system, they change who is valued, and that leads to different results. Our theory is that when a system is designed to recognize and value a greater diversity of human experiences and life paths in the acquisition of skills and experience, managers in that system will find value in the competencies of a greater diversity of

applicants during screening, assessment, and final hiring decisions. And that will lead, in time, to a more diverse, inclusive public service.

Changing the outcomes that a system produces requires more than well meaning words of commitment to inclusion. It requires a fundamental change in the choice architecture of the value structure at key decision points in the system. It also requires a recognition that the fundamental design of any staffing model is culturally coded. Making these changes can be very difficult, especially if some elements of the existing choice architecture are seen to be too entrenched, too complex or too foundational to be adapted. Because there's nothing more culturally coded than something that people believe can't be changed - something that is taken for granted as immovable to the extent that people forget it was socially constructed to begin with, in an earlier time.

We're deeply grateful to everyone who was brave enough to share their experiences and thoughts with us during the research for this component of the project, even when the storytelling was deeply personal and hard to share. **That kind of courage places on our team a burden to honour the stories through action of our own.** So here is the theory and work we give back as our first step in this direction.

Making Diversity and Inclusion the Heart of Design

Biggest Takeaways

1 Rethinking job requirements in the form of required skills is the biggest single impact we can recommend to improve diversity and inclusion. But to do this successfully, the application system design must also guide applicants to formulate their skills claims in a way that managers and HR advisors can value. Otherwise, the whole intervention will fail.

2 Show, don't tell, when it comes to making people feel included. Instead of motherhood statements on inclusion and diversity, we recommend:

- Messaging aimed at user groups that includes concrete examples of how a product or team is working towards more inclusive results.
- A pleasant accessible experience that does more than meet the minimum requirements.
- Wording and grammar choices that are GBA+ sensitive and plain language, making content more accessible for people of different genders and linguistic groups, and those with varying levels of access to advanced education.
- Products and platforms showcasing colours and images that have meaning for equity-seeking groups.
- Sensitivity towards the complex relationship between the Government of Canada and Indigenous communities, and the way in which Government branding and imagery can evoke associations for Indigenous users that are not the same as associations made by other user groups.
- User testing with diverse communities, and honouring the results of that testing with changes, as required.

3 We recommend crafting diversity and inclusion initiatives that have both "heart" and "teeth" - building an equality-driven future together, while taking concrete action to acknowledge and address existing systemic inequalities.

"Building a viable solution requires more than just inclusive designs. It also requires structural change."

Our Philosophical Approach

Our team cares deeply about building for accessibility. Accessibility is about making things that anyone can use. It's about investing the time in making a product that works for everyone, and caring about how easy it is to use, regardless of a person's individual needs when it comes to accessing content. Being a product team in government we are afforded the time to do it right, which some of our developers have lamented is not often the case in the private sector.

The world we want to be part of is a world where everyone's skills and life paths are valued, so in this instance we're glad to be building a product in government where we can focus efforts on doing the right thing.

In the context of an application that is always being changed and improved, it's not good enough to be accessible at a single point in time. Even if it were, there are always ways to improve further. Instead, we're now thinking about "being accessible" as a process of continuous improvement.

Setting up for Accessibility

Every feature we build needs to be accessible, but like making a great plate of nachos, you need the right ingredients to even get started. For our team, a few things have stood out as being particularly helpful over time.

In-House Expertise: One of the first developers we hired onto the team specialized in building accessible web applications and this has proven to be immensely important for our product's development. Having someone on the team that people can turn to for advice helps get everyone familiar with their responsibilities and sets expectations.

Accessible Design System: Giving developers the tools to help them is also key. Over time we've been able to build an in-house design system that does a lot of the accessibility work for our developers: ensuring color contrast is adequate, components like the menu or modals (pop-ups) behave properly, and key accessibility considerations are already built into the design options.

Building for Mobile Devices: Our design system, and application, are built to work on screens of all sizes, whether computer screens or phones. This is important for lots of users, but increasingly we feel this is an important part of building an accessible application. We can't reliably make assumptions about the ways people use assistive technologies or the devices they need. People are diverse and we need to build accessible products for as many use cases as we can. In today's world, that has to include mobile devices.

Automated Testing to Catch the Easy Stuff: Other tools for our developers like Google's Lighthouse, which can automatically catch some accessibility concerns, have also become staples of our development process. These tools can give you a false sense of accomplishment though and rarely mean that your application is accessible on their own. For us, getting these automated tools to

pass at 100% is the easy part, getting the application working acceptably in the real world is the challenge.

Testing with Real Users to Catch the Nuances: For actual testing of our application with assistive technologies, we've dabbled in using screen-readers ourselves, but haven't stuck with it. While useful, the practice is flawed because we don't use assistive technologies the way someone who needs them everyday. Even if we did, it's still only one combination of assistive technologies and there are many more to consider. Instead of trying to do final accessibility testing ourselves, we now rely on a third party service that connects us with real people that use assistive technologies. The company we've used for this is called Fable (https://makeitfable.com) and we have their users test our features before we consider anything to be ready for the public.

The best part is that these testers will be using a variety of different browsers and assistive technologies, so you can have more confidence that your application works for everyone. Working with Fable allows Talent Cloud to encounter and be tested against "edge cases" that wouldn't be caught by automated testing, but are a critical part of building a truly inclusive product.

Our Development Pipeline for Accessibility

Testing for accessibility with real users is an important part of our process for building an accessible application, but it's far from the end of it. Accessibility gets considered at almost every stage of the development process.

Feature is proposed by policy shop
- Accessibility implications discussed with designers

Coded
- Automated tests must pass at ~100%, but that's the easy part, and not enough on it's own
- If possible, update the design system to address accessibility issues and make future features easier to implement

Mock-up with UX team
- Check in with expert on the team to see if there are accessibility concerns (some features never make it past this point, even if people are excited about them)
- Address issues raised or flag them for developers

Accesibility Testing (Fable)
- Fable: Test with real assistive technology users (multiple browsers, multiple assistive technologies)
- Iterate as required until concerns are addressed

Release the feature
- Address issues raised by users, if any

What this Looks like in Practice

We wanted to share an example of how much working with real users changes the outcome of the product, even after a design passes a number of automated accessibility tests. This is meant to highlight that **an algorithm alone shouldn't be what gets to determine if something is considered "accessible." This can only truly be determined by those with real world experiences of requiring accessible solutions.**

Here are two before-and-after reports from Fable that we received for the new reusable menu for our design system. Our first attempt followed standard practices and we made the assumption that tabbing through the menu would be the best way to navigate it with the keyboard. We had heard that menus could be some of the most difficult elements to navigate with assistive technologies, so we were expecting to have more work to do but the results were even worse than expected. The menu seemed to work fine to us, but users were simply unable to navigate it. (Image 1)

A lot of effort and research went into our second attempt. Descriptive text was added to explain how to navigate the menu, we switched to a combination of tabbing and arrow keys for navigation, and the escape key was added to close submenus to give just a few examples. The results of our second round of testing were completely different. People with a variety of combinations of assistive technology and browsers were now able to complete the same tasks from before. Menus can be difficult to get right, so this felt like a big win for our team. (Image 2)

Our approach to building accessible applications has evolved a lot since we first started. Because we're always improving our application, it means we are continuously working to improve the accessibility of our site too. The lessons that have been learned over the years about product design and development are equally applicable to building for accessibility. The best way to obtain the outcomes we want, whether it's cyber security, interactivity or accessibility, is to build them into each part of the process and test with real users. This has proven time and again, to be more effective than tagging on a compliance exercise at the end of the process.

Feedback summary

Name	Configuration	Accessibility	Issues	Completion
Ted	Switch system with Chrome	Needs improvement	1	No
Matthew	OS Magnification with Chrome	Needs improvement	1	No
Tyler	JAWS with Chrome	Needs improvement	2	No
Erik	VoiceOver with Safari	Satisfactory	9	Yes
Richard	NVDA with Firefox	Needs improvement	7	Yes

Accessibility

- Great — 0%
- Satisfactory — 20%
- Needs improvement — 80%
- Very poor — 0%

Ease of use

- Very easy — 0%
- Easy — 40%
- Neutral — 20%
- Difficult — 40%
- Very difficult — 0%

Image 1: our first accessibility test using our menu.

Feedback summary

Name	Configuration	Accessibility	Issues	Completion
William	OS Magnification with Chrome	Great	0	Yes
Geza	JAWS with Chrome	Great	0	Yes
Niccolina	NVDA with Chrome	Great	0	Yes
Matthew	VoiceOver with Safari	Great	0	Yes
Saif	Dragon NaturallySpeaking with Chrome	Satisfactory	2	Yes

Accessibility

- Great — 80%
- Satisfactory — 20%
- Needs improvement — 0%
- Very poor — 0%

Ease of use

- Very easy — 40%
- Easy — 60%
- Neutral — 0%
- Difficult — 0%
- Very difficult — 0%

Image 2: our second test, after improvements.

The Accessibility, Accommodation and Adaptive Computer Technology (AAACT) offers training, tools and testing services to help departments create accessible digital content that is inclusive by design such as documents, presentations and web content. For those in the Government of Canada looking to learn more about accessibility, this team is a great resource.

The Problem

Selection criteria (or job requirements) are at the centre of the merit based system that is the talent pipeline for government. It's a big role for what can otherwise be a small section of the job advertisement. Nonetheless, this small section is what is primarily used to decide who will be hired by the Government of Canada and who won't be.

In the Government of Canada, it's standard practice to craft criteria that are several sentences long, often describing the experience that the manager and HR advisor think will ensure applicants have the skills needed to do the work. The problem with this approach is that it constrains the paths by which people could have acquired the skills. If those involved in creating the job advertisement are unaware that similar work is being performed in other sectors, they might even limit the experience to be "in government".

At scale this type of experience based, or biography based staffing can have a huge impact on the life experiences that those entering government have. In other words, the type of selection criteria we use can directly shape the diversity of the talent we hire.

To address this limitation of experience criteria, Talent Cloud decided to shift to exclusively allow skills (and occasionally knowledge) as criteria on our job advertisements. Experience still plays a key role in the application process. Applicants are encouraged to submit their experience as evidence that they have the skills requested on the advertisement. But using skills, rather than experience, as a criteria means we're not limiting what experience led to developing and demonstrating those skills.

A Problem of Our Own

Because of Talent Cloud's lack of access to a Protected B server, the team was unable to collect Employment Equity data on the platform, which seriously undercut our ability to statistically prove (or disprove) the validity of the model.

To address this, we took extra care to conduct qualitative analysis, and interview applicants and managers wherever possible. We were also able to do a more in depth analysis of a small handful of positions on the platform. But a larger statistical study will be required before any definitive conclusions can be drawn.

Skills Instead of Experience, and the Significance of this Choice

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The Hypotheses

- The overall idea: Changing the definition of the requirements in the selection criteria for the job advertisement will change who gets hired in the end. By replacing a list of detailed required experiences with a list of skills, and broadening what is considered evidence of competence, more people are likely to have life paths that will allow them to claim and demonstrate that skill, which will lead to more diversity in the applicant pool.

- The new model will be able work within the current government hiring ecosystem to translate value and influence decision making at critical points in the staffing process:

  1. **Creating the job advertisement:** Managers will be able to articulate their hiring needs in terms of skills, rather than previous experience, when they are developing the job advertisement.

  2. **Decision to apply:** Using skills on the job advertisement, rather than experience, will attract a more diverse group of applicants, as more people will see themselves as potentially qualified for the role.

  3. **Application:** Applicants will be able to put forward sufficient evidence in the job application to demonstrate that they have the required skills.

  4. **Initial screening:** Managers and HR advisors will be able to understand the value of this evidence so they can decide who to invite to further testing and who to screen out.

  5. **Final hiring decision:** A final result will show increased diversity, leveraging what is hopefully a higher percentage of equity-seeking applicants in the initial applicant pool and following the application screening stage.

The Experiment

This was a multi-year endeavour, with several stages in testing and development.

Initially, Talent Cloud worked on the Impact-Driven staffing model (see Section 2). This helped managers articulate job requirements by first focusing on what the impact of the hire would be, and then what key tasks would be done to deliver the impact, and what skills would be required to do those tasks. This led into testing of numerous different types of skills frameworks and methodologies (which could fill their own small report).

Once a framework for articulating skills requirements was selected, based on user testing with hiring managers, an MS word document version of the flow was given to managers to use for testing on live job advertisements. Following the success of this early testing, the framework was coded into the platform as part of the tool for building job advertisements.

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User testing was also done with applicants to see if the skills design was appealing, and something that they could speak against in an application. This was then tested live through the early version of the job advertisement and application process, where applicants were able to claim skills at certain levels, and then provide both explanations and attached evidence (such as micro-reference contacts or portfolios).

The Talent Cloud team then carefully monitored how managers and HR advisors processed the information in the application forms. The team also tracked, to the extent possible, how applicants were viewed as they moved through the hiring process.

The team also interviewed numerous managers and applicants, and conducted a survey with applicants on their platform experiences.

The Results

While the approach appeared to produce the desired result in terms of diversity in the applicant pool (to the extent that we were able to determine), the early application process proved to be a stumbling block in the process. Some managers and HR advisors had a lot of difficulty assessing applicants who didn't have more traditional experience, and many applicants didn't provide the necessary evidence for the skill required when the application gave them the chance to do so. This problem persisted with the initial design, even after several smaller interventions and nudges were added on both the applicant and manager side of the equation.

Interestingly, despite the challenges at the screening stage, managers still ended up making diverse hires, and many reported that they found talent that they would never have normally managed to attract or would have hired. Applicants who were hired also regularly

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reported that they had previously not been successful in government applications or had not wanted to apply, and that the skill-based selection criteria had influenced how they perceived their qualifications when they saw the initial job advertisement.

So the problem with the model was clearly at the screening stage - not with the attraction of applicants or the final decision of managers. Talent Cloud determined that a better "value calculator" was needed if managers were going to be able to recognize and accept a wide variety of skills evidence from applicants. And applicants were going to need to be better equipped to give managers what they were looking for when making the decision.

This led to the development of a tagging system where applicants are able to identify experiences in one of five categories:

- Education
- Work Experience
- Community Experience
- Personal Experience
- Awards

Once an experience is tagged, applicants are asked to connect skills to the experience, and then explain how the skill was used during that specific experience. The platform then produces a narrative of the skills experience that can be viewed either chronologically or per skill. Applicants are given a window into what managers see when they assess if an applicant possesses the necessary skill or not. And managers are presented with the information they need in a way that showcases skills gained through non-traditional work and education pathways.

Notably, this design was heavily influenced by user testing with Indigenous users and others from underrepresented groups who emphasized that there needed to be a better way to recognize the value of their lived experience.

In user testing throughout 2020, and in the very limited live testing in 2021, this new design performed spectacularly well. It has been one of our team's most successful interventions, and one of the hardest pieces of theory and design the team has worked on. We deeply hope that someone will be able to continue this research with a statistically large enough sample size. **If proven as a methodology, this could have an impact on the design of many inclusion and diversity approaches in the Government of Canada, far beyond just recruitment.**

Insights

Setting skills as the essential criteria (rather than biographically based experience) proved to be a highly valuable intervention in terms of advancing diversity. But it's not an intervention that works alone.

When it comes to advancing diversity and inclusion, it's the totality of the ecosystem that matters. That means that diversity and inclusion must be structurally supported at every stage - from the

Skills Instead of Experience, and the Significance of this Choice

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initial appeal of a recruitment platform to the design of the job advertisement to the initial screening to the final assessment. **While setting skills as the heart of the process made a difference, that difference would have been undone if we hadn't found a methodology that allowed managers to see and translate the value of diverse lived experiences into a recognition of those skills.**
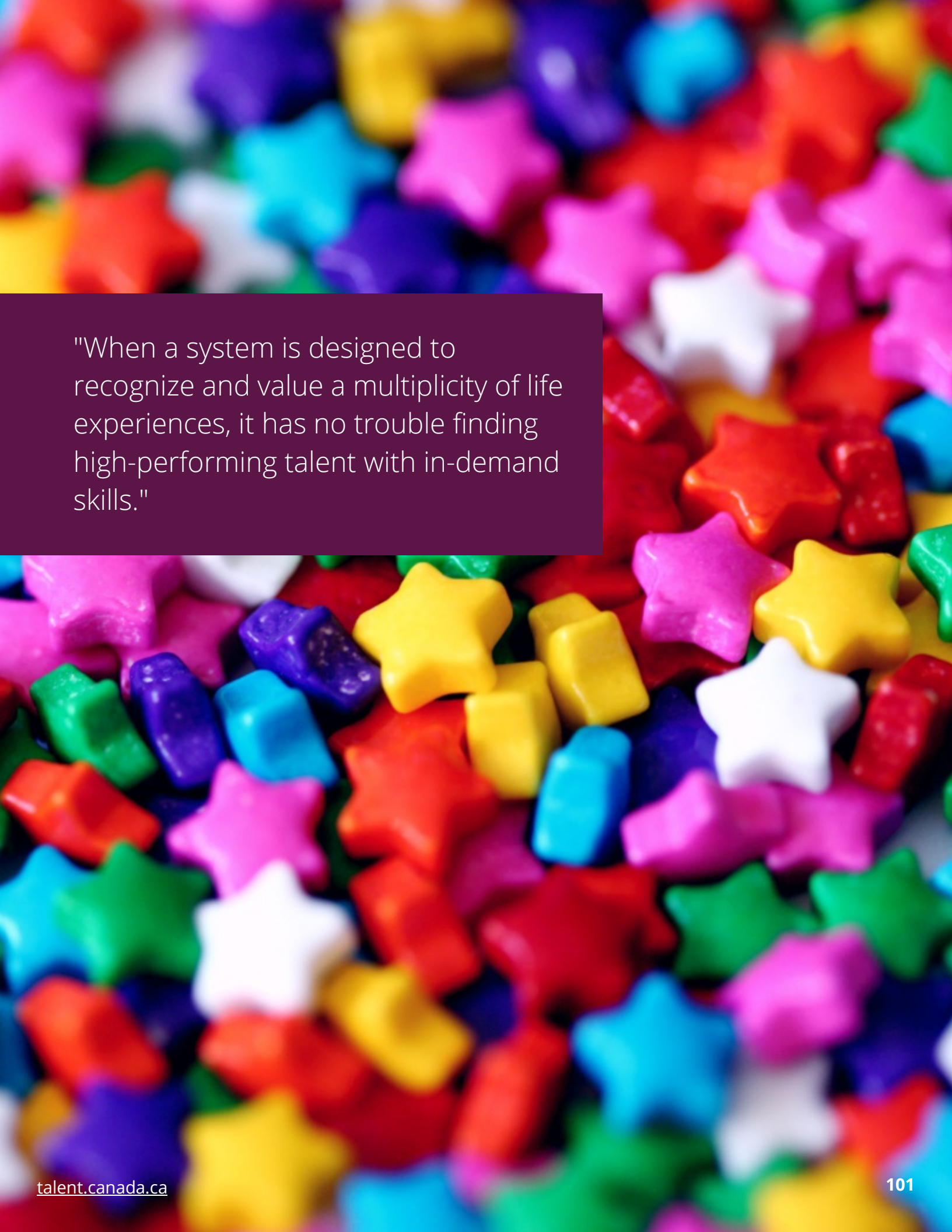
Bottom line: rewriting essential criteria won't make a difference alone. But replacing detailed experience criteria with required skills is a powerful step forward when paired with an application design that connects diverse life paths with the structural representation of applicant abilities.

Assessment for soft skills

In our user testing, managers wanted to validate soft skills (transferable skills) by testing them directly or through reference checks. Few even considered the information on soft skills applicants provided in their applications. And evidence of soft skills was one of the things in an application that people had the hardest job writing.

Because it takes a lot of time to apply to jobs, and we don't want to ask for things that aren't needed, in the new Timeline Application Model applicants no longer need to write descriptions on how they met the soft skill requirements. This saves time and energy for managers and applicants, and places more emphasis on providing strong, clear evidence of occupational skills in the initial application.

"When a system is designed to recognize and value a multiplicity of life experiences, it has no trouble finding high-performing talent with in-demand skills."

Indigenous Talent Portal

What is it?

The Indigenous Talent Portal is designed to provide a space where Indigenous talent can browse and apply to Public Service employment opportunities aimed at the recruitment of Indigenous talent. They can also browse jobs open to the general public on the site.

Functionality is planned to allow for the posting of internal mobility opportunities for Indigenous public servants, promoting access to continuous learning, development and promotional opportunities.

Members of the Indigenous community can create a profile to showcase their unique set of skills acquired through ancestral knowledge, and through mainstream pathways. At the request of Indigenous users, there is functionality planned to allow Indigenous talent to show or hide Indigenous components of their profile, as they choose, when applying to various types of employment opportunities.

Why Build This?

The Government of Canada is not an easy place to work for many Indigenous people. Systemic racism and discrimination are still an ongoing reality, despite a growing effort across the Public Service to address issues, change behaviours, and remove barriers. But systemic racism several hundred years in the making doesn't disappear overnight, nor does the legacy of its presence in the memories and experiences of Indigenous people.

The Indigenous Talent Portal is being developed for the Indigenous community - with decisions and directions set by the Indigenous community
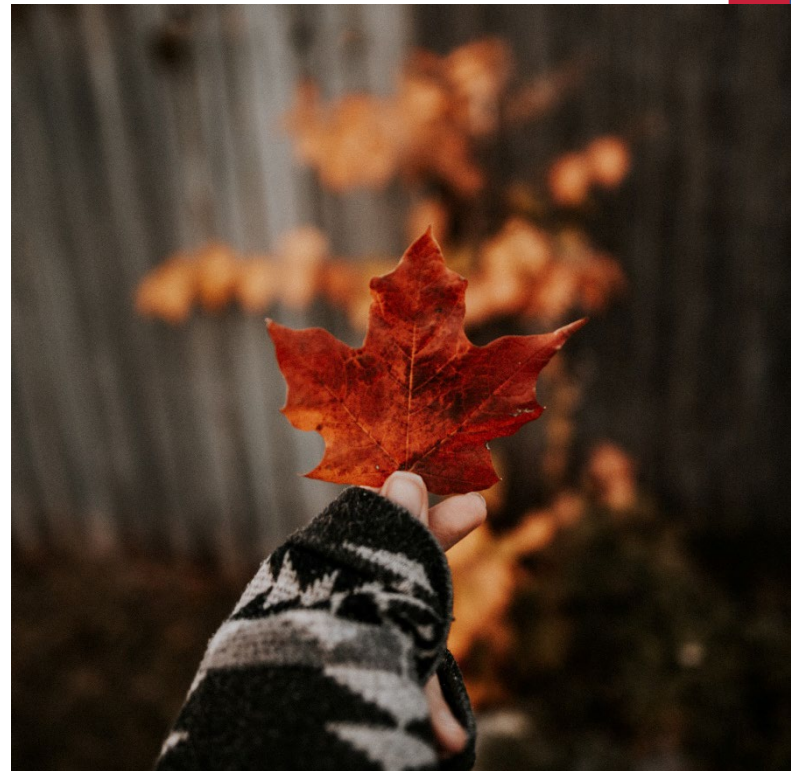
- "to reclaim our stories and to reset the way Indigenous talent is valued."

In a time of reconciliation, there was no way Talent Cloud could consider building a new model for talent recruitment that didn't put the needs of Indigenous talent at the heart of the design, (as well as the needs of other underrepresented and equity-seeking groups). For Indigenous talent, the trust between government and community is broken. To rebuild trust, we begin by rebuilding a new process, together. That means making choices, like hiring our Indigenous Community Liaison before our first developers created the first line of code for the platform. Inclusion cannot be an afterthought. It is, by its very definition, at the heart of the model.

"As we focus on combatting racism, it is not sufficient to simply equip ourselves with knowledge and tools. We must take action in ways we know will be meaningful in addressing all barriers and disadvantages. Being a leader means taking an active role in ending all forms of discrimination and oppression, consciously and constantly challenging our own biases, and creating an environment in which our employees feel empowered and safe to speak up when they witness barriers to equity and inclusion. Inaction is not an option."[1]

~ Clerk of the Privy Council; Call to action on anti-racism, equity, and inclusion in the Federal Public Service

Steps in Development

- **In-House Expertise:** One of the first hires on the team was our Indigenous Community Liaison, who has led the design and community outreach for the Indigenous Talent Portal. Having someone Indigenous on the team, with lived experience in Indigenous communities and extensive knowledge of protocol, has been essential to the team's efforts to engage Indigenous users respectfully and meaningfully at all stages of design and development.

- **Space to Talk and Share:** In an environment where many of our user testers were residential school survivors or the children of residential school survivors, talking to people about working for government and trusting government with personal information wasn't like the discussions we had with other user groups. There is a difficult history and a context here that has to be honoured, and to honour it, you first have to acknowledge it. In this case, that meant changing our approach to user testing. The team worked with our Indigenous Community Liaison to find spaces where smudging could be conducted at workshop sessions, and seats could be arranged in a circle. Our Indigenous Community Liaison also took care to acknowledge traditional territories, and to speak in her community's language whenever possible. We kept Kleenex boxes on tables. Our Indigenous Community Liaison cooked and shared traditional foods. The team brought cookies and chocolate.

- **Internal Engagement:** The team reached out throughout the process to Indigenous public servants with various degrees of seniority to understand early and long term issues related to recruitment, onboarding, work environment, and career advancement. The team brought several issues back for multiple rounds of discussion, clarifying our understanding of the issues, desires, and concerns of Indigenous employees before we moved on to user testing.

- **External Engagement:** Similar to our process for engaging internal employees, representatives from the main national organizations were engaged in discussions, and later the reviewing of designs, as well as individual members of various Indigenous communities who would be the type of talent the Government of Canada would be lucky to attract.

- **Prototype Testing:** At each stage of design, users were engaged - carefully going over every text box, process step, image, and function on the portal. Many of these prototype designs involved very difficult issues, such as self-identification. Several of these components are still being finalized with all groups involved, and some features may need to be tested live, and then revised. Some features also represent a significant departure in thinking from the way data like this is normally collected and represented on Government of Canada sites, which is why our team has endeavoured to always keep Indigenous communities at the steering wheel when it comes to design. There isn't always agreement between communities, either. And working through these design issues with communities until it's right is part of our Digital Standards commitment to empowering users in the design process.

- **Giving Back:** During user testing sessions, the issue of the value of Indigenous languages, and the challenge of bilingualism, came up over and over again (effectively, having to learn two colonial languages in order to advance in a public service career, while Indigenous languages aren't recognized). It was a contentious and painful discussion. So early on, our team decided that at least some of our Indigenous Community Liaison's time every week would be devoted to working on this issue, even though it wasn't a part of our mandate and our platform features plan. So why do it? Because when a team in the Government of Canada asks Indigenous communities to

Reducing Barriers for Equity-Seeking Groups: When is an "add on" program a solution? And when it is a problem?

An add-on program is an initiative that seeks to close a gap in performance outcomes by providing an additional service, above and beyond the main program's operations, such as a targeted recruitment program for Indigenous employees or a mentoring program for women executives. These types of initiatives can be extremely valuable in advancing inclusion and diversity… but they can also be problematic. So how can a team looking to address gaps in outcomes know whether the initiative is likely to help or hurt?

An add-on program that fills a unmet need, while generating structural changes to the central program, contributes to the advancement of inclusion. An add-on program that is created so the central program doesn't have to be changed contributes to systemic discrimination. If there is an inequality in the power dynamics, structural design, and choice architecture at the foundation of the central program, no amount of additional programming offered elsewhere will produce a long-term corrective step towards equality. The end goal of an add-on program should be deep systemic change. As long as this is the compass bearing that informs decisions, it's at least starting out pointing in the right direction.

give time and stories and ideas and emotional investment to something, that team should give back. In our case, that meant dedicating some of our team resources to support work done by the Indigenous Federal Employees Network on

advancing a proposal of ideas on this issue. This isn't a Talent Cloud initiative. It's just a chance to show our acknowledgement of the struggles and barriers faced by Indigenous talent inside the Government of Canada, even today, and to do what we can to help with this.

Status of the Portal

The restrictions related to privacy and Talent Cloud's cloud server environment have meant that we haven't yet been given permission to launch the Indigenous Talent Portal. This was because use of the Indigenous Talent Portal by applicants was deemed to be an expression of their employment equity status, which is information that can't be collected on a server that doesn't allow for Protected B data collection. (See Protected B and the Move to Cloud in Section 1.)

The design and user testing of the Indigenous Talent Portal is in advanced stages, and ongoing efforts have been made to make sure that members of the Indigenous community were able to direct the work and the features at all stages of design. But due to the restrictions on release, Talent Cloud hasn't launched final steps in the development phase. While much of the design is set up to integrate with and leverage existing features on the Talent Cloud platform, and the system of portals is in place, it would still take a few developers and a few months to get this portal live, plus work from our Indigenous Community Liaison.

Currently, there are no funding partners to support this work going forward, although there have been a few dozen managers who have already come forward asking to post positions on the portal. There seems to be strong demand for teams looking to increase the diversity of their talent. The Indigenous Federal Employees Network has also identified the value in Indigenous employees being able to post profiles and find opportunities for internal mobility, development, and promotion. The team continues to try to seek resources and support for this endeavour.

Features and Insights

Job Advertisements designed for Indigenous Talent

The job advertisements on the Indigenous Talent Portal contain new elements that were identified as important during engagement sessions with Indigenous users.

- Employees can filter opportunities to only see those designed to attract indigenous talent, or remove the filter to see all Talent Cloud opportunities.

- Unique imagery and colors contribute to a user experience that communicates an inclusive experience for Indigenous talent.

- A descriptive paragraph, drafted by the hiring manager, is provided to explain why this job requires Indigenous talent. (Indigenous employees reflected during user testing sessions that they were sometimes wary of applying to opportunities designed to attract Indigenous talent due to fears of being tokenized. This paragraph is intended to clarify, upfront, the reasoning behind the recruitment need so applicants can decide for themselves if they are comfortable with the role.)

Indigenous talent opportunities use unique imagery and colors.

Hiring managers explain what makes the opportunity specific to Indigenous talent.

Guidance for Managers seeking Indigenous Talent

Managers drafting job advertisements designed to attract Indigenous Talent will use the same tools and portal as other Talent Cloud job advertisements, but additional fields and guidance are provided.

- Managers are asked to reflect on the unique knowledge which Indigenous people bring to the Public Service when crafting their impact statements.

- Managers are provided with checkboxes to indicate the reasons they are looking to hire indigenous talent. (This list of reasons to hire Indigenous talent came from workshops with both Indigenous users and hiring managers.)

- Hiring Indigenous talent for the sole purposes of increasing representation in an organization is seen as a red flag by some in the Indigenous community. If the only reason provided by the manager is under-representation in their organization, an additional paragraph of guidance is provided to help managers better understand the risks of tokenizing Indigenous talent, and whether or not they will be able to provide a hiring opportunity that will benefit and be inclusive for Indigenous talent.

Why are you looking to hire Indigenous Talent? Choose All that apply.

- [✔] There is an under-representation of Indigenous talent in your organization;
- [ ] This is something you care about;
- [ ] The nature of this government work would benefit from a diverse perspective;
- [ ] The work concerns Indigenous communities and issues;
- [ ] The nature of the work includes dealing with the Canadian public;
- [ ] You acknowledge the value of Indigenous knowledge
- [ ] You want to support Talent Cloud's Indigenous Talent Pilot

Look for this icon for additional guidance on attracting and retaining Indigenous Talent

Did you know: Under-representation of Indigenous talent within the Public Service is an ongoing barrier?

We noticed that you chose this option as your sole reason for recruiting Indigenous talent, and wanted to ensure that you are aware of some behaviours which may contribute to Indigenous people becoming tokenized: - recruiting for the sole purpose of checking boxes and meeting 'reconciliation' quotas; staffing a position with Indigenous talent, but not implementing or encouraging the unique Indigenous knowledge which was targeted for this position; not ensuring that the appropriate cultural support is available to Indigenous employees.

We hope this information is useful for you in this process!

Managers can specify the reasoning they are looking to hire Indigenous talent.

Honesty Pledge

The honesty pledge allows self-declaration of Indigenous status, while being respectful of individual identity.

- The options have been presented as checkboxes so multiple affiliations could be indicated if needed.

- A carousel was introduced for the options so that no community would be above another.

- Allows space for individuals who may not be able to trace their ties to a specific community by including an option separate from Métis. (This was in response to expressions of frustration from members of the Métis community. They raised the issue of Indigenous people without clear ties to a specific Indigenous community sometimes selecting the category of Métis on government forms because they didn't self-identify as Inuit or First Nations, and there was no other option.) This feature introduces a number of complexities around identity and belonging, and is still in active testing. There is a strong likelihood that it will need to go through several more rounds of refinement, given the sensitivity of the topic.

- All Canadians are permitted to apply to any Government of Canada position. The "ally" option provides an opportunity for honesty for those who are not Indigenous, but perhaps have ties to the Indigenous community or Indigenous cultural competencies. These applicants may still be considered for the position, but priority is intended to be given to indigenous talent. A link is also

We recognize the importance of Indigenous voices in the federal government.

⬤ " I affirm that I am a member of the Indigenous Community "

◀   🥁   🌸   🌙   ▶

☐ I am Métis and member of the Métis Community.

◯ " I am **not** Indigenous, I am an Ally.
And I would still like to be considered for this position. "

The honesty pledge and its options.

provided to redirect people who no longer feel they are a good fit for the opportunity. The intention behind this series of choices and nudges is to deter those who might not be Indigenous, but see themselves as connected to Indigenous identity, to have options of representation other than a false claim of Indigenous ancestry. False claims of Indigeneity, and the friction and harm this causes for Indigenous communities, was something that was raised repeatedly in workshops, and Indigenous users asked us to test approaches for addressing it. Ultimately, falsely making such a claim is a form of racism, and it's a behaviour we wanted to discourage on the platform. We worked with both behavioural sciences and Indigenous experts to come up with this initial intervention. But it is in need of testing, and will require several rounds of refinement.

- A signature box is provided to highlight the importance of honesty in Indigenous communities, especially for self-declaration, where even a few bad actors can cause a disproportionate amount of damage.

Profiles Tailored to the Indigenous Community

The profile has been improved to allow Indigenous talent a place to highlight what makes them unique and …

- The option to show/hide various components of the profile to hiring managers.

- The option to identify the location of the user with Traditional Territory/Nation/Community. These options give Indigenous users narrative agency and the ability to describe themselves and their relationship to community and land in the way that they want, rather than using a choice architecture for geography that reflects colonial naming conventions.

- A text box is provided so Indigenous users can, if they want to, describe their lived experience with (or in) Indigenous community(s).

- Indigenous users are given a chance to highlight if they are traditional language speakers. The intent is to provide options that are broken down by language families and dialects.

- Traditional skills are provided to help ensure that the skills profiles of Indigenous users reflect the unique talents of the Indigenous community - skills that can be otherwise overlooked, especially in government.

My traditional Territory/Nation/Community is:

First Nations ▼

(Hidden) My traditional Territory/Nation/Community is:

Inuit ▼

Add Another Territory/Nation/Community

My story working in/with my community:

Start writing here

Options allowing the user to identify their traditional Territory, Nation, and/or Community.

Building inclusively with Indigenous talent means learning to understand and respect connections between land, identity, family and community.

Think that has nothing to do with staffing? Think again. Asking an Indigenous applicant to fill out a text box for their current location of work is a loaded question, especially if the staffing system doesn't recognize Indigenous traditional territories in its naming conventions, or the idea that applicants may live seasonally in different places.

CASE STUDY

Changing the Default Setting on Essential Education

Changing the Default Setting on Essential Education

Case Study

A Look at the Complexity and Process Behind Each Design Element

Talent Cloud talks a lot about how much attention goes into the representation of literally every form field, process step and interaction on the platform for each of its user groups. To give you a better sense of how much effort and expertise it takes to get even a single form field or intervention working so it produces the intended hiring result (remember: focus on delivery!) we wanted to walk you through the development of a single feature of our platform: the essential education requirement in a job advertisement.

Interface, Layout and Language as tools to remove barriers for Indigenous Talent

Talent Cloud set-out to develop a platform designed to attract, protect, and empower Indigenous talent to thrive within the Federal Government. And to achieve this goal we continuously design and test iteratively using user research.

In user research, critical failures occur when a user is unable to achieve their goal. At Talent Cloud, every qualified applicant should have a shot at a job they're interested in, and that starts with submitting an application. Qualitative user research helps uncover the hidden paths that prevent applicants from applying.

Some of the earliest research on Talent Cloud focused on the current job poster's design, layout, and the information it contained. But when we aim to attract a very specific subset of the population, we need to design in conjunction with that group, to address specific problems and design specific solutions. We reached out to the Indigenous Community to better understand their perspective as external job seekers, with the hopes of uncovering critical failures in our design.

Known Barriers

A common myth in Government Hiring is that certain job classifications require a certain type and level of education degree. While that is true for a number of positions, it is more often than not an overgeneralization. The truth is that Hiring Managers can choose to accept any number of qualifications and forgo an Educational Requirement for many government

> "Education is a concept of everything that a person has learned throughout their life journey, which includes the lessons learned from lived experience."
>
> ~ Talent Cloud's Indigenous Community Liaison

classifications, as long as an applicant's qualifications add up to an Equivalent Experience.

For this purpose, we include a description of Equivalent Experience in every job poster whose classification allows it. This opens up the opportunity to a much larger pool of talent. And increase manager's opportunities of finding a candidate with the right fit for their team.

Success! We found failure!

When testing our job poster designs with members of the Indigenous community we asked: "Would you apply for this job? And Why?" **Many responded "No" despite being qualified for the job advertisement.** Critical Failure.

While the text on the Education Requirement section provided information regarding Equivalent Experience, the language and layout used to display the information on the job poster included unconscious-bias (*Image 1*). The language and design in our titles catered information to applicants who already meet the criteria, and hid important information in the second paragraph for users looking for an alternative path. Applicants would only read the title or the first sentence, and immediately filter themselves out despite meeting the criteria in the second paragraph. We tested a different version: a side-by-side version to improve visibility of the Equivalent Experience (*Image 2*) but the problem persisted.

Design principles state that information is generally consumed Top-to-bottom and Left-to-right. And in addition users "skim" information instead of reading it. Our first skimmed elements are: Education Requirements ->

Criteria

Education Requirements

2 years post-secondary:
Successful completion of two years of post-secondary education in computer science, information technology, information management or another specialty relevant to this position; or

Equivalent experience:
If you have on-the-job learning or other non-conventional training that you believe is equivalent to the 2 year post-secondary requirement, put it forward for consideration. Your manager may accept a combination of education, training and/or experience in a related field as an alternative to the minimum post-secondary education stated above.

Image 1: First design of Education Requirements and Equivalent Experience on a job advertisement.

Changing the Default Setting on Essential Education

Case Study

Education Degree or Diploma -> Equivalent Experience -> 2 years post-secondary. As such, this design strongly prioritizes Western education, diplomas, and degrees, as the most important requirement to apply for the position. We learned that even when applicants read the Equivalent Experience section they wondered if a "hidden hierarchy" existed behind the scenes, and whether they would have enough to compete with applicants who had a degree.

Placing the two concepts side-by-side (rather than above/below), was a deliberate choice. The attempt was to reflect the absence of a hierarchy between the two options. But by placing Education Degree Requirement first and

calling the alternative option Equivalent Experience we are still showing a preference for the former and framing the latter as a dependent lesser version. This layout change was not enough to solve the problem.

However, **if the Degree Requirement and Equivalent Experience are truly equal, it means we can reorder them, and define the language in a way that the distinction is clear and showing their independent value.** In the hopes of removing bias for "diploma" based applications.

In our last design (*Image 3*) we present alternative information first to those who are looking for it, and give validation second to

Criteria

Education Requirements

Education Diploma

2 years post secondary.

Successful completion of two years of post-secondary education in computer science, information technology, information management or another specialty relevant to this position.

or

Equivalent Experience

On-the-job learning or other non-conventional training that you believe is equivalent to a 2 year post-secondary diploma.
The manager may accept a combination of education, training and/or experience in a related field as an alternative to the post secondary education.

Image 2: Second design, side by side comparison.

Changing the Default Setting on Essential Education

Case Study

those who already meet traditional requirements. This design caters information to those who need reassurance and guidance the most, promoting job opportunities for everyone, not only those with access to traditional western education.

Diversity creates higher quality products. As designers of products and services we must remember the dangers of implicit bias; It is invisible by nature and it hinders representation. But if we make an effort to include the voices missing from our teams, we can help mitigate some of these errors. And we can finally begin to remove barriers and do our part to advance reconciliation.

Why Rethinking the Education Requirements Matters for Equality

All jobs require the ability to demonstrate certain skills - there is no debate about that. But the way the requirements are framed has a huge bearing on inclusion and diversity outcomes, particularly when unconscious cultural preferencing is going unchecked.

The emphasis on rethinking the representation for education requirements for Indigenous applicants isn't because Indigenous talent

Criteria

Experience and Education Requirements

Combination Experience

2 or more years of combined experience in a related field, including any of the following:

- On-the-job learning
- Non-conventional training
- Formal Education
- Other field related experience

or

2-year post-secondary

Successful completion of two years of post-secondary education in computer science, information technology, information management or another specialty relevant to this position.

Image 3: Third design, side by side comparison, reordered content, improved language.

Changing the Default Setting on Essential Education

doesn't have that education. It's because we can't, (underline absolutely can not) ignore the impact of Canada's residential schools on Indigenous talent and assume a general willingness on behalf of the Indigenous community to accept the primacy of the Western education system in the job application process. For GC hiring processes to engage this way with Indigenous talent risks perpetuating ignorance, indifference and racism.

It's important to note that while the work on how education requirements are presented was originally designed with Indigenous talent on

the prototype of the Indigenous talent portal, **the representation of these requirements is now a feature on our main platform**. This is part of the team's commitment to change the default that all applicants experience. Too often, "special features" are created in separate recruitment tools or processes for those in non-mainstream communities, while the default on the main platform goes unchanged. And that's the crux of it.
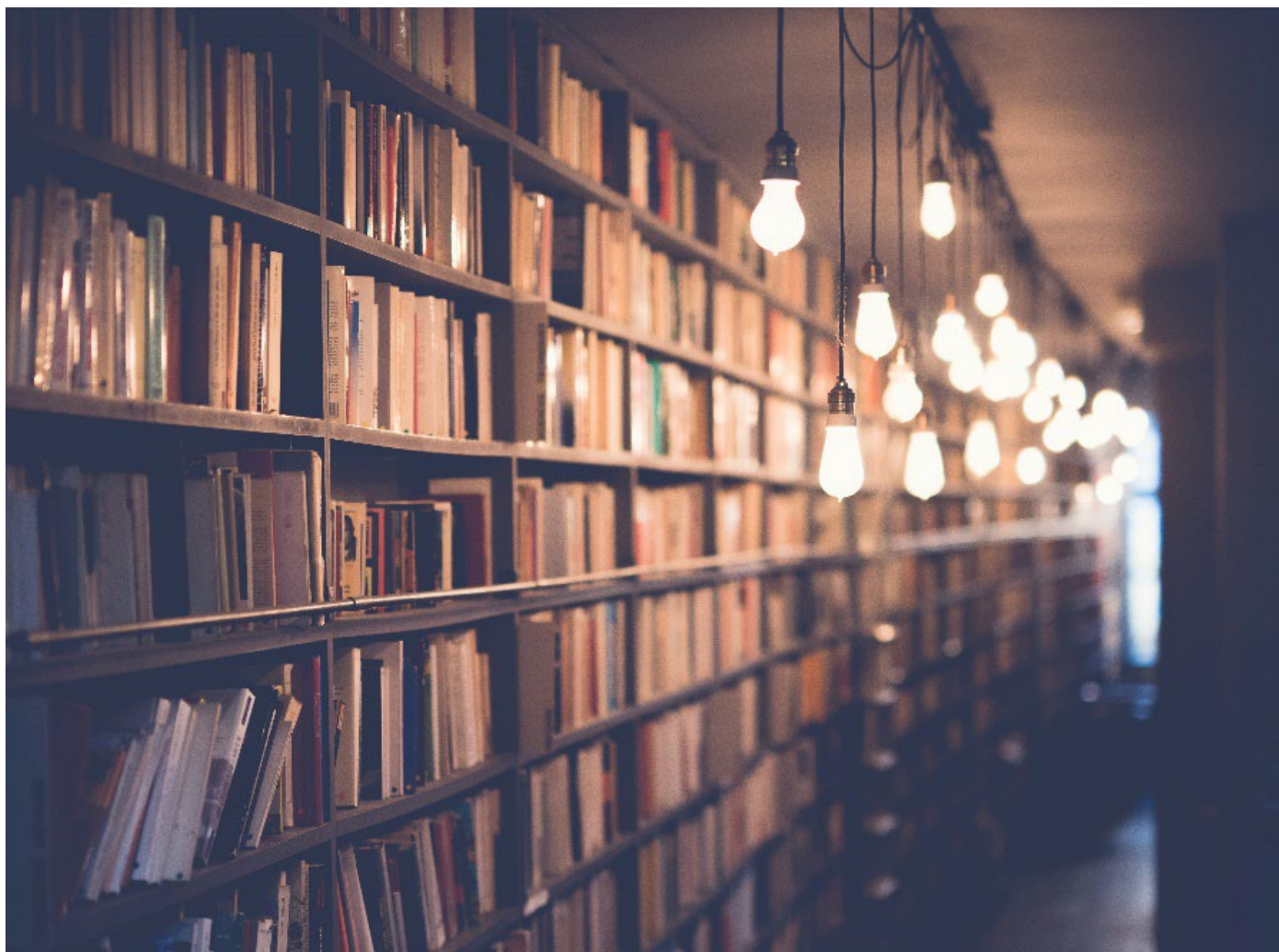
All Government systems were built by people... and people grow up in communities and come with histories, cultures, and values. It can be hard to spot the underlying culture-based assumptions built into systems design, especially when the group that designed the system is the same group attempting to identify assumptions in the system. But these assumptions can have a big impact on the experiential equality of inclusion. The first step towards inclusive design is the acknowledgement that everything in a system was built by people, and because of this, people can change it. Making the change means engaging people from communities that were underrepresented when the original system was created, and giving power to new voices in the redesign process.

Applicant Story: Getting through the Door

In talking with Talent Cloud users, we learned that many of them have never applied to Government of Canada jobs before. One of the reasons was because they didn't see themselves being qualified based on the conventional job advertisements, despite being an expert in their fields or having experience and knowledge that were much in demand in the public service. In particular, the "years of experience" or education requirements, or what we called biography based staffing (read more about why we found it problematic here - link to "Skills Instead of Experience"), often didn't consider the various paths these individuals might have traversed in acquiring their skills. If they didn't follow the prescribed path as was often implied in the job advertisements, they wouldn't even have the opportunity to demonstrate how they could be a fit for the job.

Listening to these stories was disheartening. But when we witnessed the positive difference made by the skill-based approach that we experimented with, it was impactful. We got to hear such a story when we interviewed an employee hired through Talent Cloud.

When asked why he applied on the platform, he answered,

> "I used the platform because the job posting at that time didn't require a degree. It was based on merit and skill set. That's what I really appreciate about the platform and application. Being able to detect talent is what we need here."

He went on to share how in the past he was overlooked for similar positions because of the education requirement. Not having a degree didn't stop him from doing his job or succeeding in his performance, and yet he couldn't even be considered for most positions. So when he saw the Talent Cloud job advertisement, he decided to apply. (While some job classifications require a specific education credential, many will also accept a combination of education and experience. To learn more about our work on this, check out Changing the Default Settings on Essential Education in this section of the report.)

And he was hired.

Being in the position helped him get recognized by senior management, and he has since moved on to perform functions that are central and critical to the organization. It was hard not to notice the passion in his voice when he described how he could now fulfil his duties and use his talent to deliver impacts to Canadians.

His story is a living example that when organizations change how they screen talent, they end up with different results.

LGBTQ2+ on Talent Cloud

The Need and the Challenge

The Government of Canada is committed to advancing meaningful inclusion and safe spaces for LGBTQ2+ people, but admits that the path to equality and basic legal protections has been a long and difficult road.[2] While the *Human Rights Act* now protects against discrimination on the basis of "sex, sexual orientation, gender identity or expression[3], the *Employment Equity Act* categories, set in 1995, don't extend to cover LGBTQ2+.[4]

The Government of Canada has also been working for several years to update its data collection approaches to shift away from the binary expression of "sex: Male/Female," and instead support the expression gender as a spectrum where people can shift identities over time.[5] But this transition in terms of terminology and adoption across government organizations is far from complete.

Efforts at a national scale are important, but there is a much more local reality for LGBTQ2+ people in the workplace. For some, being out at work doesn't necessarily mean being out at home… or the other way around. Harmful or unsafe work environments can place enormous mental health burdens on employees, particularly when it comes to something as closely personal as someone's gender identity or sexual orientation. It can be difficult to know what might and might not be an inclusive, safe workplace before taking a job there.

It can require a lot of courage, and sometimes involve substantial risk, for LGBTQ2+ people to choose to share the totality of their being at work. So how do organizations ensure safe

"There's a hierarchy of needs. The first need is to find a job, but if I have the chance to choose, I would choose a place where I can be out at work, even over a higher salary. Growing up in the closet, you develop this constant "looking over your shoulder" behaviour that becomes second nature. You're constantly scanning, worrying, and afraid, and you live like this for the rest of your life. It's a constant, perpetual stress. Finding a workplace where you can be safely out, and don't have to always be watching what you say or do, is so important in reducing that fear."

space - mental, emotional, and physical - for being one's whole self at work? It's a complex question, with a complex answer that the Government of Canada continues to work on.

Inclusion in Development and Design

Here are some of the small steps our own team has taken to advance this effort.

The team itself: Talent Cloud is a team that has always had strong representation from the LGBTQ2+ community, but the members of our team don't speak for others. They can, however, call out our team when we're about to make language choices or assumptions that aren't inclusive, and they're positioned to actively shape the product and the choice architecture of its features.

Visual indicators of diversity and safe space: When it comes to inclusion, a platform's atmosphere, colour scheme, language choices, and overall vibe can make a big difference. The subtleties matter, especially for a community

Skill requirements instead of prescriptive, detailed experience criteria: Similar to feedback from other user groups, it meant a lot to have the chance to claim a skill and then share evidence of the skill that included personal learning, non-traditional education, and community experience. When lives follow non-traditional paths, a system needs to be able to recognize and value non-traditional experience if it is to be truly inclusive. For those who've spent time living at the margins, there's a world of difference between job applications that require "analytical thinking and communication skills" and those that require "2-3 years of experience providing research and analysis in a policy role in a recognized organization, reporting to a director level or above."

where many people aren't out, and there's a reliance on the subtleties as a form of communication. Inclusive patterning communicates the values of the platform to applicants, and by extension, the values of the Government of Canada.[6] Inclusion is by design, not by accident, and that means making sure there's a chance for people to provide input at early design stages, not just on final products.

Manager Profiles: Applicants look to manager profiles to find clues about the type of boss they'll have if they get the job, and the type of work environment that person will create. LGBTQ2+ users mentioned the value in this piece of additional information in the job advertisement, and mentioned the "scanning for subtleties" process mentioned above, where applicants searched for hints that managers would be able to provide a safe, inclusive space for employees of all genders and sexual orientations.

Prioritizing alternatives to traditional education: The Indigenous community isn't the only user group that reported concerns and challenges with the standard language used to describe education requirements for GC jobs. The work the Talent Cloud team did on emphasizing equivalent experience (as far as policy permits) for various positions meant a lot to users we spoke to who self-identify as members of the LGBTQ2+ community. They referenced that because of the challenges of identity and non-acceptance in key education years, many LGBTQ2+ kids don't get to or chose not to follow the standard education path that begins in high school and goes up through university degrees.[7] These people may have a lot of high demand skills and lived experience, so accepting equivalencies beyond formal education creates tangible opportunities.

Choose your pronouns: This is one that is easy to do in a modern agile-built platform design, and one that Talent Cloud is actively working on testing and integrating. It means a lot to people who are sometimes misgendered or in the process of gender transition, and it gives people agency over their own narrative when crafting their profile and submitting an application.

> "I have been misgendered at work. And every time it's been a blow. I have felt humiliated in front of my colleagues. Gender expression and gender identity belongs to the individual and should never be implied."

"Seeing a pride flag displayed on a manager's social media profile helped me choose between two comparable job opportunities. Knowing that I could be upfront about myself and that the path had already been carved out was a huge relief for me."

Sometimes the way in which you get to a result matters as much as the result itself.

This is one of those cases.

As a methodology, the idea behind "name-blind" or "anonymized" recruitment is to hide any identity markers of applicants to "equal the playing field" when a manager reviews an application.[1] In intention, this is well meaning, as it strives to block any manager or HR advisor from eliminating an applicant before the interview round on the basis of outright discrimination.

Organizations adopt anonymized recruitment because they want to make things better. They recognize the presence and harmfulness of racism, discrimination and bias, and they're motivated to improve outcomes and take concrete steps to addressing hiring imbalances. In an ecosystem where there is a shortage of methodological alternatives, those who turn to anonymized recruitment do so out of the best of intentions. But even the best intentions can lead to unforeseen and adverse outcomes.

It's our team's belief that anonymized recruitment as an approach runs contrary to antiracism theory in four key ways.

1. Firstly, the core philosophy of the methodological approach says to applicants of non-centralized communities, "You are different. We will help you hide that difference so that others can't discriminate against you as easily. This will create more equality." This methodological approach in essence codes systemic bias as the problem of the applicant, not of the manager or the system itself. It is the applicant that must dramatically reconfigure their identity and representation, not the processes and human decisions inside the organization that are producing bias in staffing. In essence, the methodology fails to deliver a value structure that says, "When the organization has a problem with bias, it is the organization that must be held accountable and the organization that must change."

2. Secondly, when there is no visibility, there is no disruption to norms in terms of recasting diverse applicants in a position of centrality, and thus no disruption to the power structures of the organization in terms of strengthening the visibility and value of underrepresented groups.[2]

3. Thirdly, it fails to account for any impact on qualifications or experience that a lifetime of living with systemic discrimination may have had on an applicant, thereby characterizing a gendered, racialized body as a name and a face, and failing to see how a lifetime of living in that body in today's society has already shaped the range of opportunities, choices, and experiences.[3]

4. Finally, and significantly, it corrects only for the initial step in the hiring process, failing to address any bias at the interview stage or, even worse, in the manager or team culture after the applicant is actually hired. It's a surface treatment of a far deeper problem.

As a result of these methodological issues, even in cases where anonymized recruitment yields an improved hiring outcome in terms of diversity (and it often doesn't[4]), it arrives at this result by reinforcing, rather than disrupting, the power imbalances that fuel systemic racism and gender discrimination in the first place. It's a methodology that fails to embrace antiracism, and instead reinforces the power dynamics of the status quo.

That's a strong statement to make. We appreciate that it may cause some friction.

Here's why our team feels so strongly about it.

In this case, the intent of the intervention in HR practices is to produce a more equal and antiracist system of practices, with corresponding outcomes. But to change the power dynamics of a system, it's crucial to examine how the power operates, who controls it and how, and what pressures, levers and choices are being applied.[5] If the deeper power relationships between groups remain unchanged despite the intervention, the intervention isn't performing its function.

In antiracism literature and theory, the right to visibly occupy a position of centrality and the recognized right to equally share visible space are both key to making change.[6] The history of racism and gender discrimination has been built on controlling whose stories are told, who is made visible, who is hidden.[7] (There's a reason the story of black women mathematicians at NASA is called Hidden Figures.[8]) Pick up a Western history book and you'll almost entirely see the stories of able-bodied, straight white men. Other genders, races, people exist as a backdrop in history to the deeds of these great men, barely worth a footnote.[9]

The rights to visibility and self-narrative have not been equal, and this imbalance lies at the heart of a great many of our systems.[10] Even something as simple as a standard chair and table is optimized for a 5'9 man - hardly the aggregated average need for all human beings. But it is the invisibility of other bodies in the measuring, in the mental landscape, that allows discrimination to thrive even, and perhaps especially, when people are unaware of it.[11]

Visibility, value and centrality are essential to antiracism and the ending of other forms of discrimination. As institutions, the mental landscape of our policies and processes are undergoing change to adopt plurality where

once there was just the unquestioned centrality of white men.[12] It's a huge push in professional storytelling now - movies and shows and commercial products - to represent this diversity in a visible way.

Which brings things back to anonymized recruitment.

To put a visual to this, imagine an organization proposing the adoption of anonymized recruitment going to the next Black Lives Matter protest and pitching a "solution" that erases any indicators of black identity in order to effectively sneak black people under the radar of an unchallenged systemic hiring bias. It would likely cause massive amounts of offense. That's because **when your right to be yourself has been challenged and undermined by deeply rooted systemic discrimination, you go to the street demanding the rights of recognition and equal value, not the right to be hidden better.**

It comes down to this: if there is bias in a system and the intention is to end it[13], the interventions to correct that bias must be targeted towards those in the system who are demonstrating bias (consciously or unconsciously). **You cannot erase bias by removing the object the bias is directed towards.** Such an action validates the right for bias to go unchallenged, fortifies the power imbalance, and further erases the validity and identity of those the system (and its actors) are discriminating against.

Because of this philosophy, our team rejected the notion of adopting anonymized recruitment, and instead worked with communities and experts to come up with an alternative methodology to increase the visibility and valuing of the myriad life experiences of equity-seeking groups.

SECTION 04

Reducing Time to Staff

What's in this Research Section?

Section 4 looks at Talent Cloud's final main performance objective: Reducing Time to Staff. (See Sections 2 and 3 for research on our other main performance objectives: optimizing the hiring outcome and advancing diversity.)

Section 4 includes data showing how the overall time to staff came down as Talent Cloud introduced new features on the platform. It looks at the results of experiments designed to tackle specific aspects of time to staff, such as procrastination behaviours, application volume, and process delays. It also provides a few insights on ways to mitigate or stop certain practices that are systemically supported in the current GC staffing approach, but are contributing to longer hiring times and risk the loss of top talent. This research presents alternative approaches that can be used to rethink both procedural and behavioural elements of the staffing process, reducing time to staff and improving hiring outcomes.

Talent Cloud set an extremely ambitious target of reducing time to staff to 30 days (plus security clearance time) from the time a poster went live to the time the hire was finalized. While the time to complete security clearances remained relatively stable throughout, the time to get to a live poster and the time to find a top hire were reduced by more than 85 days. In the end, Talent Cloud landed with the most recent staffing processes on the platform taking ~40 days to final selection of the hire, plus security clearance. While not everything we tried worked, the overall impact of the interventions was significant.

List of Experiments and Interventions

- Overall Impact on Reducing Time to Staff
- Where did 110 days of savings come from?
- Points of Intervention to Reduce Time-to-Staff
- Impact of Speed on Retention of Top Talent
- Optimizing the Volume of Applications
- Optimizing the Number of Selection Criteria
- Integrated Priority Screening
- Security Clearance
- Research Summary: Simpler Text for Official Languages
- How Talent Cloud Builds Platform Tools
- A Tool to Build Optimized Job Advertisements
- A Tool for Assessment Planning
- A Tool for Applicant Tracking
- A Tool for Record of Decision

Key Concept: Speed Alone is Not a Solution

If you staff quickly, but end up with a hire who's only adequate and isn't a strong culture fit to the team, the process will fail to produce the end results Canadians need: a high performing team delivering top quality work. Getting a fast hire with a bad fit is a waste of time and energy, and draws down negatively on the emotional reserves of everyone involved. Speed has to be integrated into the design in a way that the behavioural choices work in service of the overall goal: getting a great hire quickly in a way that shows the best of GC values. This includes a commitment to advancing inclusion and diversity, even as the system endeavours to streamline its time to staff.

Key Concept: Silver Buckshot, Not a Silver Bullet

In innovation circles, there's an expression that there's no silver bullet for solving a complex problem, only silver buckshot. What this means is that when there are multiple competing factors involved in creating a problem, the "solution" also has to be multifaceted and adaptive.

Talent Cloud considered 20 individual factors in our efforts to reduce time to staff, which we identified initially through workshops with managers, HR advisors, employees, and external applicants. These factors ranged from process steps to the way in which specific information influenced the probability of manager and HR advisor procrastination. After identifying these 20 promising points of investigation, we set about testing the scale of their influence, looking for ways to quickly and easily reduce time to staff. (These 20 factors and their impact are listed in the summary on Overall Impact of Reducing Time to Staff included in this section of the report.)

While a few of these factors proved to be more influential than others in bringing down time to staff on the Talent Cloud platform, in the end most played some role in producing the intended outcome. We found that there was no single factor that would solve the issue of reducing time to staff; it could only be achieved with attention to multiple key factors. Fortunately, none of these factors proved impossible to influence on the platform, indicating that the Government of Canada could adapt these findings to other platforms and approaches.

Key Concept: Behaviour Patterns Matter in Reducing Time to Staff

The role of behavioural patterns was one of the areas Talent Cloud paid careful attention to in our efforts to reduce time to staff. What became rapidly apparent was that there were a number of behaviours related to staffing, developed strategically by different user groups, that were adversely impacting time to staff. Surprisingly, these behaviours were actually being driven by the system itself, as individual actors looked to protect their interests. The cumulative impact was a bogged down system with misaligned behaviours that further exacerbated the delays.

To reduce behaviours that slow down staffing, the system needs to clearly identify them and take corrective steps. Platform and process design choices need to strategically deter these behaviours, and incentivize others. The following section looks at some of the interventions we tried to deter these behaviours, and the impact of these design features.

Reducing Time to Staff

Biggest Takeaways

1 No single feature alone was able to reduce time to staff by more than a few weeks, although the cumulative effect of the interventions reduced time to staff by more than 85 days. Behavioural nudges throughout were mission critical to reducing time to staff, and were most effective in producing results when the language used on the platform (clarity and nudges), the structural design of the process, and the interactions between users were aligned together to produce a specific result.

2 The introduction of the applicant tracking system improved the staffing experiences for managers, but only reduced the time to staff by an estimated 3-4 weeks at most. Time savings with an applicant tracking system are not expected to be greater than this unless screening of applicants can be done in real time (as applications arrive), processes include targeted application volumes, and assessment plans are in place prior to applications being received.

3 The platform interventions that successfully reduced time to staff were tested with a wide range of departmental mandates, cultures and types of jobs. They were also tested with both seasoned and new managers who hadn't staffed before. This indicates that these interventions could potentially be widely applied to reduce time to staff more broadly in GC hiring practices.

4 No matter how much we were able to reduce time to staff, it was never fast enough for managers. This led us to wonder, maybe the whole model needs a rethink. We've come to the conclusion as a team that we think the future of staffing is in a single, massive interoperable repository of talent, equipped with the capacity to use portable digital verifiable credentials. We still believe the heavily local, five factor matching model will be essential to a strong hire, but we think the path managers will take to get to those applicants will look a lot different in the future, as the full potential of digital platforms is realized. We think this will be a lot faster and maybe, just maybe, fast enough and process light enough for busy managers to find it easy and effective.

The Problem

Long timelines to staff can have several negative consequences on hiring outcomes, including adversely impacting the ability to attract high performing talent and increasing the possibility that processes will be cancelled due to shifting corporate priorities. Long staffing times can also create extended vacancies in an organization to the detriment of organizational performance.

At the time when Talent Cloud first launched, it took 197 median days to staff an externally advertised position in the Government of Canada. This number counts the time from the job advertisement closes on GC Jobs to the first occurrence of the employee in the pay system. It should be noted that this figure includes aggregated data from both indeterminate and term staffing. (Talent Cloud only advertises term staffing positions, but the administrative steps for staffing term and indeterminate positions are the same.) This time to staff does not include lead up time for managers and HR advisors, such as crafting the job advertisement and securing approvals to staff.

The Hypotheses

Talent Cloud reasoned that if the time to staff could be reduced, it would have positive impacts on the government's ability to attract high performing talent and be an asset to managers needing to fill vacancies. But how long would the time to staff need to be reduced by? Because there was no clear data on what target we were aiming to hit, we decided to make it as fast as we thought might be possible. Even if we fell short, hopefully we'd be able to show progress against the average time to staff.

Talent Cloud set an extremely ambitious target of reducing time to staff to 30 days from the time a job advertisement closed to the selection of the final candidate (this does not include additional time for security clearance and/or language testing). Notably, it also doesn't include the time managers and HR advisors put into getting to a live job advertisement, but here we aimed to bring the time to staff down to a few weeks at most (with the fastest time possible being two days).

There was nothing magic about the 30 day target, it was just a nice round number that seemed in line with private sector industries. From an applicant's perspective, one month to a verbal offer, plus security clearance time, sounded competitive and reasonable.

The Experiment

Early on, we laid out 20 points of intervention that we thought had the potential to drive down the average number of days it took to staff a position. These interventions fell into three broad categories:

- Behavioural nudges (to either address behaviour patterns that were delaying time to staff or encourage new behaviours that optimized results);
- Business process re-engineering to move things along faster; and
- Tools for hiring managers and HR advisors to make it easier for them to attain their hiring outcomes.

These interventions are outlined in greater detail in the following pages.

The Results

"Talent Cloud days" represent the number of days from the time the job advertisement closed on our platform to the time a verbal offer was given to the manager's chosen applicant, which covered the majority of Talent Cloud's platform interventions on reducing time to staff. Following the verbal offer, a second count of days represents the time for security clearance, language testing and HR finalization, which Talent Cloud had little to no influence over.

While the time to complete security clearances remained relatively stable throughout, the average time to staff (as influenced by the platform) was reduced by more than 85 days over the course of the pilot. The most recent staffing processes on the platform took ~40 days from the close of the job advertisement to final selection of the hire. This is a significant reduction - a trend that we first began to see with some jobs in the summer of 2019, and one that has continued to grow with more recent postings.

It is also worth noting that these two most recent processes were the first two to do the initial screening of applications as they were received. (All previous processes began screening applications once the job advertisement had closed.) This effectively means that the clock for processes is not only shorter, but can now be started sooner, which has

Overview of Talent Cloud Time to Staffing Decision

Period	Average Talent Cloud Days	Average Days Security Screening and Language Testing
Oct '18 - Jan '19 (10)	127	67
Feb '19 - May '19 (7)	78	48
Jun '19 - Sept '19 (9)	92	80
Oct '19 - Jan '20 (7)	86	86
Feb '20 - Present (2)	40	60
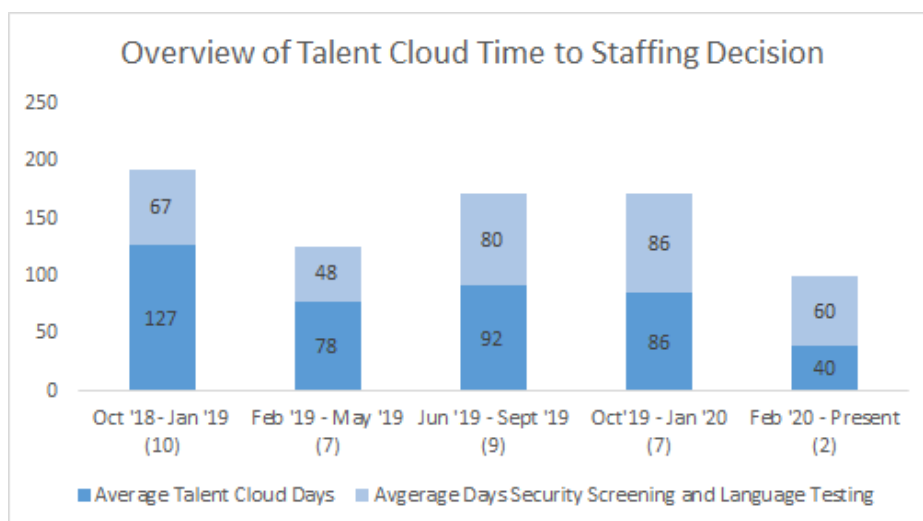
the potential to save another 1-3 weeks in the staffing process.

When we looked at the way time to staff was reduced, we noted another interesting finding. A closer look at the data shows it's clear that saying the average time went down to ~40 Talent Cloud days in the last year doesn't tell the whole story.

In fact, when we looked closely at the last 8 jobs advertised on the platform, we realized we were seeing two tracks developing: 4 processes that took longer and 4 processes that were much faster, showing us 2 distinct patterns of behaviour on the platform. These trends correlate directly with observations from Talent Cloud's live testing showing that those who followed the recommended practices and used the tools on the site (as intended) saw a faster trajectory. In essence, **Talent Cloud was able to reduce the time down to a matter of a few weeks for a manager to arrive at a verbal offer to a top candidate in a competitive, externally advertised process.** This is a remarkable leap forward - one which places the Government of Canada in a strong position to attract and secure high performing applicants.

External Research

One metric used to evaluate the speed of a hire is the time from the interview to the letter of offer. In a 2017 study by Glassdoor, Canada ranked 4th out of 25 countries surveyed with an average time of 20.1 days, 2.6 below the international average.[1] It should be noted that there is variability by industry. The report also showed that, internationally, government is also consistently the slowest industry to move from interview to final hire, often taking 1 ½ - 2 months to complete the hiring process post-interview.

Notably, the Government of Canada is competing with other industries in the country in search of high-performing talent. According to the 2019 Jobvite Recruiting Benchmark Report, the Information Technology field (which has the most overlap with positions listed on Talent Cloud), took an average of 42 days to staff a position.[2] This is far below the Government of Canada's average time to staff. It's in line with the number of days it takes to get to a verbal offer using the Talent Cloud platform, although this is conditional on security screening and language testing which then take an additional 1-2 months to complete. This shows that the Government of Canada is likely going to need to consistently bring time to staff down to the timelines achieved by the Talent Cloud experiment, plus additional time savings in the security clearance process step, if it wants to be truly competitive with industry when it comes to recruiting top performing digital and technology talent.

"While COVID-19 reduced the volume of jobs advertised on the Talent Cloud platform, our fastest hiring processes were conducted in 2020, showing that Talent Cloud's time to staff continued to drop despite the challenges of the past year. The release of new features and new research insights continued to help managers accelerate their processes and attract high-performing talent, recruited through externally advertised competitive processes."

Our Best Guess
Where did 110 days of savings come from?

When Talent Cloud first launched the platform in 2018, our initial hiring processes took ~130 days to identify the top applicant, plus ~60 days to complete security clearance and finalize HR paperwork. This was right in line with the Government of Canada average at the time. By the time the experiment wrapped, our average time to identify the top applicant was down to ~40 days, plus security clearance. And our fastest processes came in at ~20 days, plus security clearance.

So how does a manager go from taking ~130 days to find a candidate to ~20 days? Some steps that save time overlap with each other, and some interventions have wide ranges in how much time they can potentially save. Splitting the credit for time saved in places where these interventions chronologically overlap, here's our best (and very rough) estimate of how our platform interventions added up to ~110 days saved.

One important reminder: all this data comes from competitive, externally advertised jobs.

20 Days
Introduction of an applicant tracking system (with pre-sorted categories)

35 Days
Interventions related to volume control & optimization of applications

10 Days
Real time applicant screening (as applications arrive)

15 Days
Behavioural nudges to keep managers on task

20 Days
Assessment planning tool

10 Days
Integrated priority screening

"Small changes to platform design can add up to big impacts in results."

Points of Intervention to Reduce Time-to-Staff

Back in 2017, before we launched the Talent Cloud staffing platform, we put together a list of 20 assumptions that we had about time to staff that we wanted to test. These were areas where workshops indicated there might be ways to save some time. While not everything we tested was useful (and there were a few hypotheses we didn't get a chance to test), here's the list of what proved valuable in reducing time to staff in our experiments.

Our Top 5: Larger Impact

- **Integrated Priority Screening:** Working with the Public Service Commission, Talent Cloud was able to consistently reduce the time to staff required for this step to zero days by developing an integrated priority screening process that ran concurrently with other steps in hiring on the platform. Managers reported that this saved them approximately a month in their usual timeline. (For a full write-up, see Integrated Priority Screening in this section of the report.)

- **Redesigning the job advertisement to reduce application volume:** Talent Cloud worked to reduce the volume of mis-matched applications by giving applicants more information about the job. By democratizing access to this information, Talent Cloud gave applicants more responsibility for deciding whether they thought they would be a "fit" for the job, reducing screening burden on managers and improving applicant experience. (For a full write up see Optimizing the Volume of Applications in this section of the report and Research Section 2: Optimizing the Talent-to-Team Match.)

- **Assessment planning support:** Talent Cloud provided hiring managers with an online tool to create a custom assessment plan that was pre-populated with the essential and asset criteria in the job advertisement. This provided a single place to develop questions, attach assessments to skills, and write the rating guide. Managers and HR advisors could both edit the plan, and rearrange information according to their preference. For example, managers usually liked things arranged chronologically, so they could plan their calendars around upcoming steps, whereas HR advisors preferred to organize information by essential and asset skills, and their corresponding assessment method(s). We estimate that this tool (and the nudges in it) reduced time to staff by approximately 2-6 weeks. (For a full write up see A Tool for Assessment Planning in this section of the report.)

- **Screen in real time:** In mid-2020, Talent Cloud released a feature that allows managers to begin assessing their candidates once the advertisement goes live. The early results suggest this could reduce time to staff by anywhere from 2 weeks to several months, as managers reported higher enthusiasm levels for sorting applicants as they came in, reducing procrastination. Managers felt that evaluating a handful of applications a day was much more manageable than receiving them all at once, and they were excited to see who had applied each day. This speed in the initial screening phase also helped managers to retain top talent by making their initial contact with high quality candidates more quickly.

- **Applicant screening tool, with pre-sorted applicant categories:** On Talent Cloud, managers are able to view applications directly on the Applicant Screening Tool, and found their applicant pool pre-sorted into veterans and priorities, Canadians, non-Canadians and those applying with skills below the required level. Both managers and HR are also able to sort and comment on applications (each through their own portal), reducing email-based conversations by introducing a central platform (which also tracks time). We estimate that the introduction of this tool was able to reduce the time to staff by 2-4 weeks (See A Tool for Applicant Tracking in this section of the report.)

3 Worth Doing: Moderate Impact

- **Support for creating the job advertisement:** While the time leading up to a live job advertisement happened before the clock started on our target of ~30 days (plus security clearance), there were still weeks to be saved here for managers and HR advisors. Optimizing the choice architecture on the platform and providing a tool to help with crafting job advertisements resulted in several weeks of time savings for managers. (For a full write up see A Tool to Build Optimized Job Advertisements in this section of the report.)

- **Rethinking merit criteria:** Through testing with live processes, we identified an optimized number of selection criteria, and encouraged managers to target this. This resulted in a more focused assessment plan that took less time to complete, and contributed to managing the volume of applications. (For a full write up see Optimizing the Number of Selection Criteria in this section of the report.)

- **Nudges to keep things moving:** Talent Cloud built in a series of nudges to encourage managers to move swiftly, including automating nudges, like email reminders about how many days until top applicants might start seeking other opportunities, and showing managers and HR advisors how many days have passed since their advertisement closed when they log into their portal.

2 To Consider: Lesser Impact

- **Alternative approach to reference checks:** Reference checks often get tagged on to the end of a hiring process and can take days to complete. Talent Cloud gave candidates the option to provide "micro-reference checks" as evidence to substantiate their claims during the application process. Micro-reference checks were only used a handful of times. We still see potential to reduce time to staff by up to a week, but this will require further work with HR advisors to develop tools that they feel confident are as valuable and rigorous as traditional reference checks.

- **Collecting supplementary information early on:** We identified supplementary information needed for later steps in the staffing process that could delay the employee's start date, and provided nudges to encourage candidates to start gathering this information earlier on. This included encouraging applicants to fill out their security screening forms and have them ready, and request out-of-country police checks early on. Applicants were also prompted to have copies of things like their education credentials ready. Qualitative data showed employees that started collecting this information after submitting their application reduced time to staff by 1-2 weeks, but this is a very limited sample size.

"Behaviour patterns matter in reducing time to staff."

Impact of Speed on the Retention of Top Talent

Research Summary

The Problem

There is significant competition for high-performing talent with in-demand skills, particularly when it comes to digital and tech talent.[1] Speed is a critical factor in remaining competitive when the talent being recruited has multiple opportunities to consider.

During early workshops with applicants, Talent Cloud heard that top talent responding to job advertisements would potentially leave the competition if they were not contacted within 2-3 weeks of submitting their application. This was also true for each successive step after the initial screening process (e.g. assessment/testing, interview, reference check, final offer). Applicants expected no more than a few weeks to pass between key stages, and no more than 2 months overall from application to offer.

Workshop participants listed three top reasons for withdrawing from job processes they had applied to (government and other). These were:

- being offered another job that they had applied to concurrently;
- receiving a better offer from their current employer; or
- interpreting the long wait as indicating something undesirable about the work environment, manager or the bureaucracy of the employer in general.

In all three cases, the slow speed of the average Government of Canada staffing process would be a significant hindrance to securing high performing talent, particularly if that talent was motivated to find a new position and was applying to multiple potential employers.

The Hypotheses

The hypothesis for this part of the research was fairly simple: we thought top talent would drop out if processes ran long. What we didn't know was how quickly processes would need to move in order to keep a sufficient number of top applicants in the process to ensure that managers could get an optimal hire (notably, one of their top choices of applicants). We decided to test the self-reported claim from workshop participants that processes needed to advance in no more than 2-3 week intervals per stage, and that the total process needed to take less than 2 months (at least until a verbal offer was in place).

Impact of Speed on the Retention of Top Talent

Research Summary

The Experiment

To test the impact of time to staff on the ability of managers to retain applicants, we compared the percentage of applicants who dropped out during the application screening phase, while also tracking the speed at which the process was moving forward.

While we observed that applicants dropout of hiring processes at all phases, during this period nothing beyond the application has been asked of the applicants. This helps to avoid including unqualified candidates who drop out when they see the assessment tools, such as a test.

For a small subset of the jobs advertised on the Talent Cloud platform, the team conducted additional qualitative analysis, tracking the manager's top choices of applicants at each stage, and following up with them about their decisions and the impact of speed on their final decision to accept or reject an offer.

The Results

Data collected during the pilot confirmed what we heard from applicants during our early workshops. When the applicant screening phase took less than two weeks the average dropout rate was 8%; when it was two weeks or more, the dropout rate rose to 13%.

Talent Cloud then interviewed managers to see who, exactly, was dropping out. Where possible, Talent Cloud also contacted applicants to find out why they had withdrawn their names. There was a consistent trend in the qualitative research showing that high-performing applicants with other offers on the table were the most likely to drop out of a process that was moving more slowly. Unfortunately, in cases where managers moved very slowly, sometimes they didn't realize for a month or two that their

top choice of applicant was already long gone. This caused a lot of frustration for managers.

Notably, this improved significantly in processes posted more recently to the platform, when Talent Cloud had released additional features, and was able to provide more guidance about exactly how fast managers would need to move in order to keep their top choices. In the most recent jobs posted to the platform, managers were able to attract and retain a significant amount of top talent, with 4-14 strong, fully qualified applicants from an initial group of ~40-50 applicants. These processes averaged ~40 days from job advertisement close to verbal offer (followed by time for security clearance). Speed did indeed seem to help with ensuring the Government of Canada was the first employer to arrive with an attractive offer.

In workshops and interviews, applicants said that the need for speedy processes applies at all stages. This indicates that to keep top candidates in the applicant pool, managers should move through screening, testing, interviews, references, and finalization of offer

in no more than three week intervals. In our sample, just over half of dropouts occurred during the initial screening phase, which could be interpreted as applicants becoming more invested as the process continues.

When processes moved more slowly, this often gave the current employers of top applicants the chance to propose and finalize promotions internally. A majority of top applicants who declined positions (in our very small sample size) did so to remain with their current employer. The remainder were offered a position by another organization sooner than the Government of Canada was able to finalize an offer, and elected to take the firm offer that was before them. In all but two cases, applicants confirmed that if the Government of Canada had been the first to arrive with a firm offer in writing, their decision would likely have gone the other way. (In the remaining cases, the absence of a manager profile on the job advertisement proved to be a significant factor in the applicants' final decision about accepting an offer elsewhere, citing a mismatch with the fit-to-team as influencing their decision.)

Insights

To make the Government of Canada more desirable to high-performing talent with alternative employment opportunities, the Government of Canada needs to have a competitive time to staff - not just overall, but at each of the many stages of screening and assessment. To determine how fast exactly hiring managers must move, a larger research study, with a larger sample size, would be required.

There are, however, things that hiring managers can do today to make their position more attractive to candidates. Keeping candidates in the loop during the hiring process, even if it is to

check in and let them know that things are taking longer than hoped, may help managers retain their top candidates throughout the hiring process. Developing assessment plans in advance, and sticking to a screening plan, can also be significant aids to keeping the hiring process moving swiftly... and keeping high performing talent engaged.

Think you have months to screen applicants? Think again.

After several failed staffing and contracting attempts at finding rare talent for a specific role, a manager came to Talent Cloud with a very specialized need. We knew it was going to be tough to attract someone from the private sector to join the Government for that role, so we emphasized to the manager that speed would be an essential component. The manager delivered a staffing process that took less than six weeks to arrive at a verbal offer, but even at this speed, it was almost not fast enough. Here's a quote from the top applicant who ended up securing the job.

"It took almost a month for me to hear from anyone about the position I applied to... that was a long time to wait and I assumed I wasn't being considered. When I saw an email from Talent Cloud in my inbox, I assumed it was a 'better luck next time' note but was excited when I read that I had made it to the second stage in the hiring process."

"Optimizing the volume of applications is key to delivering a fast, positive hiring result."

Optimizing the Volume of Applications

Research Summary

The Problem

High application volumes are a challenge for managers, especially if many of the applications turn out to be a poor fit for the position. But how many applications should managers be hoping for in order to yield a strong hiring result? And is it even possible to influence the behaviour patterns of applicants in order to optimize the volume of applications?

Talent Cloud ran a series of workshops in 2017 to better understand the steps and choices applicants were making in the staffing process. As part of that process, managers identified that their preferred number of applications to receive was 20-30 at the initial screening, and 5-10 for interview, but that the number of applications received was often several hundred. Managers reported that they found this volume overwhelming, leading to procrastination and cancelled processes.

One of the most illuminating findings from that user engagement was the identification of a specific behaviour that was, at an aggregate level, contributing to high application volume and low quality fit. HR advisors were aware of the behaviour as a factor in longer times to staff, and hiring managers associated it with poorer hiring outcomes.

The behaviour pattern we identified was referred to by applicants as the "brute force attack" application practice - a term workshop participants shared, not one we came up with ourselves. In our research, applicants reported using the "brute force attack" application practice as a common strategy. Basically, they applied for anything and everything where they thought they might even remotely meet the selection criteria.

Most applicants reported that they didn't clearly understand why they got accepted into pools or jobs for some processes, but failed others they thought they were more qualified for… and applicants reported that they had low success rates overall in applying. As a result, applicants reported developing a "try everything" approach. Most in the workshops reported applying for at least 10 jobs in the last 6 months, with a similar pattern of feeling like they were only a strong fit for a couple of them. Some even reported applying for 30-50 jobs in the past year, and estimated that they were a good fit for only 5-10 of those jobs. This apply-despite-not-believing-I'm-qualified behaviour was consistent for both external applicants and internal GC employees looking for promotional opportunities. A sense of confusion about "what gets you in" was pervasive.

So why continue the practice, even with a low chance of success? Why apply, even in cases where applicants reported not wanting the actual job? Applicants told us it's "common knowledge" - or at least common belief - that once a person gets into government, they can move around easily, and seek a better fit job from the inside. (An internal mobility rate of ~12% in 2019-20 in the Government

Optimizing the Volume of Applications

Research Summary

of Canada, and a promotion rate of ~13 %, would seem to corroborate the idea that once inside government, many people move to a different position that appeals more to them.[1])

The Problem at Scale

For some hiring processes, high volume is the targeted outcome, such as when the Government of Canada gathers large pools of talent through recruitment drives that are open for several months. Numerous hiring managers from various departments pull from these pools, applying generic work descriptions. As a result, there's little rationale to take behavioural steps to reduce application volume and optimize applicant fit.

But for individual hiring managers running a process for their own team with limited time and energy reserves, high application volumes are a challenge.

While it's easy to understand the rationale that creates the brute force application behaviour, if it occurs at a large scale this pattern can lead to a massive number of misaligned, long shot applications that bog down the entire hiring system, placing a time and energy burden on HR advisors and managers, who are already stretched thin.

There are also diversity and inclusion factors to consider. There is external behavioural research showing that men are more likely than other groups to claim that they are ready for advancement or qualified for jobs. As a group, men reported often applying to jobs when they felt they were 60% qualified, compared with women, who reported waiting until they felt they were 100% qualified before applying.[2] If this external research holds true for applicants to Government of Canada jobs, this could have significant GBA+ implications for application rates and hiring outcomes. It's something that we wanted to be aware of when intervening to deter applicants who weren't fully qualified.

The Hypotheses

If managers say they prefer to see 20-30 applications, we should aim for this volume and test to see if it's actually the number that produces the best hiring outcome. This would require several interventions to address the high volume of applicants typically seen in government HR processes.
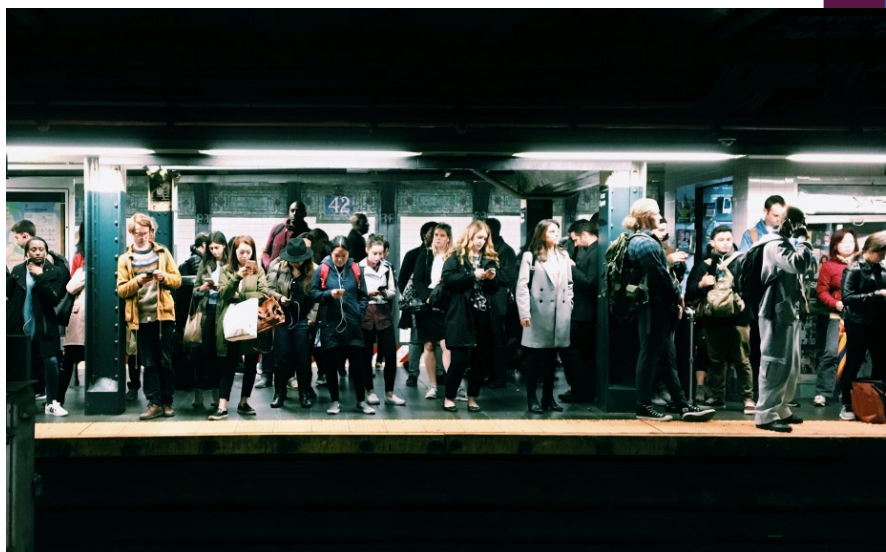
Optimizing the Volume of Applications

Research Summary

Talent Cloud reasoned that if the brute force attack application approach was causing high-volume, poor-fit application practices, disincentivizing this behaviour might improve time to staff and help increase the average quality-of-fit in the applicant pool.

Talent Cloud hypothesized that the following interventions would help address the brute force attack approach by applicants and would lead to fewer, but higher average quality of applicants.

1. **There is only one job, and here are all the details.** We reasoned that if applicants were trying to come in any "door" to go somewhere else (and consequently all doorways were becoming jammed and impassable), it was worth testing to see what would happen when each "door" only led to a single location. One job, one manager, one team, one term appointment of finite length. No pools, no applying here to get hired over there. Come in this door to get to this location only. (This was one of the drivers behind our theory on the value of five factor talent-to-team matching.) If we provided the details of the only job on offer, and it didn't actually appeal to an applicant, perhaps the applicant could be persuaded to invest their job search energy elsewhere.

2. **Give applicants a sense of exactly how much competition they have.** We reasoned that applicants who want a job will be willing to put in the time to apply, especially when they have no idea who else is being considered. We reasoned that if applicants knew 300 other people had applied for something, they might not go to the effort unless they believed they were a really strong match. So we added an "applicant count" to the live job advertisement, showing applicants in real time how many other people had already applied.

3. **Acknowledge that applicants will be tempted to exaggerate, and factor this into the platform design.** In addition, we hypothesized that applicants could sometimes be deterred from applying to jobs that they weren't ready for by simply encouraging them to be honest about their skills and level of readiness to take on the role. We added a series of nudges on the job application to deter applicants who weren't qualified from both applying and stretching the truth about their skills.

4. **Integrity matters.** We added an honesty pledge, carefully reflecting behavioural sciences on how to make these work well, and added it to the application process. Based on behavioural science, we have chosen to base the honesty pledge on trust rather than legal formality.

> While we needed to convince applicants that there was nothing to be gained from the brute force behaviour pattern when applying for jobs on our platform, we needed to do so in a way that was psychologically safe, not undermining. This was especially important in the context of encouraging diversity and inclusion on the platform. When designing, we needed to maintain a conscious awareness about not inadvertently deterring members of underrepresented, equity-seeking communities who might be more likely to self-select out, even when equivalently or more qualified than others.

Optimizing the Volume of Applications

The Experiment

Confirming whether or not our four interventions to deter this brute force behaviour actually worked is challenging. This is because of other interventions on the platform that were simultaneously encouraging more applications from a diverse range of applicants, many of whom had not applied before to government jobs. (Basically, we wanted to increase applications from diverse, high-performing talent, and reduce low-fit applications.)

So we don't have a conclusive statistical test that allows us to confirm if these are the right solutions to this specific problem.

It's important to note we couldn't survey those who decided not to apply based on the nudges we made to change their behaviour pattern. Those who opted out simply never showed up as a data point for us. So instead, we started

> ### Need to have
>
> **Remember, that you need ALL these skills to apply for this job!**
>
> *Q. Really? I have most of these skills and I'm a quick learner.*
>
> **Sorry, you really do need all of them, and at the right level.**
>
> *Q. What if I stretch the truth a little? Once I'm interviewed they'll change their mind for sure!*
>
> **Don't do it. These will be assessed, and you're better than that.**

Here's text from our site, targeting applicants prior to putting together an application. The text is designed to deter non-qualified applicants from applying or stretching the truth.

> ## Final Submission
>
> **You've made it!**
>
> I understand that I am a part of a community of people who trust each other and by signing my name below, I am confirming that:
>
> - I've reviewed everything written in my application.
> - I promise that the information I've provided is true.
>
> Sign (Type) Your Full Name   Required   Today's Date   Required
>
> e.g. First Last   yyyy-mm-dd

We also included text to dissuade applicants from submitting or over-representing their qualifications prior to actually hitting the Submit My Application button. An honesty pledge before submitting an application to encourage applicants to provide truthful information.

Optimizing the Volume of Applications

looking for what was not there: namely, were applicants in Talent Cloud processes applying for everything they could or were they more targeted?

In terms of applicant volume, we were able to track application rates, and monitor these as we introduced new features on the platform or changed our advice to managers (e.g. when we began limiting the volume of selection criteria to a more optimal range, we saw the volume of applications move into the target range.)

We conducted careful analysis of hiring outcomes in comparison to the volume of initial applications and the rate at which applicants were screened out during each successive assessment phase. We also looked at outcomes when managers were left with too few top applicants, and other factors (such as long completion times for security screening and HR finalization) that led to the top hire choosing another position, and leaving the manager without a hire. We also cross-referenced this quantitative data with qualitative interviews, to understand exactly how well managers were doing with the target range of applicants they told us they wanted (20-30) and whether or not it mattered if a manager was seasoned or new to hiring.

The Results

Talent Cloud was able to provide a platform that encouraged managers to optimize their job advertisements and assessment plans to produce a smaller volume of applications, resulting in fast processes with strong hiring outcomes.

Talent Cloud job advertisements drew an average of 21 applications. Of those, nearly half (44%) passed the initial screening, 14% passed testing, and 9% passed the interview, indicating they had all the skills required for the position and were qualified to receive an offer, pending language testing and security.

The proportion of candidates that make it through each phase of the hiring process, also known as the hiring funnel, is an important metric that looks at both the final outcome (did managers get a hire?) as well as the performance of the applicant pool at each step (the drop off rate at each successive assessment phase).

Talent Cloud was able to impact the behavioural choices of the manager to help them design a job advertisement that would attract the targeted number of applications. By the end of the experiment, the team was able to predict with reasonable accuracy how many applications would be received by a manager based on the components of the job advertisement, and could work with the manager to amend the job advertisement to increase the chances of getting a hire into the target range.

The Talent Cloud hiring funnel is based on hiring processes that went to completion. That means that we include processes that didn't go well, for example job advertisements that didn't draw any qualified candidates. As long as the process isn't still in progress in 2021, or was cancelled by the manager/department before it was completed, we included it in these results.

Optimizing the Volume of Applications

Research Summary

This diagram simplifies these findings, roughing it out into rounder numbers for managers and HR advisors to use as target values.

- 20 — **Applications received**
- 10 — **Passed initial screening**
- 3 — **Passed testing**
- 2 — **Passed interview and reference checks.**

  Deemed fully qualified based on assessment against all essential job criteria.
- 1 — **Hired**

Although managers told us initially that they thought the optimal volume of applicants was 20-30 in the initial applicant pool, this proved to be too low a number for optimal results. Most Talent Cloud hiring processes successfully fell into this 20-30 range of applications, but based on data gathered, we're recommending that a slightly higher volume of applications (30-60) is actually better. Our analysis led us to believe that this initial target of 20-30 applications reflected how many applicants managers felt they had the energy to deal with, rather than the optimal number for producing the best hiring outcome. That said, manager energy and enthusiasm levels have to be taken into account in a staffing process, otherwise it leads to long delays and cancelled processes.

There was a definite connection in our experiment between volume of applications, manager behaviour patterns, and hiring outcome. **We found that the optimal target range of applicants for a new hiring manager was 30-40. For seasoned managers, who had a larger frame of reference for screening applicants, the optimal range increased to 40-60.** Based on the hiring funnel data, this would leave new managers (who followed other Talent Cloud steps as designed) with ~6-8 fully qualified applicants, and seasoned managers with ~8-12 fully qualified applicants. An applicant pool of only ~20 applicants ran the risk of failing to produce a hire, particularly if the hiring manager delayed, even a little, at any stage of the screening and assessment process.

Seasoned managers, on average, processed their applicant pool more quickly than new managers and were more likely to do it themselves. They were also often in a position to make multiple hires (either onto their team or by matchmaking in their organizations). On the other hand, receiving more than 35 applications for a new manager created delays - either through procrastination behaviours or because they sought additional help from HR services. This added several weeks to the hiring process (months, if the HR services were a procurement arrangement). These delays, in turn, cost new managers their top applicants, and led to several failed processes in our study. This is why, for newer managers, fewer applications and fewer fully qualified applicants can actually increase the chances of a successful hire. There is a balance to be struck between application volume and processing speed, which can impact the final outcome. (See also Impact of Speed on Retention of Top Talent in Research Section 4.)
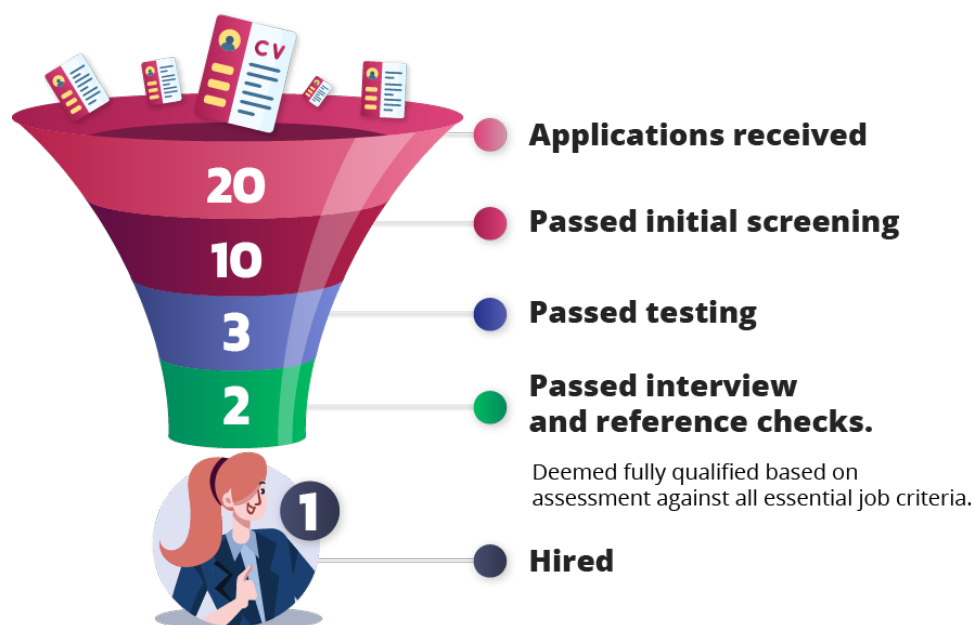
Optimizing the Volume of Applications

Research Summary

The research led to the discovery of an optimal target range for applications, but what about the other side? What about impacting behaviours so that applications arrived in a volume that optimized the hiring outcome?

Talent Cloud had success in relation to the efforts to reduce the number of under-qualified applications. While it's difficult to claim conclusively that these interventions worked, the "qualified to receive offer" rate for Talent Cloud is 9%, meaning roughly 1 in 11 people applying were assessed as having all the essential skills required for the job. The industry average is much lower, sitting ~2% or 1 out of every 50 applicants is fully qualified.[3]

In terms of multiple applications, out of the 1000+ individual users submitting applications through the Talent Cloud platform, which hosted 50+ positions, only a single person applied for more than 10 jobs. In essence, the brute force attack behaviour only accounted for 0.09% of total applicants. Talent Cloud did observe multiple applications in smaller volumes (approximately 7% of applicants submitted between 2 and 6 applications), but this occurred where we hoped to see applicants using their reusable profiles to apply to multiple jobs at similar levels and classifications. No applicants submitted 7-11 applications, indicating a break in the behaviour pattern between those who applied to multiple similar positions, and those applying for many distinct positions. In summary, Talent Cloud noted a clear absence of the brute force application behaviour on our site.

Insights

The steps we designed and implemented on our platform to optimize application volume and specifically to deter the "brute force application" could be applied more broadly. In order for the Government of Canada to see these benefits at scale, changes would need to be made to the platform managers were using to hire, in order to ensure system-wide change management.

We believe the interventions listed above, as well as the five factor matching approach (optimizing talent-to-team fit), were significant factors in changing applicant behaviours and tailoring the volume of applications to the target range we aimed to produce. This wouldn't be available as a deterrent in cases where departments are running larger pools with generic information. However, when running a pool, a larger volume of applications may not be a concern, and potentially the need for a rapid process is also less significant, reducing the rationale to apply these interventions.

But for managers looking to staff quickly for roles on a specific team, we strongly recommend deterrents in the language on the job advertisement that will dissuade those who are applying for any reason other than actually wanting to be selected for that specific job. We also recommend optimizing the process (to the extent possible on the platform being used) to target a range of applications optimized for the manager's level of experience in hiring. This is one case where more is definitely not better - top talent will only wait so long, and speed is of the essence.

"When choosing selection criteria, it can be difficult to decide how many is too many... and how many is not enough."

Optimizing the Number of Selection Criteria

Research Summary

The Problem

Every externally advertised position in the Government of Canada includes a list of selection criteria (or requirements) which lay out the skills and experience an applicant needs to demonstrate in order to be considered for the position. These selection criteria fall into both essential (required) and asset (nice to have).

Getting the selection criteria right is critical to the success of the staffing process. All applicants must be assessed against each of the essential criteria, so adding too many could lead to job competitions with many steps for applicants to complete. On the other hand, the list of essential criteria is also the first filter managers have to keep unqualified people from applying. So too few essential criteria and managers may find themselves with a very large number of applicants, and an insufficient way to distinguish who will be the best choice for the position. So the stakes are pretty high for getting the selection criteria right.

The Hypotheses

1. There will be an optimal number of selection criteria in terms of producing a hire.

2. There will be an optimal number of selection criteria in terms of reducing time to staff.

3. More people will apply to job advertisements when there are fewer essential criteria (or requirements).

4. Adding more essential criteria will increase the overall time to staff.

5. Adding more selection criteria in total will increase the overall time to staff.

6. With the right interventions, managers can be guided to adopt a targeted number of selection criteria (essential and asset) for their job advertisements. We need to be able to guide managers to use an optimal number of essential criteria, or there will be no benefit from uncovering it.

The Experiment

For all staffing competitions advertised on Talent Cloud we kept track of key data including:

- Number of essential criteria
- Number of asset criteria
- Total number of selection criteria (essential + asset)

Optimizing the Number of Selection Criteria

Research Summary

- Number of applicants
- Number of assessments
- Success of hiring process
- Time to staff

The correlations between these data points is what we are interested in for testing our hypotheses. In addition, we added a few different platform interventions to see if we could influence the number of essential criteria managers used.

Platform Interventions

We never blocked a job advertisement from going on the site because of too many essential criteria. In fact, in the first year of the live platform, we deliberately provided no direct guidance to managers on how many selection criteria to use, while we studied behaviours, choices, and outcomes. (This caused a fair number of failed processes.)

After the first year, we added information for managers in the instructions for the job advertisement tools, drawing on the data from failed vs. successful job processes.

When we eventually launched our Job Advertisement Builder we added some of these nudges into the platform. We knew it would be tempting for managers to keep adding skills, especially when they are only a click away, so we built in real-time feedback to let managers know when they were within the targeted number of essential skills. Based on the behavioural sciences at the time, we went with numbers, emojis and colour indicators (based on the standard stoplight red-orange-green).
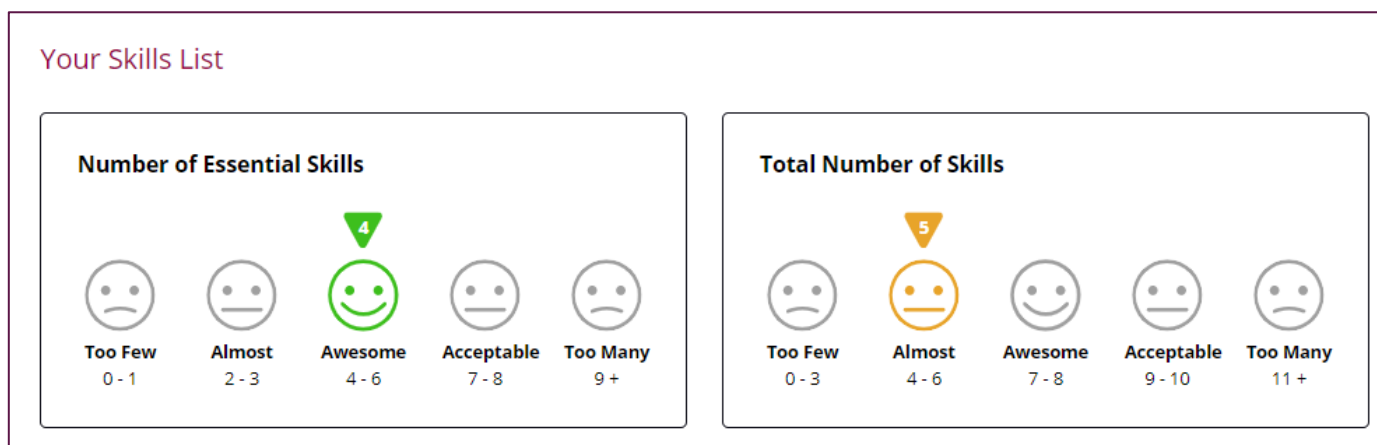
The Results

This was one of the most complex experiments to unpack what we were seeing because of the number of factors involved. Here's what we think we're seeing, but ultimately a much larger study with a larger sample size will be required to validate these findings:

Optimizing the Number of Selection Criteria

Research Summary

- There is an intersecting relationship between the number of selection criteria (essential and asset), the number of assessment steps, the length of each assessment step, the number of applicants the job advertisement attracts, the success rate of the hire, and the overall time to staff.

- Processes with fewer selection criteria attracted a higher number of applicants. This increased the time to staff at the initial screening stage of the hiring process.

- As the number of selection criteria increased (essential and asset), managers added additional assessment steps. This increased the time to staff at the assessment stage of the hiring process, and in the development time for assessment materials. (We found, on average, each essential criteria was assessed in at least two ways by the hiring manager, and assets were assessed in 1-2 ways.)

- **We found no correlation between the number of selection criteria and the overall time to staff.** We suspect that as the number of selection criteria changes, factors impacting time to staff (volume of applicants, number of assessment steps, manager energy levels and enthusiasm) may counteract each other to negate any time savings.

- Processes with more than 8 essential criteria failed to attract the number of applicants required to leave a sufficient number of top applicants in the process after the assessment stage. Effectively, it left a single top applicant in the process, and if that person left, the hiring process failed. (See diagrams on the hiring funnel in Optimizing the Volume of Applications in this section of the report.)

- Processes with fewer than 4 essential criteria weren't tested on the platform. While it's possible that 1-3 essential criteria may produce a strong hire, it's difficult to take into account the skill requirements associated with a 5 factor match (hard and soft skills) with fewer than 4 essential criteria. Based on the selection criteria chosen by managers, we believe it would not be possible to run an effective 5 factor match with 3 or fewer essential criteria (although this might be desirable for large generic pools of talent).

- **We did find a correlation between the number of essential criteria and the chance of a successful hiring outcome. Based on the overall balance of all these factors, our recommendation for the optimal range of essential criteria is 4-6, and no more than 8 selection criteria in total (essential + asset combined).** That means, if a manager wants a lot of essential criteria, they will need to have few assets.

- The number of asset criteria had no bearing on the results. But the number of essential criteria mattered. There appeared to be a range where the number of essential criteria yielded more success. A manager with 5 essential criteria appeared to be as successful as a manager with 6 or 7 essential criteria, as long as they all had no more than 8 selection criteria in total. (Managers with 4 essential criteria fared the best, but the sample size was very small.)

Optimizing the Number of Selection Criteria

Research Summary

- We were successfully able to design platform interventions that nudged managers to adopt these target ranges for the number of selection criteria, which had a positive impact on the overall results for hiring outcome.

- **Managers don't necessarily like the nudges that behavioural scientists think are effective.** The presence of a guidance tool was applauded by managers, as was the interactivity in terms of feedback when they added or reduced the number of criteria. But ultimately, they simply didn't like having to work with a tool that had smiley and sad faces. On the nudges themselves, we conclude that the colours and the number range are valuable, but next time we'd swap out the emojis for something a little more subtle. (Of course, then we'd have to test and see if it still worked...)

Insights and Potential Future Directions

These findings represent weak signals, but they would likely be worth pursuing with a larger study. In that context, it's important to point out that Talent Cloud uses selection criteria made up of a single skill, whereas other platforms sometimes use selection criteria made up of multi-component experience requirements. This could impact an applicant's perception of whether or not a selection criteria was really one requirement or several described together. Any future study would need to take this into account.

Regardless of the results of the research on the optimal number of selection criteria, we found that the inclusion of nudges was surprisingly effective in changing manager behaviour patterns. Our nudges combined numbers with emotional and colour indicators, and were interactive, so as the manager changed the number of essential and asset criteria, the nudge was updated to reflect this change. The usefulness of this addition to the platform could have broader implications for changing manager behaviours in other types of platforms as well.

We also found that when it comes to designing selection criteria, HR advisors remain an invaluable resource for managers.
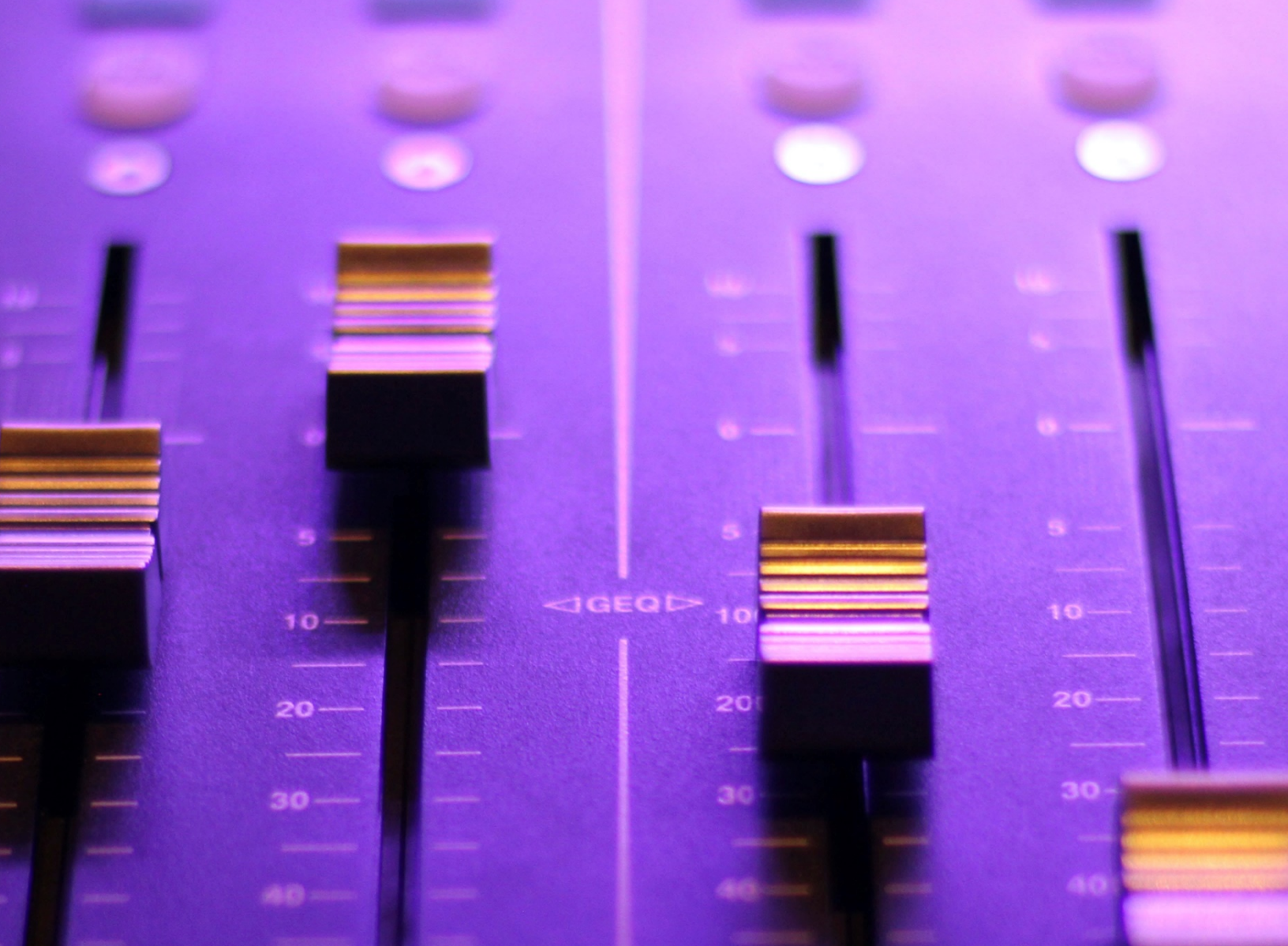
"Adjusting the number of selection criteria can increase the chances of getting a positive hiring result."

Integrated Priority Screening

Research Summary

The Problem

In speaking with employees with priority status, many of them reported being seen as a barrier by managers in staffing processes, and managers tended to discount the talent and qualifications they had to offer. Having to continually put their names forward also became a burden. In general, participating in staffing processes as a person with priority status was an emotionally damaging experience.

Managers also reported that the priority screening process "took a long time" and held up staffing - an assertion we were keen to test for ourselves. Based on workshops with managers and HR advisors, we found that the priority clearance process was usually initiated prior to the job opportunity being advertised. As managers were advised to wait for at least five business days in case any person with priority status came forward, the process usually resulted in one to two weeks of waiting time before the manager could see any progress on their staffing process. As priority clearance expires after six months, staffing processes that took a longer period require a new clearance before the Letter of Offer can be issued. These factors have contributed to managers perceiving the priority process as an obstruction to hiring the candidate they have selected.

The Hypotheses

1. People with priority status have a lot of talent to offer. Showcasing their qualifications differently will help managers see them as part of the talent pool.

2. Being framed as available talent rather than an obstruction in a staffing process will create a more psychologically positive experience for persons with priority status

3. Priority screening that runs in parallel while the job opportunity is being advertised will reduce time to staff.

4. Talent Cloud handling the transactional side of the priority clearance processes with the Public Service Commission will give managers and HR advisors a consistent, predictable timeline for this step.

Integrated Priority Screening

Research Summary

The Experiment

With the help of experts in the Public Service Commission, we mapped out a typical priority clearance process to identify areas for experimentation. We also obtained permission to request priority clearance on behalf of our partner departments in order to integrate it with the Talent Cloud process.

The test was to attempt to submit the priority request at the same time as the job opportunity is advertised, so no extra time would be added to the staffing process. Under this approach, when a person with priority status expresses interest in a job opportunity, they were asked to apply on the

Image 1: Priority applicants are tagged and categorized separately to ensure that they're reviewed first.

Integrated Priority Screening

Talent Cloud platform instead of sharing their resume and cover letter directly with the manager. Their qualifications were then displayed in the same way as other applicants, and managers were informed that their applications would need to be assessed first.

Talent Cloud then monitored the impact of these changes on both the time to staff and on qualitative data from those with priority clearance about the experiential side of these changes.

Platform Interventions

Persons with priority status were registered in the Public Service Commission's database, accessed through a separate system from Talent Cloud. No API was available from the Public Service Commission to connect the system to Talent Cloud, so manual data entry into the Public Service Commission's site by Talent Cloud staff was required. (While this allowed for the test of the overall model, at larger scale, there would need to be some automation between systems for the sake of efficiency and effort involved.)

Tag persons with priority status: When a person with priority status applied on the Talent Cloud platform, we located their application on Talent Cloud, and used our platform administration portal to tag them as a priority.

Image 2: Priority information is directly provided to HR Advisors.

Autosort candidates by priority: When managers reviewed their applicants, those who had been tagged as a priority appeared at the top of the list automatically. Managers were reminded of the legislative requirement to assess these applicants first ahead of all others. (Image 1)

Make it easy for HR Advisors: All priority clearance numbers were included as information on Talent Cloud's HR advisor portal, allowing for a swift policy compliance check before HR advisors completed the final paperwork for a job process. (Image 2)

The Results

The PSC informed us during our initial mapping exercise that only a fraction of persons with priority status would be interested in term positions. Our results were consistent with that observation. As all

Integrated Priority Screening

job opportunities advertised on Talent Cloud are term positions, only a few persons with priority status expressed interest in those opportunities.

Amongst those individuals, their applications on the Talent Cloud portal were assessed by managers ahead of all other candidates. Managers were impressed by the qualifications of these individuals and didn't display any negative sentiment regarding the requirement to assess these individuals first.

Because the priority clearance process occurred while the job was advertised, it didn't add to time-to-staff. All information on clearances was easily accessible, making it simple for managers and HR advisors to complete all requirements related to this part of a job process.

No applicants with a priority entitlement identified interest in a process later than the initial application stage, but if there had been an expression of interest at a later stage Talent Cloud would have been able to integrate the applicant's information into the process for manager consideration. That person would then have been assessed immediately.

Insights

The requirement to work with a separate system and to enter data manually has limited the scope of the experiment. That being the case, our small sample experiment suggested that interventions can be implemented to create a more holistic experience for persons with priority status, as well as reducing time-to-staff.

Security Clearance

Research Summary

The Problem

The Security Clearance process was one of the most often cited reasons for delays in the staffing process during our user research. Though we anticipated most of these delays happened for Secret clearance given the additional steps involved, the same was reported for Reliability clearance as well.

We tried to better understand the process for Reliability Clearance through reviewing the research done during Blueprint 2020, as well as meetings with various stakeholders. The Security Policy team at the Treasury Board of Canada (TBS) helped us map out the typical clearance process. We also interviewed the chief security officers at a few of our partner departments. This research found that similar to other steps in the staffing process, the security clearance process varied widely across departments. These interviews eventually led us to a meeting with the team at the Royal Canadian Mounted Police who was responsible for one of the checks in the Reliability Clearance process.

As a result of these meetings and interviews, we learned that due to the nature of the security clearance process, an outside team like Talent Cloud couldn't have much influence in reducing timelines.

The Hypotheses

While Talent Cloud couldn't influence much when it came to timelines related to security clearance, we could still help clarify information in a user-friendly way. One of the delays identified by experts in the process review involved candidates who have lived outside of Canada for a certain period of time. These candidates were required to request and submit policy checks from those countries, which could take anywhere from a few weeks to a few months. Given most candidates were not aware of this requirement until they had been selected as the final candidate, Talent Cloud hypothesized that in these cases, there was at least some opportunity to accelerate the process.

So here's the hypothesis we landed on testing:

> If candidates who have lived outside Canada are informed of the requirement to request out-of-country criminal record checks in advance, they will initiate the process earlier and have the documents ready when they are informed of the selection decision.

Security Clearance

The Experiment

Information about the security clearance process requirement was provided to all potential applicants through the website's Frequently Asked Questions (FAQ) page, and later on a thank you page after an application was submitted. Potential applicants were advised to complete the security forms in advance (but not to submit them until they were asked to do so). They were also encouraged to request out-of-country criminal record check ahead of time if they had lived outside of Canada over a certain period of time.

We then monitored visits to the FAQ page to estimate how often this information was being used.

Platform Interventions

1. FAQ (Image 1): A page was dedicated to provide important information in advance to potential applicants, including information about the security clearance process. Potential applicants were encouraged to review the information by using the title "How You Can Speed Things Up After Applying".

How You Can Speed Things Up After Applying

All Government of Canada employees are required to pass reliability security checks and many will require secret level clearance. This involves giving fingerprints, having a criminal record check and a credit check. These functions are conducted by authorized security officials in Government (not Talent Cloud).

All this can take a while.

Want to speed this up?

There are 2 things you can do:

- Fill out the papers you'll need to submit in advance
- If you've lived out of Canada, read below

If the job you've applied to requires Reliability Level security, complete the form found here and then hold onto it. Once complete, don't email it to Talent Cloud until you get asked for it.

If the job you've applied to requires Secret Level security, you'll need to complete both a Reliability Clearance form and a Secret Clearance form. Once these two forms are complete, don't email them to Talent Cloud until you get asked for them.

If you've lived outside of Canada for more than six months in a row in the last 5 years (10, if your job requires secret clearance) then you'll need to provide an "out of country" criminal record check. This can take a while, as it depends on procedural timelines of the country you've lived in. Applicants can request this "out of country" criminal record check at any time, outside of any staffing process. This record is submitted from the applicant to the Government of Canada at the time of security screening. So if you've spent 8 months in South Africa or hung out in the Alps for a year or been at school in Australia, we suggest requesting your records up front. This can save you and your hiring manager a lot of time later. (And if a particular project-based position starts at fixed date, the lack of security clearance in time may force the hiring manager to select another candidate...)

Image 1: an example of how our FAQ offers post-application directions.

Security Clearance

Research Summary

2. Thank you page (Image 2): In an effort to make this information more apparent to actual applicants, suggestions on next steps, which included requesting out-of-country criminal record check in advance, were added to the thank you page that appeared after the applicant submitted their application.
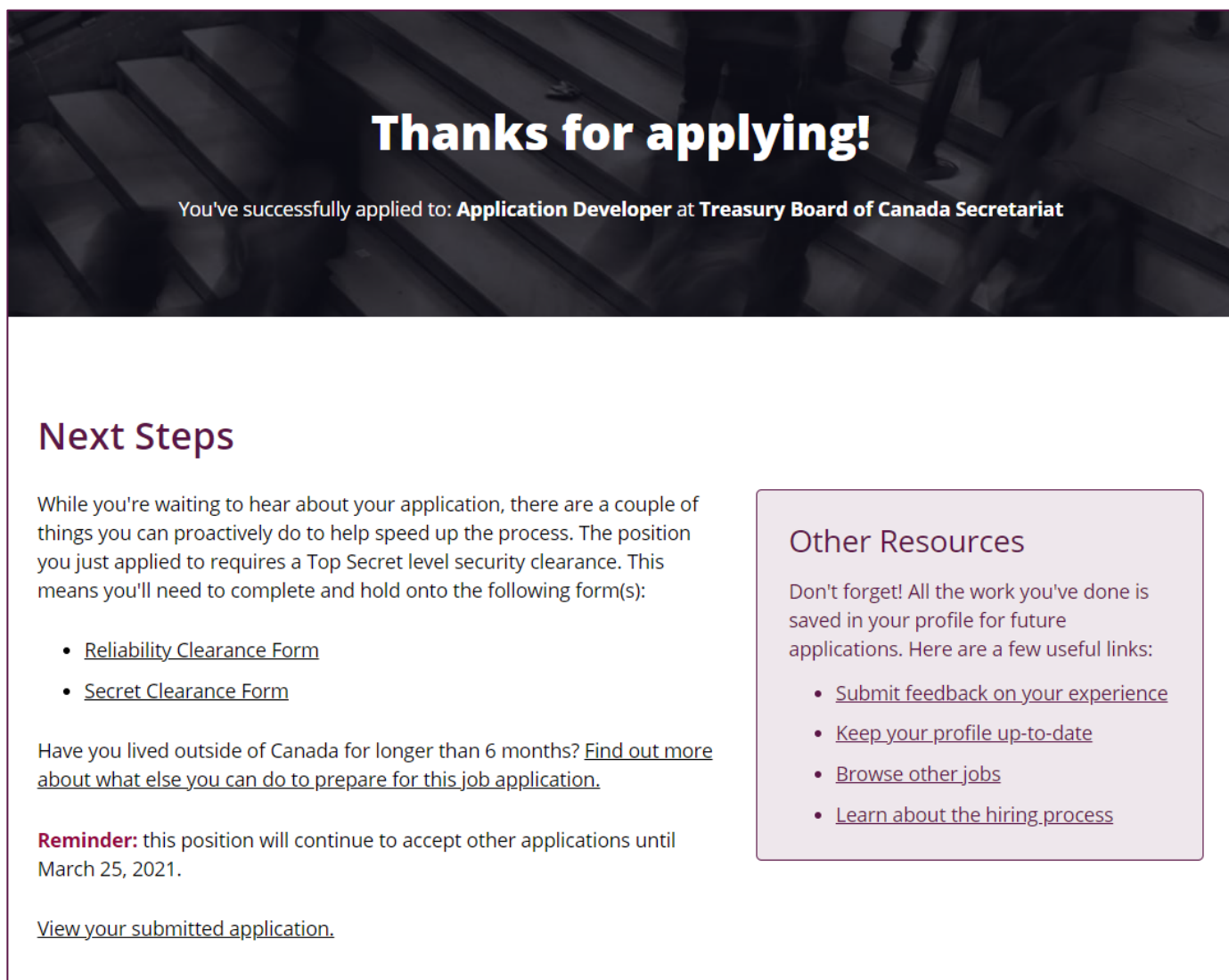
Image 2: users are offered helpful next step information after the submit an application.

The Results

The FAQ page has registered over 20,000 pageviews as of March 2021 since we started tracking the statistics three years ago. Though we could not measure directly how information on the FAQ page might have influenced behaviours, our interviews with people who were hired through Talent Cloud

Security Clearance

indicated that they found the information helpful. Some of them consulted the page multiple times through the staffing process, even revisited the page after they were hired.

We also heard from one manager that because his candidate took the advice he saw on the thank you page, the candidate immediately requested out-of-country criminal record checks after submitting the application. As a result, the manager estimated that the staffing process was shortened by two weeks to a month.

Insights

Despite the minimum influence Talent Cloud had on the security clearance process, sharing information with applicants in advance has allowed them to be prepared and helped to reduce time-to-staff in some cases. Sharing the requirements in simple languages also helped applicants who were new to government to better understand the process. We even received requests from HR advisors at our partner departments to share the information with their candidates.

In Collaboration

Towards an Online Security Screening Form

Towards an Online Security Screening Form

In Collaboration

GC experts identified that some delays in security screening were caused by applicant errors made on the clearance forms, resulting in processing issues and forms having to be resubmitted. Users have reported that they found the forms confusing and prone to errors during our research. Since only an original copy with signature was accepted by security officials, and secure methods of delivery were required, candidates often needed to mail the paper copy to the security office. One can imagine how the process could slow down if the error was only detected by the time the mail reached the department, and the candidate needed to complete and submit (by mail) a new form. In some cases, forms went from applicants to managers to HR to security, only to travel this chain of transmission in reverse when an error was detected.

While Talent Cloud has no mandate for security clearance modernization, the team worked with the Security Policy Team at Treasury Board Secretariat to design a prototype of a digital Reliability

Welcome to the Security Screening Application

Please note that this application is a prototype and is not ready to be used in production.

Demo Home / Applicant Home / **Application Start Screen**   **DEMO**

Hey Jason, let's get working on an application!

Please select one of the following paths:

Start a New Application

If you haven't completed an application using this tool before, or you'd like to start an application fresh, select this option.

Start an Application

Continue an Application

If you've already begun an application and have the file you were asked to download on your device, select this option.

Continue an Application

The prototype included what it might be like to start an application fresh, or return to continue an existing one.

Towards an Online Security Screening Form

In Collaboration

security form. The prototype was front-end only, meaning it was not linked to any database in the background for real-use.

In collaboration, the prototype was tested to determine if the digital form would help guide applicants to provide the correct information and if the code would correctly check for errors in real-time before submission. The digital reliability clearance form prototype demonstrated that an interactive form could support users in providing the correct information. Users also commented on the intuitiveness of the interface compared to the paper form, which helped them to navigate the requirements and provide information in a correct format.

The prototype explored showing/hiding requests for information based on how a user answered specific questions to avoid complicated interfaces and asking for irrelevant information.

Security screening is an important security measure for the Government of Canada. The Talent Cloud team appreciated the opportunity to collaborate with the Security Policy team to build and test the digital reliability clearance form prototype. The prototype has been transferred to the responsible authority for their consideration.

Towards an Online Security Screening Form

In Collaboration

⚠ Residence

List all (including temporary) addresses where you have lived in the last 10 years, beginning with your current address. Ensure that there are no gaps in the dates that you provide below.

Please provide information up until **May 2010**. You've covered a period of **4** out of the 10 required years.

My Current Address

Gatineau, QC May 1, 2019 - Present	Edit Remove
3 - 55 Solace Avenue Gatineau, QC, A1B 2C3 Canada (555) 555-5555	

Previous Addresses

Winchester, ON March 1, 2019 - April 30, 2019	Edit Remove
1278 Nightly County Road Winchester, ON, A1B 2C3 Canada (555) 555-5555	

> ⚠ **There seems to be a gap here.**
>
> We've noticed a gap in your dates (February 1, 2019 to March 1, 2019). Please ensure that there are no gaps in your residence before submitting this form.

Ottawa, ON March 4, 2015 - February 1, 2019	Edit Remove
45B - 20 Franklink Crescent Ottawa, ON, A1B 2C3 Canada (555) 555-5555	

Add a Residence

On this page:

- Introduction
- ✔ Consent & Verification
- ⚠ Background Information
- ▲ Residence
- ⚠ Professional Background
- ⚠ Personal References
- ⚠ Education & Designations
- ⚠ Criminal Record
- ⚠ Proactive Notification
- ⚠ Marital Status
- ⚠ Roommates / Cohabitants
- ⚠ Immediate Relatives
- ⚠ Save or Submit

Save & Continue Later

The prototype highlighted areas of opportunity where a digital interface could prompt the user to fix errors that are easy to catch to help avoid incorrect submissions.

Simpler Text for Official Languages

Research Summary

The Problem

In our user research, many applicants reported that they found the official language requirements confusing in government job advertisements. With the proficiency level usually described as CBC or BBB, applicants who were new to government had many challenges in understanding what was required of them, and whether or not their level of language ability would be sufficient to succeed in the job.

Managers also reported concerns with this element of the screening process, expressing that applicants tended to overestimate their bilingual capacity. This was resulting in managers selecting promising applicants who didn't end up meeting the language requirement. As second language evaluation (SLE) usually took place after a few candidates had been shortlisted, when these candidates failed the SLE, uncertainties and delays were created in the staffing process. Managers sometimes had to go back to their applicant pool several times, only to find that other top applicants had already moved on to other offers.

The Hypotheses

Those who do not meet the necessary language requirements will not apply to bilingual positions if:

- Applicants have clear understanding of the language requirements, with guidance to cross-reference their official language capacity to the Government of Canada's proficiency level structure; and

- Applicants with clearly insufficient language levels will be dissuaded from applying if they understand that they will absolutely not be appointed to the position if they don't meet the language requirement

The Experiment

Talent Cloud initially identified two areas of intervention related to official languages that could be easily added to the platform design: changing the way information was provided in a job advertisement and adding a nudge. These were tested live with numerous Talent Cloud processes. Talent Cloud tested these interventions with users in mock processes, and then tested to see what would happen in live processes.

Simpler Text for Official Languages

Research Summary

Following the initial findings in 2019, Talent Cloud decided to test a third intervention in 2020: adding a language self-declaration form on the job application. This was tested with users in mock processes, but has not yet been released for testing on a live job advertisement.

Platform Interventions

1. **Language requirements in simple language:** On job advertisements, information about the language requirements was rewritten in simple language and described in a way that could be understood by applicants from various backgrounds, including those completely new to government jobs. A link to the Public Service Commission website on second language evaluation was included for those interested in learning more about the evaluation or taking the self-assessment. (Image 1)

2. **Official language capacity confirmation:.** In order to discourage those who didn't have the required official language capacity from applying, a behavioural nudge was added to the application process to ensure that applicants fully understood that they would absolutely need to meet the language requirements in order to be considered for the position. Before they could submit their application, applicants needed to tick a box confirming that they had the required language capacity in order to proceed.

3. **Official Language declaration form:** Based on observations on how managers and HR advisors utilized information about applicants' official language capacity in real staffing processes, a new Official Language declaration form was developed. Users had the option to describe their official language capacity, while managers could access the information in a way that supported them in making staffing decisions (framed in the context of Government of Canada language levels). (Image 2)

Language Requirements

Bilingual - Intermediate

This position requires working knowledge of both French and English. This means that you can take on job duties in either French or English, and you have intermediate reading, writing and verbal communication skills in both official languages. As part of this selection process, your language abilities will be tested by the Public Service Commission of Canada.

You can complete all other steps of this assessment process in the official language of your choice, including the initial application, interview, exam and any other evaluation components.

Image 1: job advertisements contained simple language that described the position's language requirements.

Simpler Text for Official Languages

Research Summary

The Results

Of all the questions we received from applicant portal users, which ranged from inquiries about specific job advertisements to general technical questions, none was related to the language requirements.

That said, there were still a few instances where applicants over-estimated their language levels, despite the clearer language on the job advertisement and the nudge against overclaiming. In these cases, the applicants had some ability in their second language, but didn't have a benchmark to understand how well this would translate to Government language around CBC or BBB. This indicates the need for the inclusion of further interventions.

The Official Language declaration form Talent Cloud designed received positive feedback during user testing. It can hopefully be integrated into use in the future, and tested as a potential solution to the issue of misaligned applicant self-assessment of language levels.

Insights and Potential Future Directions

Talent Cloud users repeatedly reported that clarity of information presented on job advertisement was an important factor in motivating them to apply for opportunities. It was important to ensure information was communicated in a way that could be easily understood, especially for users who had never previously applied to government jobs.

As language requirements are key information on government job opportunities, Talent Cloud demonstrated that various interventions can be implemented to ensure applicants clearly understand what was required of them. These interventions can also contribute to reducing time to staff by helping deter potential applicants who do not have the required official language capacity.

Simpler Text for Official Languages

Research Summary

Your Language Information

Use the form below to help us better understand your language preferences and capabilities. Fields are required where marked.

Select your first official language. (Required)

- ● English
- ○ French

Please indicate your proficiency in the other language. (Required)

- ○ I am not bilingual (English/French).
- ● I am bilingual (English/French) and **have** completed an official Government of Canada language evaluation.
- ○ I am bilingual (English/French) but **have not** taken an official Government of Canada language evaluation.

Please indicate if you are interested in bilingual positions: (Optional)

- ● I am interested in bilingual positions.
- ○ I would prefer not to be considered for bilingual positions.

Please indicate the language levels you acquired from your Government of Canada language evaluation.

Comprehension (Optional)	Written (Optional)	Verbal Comm. (Optional)
Level... ▼	Level... ▼	Level... ▼

Image 2: a prototype currently being tested that collects applicant language information.

How Talent Cloud Builds Platform Tools

1

Planning a Tool

Workshops, Journey-mapping, Interviews. This is where we build hypothetical tools using whiteboards, paper or digital prototypes, and ask managers and applicants to use the tools in mock processes.

2

Live, Low Fidelity Testing

This is where paper prototypes become Excel and MS word documents, and get used for real job processes. Managers and HR advisors use these tools off-platform to test their usefulness and refine how our theory of change connects to the practical realities of actual staffing.

3

1st Round Platform Testing

This is where feature designs from workshops and off-platform testing finally get coded and make it into a portal. For applicants, most tools get introduced and tested here first for live processes. For managers and HR advisors, new tools on their portals have usually gone through several rounds of live, off-platform development.

4

Upgraded Platform Tools

This is the stage where the big things become "permanent" parts of the platform. However, there are always refinements that we only learn about from live testing. In some cases entire tools are rebuilt to deliver better behavioural or process results. The tools on our platform are also interconnected, so no matter how great a tool is when it's released, it still needs to be updated when other tools are changed or added.

A TOOL TO BUILD OPTIMIZED JOB ADVERTISEMENTS

Welcome to the manager portal, Jessica.

Craft a Job Advertisement

Craft an Assessment Plan

Review Applications

Record Applicant Assessment

A Tool to Build Optimized Job Advertisements

Purpose of the Tool

On Talent Cloud our job advertisement builder does more than create a document we can publish. The process of creating the job advertisement itself is used to help managers put together their thoughts about the job, and once drafted, the advertisement serves as an important tool to start a conversation with HR.

Managers have expressed to us the challenges of putting together a job advertisement that properly translates their needs into something that also appeals to applicants and addresses the many requirements of Government HR. The job application builder tool is our attempt at making this process easy enough for anyone to finish, while ensuring HR advisors aren't shouldering a large part of the workload in drafting content.

This tool combines our research on optimizing the talent-to-team fit and reducing time to staff, helping managers produce optimized job advertisements that will lead to swift processes and strong hiring results, without managers even having to think about the behind-the-scenes research.

Current Status

The job application builder is currently available for managers to use and for HR advisors to review. The tool has been used for dozens of job processes since its release, and continues to be upgraded as new findings emerge.

Results

Managers using the job advertisement builder are able to put together job advertisements within a day or two (1-2 hours of active drafting time). These drafts are generally approved by their HR advisor with minimal changes, (although any back and forth on editorial changes can take time.) In our early workshops, managers reflected that this would normally take weeks or even months of back-and-forth, so we see this as a big improvement.

The tool has also helped ensure that managers are made aware of, and encouraged to apply (through nudges and choice architecture), best practices that lead to better hiring outcomes and faster staffing processes. This includes steps to optimize the volume of applications (such as the number of selection criteria) and details on the team culture, operational requirements and work environment.

Applicants generally expressed a high level of satisfaction with the job advertisements generated with our tool and have highlighted the work environment and team culture sections as being particularly valuable.

Insights

Early versions of the job advertisement builder worked well in some areas, but also failed in a few unexpected ways.

One early blocker in 2018-19 was the sections for describing team culture and work environment. Some managers didn't know where to start and found a blank text box daunting. It led to procrastination and some told their HR advisors it was too much work. To resolve this, Talent Cloud moved to providing tools that pre-populated default text, based on a checklist, which managers could then edit, making the task much easier. Managers spend a lot of time editing as part of their regular duties, so we redesigned the process to play to this strength. This behavioural redesign resolved the issue, and led to broader insights about procrastination behaviours on the part of managers and steps Talent Cloud could take to help address this.

Another challenge we observed in 2018-19 was that managers on their own tended to add too many essential requirements to a job advertisement. In the course of a year, a human on the job uses a lot of different skills, and managers were prone to try to list as many as they could imagine on a job advertisement. To help managers arrive at an optimal number of selection criteria - one that would attract the right number of applicants and not be too long to process - Talent Cloud built nudges into the tool to help managers realize the detrimental impact of too many (or too few) selection criteria.

Key Components of the Tool

Basic Data Entry:

- Drop down menus to help managers rapidly confirm the details of the job, such as classification, level, language, security.

- Multiple choice selection for work flexibilities including: Remote work, Telework, Flexible hours, Travel, Overtime (with nudges to promote best practices)

- Default education requirement text that allows for equivalencies but can be narrowed by managers as needed (with text written to promote inclusion and diversity by clarifying the value and acceptance of education equivalencies)

EN & **FR** Bilingual - Intermediate

This position requires working knowledge of both French and English. This means that you can take on job duties in either French or English, and you have intermediate reading, writing and verbal communication skills in both official languages. As part of this selection process, your language abilities will be tested by the Public Service Commission of Canada.

You can complete all other steps of this assessment process in the official language of your choice, including the initial application, interview, exam and any other evaluation components.

Easily understandable text for applicants based on the manager's selection and government policy.

Work Environment & Culture

- Checkbox list to describe Amenities, Access to technology, and Physical Environment

- Multiple choice questions on work culture to prepopulate a statement that can be further edited by the manager

- Work environment choice selection also informs the skills suggestions for managers when setting the essential and asset requirements of the position, helping ensure a soft skills fit between the applicant and the team

Fast-paced vs. Steady:	Required	
○ Very Fast-paced ○ Fast-paced ● Steady ○ Very Steady	**Steady** Our deadlines are regular and predictable, we balance a couple of tasks at a time, and our priorities change occasionally. We keep things on an even keel.	

Simple tools that generate default text (that can be edited afterwards)

Impact Statement

- Helps managers craft a strong and concise impact statement that will appeal to applicants.

- Three sections: department impact, team impact and impact of the applicant in the job.

- Departmental mandate is prepopulated, based on the manager's profile setting

Key Tasks

- This is designed to help managers follow the logic flow that begins with the Impact Statement. In order to deliver the impact articulated, managers are asked to identify a list of specific tasks the person hired will be doing.

- Key tasks are open text fields, but the number is limited to 6, which proved to be the optimal number in user testing (workshops and live testing). This was chosen to strike a balance: on one hand, we wanted to help managers provide key information applicants wanted to see; on the other hand, we didn't want managers to overwhelm applicants with a huge list of tasks (which generated negative behavioural associations with micromanagement practices during early user testing).

- Managers, when crafting key tasks, can draft as many as they like. They can then move them up and down the list, prioritizing and ordering their top six key tasks using a sorting system. This also lets managers hold onto draft content, in the event that HR advisors recommend different key tasks.

①Just a heads up!
You have exceeded the maximum number of key tasks allowed, but that's okay. You can continue to add key tasks as you brainstorm here, but you will be asked to trim your list to 6 key tasks or fewer to proceed.

Task 7   Required

Task 6

Feature to support managers in reaching the optimal number of key tasks with the flexibility to brainstorm

Skills (Essential and Asset Criteria)

- This is designed to follow the logic flow from impact to tasks to skills required to perform those tasks (and ultimately deliver the impact on Canadians for which the job is being filled).

- A curated list of occupational skills is available to choose from based on job classification, and a list of transferable skills is available for all classifications. This helps ensure consistent descriptions and translations across different jobs (paving the way towards interoperable talent pools for those who pass requirements). This also makes it easier for applicants to apply by allowing them to re-use work done in previous applications that had the same skills listed.

- Skills are grouped into logical categories for ease of browsing.

- Managers can add a personalised description to each skill if they feel a need to add further information or they can use this space to let applicants know the specific context in which the skill is applied on their team.

- Managers can also request new skills if none of the ones provided meet their needs. (This information is gathered through the tool, vetted through HR and added to the master database for skills.)

- Based on answers provided by the manager in the Work Environment and Team Culture sections, skills are suggested to the manager. (For example Resilience is often suggested when the manager indicates the work environment is high paced or relatively high stress; Collaboration is recommended when managers indicate that their team works with other teams regularly.)

- When the manager selects a skill, they are shown the skill description and prompted for the level of proficiency that is required.

- Managers are strongly encouraged (through various nudges) to keep the number of skills on their job advertisement within an optimised range. (See Optimizing the Number of Selection Criteria in this report.)

General Components

- Step by step process designed to help managers keep focused, with lots of "win moments" built in to encourage managers to feel like they're making progress and to complete the task at hand.

- Progress is shown to managers after each step is completed, also giving them a chance to see what an applicant will see when the job advertisement goes live.

- Once drafted, managers can share the job advertisement with their HR advisors for comment and approval.
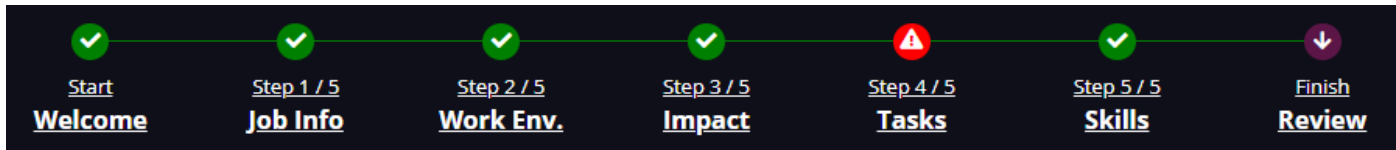
Step by step process for managers

Helpful Guidance at every step, tailored for the Government of Canada

A TOOL FOR ASSESSMENT PLANNING

Welcome to the manager portal, Jessica.

Craft a **Job Advertisement**

Craft an **Assessment Plan**

Review Applications

Record Applicant Assessment

Purpose of the tool

Developing assessment materials was routinely mentioned by managers as one of the most challenging steps in the staffing process during our user research. Many reported procrastinating on this step as they felt overwhelmed with scheduling challenges and unclear about how to develop materials. This significantly added to the overall time to staff.

Talent Cloud's assessment planning tool is designed to facilitate discussion between managers and HR advisors early in the staffing process (before a job advertisement is finalized). It consists of two components:

- The first component focuses on supporting managers in building an assessment plan. It pre-populates information as managers add skills (essential and asset criteria) to the job advertisement. Both managers and HR advisors can then decide how each skill will be assessed, and comment back and forth on the proposed plan. The planning tool provides drop down options and formats information in a way that managers can, with a few simple clicks, present their forward plan to their HR advisors.

- The second component is a ratings guide builder, which is designed to prompt managers and HR advisors to discuss and create actual questions and materials for each assessment type they have chosen and decide on the passing criteria for each skill.

Notably, neither component of the assessment planning tool is designed to promote a particular assessment method for a particular skill or provides tests associated with the assessment method. It's purely for planning purposes. (The team looked at ways to connect the tool to academic references, making suggestions to managers on literature-supported assessment methods for each skill, combined with data on how previous GC managers had tested each skill on Talent Cloud, but we didn't have the resources to complete the work.)

Current Status

The assessment planning tool is currently in beta for managers and HR advisors to use.

The first component (basic plan) received positive feedback and was well-used, and is now ready to be upgraded with a planning calendar, email templates for key stages, and additional support for managers.

The second component (ratings guide builder) had mixed results in live testing. It surfaced several underlying challenges managers face when developing assessments, as well as the high degree of variance in advice provided by HR advisors in different departments. Some managers found the model very useful, others found it confusing. In many departments, this component of the tool was used almost exclusively by HR advisors (who had an easier job using it than managers). To address these variances, improve usability, and to connect the ratings guide methodology to the final

assessment justifications required for each applicant (Record of Decision), our team is working on a new design for the ratings guide component. It has been through several rounds of workshop redesign, and is ready for a round of live testing using off-platform tools. (See also A Tool for Record of Decision in this section of the report.) While complicated to develop, we believe that creating a simple logic frame that all managers can use will dramatically help speed time to staff in the assessment phase of staffing and early planning stages (pre-job advertisement).

Results

As an HR best practice and to avoid delays while candidates are waiting to be contacted, some departments require that all assessment materials be completed before the job advertisement can be published. This shortens how long applicants wait for testing and interview stages, but it requires more upfront work from managers. After observing manager and HR advisor interactions around the development of assessment materials, Talent Cloud has found that staffing processes run best if there is at least an assessment plan in place when the job advertisement is finalized, even if the assessment materials themselves (tests and ratings guides) are still in development at the moment a job advertisement goes live. (Although we agree with HR advisors on this one - it's best if everything is set to go before a job advertisement is posted.)

The assessment planning tool was used by some managers and HR advisors to facilitate discussions while the job advertisement was still being finalized. As a result of these discussions, some managers added screening questions to the application process. In other cases, managers were prompted to have more in-depth discussions with their HR advisors on what skills were absolutely required and whether there were any overlaps. They then revised the skills on the job advertisement to ensure they could assess applicants in a manageable way.

As for the ratings guide builder, some used the tool to finalize their assessment materials while the job advertisement was open for application. In those cases, the managers were able to start assessing their applicants as soon as the applications became available.

Overall however, the ratings guide, in its initial implementation, has not been broadly adopted and most managers have instead opted to use the standard departmental tools for putting together ratings guides for their assessments.

On the whole, while this tool was one of our more heavily debated and revised products, we ultimately found that its inclusion was definitely helpful for managers in reducing time to staff, especially when it came to moving swiftly enough through assessment stages to keep top applicants interested and feeling engaged.

Insights

The assessment plan builder was useful as a tool to facilitate discussions between managers and HR advisors. It also helped managers to take a more holistic view of the staffing process while they were still finalizing the job advertisement. This improved quality and cohesion across staffing stages, as well as overall time to staff.

One of the challenges managers faced when building the ratings guide was to articulate the passing criteria for each skill and distinguish between various levels. While Talent Cloud doesn't provide any

advice on the assessment, our team is working on a logic framework that aims to help managers consider this in a consistent way. Using this framework, our team has developed generic behavioural indicators for some of the most commonly requested skills as proof of concept. With more time and capacity, we believe behavioural indicators can be developed for a wider variety of skills and be pre-populated in the ratings guide builder, which in turn can help accelerate the discussion between managers and HR advisors. These behavioural indicators should be developed with the support and validation of the communities of practice for the various classification groups.

During assessment planning discussions, managers routinely requested sample questions and existing assessment materials, to which HR advisors responded differently across various departments. Some managers also suggested building a GC-wide inventory of assessment materials developed by managers in the Government of Canada that teams from different departments can reference. Assembling a library of assessment materials gathered from GC partners was, unfortunately, beyond the capacity of Talent Cloud at its current resource levels. But the concept of an assessment learning library for managers represents an opportunity for a broader discussion across the public service.

Key Components of the Tool

Notably, both managers and HR advisors (who have claimed that specific job) can create content and edit all parts of the assessment plan from their respective portals. Activity is tracked, and managers and HR advisors can add questions and comments for each other.

Assessment Plan Builder

- Prepopulated skills from the job poster builder, including description of the skills and the selected level

- The stage "Narrative review" - a review of information submitted by applicants in their application - is added by default as an assessment step for all criteria where this information was gathered in the initial application

Prepopulated skills based on selection in the job poster builder and ability to add / edit assessment types

- Drop-down menu of common assessment types for managers and HR advisors to choose from for each skill

- Ability to add multiple assessment types for each skill

- Error reminder when any of the skills don't have at least one planned assessment in addition to the application review. (Managers may confirm that the only assessment planned is the application review, but this functions as a reminder to validate essential criteria through an assessment method beyond an applicant's initial claim.)

Assessment Plan Summary

- Display of all assessment types selected in the assessment plan builder, along with the associated skills, in a way that meets the needs of both managers and HR advisors

- Can be rearranged by ordering the information by assessment steps or by selection criteria being assessed. (We found that, in general, managers prefer the former because they're interested in what comes next in their calendars, whereas HR advisors prefer the latter because they want to confirm that each essential and asset criteria has a sufficient assessment methodology attached to it.)

2. Assessment Plan Summary

This is a summary of the work you've done above. You'll find each assessment accompanied by a consolidated list of the essential and asset skills attached to it.

Assessment Summary

Your plan uses 4 tools to assess 9 skills.

Narrative Review	Essential Skills	Asset Skills
Assessing 6 skills.	• Client Services • Integrity • Ability to Learn Quickly	• Human Resources: Assessment Tools • Storytelling • Ability to Work on a Distributed Team
Reference Check	Essential Skills	Asset Skills
Assessing 2 skills.	• Collaboration • Dependability	No skills being assessed by this tool.
Interview	Essential Skills	Asset Skills
Assessing 2 skills.	• Dependability • Collaboration	No skills being assessed by this tool.

Summary of all selected assessment types and their associated skills

Ratings Guide Builder

- Display of all the assessment types selected in the assessment plan builder, along with a description of the assessment type and the associated skills

- Ability to add questions for each assessment type and link them to one or more skills associated with that assessment type

- Ability to add acceptable answers or passing criteria for each question

- Error reminder when any of the skills associated with the assessment type weren't linked to at least one question

Ability to add questions and link them to associated skills in the ratings guide builder, then add passing criteria for each skill

Copy Ratings Guide to Clipboard

- One-click button to copy all information from the ratings guide builder in table format to paste in other software (e.g. Word, Excel, etc.)

One-click to copy all information from the ratings guide builder in a table format

A TOOL FOR APPLICANT TRACKING

Welcome to the manager portal, Jessica.

Craft a **Job** Advertisement

Craft an **Assessment Plan**

Review Applications

Record Applicant Assessment
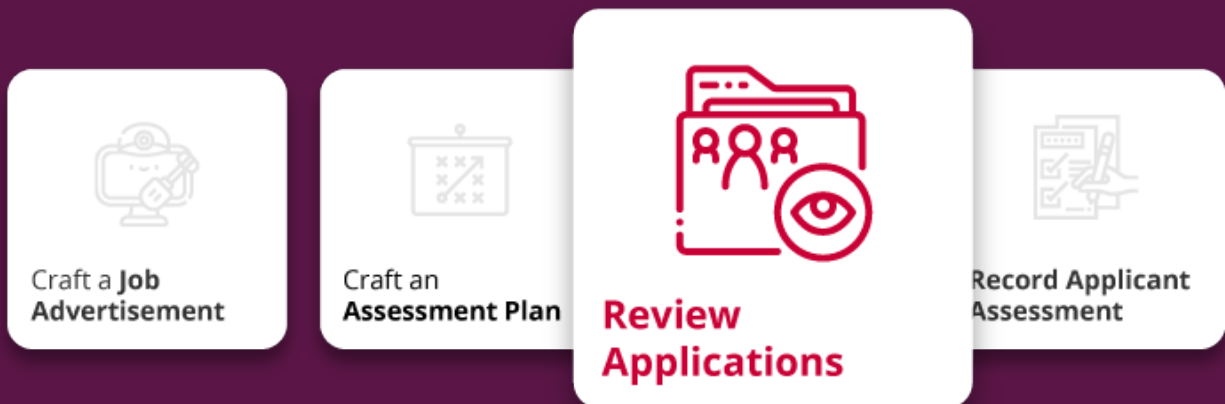
A Tool for Applicant Tracking

Purpose of the Tool

At the heart of every hiring process are the applicants themselves. The applicant tracking tool was designed to present the list of applicants to managers in a way that made it easier for them to review and stay organised throughout the assessment phases of the staffing process.

Government of Canada hiring managers are required to consider applicants in a certain order, and this can vary depending on a manager's department or agency. For example, Canadian citizens must be considered before non-Canadian citizens. In some departments, those with veterans and those with priority status must be considered first, whereas in other departments internal employees must be considered first. The applicant tracking tool organizes and groups applications in the order of consideration required by their department. If a manager changes departments, the applicant tracking system changes the order of consideration. This supports managers to sort applicants efficiently, and be policy compliant, without managers needing to think about requirements. Applicants are simply presented in the "flight" order in which managers need to consider them.

The tool keeps track of applications that have not been reviewed and reorganizes them as managers review and decide whether the applicant is qualified to proceed to the next assessment step. Applicants who are still being considered stay at the top of the "Under Consideration" category, while those who are screened out are moved to the bottom of the list. This automatic sorting helped managers and HR advisors to keep track of their assessment process and coordinate communications with applicants.

The sorting selection also allows managers to flag an application decision as "Still Thinking", meaning that managers don't get hung up on points of indecision. They can simply flag these files for later review, and move on to others where they can more easily determine if the applicant should proceed or be screened out. This is a behavioural intervention to prevent choice paralysis, which can lead to procrastination and longer staffing times.

Current Status

The applicant tracking tool has been available to managers since early 2019 and HR advisors since early 2020 (when their respective portals were launched on the platform). The tool has limitations on detailed assessments of each applicant (by deliberate design) in order to comply with policy requirements related to the absence of a Protected B server environment. These limitations are ready to be removed and replaced with new features as soon as a Protected B server environment becomes available.

An upgraded new design has been developed to combine the applicant tracking tool with the record of decision (see section 4.14 A Tool for Record of Decision for more details). This upgraded design has not yet been released.

Results

Managers reported that the tool made it significantly easier for them to keep track of and review applications. They found the auto-sorting to be convenient, and grouping of applications had in some cases helped managers to batch and prioritize applications they needed to review. Managers also appreciated being able to see the names and email addresses of all the applicants on a dashboard.

Managers also followed the behavioural designs around the choice architecture (to prevent choice paralysis and procrastination) as expected, which was a success in terms of reducing time to staff, particularly in the initial applicant screening stage of the hiring process.

After introducing a feature that allows managers to screen applicants in real time, as applications arrived, we also observed a reduction in time to staff for processes that took advantage of that feature (read Overall Impact on Reducing Time to Staff for more details).

Insights

Managers found the applicant tracking tool to be useful in the initial application sorting stage, and most continued to use it throughout the rest of the hiring process (even considering the required limitations on the platform that made assessment tracking less functional). Other managers and HR advisors tracked applicants in their own ways off platform as they continued the assessment process, signaling a need to link applicant tracking and record of assessment for users to utilize the tool from end to end. (This can only be implemented once the platform is successfully migrated into a Protected B server environment.)

As job opportunities on Talent Cloud were usually advertised for at least two weeks, the introduction of real time screening allowed managers to review applications as they arrived, which tended to coincide with the behavioural stage when managers were most eager to sort applicants. Having posted a job advertisement, managers wanted to see who was applying. Although this feature was introduced late in the pilot, managers that used it reported feeling less overwhelmed, and were more able to keep pace in screening when they were dealing with a few applications a day. This lower daily time draw, coupled with the enthusiasm to see who had applied each day, led to positive outcomes - both experientially and in terms of reducing time to staff.

There is research that suggests that making a large volume of assessment decisions at once can lead to decision fatigue, an excessive tendency to draw inferences from small points of data (thin slicing), and ultimately errors in judgement brought on by depleted mental energy reserves related to decision making capacity.[1] The choice architecture in this tool is designed to promote best practices in decision making in three ways: sub-grouping without drawing on decision-making energy reserves, reducing choice paralysis, and reducing application volume in a single sitting through real time screening. In essence, it has been engineered to promote not only a faster staffing process, but also best practices in terms of generating fairness in decision making, based on the current behavioural science.

Key Components of the Tool

Real-time applicant screening

- Applications can be reviewed as soon as they are submitted

Pre-grouped applications

- Applications are grouped and sorted by veteran and citizenship status.
- Applications submitted by a priority status person are flagged with reminder to the manager to assess that application first
- Totals number of applicants provided for each group

Applications grouped and sorted by priority, veteran and citizenship status.

Helpful Information

- Links provided to application and applicant's email

- Option to record notes as managers and HR advisors review the applications (with limitations in line with privacy requirements for a non-Protected B server situation)

Auto-sort applications

- Applications automatically sorted as managers make screening decision

- "Still thinking" category allows managers to delay final decision if they are uncertain and move on to the next candidate, with the "Still Thinking" applicant flagged and moved to a position on the list below "advance to next round" and "not yet assessed" application groups, but still in the Under Consideration category

Automatic sorting as managers make screening decisions.

A TOOL FOR
RECORD OF DECISION

Welcome to the manager portal, Jessica.

Craft a **Job Advertisement**

Craft an **Assessment Plan**

Review Applications

Record Applicant Assessment

A Tool for Record of Decision

Purpose of the Tool

As soon as managers start looking at the applications submitted to their job advertisement they start making decisions about which candidates are qualified and which candidates are not. Managers are required to record these decisions so they can be reviewed by their HR advisor, forming part of the official HR record, to ensure transparency and accountability in government job competitions.

The record of decision tool is intended to provide managers with a step by step process for reviewing job applications and recording the decisions made on the platform, in real-time as they progress through the staffing process. It organizes and presents the information provided by the applicant, as well as assessment decisions by managers at successive evaluation stages. The logic flow and standardization options are designed to facilitate a fast, accountable, consistent decision making process. Because of the different HR systems used by various HR advisors, the tool is also designed to produce an exportable record.

In the future the intention is to make this tool interoperable with the assessment planning tool, ratings guide builder, and applicant tracking system. This would also require the implementation of planned adjustments to these other tools to promote a smooth user experience and maximize pre-populated data and automated functionality across the platform.

Current Status

The record of decision tool is in the advanced design phase of our product cycle, having gone through multiple rounds of iteration and mock process testing. However, without a Protected B server environment, we aren't able to post assessment records on the platform because of the level of personal information they include. Because of this restriction against the tool hasn't been released yet.

High fidelity prototypes have been produced, with the help of input from several dozen managers and HR advisors in workshops, and through observation of the final HR steps required for live job processes in more than a dozen departments. The prototypes developed were then qualitatively tested with roughly a dozen HR advisors and managers, but the tool has not gone to the development team for coding.

Insights

It remains a pain point for managers to capture a record of decision (decision and rationale) that meets the requirements of an accountable, transparent HR record. In essence, managers must account for their thinking as they review each applicant for each selection criteria during each assessment method applied. This also has a major impact on time-to-staff, as some of the work to record and report these decisions is often done retroactively at the end of the process. This can

easily add weeks to the hiring process while managers and HR advisors go back-and-forth to ensure everything is in order.

The ways in which HR advisors require the selection decisions to be presented are based on years of practice and legal case precedent, but what is clear to HR is not always intuitive to managers. It would save managers a lot of time and effort if the platform was able to collect and present this information in a simple way that was validated by HR advisors as meeting policy requirements.

Key Components of the Tool

Application Review Record

- Simple click-through process for reporting which candidates meet the education requirements with pre-populated text provided for the most common justifications, and the option to add additional notes or rationales.

Does the applicant demonstrate that they meet the educational requirements?   Required

Demonstrated   Not Demonstrated   Still Thinking

Please specify (Check all that apply)

☐ Not the right field or specialization.

☑ Not enough education or experience to meet the requirement.

☑ Not enough information provided.

☐ Other reason for screening out.

Save and Screen Out

💬 Add optional notes

Simple choice structure for capturing decisions

- Similar click-through process for required and asset skills.

- Clear indications to managers when a decision choice requires an additional explanation for the sake of HR accountability.

- Optional notes section available at each step in case the manager wants to add more details.

- The evidence provided by applicants is shown to managers, one skill at a time, so they can focus on the relevant information when making each decision.

- As soon as an applicant is marked (and confirmed) as not meeting an essential requirement, they are moved to "no longer under consideration" in the applicant tracker and the manager

is presented with a new application. Managers may review and amend this decision at any time.

- "Still Thinking" option available at each step for managers in case they are uncertain. This allows the manager to keep working and come back later to make a final decision.

- When an assessment method is added to the assessment plan, the need to complete a decision for the criteria being assessed is added automatically to the record.

- Managers are able to see at a glance the strength of various applicants, and the overall "arc" of the staffing process in terms of how much is complete, what the attrition rate is for applicants at each stage, and how many applicants are deemed fully qualified.

- Managers may also flag high-performing applicants per criteria per assessment method, which helps managers make evidence based decisions using high levels of detail gathered at each step. (The intention here is to provide a data source that can help prevent managers from being overly influenced by external factors that can artificially influence decision making, such as the initial and most recent applicants being more memorable or those with a more familiar life trajectory to the manager standing out as noteworthy.)

- Summary page of all decisions available for HR, as well as the full record of decision per applicant per skill per assessment method.

Example of a results summary page for HR

SECTION 05

Future Possibilities

At the Intersection of Today's Challenges and Tomorrow's Potential

Pandemic, Disruption, and a Fragile Opportunity for Bigger Change

Research estimates that COVID-19 has accelerated the digital transformation of organizations by up to six years.[1] This includes not only the technology, but also the cultural components that surround the technology, such as a willingness to supervise employees remotely[2] and in stronger organizations, the innovation capacity to develop rapid response strategies with incomplete information.[3]

But the pandemic has also set women's employment equality back - some estimate by decades.[4] People in vulnerable employment situations, such as LGBTQ2+ workers[5] and immigrant communities[6], have been heavily impacted.

While living in an age of disruption can bring disadvantages and challenges, it also brings opportunity. It's historically very rare for such a massive volume of businesses, governments and people to be in a position to adopt new behaviours and new operating models at the same time. While not all will look to (or be in a position to) adopt the same changes, this condition of massive social flux provides a rare (albeit unsought) chance to do things differently going forward. Significantly differently.

This window of opportunity also extends to the Government of Canada's recruitment and talent mobility model. The world is changing, and with this comes an opportunity to be bold in reaching for stronger, better, more resilient models that can adapt as societies evolve... Models that aim to do more than simply meet the needs of Government... Models that proactively generate better diversity and inclusion outcomes, pioneer the future of public service work, and drive the talent engine for the kind of digital government that the Government of Canada aspires to become.

Talent Cloud's research opens up new potential directions for the Government of Canada's talent engine - directions that can leverage the current change environment to advance the transformation of digital government, and build a more inclusive, diverse public service.

What's in this Section?

This section takes a look at lessons learned from two of the extra projects Talent Cloud took on:

- a blockchain pilot for credential recognition; and
- an internal GC mobility platform in response to COVID-19.

It also identifies promising areas for future research, and some thoughts on what Talent Cloud could do if it was resourced to continue as a project beyond March 2021:

- Records as a Service: Portable Verifiable Digital Credentials
- A Massive Interoperable Talent Repository for Government
- Testing Diversity Measures at Scale
- Talent Portals for Equity-Seeking Groups

As a final wrap up, this section includes a few final thoughts from the team on:

- Could Talent Cloud be Used GC-Wide?
- Wrap Up: Where to from here?

Five Things that Surprised Us

Being able to work side-by-side with managers and HR advisors and communicate with applicants throughout staffing processes gave us the opportunity to observe how users behave in the real world. And there were a few things that we didn't expect.

We thought...

1. We thought we would have difficulties getting applicants to use the platform.

2. We thought allowing for broad access to the platform would be the optimal choice for partner departments.

3. We thought we had a good understanding of how diverse the HR culture was within the public service.

4. We thought high-performing talent, especially applicants with competing offers, would have almost zero tolerance for delays in the hiring process.

5. We thought having a classified position and confirmation from both managers and HR advisors represented a level of certainess that the advertised job processes would be completed, not cancelled.

Turns out...

→ Turns out finding managers willing to use an experimental platform was the main challenge when it came to scaling up.

→ Turns out there was sometimes a hesitancy to share access even between branches within the same department unless an internal financial arrangement was made.

→ Turns out the extent of diversity in operational models, in combination with the high HR personnel turnover, created some design challenges, even for as adaptable a platform as ours.

→ Turns out if applicants had a sense of being valued and believed the process was well-designed (fair, clear and progressing), they were more understanding and more willing to wait it out. (This was especially true if they connected with the manager, either by reading the profile or in the interview.)

→ Turns out cancellations still happened more often than we expected. Most were due to changing funding levels and shifting operational requirements, while some were due to changes in management. Not surprisingly, faster processes had better completion rates.

CASE STUDY

GC Talent Reserve

GC Talent Reserve

Case Study

The COVID-19 pandemic hit early in the third year of our pilot and, when it did, staffing for the types of processes our platform offered all but ground to a halt. As government employees were sent home, we recognized a brand new challenge was emerging. To respond to the pandemic, some departments would need to scale up dramatically to meet critical needs, creating talent gaps that could be filled by employees in less critical roles.

Because we're an agile team that embraces the digital standards, we were able to pivot quickly and repurpose Talent Cloud to create the GC Talent Reserve in just under three weeks. This new portal was a dedicated, single-window coordinated talent management tool for triaging digital and tech talent needs across the Government of Canada. It enabled the flow of talent from areas of lower priority to areas of critical need, supported by data tracking and central coordination.

Gaps in Digital and Tech Talent

Based what we were hearing across our networks, and in collaboration with the Community Management Office, the policy side of the Talent Cloud team acted as central coordinators, and drafted internal job advertisements (open to employees with a valid security clearance) for in-demand work streams, such as cybersecurity, MS Dynamics, software development, system administration, and procurement. For each work stream, volunteers were asked to put their names forward at either a beginner, intermediate, or advanced level.

Purpose of This Site

[Offer to Help]

The COVID-19 pandemic has placed enormous pressure on citizens and governments around the world. In times of extreme disruption, organizations have different talent needs. Governments may experience critical talent shortages in some areas and surplus in others. A strong, coordinated response requires a method for identifying talent gaps, and getting skilled people where they're needed most, quickly and effectively.

This site is designed to:

- Provide a single-window, whole-of-government vehicle for talent mobilization in a crisis situation
- Enable the flow of talent from areas of lower priority to areas of critical need, supported by data tracking and central coordination
- Give skilled public servants a way to use their skills where help is needed most
- Offer departments a fast, efficient vehicle for sourcing skilled, available talent

This exercise is a coordinated effort by the Office of the Chief Human Resources Officer, Public Safety, and the Office of the Chief Information Officer of Canada.

The code for this site and supporting information is available to other governments and jurisdictions. Please visit us on GitHub or email the team at ____.)

[How to Submit Your Name]

🔔 **Does your department need extra help?**

If your department has identified a current or anticipated talent shortage in a critical area, get in touch to request some extra help. If your department has a unique need in a specialized field, a new call-out can be launched.

You should apply to be in the GC talent reserve if:

✓ You want to help Canadians by going where you're most needed
✓ You're currently a Government of Canada employee (indeterminate or term)
✓ You have specialized skills to share (see list below)
✓ You want to support your colleagues in other teams or departments
✓ You're good at adapting to new environments and processes

You should NOT apply to be in the GC talent reserve if:

✗ You're not a current Government of Canada employee (indeterminate or term). Sorry, no exceptions
✗ You don't have the skills needed (see below)
✗ You're hunting for a new permanent job
✗ You're looking for a promotional acting appointment
✗ You find it hard to adapt to new environments or processes

The Talent Reserve's homepage content.

GC Talent Reserve

Case Study

Employee Volunteer Model

Employees who wanted to volunteer were given clear criteria to judge whether they should put forward an application. Most importantly, we asked them to ensure their manager would support a temporary placement if the applicant was selected from the pool. The application form was short, consisting of a few key questions that were assessed by the central coordinating team. Applicants that passed the first round were contacted by email to complete a follow-up questionnaire and/or reference checks.

Selecting Talent from the Pool

Managers who were experiencing a critical digital and tech talent gap contacted the coordination team with a list of the work stream and skills they required. In cases where there were volunteers that had passed assessment, we provided a list of applicants along with their profiles. We also created additional streams of in-demand talent on GC Talent Reserve for skills related to fields like procurement when we received new requests. Once a manager selected an employee, it is up to them to figure out an appropriately fast and flexible HR arrangement to move the employee to their department.

Barriers to Talent Mobility

As fast as the team moved to build GC Talent Reserve, we weren't fast enough. There was no way we could be, because the tool that supports coordinated interdepartmental functionality needed to be in place before the crisis hit.

> While we didn't run GC Talent Reserve for very long, we built some interesting features for it that users found valuable, which we're now integrating back into the main Talent Cloud platform. Notably, this includes automated micro-reference checks for skills, enhanced sorting functionality for managers and HR advisors in the applicant database, and more information on interests, availability and matching potential for employees/applicants looking for opportunities.

GC Talent Reserve had several hundred employees submit their names, and nearly three dozen employees with critical and in-demand skills assessed and ready to be deployed. But after that point, it was impossible for us to track whether or not employees actually moved because the final connection between managers and employees happened off our site. (In one case, we actually heard about someone getting a new role when she thanked Talent Cloud on Twitter for the GC Reserve opportunity.) We also heard from managers that the paperwork required for internal mobility, even at the secondment level, was taking more time than they had, and many sought talent already internal to their own departments to close gaps more quickly.

Lessons Learned

Talent Cloud's biggest takeaway from this was that until there is a permanent, stable solution in the Government of Canada capable of mapping, tracking, and incentivizing employees to put their skills in a central profile or interdepartmental talent repository, the Government won't be optimized to succeed the next time a significant, rapid talent reallocation is required.

CASE STUDY

Talent Cloud / Canada's Free Agents Blockchain Pilot

Talent Cloud / Canada's Free Agents Blockchain Pilot

Case Study

The Problem

In order to respond to critical work needs, we have to be able to move talent quickly. To do this, our processes and technologies have to be equipped for agility, accuracy and speed. Government's often rely on rigid HR processes that require multiple re-verifications of employees' work-related data (such as education, skills and security), particularly when the same people apply for similar jobs but are assessed by different managers.

This reliance on rigidity and duplication of effort makes transforming into a modern digital skills approach a lot easier said than done.

The Other Problem

Governments often adopt technologies that are fully developed, rather than being a part of shaping that technology in its initial design and optimizing it for government context. This experiment was a chance to get in early on emerging technology, be a part of an international ecosystem and test theories before larger-scale commitment.

The problem amplified with Canada's Free Agents

Canada's Free Agents know the problem of skills validation and systems duplication all too well. In fact, they experience this problem tenfold. The Free Agent program is a talent mobility
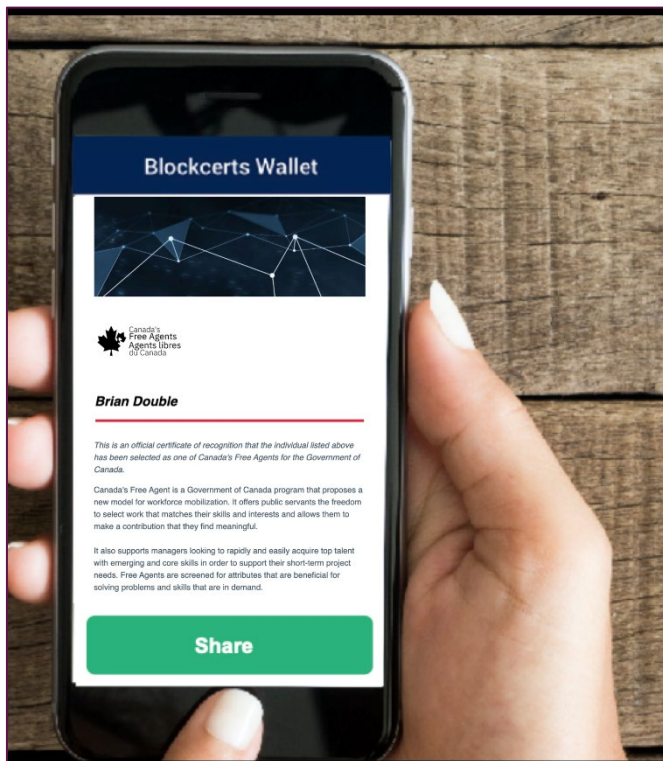
Example of a Free Agent Blockcert in a digital wallet being viewed on an iPhone.
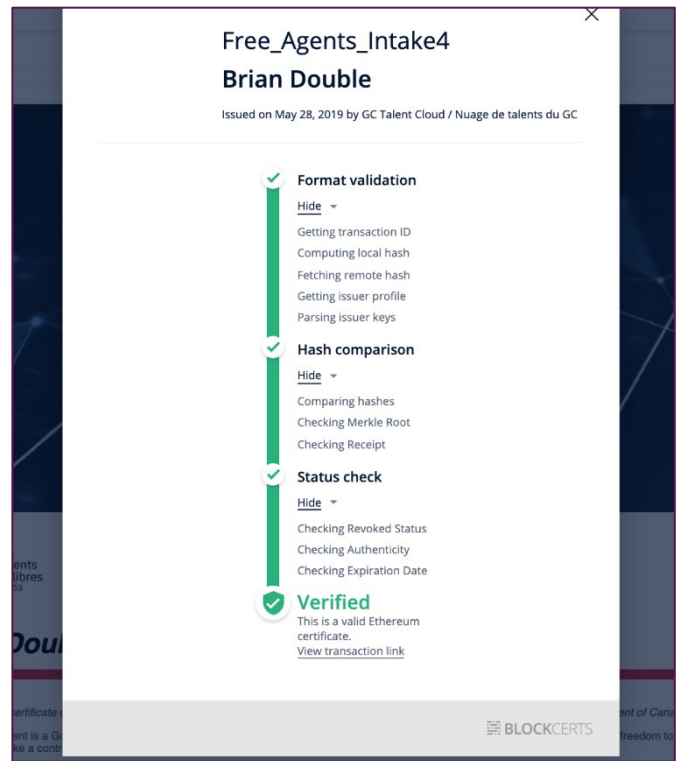
Example of a Blockcert verification process showing that the credential is verified.

Talent Cloud / Canada's Free Agents Blockchain Pilot

Case Study

Example of a Free Agent Blockcert showing all of the skills and relevant metadata contained in the credential.

program that's designed to move talent for project-based work within the federal government. However, [the frequency with which Free Agents move creates an incredible administrative burden on everyone](). And, perhaps most importantly, according to Abe Greenspoon, the former Talent Manager for the Free Agents "We haven't figured out the right systems to support our patented mix of autonomy, mobility, and talent management."

The ideal control group

As the Free Agent program is mobile by design, and all qualifying individuals are assessed according to common attributes that are

aligned to an internationally recognized framework, Free Agents were an ideal control group for a pilot test of the use of Blockchain for skills validation in a government context.

The Experiment

Enter [Blockcerts]() - a global, open standard for creating, issuing, viewing, and verifying any type of credential using any blockchain as a secure anchor of trust. Blockcerts was one of the very few ready-to-use products ready to test verifiable credentials and digital wallets. In 2018, as part of a one-year proof of concept, [Talent Cloud]() and the Digital Identity Unit at the Treasury Board Secretariat (TBS) of Canada in

Talent Cloud / Canada's Free Agents Blockchain Pilot

Case Study

partnership with Learning Machine (a global leader in Blockchain technology), issued Blockcerts: blockchain-anchored credentials to Canada's Free Agents.

Free Agents equipped with Blockcerts now have a way to independently and securely prove their identity and their skills in a way that is easy and that respects their individual rights to privacy and data ownership. The Government of Canada became one of the first governments in the world to use Blockcerts to vet an employee's skills.

Here's a real example of a Blockcert issued to a Free agent: shared via Twitter (with permission, courtesy of Brian Double.)

Limits of the Experiment

By design, the Free Agents were not dependent on proving their "Free Agent status" or skills to get their next assignment and Managers didn't need to verify the Free Agents Blockcert in order to offer them one. Although issuing a Blockcert for Security Clearances would have provided

transactional value for both Free Agents and Managers, the use of Blockcerts wasn't transactionally essential, which reduced the dependency on adopting their use.

Rather than testing full dependency, we chose instead to focus on a simple use case for the demonstration of verifiable skills, which had not been done before. While blockchain technologies are often used for things like land registry and supply chain management, the use of Blockcerts for certifying "soft skills" hadn't been done before. In doing so, we were able to illustrate the power of verifying credentials for high-value uses such as educational records, security, language levels and others.

It Works. But Will it Work?

The use of Blockcerts and other blockchain type technologies is more than just a tech problem, it's also a cultural adoption problem. Both aspects are significant and represent a steep learning curve for the Government of Canada, particularly in the HR space.

70 Free Agents

365 1 year of data

70% Accepted the Blockcert
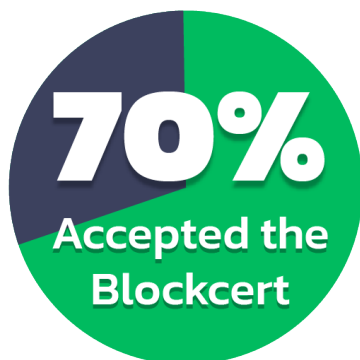
Viewed 600 times

Verified 214 times

Talent Cloud / Canada's Free Agents Blockchain Pilot

Case Study

As we've all learned by now, it's not just about testing new and emerging technologies. In many respects, that's the easy part. The difficult part is socializing new concepts. Cultural adoption and change management remain persistent challenges in most organizations, particularly public service organizations.

People loved the concept. Security and others immediately saw the potential for other uses. But even amongst the Free Agents, who are known innovators and early adopters of new technologies, adoption rates were lower than we'd hoped.

Right Idea. Part of a Bigger Solution to a Complex Problem.

In June 2019, McMaster University became the first Canadian institution to offer digital degrees via Blockcerts. Those Blockcerts can then be used as proof of education when applying on GC Talent Cloud.

Blockcerts are a piece of the puzzle, and the ecosystem is evolving rapidly. Even three years after the pilot test launch, the international community has seen huge strides forward. But these strides point in the direction that blockchain technologies will remain useful in a specific range of circumstances, and the GC's need for a skills validation solution is much broader.

So we can conclude, that while university-issued blockchain degrees and other high-level professional validations of skills have a place in the future of the GC hiring ecosystem, there will need to be other solutions for smaller level, faster-changing skills validations (such as passing tests in an assessment process) to round out all the GC's needs when it comes to validating skills.

McMaster University becomes the first major institution in Canada to issue Blockcerts and Talent Cloud accepts them as Proof of Education shared via Twitter

Talent Cloud / Canada's Free Agents Blockchain Pilot

Case Study

(For our thoughts on a solution for this, check out the next write-up on Portable, Validated Credentials.)

Fit for Digital

This is our digital world. It's our new reality whether we like it or not, and things are moving fast. And as technologies around us evolve, we have to evolve as well. It's not just about digitizing analogue processes but it's about a fundamental rethink of processes fit for digital. We are navigating new terrain with many obstacles yet to overcome. But we're now one step closer towards a dynamic talent ecosystem fueled by portable credentials for skills.

And it's not just about skills. Credentials such as security clearances, certifications for regulators, language levels are just some of the potential uses for verifiable records.

Portable credentials for skills is a radically different way of thinking about collecting, discovering and using skills-based data. It touches on concepts like trust, data ownership, digital wallets, and interoperability between systems. The Blockcerts project gave us the space to talk about these concepts and show what's possible now, irrespective of the underlying technology.
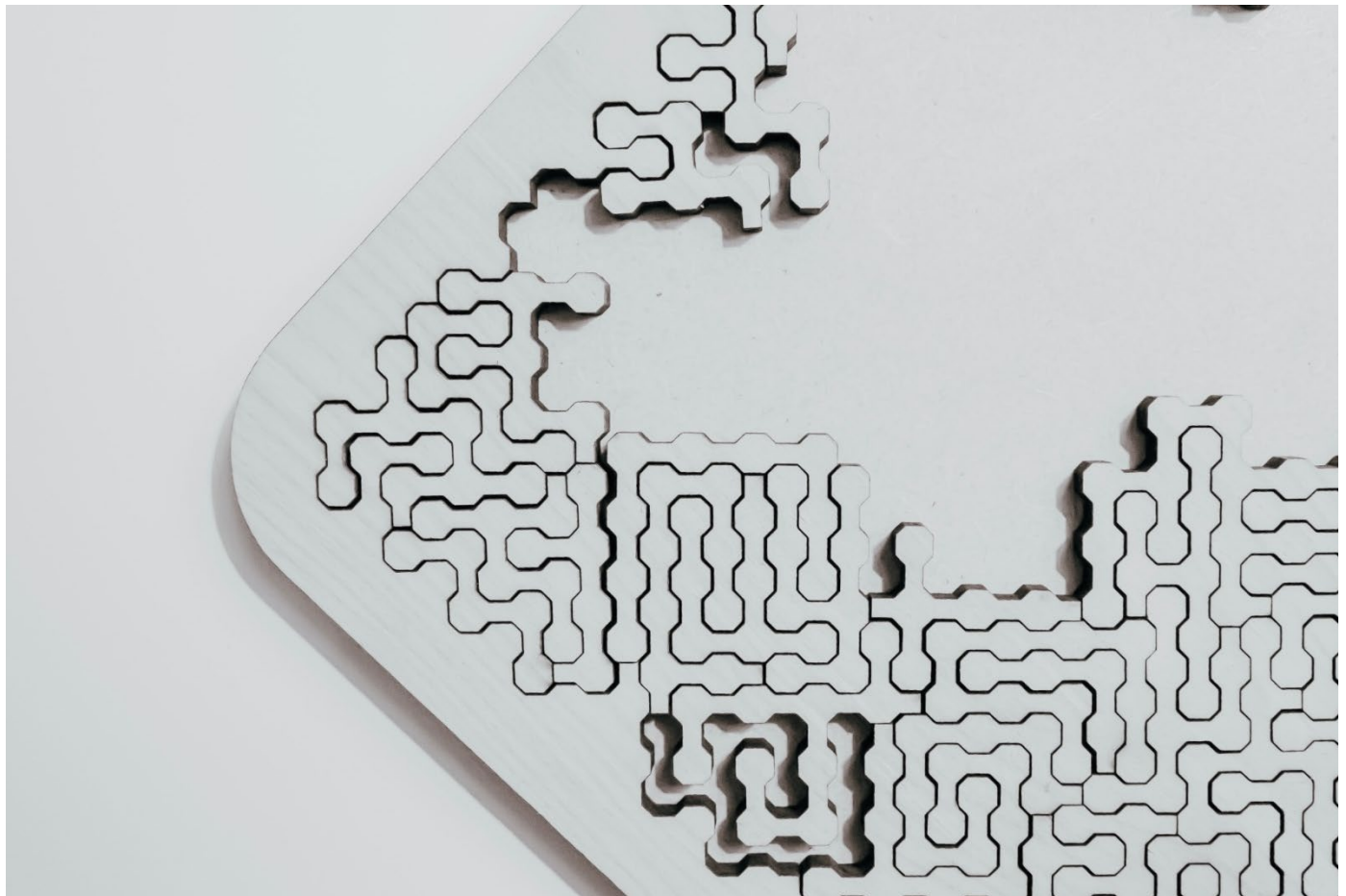
"When people apply for a new job, they need to be able to showcase their skills in a way that can be validated, trusted and useful to hiring managers."

Records as a Service: Portable Verifiable Digital Credentials

The Idea

Talent Cloud believes, along with many others, that the future of hiring will rely on platforms and processes that use portable verifiable digital credentials. These records allow for reusable, validated information on skills and qualifications to be shared interoperably between platforms. The challenge is, the Government of Canada doesn't have the technological framework or significant levels of expertise yet in this field. There is a need for a platform that can provide Records as a Service to the Government of Canada - skills records that are interoperable between the multiple HR services and recruitment platforms used by various departments and agencies across government. Positioned in the Office of the Chief Information Officer, and having run several years of experiments in this field, Talent Cloud is well positioned (with the right resources) to provide this service. (Notably, this service is not prescriptive about which staffing platform departments and agencies are using.)

Talent Cloud has been experimenting with the design of portable credentials, blockchain credentials, and micro-reference validation for several years. But to scale this aspect of Talent Cloud work to its full potential would require additional resources, and, ideally, a test case for live pilots at sufficient scale to create the necessary ecosystem behaviours. Talent Cloud would recommend the GC digital community as an excellent potential test case, given that the skills here are heavily in demand, and there are significant efficiencies to be gained from a central repository of digital talent, where skills are searchable and verifiable, and assessments effectively become reusable for mobility and promotion.

In order to understand the power of this new direction in recruitment and mobility, it's worth taking a look at some background on portable credentials, and how the concept could be used by the Government of Canada.

What are Portable Credentials?

Portable Credentials are comprehensive digital records issued to a person, by a trusted authoritative source, that contains data that can be accessed and verified by another entity. When designed with open standards and linked data structures, they are interoperable between systems and can be verified in real-time. In a work context, they can offer granular details that can be used for eligibility or where specific skills and qualifications are required to fill a particular role. Portable Credentials provide evidence that a person is qualified to do what they claim and that the qualification is still valid.

> There are a lot of different terms used to refer to credentials for the Digital Age. We are using the term "Portable Credentials" as a means to convey the overarching theory but here are some of the other terms you should be aware of: Blockchain, Blockcerts, Open Badges, Verifiable Credentials (VC), Micro-credentials, Learning and Employment Record (LER), Comprehensive Learner Record (CLR).

The three critical elements of Portable Credentials are **trust** (can be verified), **value** (can be understood) and **interoperability** (can be shared).

Why do we need Portable Credentials?

Because the need is great and the talent ecosystem has changed. People are acquiring knowledge, skills and experience in ways that we could not have imagined when hiring systems were first designed. Yet, the Government of Canada still relies largely on traditional methods and processes to vet talent, particularly when it comes to the recording, storage and non-reusability of assessment information. This asymmetry is causing unnecessary delays in our ability to identify people with in-demand skills and to match talent with work needs. It is also limiting the mobility and professional growth of our workforce.

Now more than ever, it is critical for managers to quickly find and move talent as urgent requirements arise. To do this, applicants and employees need to be able to communicate and **share** their qualifications and evolving in-

Talent Cloud is a contributing founding member of The Open Skills Network a coalition of more than 40 employers, educational organizations, and technology providers committed to the democratization of skills as a sharable, interoperable currency through the practical application of open, accessible, machine-actionable skills data.

demand skills in a way that managers can quickly **understand and trust**.

We are witnessing a real-time evolution of the workforce where the skills themselves are becoming a new currency for the labour market.[1] **But if skills are going to have value like currency, we have a responsibility to ensure that everyone benefits.**[2] This is particularly important for underrepresented groups and individuals in vulnerable situations who are disproportionately affected by restrictive hiring practices. The effects of COVID-

Portable Verifiable Assessment Records.
Records that can be easily VERIFIED and TRUSTED by hiring managers.
More freedom, more accountability. Interoperable by design.

Applicant creates profile
1

TALENT CLOUD

2
Starts application

3
Claim skills via Work experience, Community work, Education, Personal

4
Application is assessed

5
Assessments Stage References Stage

6
Verifiable Assessment Record is issued

7
Add to Profile / *Digital Wallet (TBD)

8
Apply to new job using Verifiable Assessment Records to substantiate skill
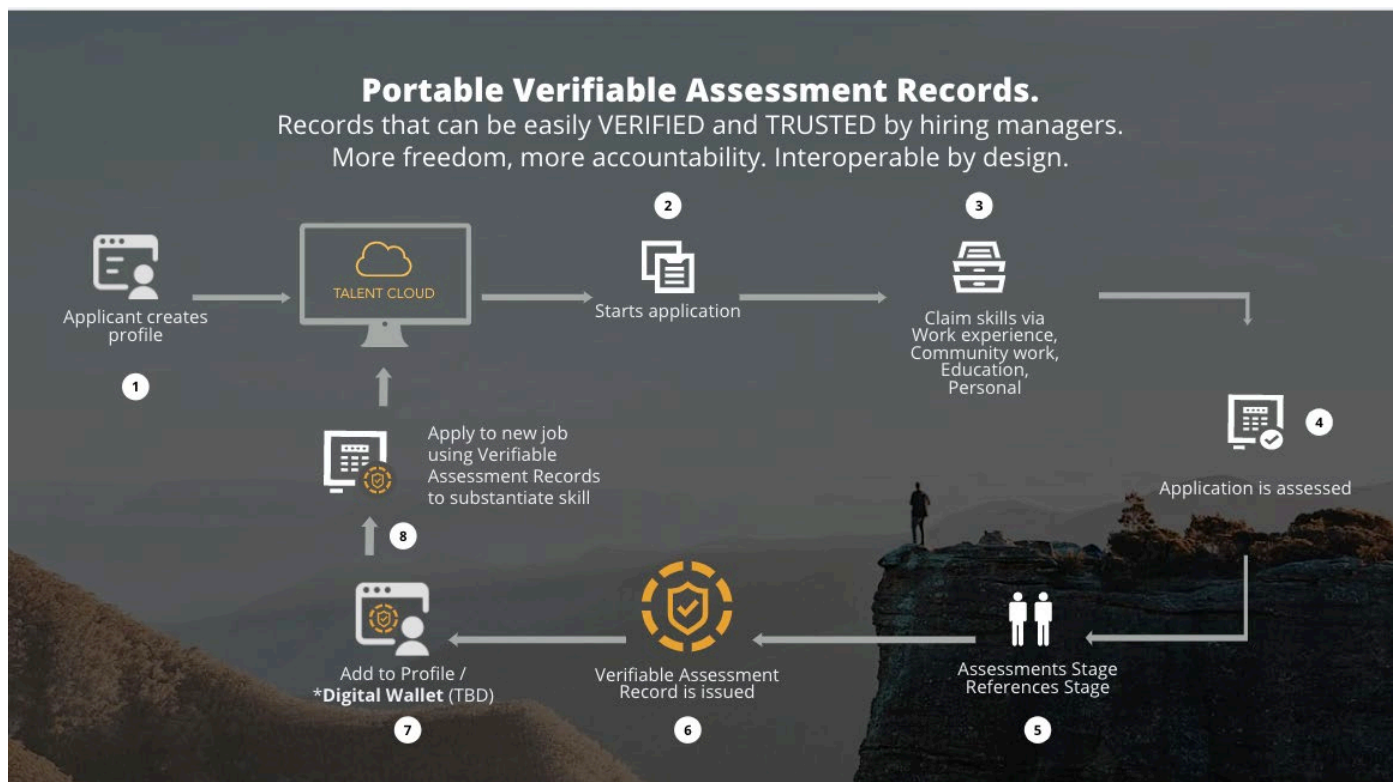
Illustration of Applicant process flow for Portable Verifiable Assessment Records on Talent Cloud

19 have had an even greater impact on these groups who could fill critical talent gaps.[3]

Practical Uses for Portable Credentials for Skills

Building off of the team's experience with talent mobility projects and Talent Cloud's recent Blockchain pilot, three scenarios are ripe for using Portable Credentials for skills. (The following scenarios could be prioritized for the use of Portable Credentials but would require further investment).

1. Micro-references for skills
2. Skill assessment validation (e.g. test results)
3. On the job skill demonstration

When used for skills verification, Portable Credentials can benefit managers by surfacing the granular details and evidence of skill assessments, micro-references and on the job skill demonstration. This allows managers to

get quick, comprehensive and contextual information about the skill that was assessed, that can be easily verified.

Applicants and employees can also benefit because the assessment records can be used as a skill signal for managers searching for talent and reused as skill evidence when applying for new jobs. They also maintain greater control over the privacy, discovery, and sharing of their skill data. And because the Portable Credentials are based on open, accessible, machine-actionable skills data, links can be made between in-demand skills and other data sources such as real-time labour market data[4] and career and learning pathways.

The duplication of effort in assessing skills repeatedly is a pain point for people applying for government jobs, for those already employed by the GC and the hiring managers assessing them. Portable Credentials create a way for information to be validated, and allow people to submit reusable, portable data, while maintaining privacy and data ownership. It is

Talent Cloud provides both the job marketplace and the currency validation. Together, they equal a new talent engine with tremendous future potential. Far beyond the walls of Government.

Portable Verifiable Assessment Records A new trusted digital skill currency

INDIVIDUAL

TALENT CLOUD

PRIVATE SECTOR

NOT-FOR-PROFIT

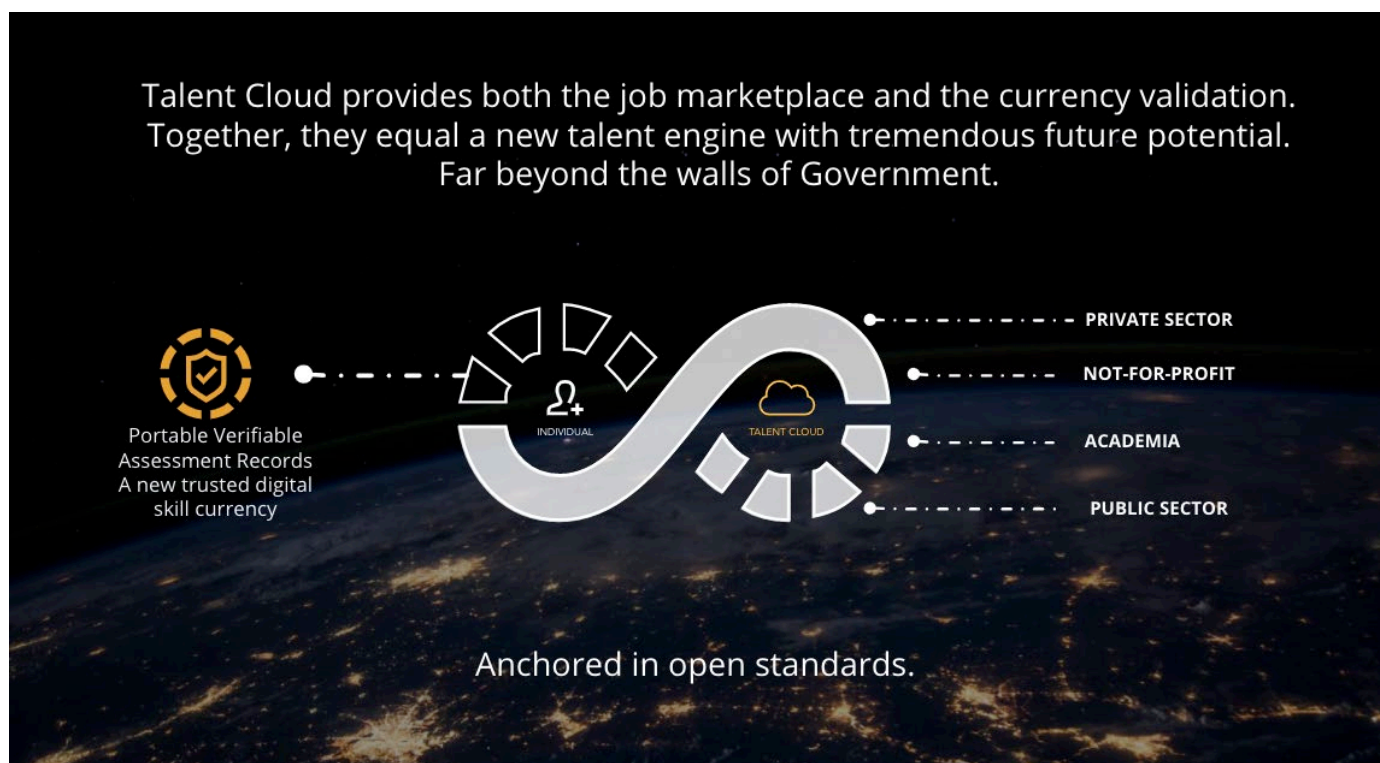ACADEMIA

PUBLIC SECTOR

Anchored in open standards.

Illustration of interoperable talent ecosystem with Portable Credentials

important to also note that this model has wide-ranging applications beyond skills verification, such as education records, language proficiency levels, security clearance, etc.

Portable Credentials can generate business efficiencies and improve the validation and auditability of records related to hiring and mobility. It is expected to reduce friction and time to staff for both externally advertised and internal mobility staffing actions, and improve the quality of the experience for departmental HR, managers and employees.

Why we think Portable Credentials are the future

This isn't in the future 10 years from now. This is an achievable vision with emerging technologies and current open data standards.

However, a skills-based approach for hiring in and of itself is not a panacea. If we want to get it right, we need to acknowledge that this is not just about technology, it's about people. It's about moving the dial towards an inclusive skills-based culture where people can be recognized for what they can do.

Talent Cloud cares deeply about creating a more diverse, equitable and inclusive talent marketplace. We believe that skills-based hiring and verifiable skills-based digital credentials can help create such an environment. And that these emerging open technologies and data standards are key to enabling how skills are recognized, shared, and verified across the entire talent ecosystem.

"Talent Cloud is a first-of-its-kind project for the whole world, not just for Canada. It has the potential to inspire and encourage other governments around the globe, through evidence, to follow the trail. It has the potential to show integrity and leadership, that innovation is not just for start-ups, but can be done swiftly and at scale by Government agencies that can fast-track the path to innovation and leave bread-crumbs for a whole country, leading by example."

Simone Ravaioli
Director Strategic Partnerships, Digitary
Chair, IEEE Integrated Learner Record workgroup
Member of Maintenance Committee, ESCO
Advisor: Open Recognition Alliance, Learning Economy Foundation, International Council on Badges and Credentials

"Today, we have unprecedented opportunities to rebuild how our education, training, and employment systems and processes work together to create valuable career pathways.

We can address the current confusion about the vast diversity of credentials and skills by using a shared data structure, the Credential Transparency Description Language, and digital credentials that people can collect and share. Then government agencies, educators, and employers all have interoperable data to connect people and jobs.

Talent Cloud is a leading initiative in making skills transparent and valuable, and we're excited to be working with them because everyone deserves the opportunity to understand and apply their talents in meaningful careers."

Dr. Deborah Everhart
Chief Strategy Officer, Credential Engine

"Portable, interoperable skill credentials enable individuals to find fulfilling jobs and careers while removing traditional barriers that may have excluded them. They will also benefit employers, allowing them to identify provably qualified candidates from a broader pool of candidates.

GC Talent Cloud's work is critical to making this happen. They are working to add a skills dimension to job listings, resulting in more efficient and effective matching of skilled candidates, instead of relying on (often) outdated, overly-broad gatekeeping job requirements.

This opens up opportunities for Individuals with non-traditional educational backgrounds who can be recognized for skills they've learned, whether through continuing education, job experience, or general lifelong learning. And individuals can more easily identify opportunities for which they are well-qualified, even when those opportunities are in different sectors."

Kim Hamilton Duffy
Architect, MIT Digital Credentials Consortium
Co-Chair, W3C Verifiable Credentials for Education Task Force

The Idea

Talent Cloud was able to dramatically reduce time to staff and optimize the hiring fit between applicants and teams. But even at this speed, with these results, our team has a nagging suspicion that the future of talent recruitment and mobility won't be driven by staffing processes. It will come down to a massive interoperable repository of talent, where managers and applicants are continually validating and updating skills, and the ecosystem as a whole functions a lot more like a digital network - a learning system - than a collection of individual processes.

What if there was a system that could answer questions for GC hiring managers like:

- Where can I find someone who can take on a CS-02 cloud architecture role, and is bilingual, resilient, collaborative, and in a pre-qualified pool ready to hire?

- Our department has a critical shortage of user experience designers. How many of our employees have ¾ of the skills required for this role, and could be upskilled to address this unmet need?

- When I search the database, there are no employees looking for work with a profile of skills that meets my needs. Where do I find external talent to fill this hiring need?

In Talent Cloud's experience, these are the types of questions hiring managers have. And these are the types of questions that a digitally enabled public service should be able to answer, rapidly and with a high degree of data confidence.

At the moment, the Government of Canada does have pools of pre-assessed talent ready for hire without further competition, and a few departments have basic skills inventories for their employees. But this information is fractured, and the ecosystem is a long way from the type of interdepartmental, interoperable talent inventory that would be required to easily respond to the questions identified above.

Under the current model, access to pools is often restricted by departments, and the lists of available pools are not centrally searchable by managers without the aid of HR advisors. There is no way for managers to find talent by individual skill(s). If a hiring manager wants to pull talent from a pool, their needs must meet the original essential requirements for the position posted by the original manager. The essential criteria are not attached to the applicant; it is the applicants who are attached to the list of essential criteria. In effect, the "pools" system is an analogue operating model in both process design and technological functionality, and one that fails to meet the needs and timelines required for a digitally enabled government.

But what if there was a way to link all these pools together, and give GC hiring managers searchable access through a secure, validated portal? What if applicants who were qualified in processes had each individual criteria or skill validated separately, through a portable credential, allowing managers to "mix and match" skill requirements optimized for their individual needs?

What if applicants could then go into their profiles and fill out other information, like their availability, interests, additional skills and timeline of skills development? What if they could proactively get trusted, validated micro-

references for these skills from past and current managers?

That's what we're talking about when we propose a massive interoperable talent repository - an interconnected marketplace platform, powered by portable credentials, that facilitates rapid matching between managers and talent.

Intended Outcome

Intended outcomes from this would be:

- Benefits to Canadians emerging from the Government of Canada having a faster, stronger talent engine, capable of reducing staffing vacancies that slow and reduce services;

- A reduction in the time needed for managers to identify high-performing talent to fill vacancies;

- An improved, more tailored approach to identifying talent needs based on a flexible, responsive skills search model, capable of delivering a more optimized result;

- Richer skills data sets for departments on employee skills capacity and external talent sources, for more refined planning and forecasting; and

- Future potential to adapt the skills repository to be an upskilling engine for employees and external talent, with skills mapping on learning pathways, enabling both self-directed improvement and departmentally-driven planning for employee development.

Leveraging Talent Cloud

The most important prerequisite for a talent repository like this is a robust system of portable verifiable credentials and a skills framework optimized for the Government of Canada - work that Talent Cloud has already begun. This system will need to capture the skills that thousands of Canadians have demonstrated through on-the-job work, written tests, interviews or other assessments. And this work, or these assessments, could have been performed anywhere in over a hundred of different departments and agencies in the Government of Canada. On top of that we want Canadians to be in charge of their own data and we want to leave the door open to expanding the use of this system of credential recognition to provincial governments or even not-for-profit organizations and the private sector, allowing for true interoperability in skills recognition. It's a massive technological challenge, but one that portable verifiable credentials are well designed to handle.

The platform features for running external recruitment that Talent Cloud has already built would be key to ensuring a steady stream of new entrants for the talent repository. Some relatively simple changes (already identified by our team) would be required to allow for broader recruitment initiatives in addition to the targeted hiring that Talent Cloud has focused on so far.

Making the massive talent repository searchable will also require tools that our team is already developing. This includes search functionality so managers can enter the skills they want to hire for, as well as other criteria such as location, job classification, and language ability. It will also require improved profiles for users, so they can better highlight their skills and preferences.

The majority of these features are already under development with Talent Cloud, and could be easily scaled up with the right resources.

Quick Stats

Here you can find a handful of usage statistics about how your department has used GC Talent.

Select a time period: **Past Week**   Past Month   Past Quarter   Past Year   All Time

+ 24 profiles were created by Canada Revenue Agency employees this past week.

▲ Participation on GC Talent increased by 2% this past week.

+ Canada Revenue Agency employees added a total of 123 skills this past week.

▼ Canada Revenue Agency received 30% fewer applications on average this past week.

+ Canada Revenue Agency hired 2 people using GC Talent in the past week.

Level Distribution

Below is a summary how CS employees at Canada Revenue Agency with GC Talent profiles are distributed within the CS levels.

| **25%**	**50%**	**15%**	**8%**	**2%**
CS-01	CS-02	CS-03	CS-04	CS-05
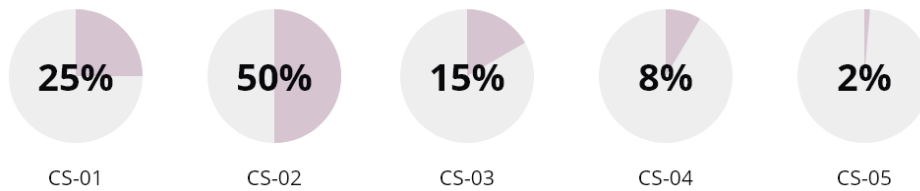
Skill Distribution

These categories allow you to browse how the skills offered by Canada Revenue Agency talent add up, as well as how they compare to popular searches and other departments.

Most In Demand Skills

Below are the percentage of employees in your department who have the top 5 skills managers are searching for in your selected time period.

■ Canada Revenue Agency   ■ GC Talent Average

Select a time period: **Past Week**   Past Month   Past Quarter   Past Year   All Time
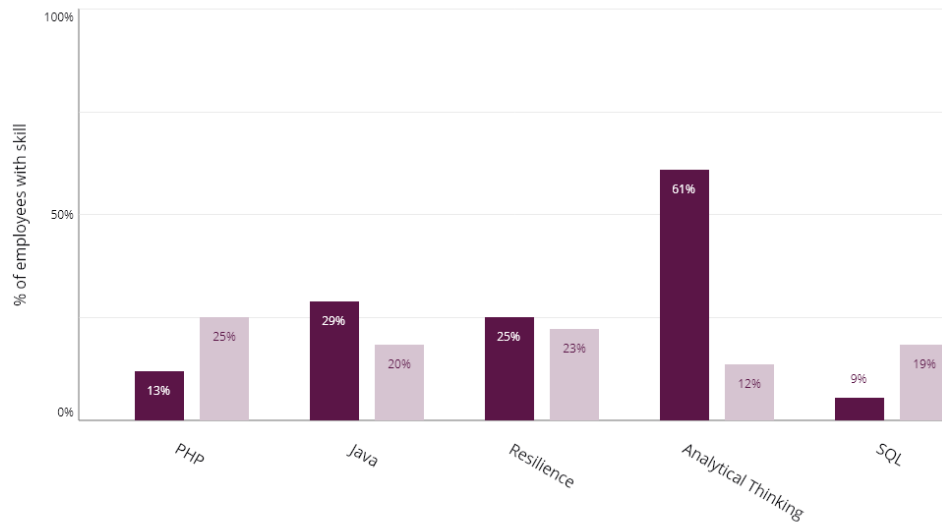
Skills Repository: Departmental Dashboard

"Digital futures need digital solutions."

Testing Diversity Measures at Scale

The Idea

The Government of Canada is committed to advancing diversity, inclusion and equality in public service hiring, and in all aspects of government work. While much of this commitment involves the socialization of antiracism approaches and a shift in culture, particularly at decision-making levels, there is also the need for systemic solutions that can produce results at an aggregate level. In short, the Government is in search of new processes that produce new outcomes.

Based on the small, but promising work that Talent Cloud has done on reengineering the application process for Government of Canada jobs, the team feels there is merit in a wider study to see if this solution can produce scalable results.

The experiments done by Talent Cloud to date are far from a statistically sound study that would prove or disprove the method. The first step would be to start with a sample large enough that we could statistically prove (or disprove) the theory. This would require between 50 and 100 jobs, with an anticipated applicant volume of 2000-5000 applications in total. (Ideally, this would then be tested

against the diversity outcomes of an equivalent sample of advertisements on the GC Jobs platform, comparing baselines.)

If the model proved successful, the intention would then be to standardize its use in Government of Canada job advertisement processes, by making the necessary changes to the primary platform(s) being used by GC hiring managers and departments.

Intended Outcome

The intended outcome of this project would be two-fold:

1. Confirm and refine a new methodology for advancing inclusion and diversity that could have far-reaching implications for the Government of Canada beyond just hiring, and could be an asset to other governments domestically and internationally looking to do the same; and

2. Generate concrete, sustainable, process-aligned improvements to diversity and inclusion outcomes in hiring at all stages of the recruitment and selection process; and to deliver results for equity-seeking and underrepresented groups including, and beyond, the employment equity categories identified in the *Employment Equity Act (1995)*.

Leveraging Talent Cloud

Talent Cloud has the expertise, the platform, the methodology, the Privacy Impact Assessment, and the Authority to Operate ready to go to undertake this study. If there was a decision to advance this work in the near future, the research study could "go live" at any time.

Requirements to advance this research:

1. The willingness of a dozen departments to put forward a small handful of job advertisements each as part of the study;

2. Sustained resource support; and

3. Ongoing championing from Treasury Board Secretariat and the Office of the Chief Information Officer to host the team as part of its organizational structure (which is where the infrastructure, Authority to Operate and Privacy Impact Assessment for Talent Cloud have been set up.)

"A commitment to advancing diversity and inclusion is measured in more than just words."

Talent Portals for Equity Seeking Groups

The Idea

Because of the restrictions related to privacy and Talent Cloud's cloud server environment, we were never able to launch the Indigenous Talent Portal, which was developed in collaboration with Indigenous employees and users. (See Section 1 for more information on Talent Cloud's efforts to secure a Protected B cloud environment.)

During development, Talent Cloud was also approached by other departments and mandate authorities in the Government of Canada who were interested in whether or not similar platforms could be developed for Talent with Alternative Accessibility Requirements and Women in STEM. They were looking for portals optimized to advance employment opportunities for these groups, and could be used for external recruitment, internal mobility and promotional opportunities.

The team feels that based on the groundwork already in place on the platform, this would be easily achievable with the right resources, and could be implemented in under a year if the existing Talent Cloud platform and team was leveraged to deliver these portals. Additional portals for other underrepresented and equity-seeking groups could also be considered.

Intended Outcome

The structural intended outcome would be to create a technology solution that facilitated the successful increase in the recruitment, mobility and promotion of underrepresented and equity-seeking groups, with the net result being a decrease in the underrepresentation of these groups in the Government of Canada and,

eventually, representational equality in employment.

The experiential intended outcome would be to provide an ecosystem where talent from equity-seeking groups experienced an optimal recruitment and mobility experience - one that helped each person find a strong employment fit with a user experience that was validating and emotionally positive. Outcomes would be measured in terms of the ratio of successful hires relative to the opportunities posted by departments, as well as qualitatively.

The development plan would be to produce these portals as part of the same platform ecosystem, ensuring that all talent groups have access to jobs that are advertised more generally (e.g. on the main Talent Cloud platform), as well as those that targeted opportunities for specific communities to which the users belong. One of the benefits of this approach is that it would increase the data available to the Government of Canada on emerging trends and points of potential

intervention - such as how many women have 3 of 4 skills needed for a promotion in a STEM role or what percentage of departments have posted opportunities targeting the recruitment of people with accessibility considerations. The intention would be to collect and share this data in a way that respects privacy and a user's right to their own data.

Leveraging Talent Cloud

There are many prerequisites for such a system - most of which Talent Cloud already either has in place or would be in a position to establish very quickly, with the right resources.

These prerequisites include (but are not limited to) technological considerations, IT security, privacy permissions, authority to operate, subject matter expertise on the team, agile development capacity, user experience design capacity, and the ability to change things (even big things) on the platform as user needs dictate. Portals designed to serve underrepresented communities must meet the needs of these groups, which are distinct and varied. These portals must also be designed to address systemic discrimination that can occur during the staffing process if they are to achieve the structural and experiential intended outcomes of the project.

Such portals almost certainly cannot be easily "tacked on" to existing infrastructure and designs, unless the infrastructure and designs have already been structured to be iterative and continuously improved.

Because the Indigenous Talent Portal is fully designed and waiting on final development and approval, it would be straightforward to launch this on the Talent Cloud platform if resources to sustain the initiative were in place.

While much of the coding to support additional portals is already available through Talent Cloud, if new portals were to be developed for other equity-seeking groups (e.g. Women in STEM, Talent with Alternative Accessibility

Requirements), Talent Cloud would need to hire additional employees with affiliations to each group, and to engage in a rigorous user experience design process.

Each portal would require ongoing resource support. Additional portals could be scoped, as needed.

"The future we get is the one we build together."

Could Talent Cloud be Used Government-wide?

Perhaps the single most common question we get asked about Talent Cloud is some version of, "Is this going to replace the Public Service Commission's GC Jobs platform? Has anyone thought about that?"

Here are the responses. No, it's highly unlikely that Talent Cloud will become the replacement for GC Jobs. And yes, people have thought about it.

The Public Service Commission has been on a multi-year journey to consider the replacement for the GC Jobs platform. It's a significant undertaking that requires diligence. The choice of platform replacement will impact the talent engine for the entire Government of Canada, and that means that the risks to Canadians could be substantial if the choice isn't made correctly. The Public Service Commission team has been involved in extensive planning since 2016 to identify the requirements of a new platform, and has faced numerous considerations in its deliberations.

The Public Service Commission, on the advice of an analysis by a third party reviewer, has opted to take the procurement path for an external system purchase, rather than a government-built solution.

For reference, Talent Cloud has never been commissioned by any Government of Canada authority to provide a costing and timeline analysis of what it would take to scale the Talent Cloud platform GC-wide, with the features list the Public Service Commission requires. Similarly, the team has never been commissioned to scope options for a transition plan for ownership and operation of the Talent Cloud platform. When the third party analysis was done for the Public Service Commission, Talent Cloud was not reviewed by the third party team making the assessment; their researchers never met with our team, nor did they receive a demo of the product or materials provided by Talent Cloud on the platform's build trajectory and early results. No live A/B staffing test of Talent Cloud versus potential external vendors has been conducted against measured objectives.

The question of whether or not Talent Cloud could (with the right resources) be used more widely as a staffing vehicle for the Government of Canada remains a thought experiment. It's the team's belief that with sufficient resources, operational structure, and support, the Talent Cloud platform could continue to scale to become a fully fledged recruitment and mobility solution for the Government of Canada.

Wrap Up: Where to from here?

Talent Cloud has been an unusual experiment for government - something often commented on not only by colleagues in the Government of Canada, but also by domestic and international public services who are hoping to develop more support for innovative practices. It's a grassroots start-up, funded by a patchwork of partner departments with common goals and different HR structures, and it's focused on multi-year experimentation to address entrenched systemic challenges. As such, Talent Cloud has operated in an environment that is relatively rare. There is no doubt that the work achieved could not have been accomplished so quickly, with such intensity, if it hadn't been for an agile-enabled operational model that was able to embrace the Digital Standards.

But Talent Cloud's existence also relied heavily on the serendipity of circumstances and individual champions. It is not, in short, a stable path towards experimentation that we'd recommend to others. While this has afforded many advantages in terms of speed, research and flexibility, there have also been significant challenges, such as the erratic nature of an annually renewed partnership model (small investments from many departments), and the operational challenges of securing a server environment that would fully enable an open source experiment handling sensitive personal information. There have also been numerous places where the iterative nature of an agile build - particularly one that changes regularly based on user input - hasn't fit comfortably into the standard project approval processes and annual reporting cycles of the Government of Canada.

As we prepare this report, the Talent Cloud experiment, as originally conceived, is concluding. The result of our development efforts over the last three years have led to numerous insights on ways to improve recruitment, and a fully operational staffing platform that has delivered a hiring timeline dramatically faster than the Government of Canada average.

The Talent Cloud project (as it has been) is wrapping up at a time when there are still numerous promising developments well underway. The future of the project remains uncertain. Funding proposals have been submitted to advance several of the project options identified in Section 5 of this report, but as of yet none have been confirmed. The team itself will be shifting to collaborate with those inside the Office of the Chief Information Officer with a mandate to advance the Minister for Digital Government's priorities on securing and enabling digital talent. The platform work done to date will be an asset, but it will be up to the GC digital community and the Chief Information Officers in various departments to direct the nature of the work from here on out.

Talent Cloud has been a project focused on reimagining the talent engine for government, with a particular focus on attracting those with

high demand digital and tech skills. But there's a wide range of innovation and experimentation initiatives across the Government of Canada that offer similar benefits in terms of approach: test, iterate, improve, then scale. And many are facing similar challenges around finding a way through the system to get started and existing long enough to deliver real benefits.

A project like Talent Cloud poses broader questions for the Government of Canada around whether or not it wants to contain experimental innovation projects such as this, and if so, what steps is it willing to take to resource, enable and support them.

There are some questions to be asked here: Does this type of project have value for the Government of Canada and for Canadians? Does the Government of Canada want to replace large waterfall projects with iterative, responsive projects aimed at continuous

improvement and adaptation? Does the Government of Canada want to support a shift towards agile approaches and Digital Standards, including the establishment of internal multidisciplinary product teams?

If the answer to these questions is yes, then the answer to the next question becomes much harder: What concrete actions will the Government of Canada take next to create a stable innovation pipeline that supports experimentation, measures results, and mainstreams agile best practices and Digital Standards into government operations?
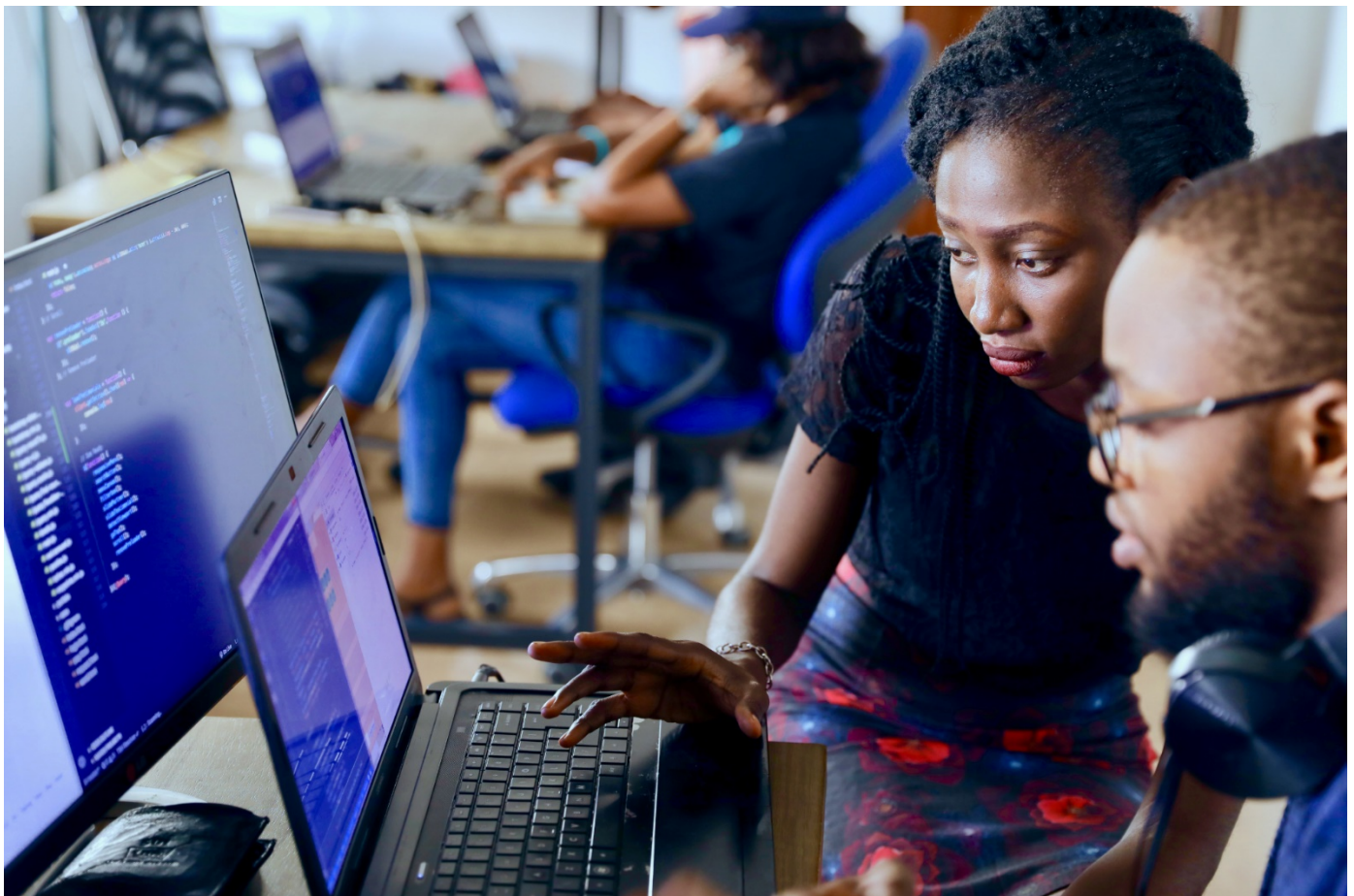
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