

Deloitte.



Capitalizing on government's cloud momentum

How to accelerate mission-critical outcomes
in the Canadian public sector

Contents

<u>Introduction</u>	4
<u>The case for the cloud in government</u>	6
<u>Value for government and public services</u>	10
<u>The current state of progress</u>	15
<u>Cloud case studies in the Canadian public sector</u>	19
<u>Breaking through the barriers</u>	22
<u><i>Access to talent</i></u>	24
<u><i>Financial management</i></u>	26
<u><i>Security</i></u>	28
<u><i>Organizational alignment</i></u>	30
<u>Clear line of sight: how to accelerate adoption</u>	32
<u>Conclusion</u>	36

Key takeaways in this report

- Confirmation that cloud technology is a critical enabler for government and key to unlocking modern services across Canada. It's also a mission accelerator with the power to drive better experiences and outcomes for more people, in turn contributing to a more thriving Canada ([page 9](#)).
 - Government organizations in Canada have had an uneven experience to date and have explored different use cases for the cloud. ([page 17](#)).
 - Despite recognition of its value, the rate of adoption in the Canadian public sector is lagging due to complex, systemic barriers ([page 23](#)).
 - Respondents cited that positioning the cloud as secure with leadership is no longer as much of an issue and consider security as more of a driver to cloud adoption given its benefits compared to legacy platforms ([page 28](#)).
 - Government needs bold leadership to facilitate end-to-end transformation and address specific, entrenched barriers ([page 31](#)).
 - Actions all levels of government can take to accelerate systemic change ([page 33](#)).
- 



Introduction

The COVID-19 pandemic touched all aspects of government operations. It brought on an almost-overnight shift to remote work, disrupted supply chains, and prompted urgent demands for new services. It also thrust public service organizations at all levels of government into the cloud.

Across Canada, government responses were, at least in part, enabled by a digital backbone served by the cloud. For example, rapid vaccine deployment required many government organizations to leverage highly reliable, scalable infrastructure to acquire, distribute, certify, and track the administration of vaccines. This feat was massively facilitated through the advantages of the cloud.

How have the perceptions and practices of Canadian public sector leaders toward the cloud changed since then? What barriers and opportunities exist to impede or accelerate cloud adoption? Will 2020's surge in cloud spend persist and drive sustainable changes to how services are delivered? How can government organizations best leverage new technologies to enable and deliver trusted services to the people of Canada?

To help answer these questions, Deloitte conducted in-depth interviews and workshops with federal, provincial, and municipal technology leaders from across Canada, as well as with leaders from Google Cloud, Amazon Web Services (AWS), Microsoft, Salesforce, and DXC Technology. We also leveraged insights from our [2021 Canadian cloud adoption research](#), for which we surveyed more than 50 government cloud decision-makers.

We discovered that while the pandemic helped many government organizations to accelerate the prioritization of effective and coherent cloud adoption, systemic barriers continue to hamper uptake. Despite this, government leaders still recognize the practical opportunities and are eager to build on their previous successes. The following themes emerged from our many discussions on the current state of government's cloud adoption in Canada:

- Many of the barriers and challenges organizations face are systemic and shared across all orders of government. Many also fall outside of the direct remit of conventional technology teams.
- There is a perception that Canada is behind other developed jurisdictions.
- There is also an overwhelming sense of optimism about the cloud's potential to transform and accelerate how all levels of government can achieve their mission and to elevate the human experience, for both those in public service and the end users of government services.

In our view, governments should continue to invest in the cloud with the same fervour and awareness they had when responding to the pandemic. We believe that bold, transformative, and enterprise-wide leadership is required to effectively reduce and overcome the friction caused by the systemic challenges that exist today.

By cultivating a deliberate, ecosystem-based approach, government organizations have a unique opportunity to address the challenges they face head on. This approach should be inclusive of partners outside of the traditional technology realm and take advantage of other local and global public sector organizations, private industry, and civil society.

The future of government will be enabled by the cloud. It is a mission accelerator with the power to drive better experiences and services to people, and in turn build a more thriving Canada.



The case for the cloud in government

Nova Scotia

What is the cloud?

The cloud allows users to access a shared pool of computing resources—networks, servers, applications, services, etc.—on demand and from anywhere. It supports diverse functions, including infrastructure-as-a-service (IaaS), platform/software-as-a-service (PaaS or SaaS), and business-process-as-a-service (BPaaS). Instead of all the computer hardware and software sitting on your desktop or somewhere inside your company's network, it's provided to you as a service and accessed over the internet, usually in a completely seamless way.

Today, the cloud is an expansive toolkit for accessing services and capabilities. It also supports new ways of working in government. Whether you're using innovative analytics tools and AI models, accelerating time to market by pairing the cloud with modern approaches to software engineering, or expanding your platform to rapidly access new business resources, it's essential for innovating and delivering modern services.

How can government realize its value?

The cloud has catalyzed a shift in business models. It allows a provider to rapidly scale a service from one user to many users. It allows the consumer to access the service faster and at a lower cost than when government builds it alone. This trend toward [business-as-a-service \(BaaS\)](#) has disrupted a broad range of industries by increasing the capacity for change and driving the creation of new and differentiating capabilities, from how companies use software to how consumers watch television.

The question is, what does it mean for government? What does government-as-a-service look like?

Let's explore a few examples (figure 1).

Figure 1: The cloud in action—government-as-a-service examples from around the globe

Government service	Example
<p>Disaster preparedness <i>(City of Los Angeles and State of Colorado, United States)</i></p>	<p>The City of Los Angeles Information Technology Agency taps into cloud-based Google Maps to provide residents with real-time visual information related to natural disasters and other emergency scenarios within one hour. Similarly, Eagle County in Colorado uses Google Maps in conjunction with Google Workspace to enhance emergency operations and streamline communication with residents during crises—improvements that were instrumental in the evacuation of 3,500 residents during the Lake Christine Fire.¹</p>
<p>Resource management <i>Government of the Netherlands</i></p>	<p>In the Netherlands, cloud-based technologies were harnessed by the water management system to analyze real-time data from over 15,000 sensors and identify any changes in infrastructure and water flow, allowing the government to act quickly and with precision to mitigate potential flooding.²</p>
<p>City services <i>City of Cascais, Portugal</i></p>	<p>The City of Cascais knew its appeal to tourists would continue to grow, so city leaders adopted a mission: to test innovative solutions capable of being scaled that would streamline operations and establish Cascais as an integrated, operational Smart City. It leveraged the cloud to build a digital command center enabled with data visualization and analytics and built mobile apps to connect the city to its residents and visitors, allowing them to report problems, upload photos, and learn about changes in the city's services. Cascais expects an average of 10% to 27% in mobility cost savings, but, more importantly, it has helped propel the 650-year-old city, its government, citizens, and visitors into a tech-forward future.</p>
<p>Law enforcement <i>Federal Bureau of Investigation (FBI), United States</i></p>	<p>The intelligence community is turning to cloud-based artificial intelligence and machine learning to exponentially increase the productivity and efficiency of data and pattern analysis to predict and prevent terrorist attacks, with the FBI citing cloud technology as a game-changer in the field.³</p>
<p>Traffic control <i>City of Detroit, United States</i></p>	<p>With over 800 traffic signals, over 2,500 miles of road, and a team of only 50 people, Detroit was struggling with traffic management. The Department of Public Works then deployed a remote traffic management system in the cloud and was able to ramp up emergency response times by 20%, reduce travel times by 30%, and cut resolution times for traffic issues from eight to just under two hours.⁴</p>
<p>Student services and security <i>University of Newcastle, Australia</i></p>	<p>The University of Newcastle was set to demolish its existing data centre to better enable collaboration between the disciplines of science, technology, engineering, mathematics, and medicine. It chose to transition to the cloud to be more environmentally sustainable, improve cybersecurity, enhance its technology responsiveness, and enrich the digital experience of students and staff. It has since become one of the first public universities in the world to operate completely in the cloud.⁵</p>

The cloud as a mission accelerator

These examples highlight how the cloud can be a mission accelerator for innovation and, when done right, help government deliver better services. This sense of optimism was apparent in our survey and interviews. In our 2021 survey, 69% of government respondents indicated they were very motivated to accelerate their organization's move to the cloud, attributing most of its value to the ability to:

Drive better business performance

41%

Create an ecosystem for better data sharing

35%

Create more secure and resilient infrastructure

32%

Many of those interviewed commented on the effect the cloud has had on speed to market, specifically during their response to the pandemic. Ontario's director of enterprise planning and project delivery services, Rick Provenzano, suggested that agility and access to innovation are the biggest forces driving adoption. "We were doing things in a day or two that used to take weeks and months when I built them in my data centre," he said. James McCabe, Microsoft Canada's chief technology officer for the federal government, described how his company helped a department achieve interim authority to deliver a minimum viable product within eight days of the government's call.

Several government leaders revealed that they rely on cloud providers to access world-class capabilities and talent. Montreal's chief information officer Richard Grenier described the city's challenges in supporting and maintaining some 1,000 IT assets with a staff of 700 people. "We need to go to the cloud," he explained, "because it's tough for us to deploy new assets when we already have 1,000 things to maintain and support."

“ We were doing things in a day or two that used to take weeks and months when I built them in my data centre. ”

Rick Provenzano

Director of enterprise planning & project delivery services for the Government of Ontario



Value for government and public services

Saskatchewan

Realizing the benefits for government

Beyond service improvement, our respondents noted several other benefits that organizations realize:

- **Reduced technical debt**

Cloud-based applications offer enhanced functionality and typically remain up to date. James McCabe shared that “[the cloud helps] avoid future technical debt through an automatic update function where services are continually updated to the latest standards”.

- **Innovation**

The Government of Ontario's Rick Provenzano identified “agility and access to innovation” as the biggest forces driving cloud adoption. The cloud provides access to exciting new capabilities that simply would not be available to government otherwise.

- **Resilience**

The cloud offers availability that data centres can't match—a crucial benefit, especially when critical data, applications, and services are at stake. In the wake of recent high-profile outages in Canada, interviewees reported enhanced scrutiny of uptimes for data centre operations, bolstering the case for highly resilient environments.

- **Talent and support**

“The cloud helps us with the war for talent because we can offload a lot of things that we just can't find people to do in house. Leveraging SaaS, IaaS, and PaaS lets us access services that are hard for us to do well in house given the current state of the IT talent market,” shared the City of Winnipeg's director of innovation and technology, Tyler Gooch. Public servants with digital skills want access to modern tools, making the cloud relevant to both recruitment and retention in government.

- **Value for money**

While interviewees acknowledged the cost of transitioning services to the cloud, they also anticipated better value in the medium term. In a recent study of its impact in Canada, AWS estimates that replacing outdated legacy IT systems with a public cloud provider could help save the federal government over \$2 billion per year.⁶

“With the introduction of Agile and DevOps methodologies, along with cloud technologies, we can deliver large complex applications in very aggressive timeframes to satisfy the needs of Canadians and Canadian businesses and to support the internal Government of Canada needs, such as the Vaccine Attestation Tracking System [GC-VATS].”

Paul Girard

Executive director & chief information officer at Treasury Board of Canada Secretariat (TBS)

The cloud as an enabler of climate and sustainability goals

Environment, social, and governance (ESG) considerations are emerging as a major driver for government's move to the cloud. Technology has an important role to play in enabling climate goals, services for people and businesses, and critical infrastructure that contributes to social good. [Social impact](#) is an increasingly important consideration for all organizations and they have a unique opportunity to use innovative technology for strategies that create social and business value, such as expanding access to education, enhancing food production, and creating safer and more equitable cities and communities.

Tyler Gooch shared his view that "workloads are getting actively migrated out of the data centre because there's a much larger play going on around the strong desire to meet ESG goals, and the knowledge that one-fifth of all energy consumption in the world is through data centres." The federal Centre for Greening Government is analyzing how the cloud can be used to help reduce the government's carbon footprint. Migrating to the cloud, choosing a provider that's committed to a net-zero/carbon-neutral footprint, and adopting efficient migration approaches will all be key to meeting [environmental sustainability goals](#).

How public cloud providers are investing to support ESG goals

Major cloud service providers offer smaller carbon footprints than traditional data centres, with AWS, for example, being 3.6 times smaller than the median on-premises data centre.⁷ Microsoft has a goal to run their data centres on 100% renewable energy by 2025, and Google is on track to operate on 24/7 carbon-free energy by 2030 and is already matching its energy usage with renewable energy purchases.⁸

My take



Mark Levene
Chair of digital nations' greening digital government group, Treasury Board of Canada Secretariat (TBS)

“ We're really looking to emphasize the value of sustainability as part of procurement criteria. Our assumption, of course, is that moving from departmental data servers to enterprise data servers and then to the cloud is going to bring reductions overall in our environmental footprint.

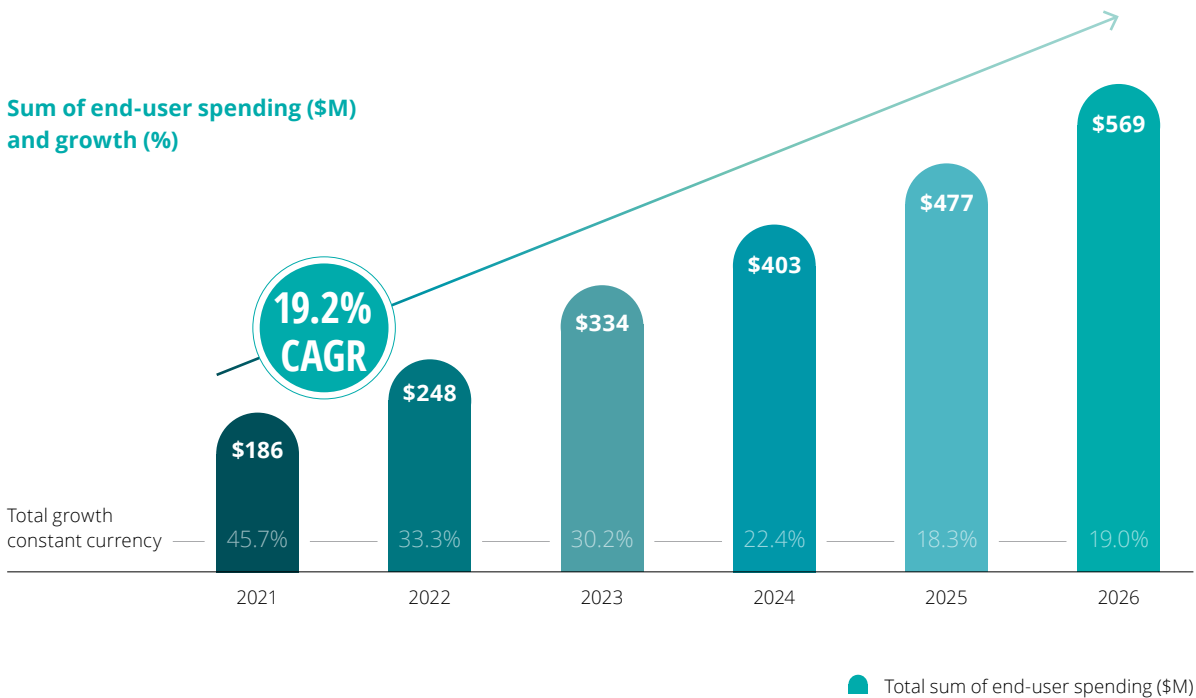
Our direction is still to maximize the use of the cloud for Government of Canada operations. We would like to ensure that the hyperscalers are, in fact, living up to their commitments, and we hope that the data we're able to get from them will help us prove that assumption. We definitely want to push them to even more environmentally responsible clusters of servers that aren't competing on high-value energy grids, etc. ”

Growth in cloud spend shows recognition of its value

According to Gartner®, the Canadian cloud market is forecasted to grow to \$569 million by 2026 and this trend is expected to hold into the future, with government spending having a five-year compound annual growth rate (CAGR) of 19.2%.

Figure 2: Forecast for Canadian public sector cloud spend (IaaS), 2021–2026

Graphic created by Deloitte based on Gartner research. Source: Gartner, Forecast: Enterprise IT Spending by Vertical Industry Market, Worldwide, 2020–2026, 3Q22 Update, Inna Agamirzian, Rika Narisawa, September 2022. Gartner is a registered trademark and service mark of Gartner, Inc. and/or its affiliates in the United States and internationally and is used herein with permission. All rights reserved.



These forecasts illustrate the clear shift in sentiment that we heard in our survey responses and interviews. In our 2021 report, [Accelerating to the cloud](#), we characterized a shift in the dialogue from “Why cloud?” to “How?” and “How fast?” in organizations across all industries. This trend is consistent when we isolate the data for responses from public sector leaders. A few data points that stood out:

- The **top driver** for adoption for public sector cloud leaders was to drive better business performance.
- **90%** identified the need to make the cloud a strategic imperative for the organization as very important or important.
- **75%** characterized the need to shift the cloud discussion from cost avoidance toward business value as very important or important.

Canadian public sector leaders understand the important role the cloud plays in enabling digital government and offering greater access and quality of service. A senior provincial technology leader shared that “the reason that we’re interested in the cloud is to close the time between a policy decision by a government and value being delivered to the public. That’s our primary driver.” Clearly the imperative of service delivery is a powerful incentive for leveraging the cloud and digital tools in government.

To access this powerful accelerator for execution and innovation, government organizations should continue to learn what worked with their digital investments fuelled by the pandemic. They should continue to invest in and prioritize the cloud at a scale and pace that matches or exceeds industry projections.



The current state of progress

Prince Edward Island

Government's journey so far

Our 2021 survey indicated that about half of our Canadian public sector cloud leader respondents believe they are in the migration and scaling phase of adoption.

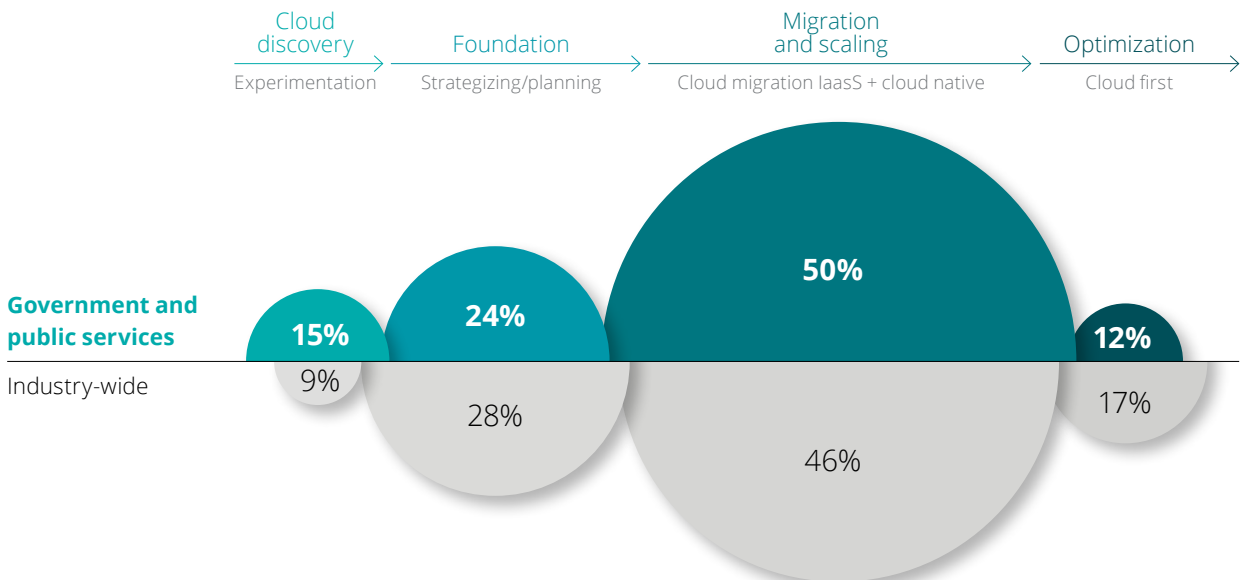
At this stage, organizations have moved past the initial experimentation of discovery, established the foundational capabilities to operate in the cloud and are working toward scaling capabilities across their organization.

Compared to industry respondents overall, public sector leaders are at relatively the same stage of adoption, which presents a relatively positive view of the state of cloud adoption in the sector.

Figure 3: Self-assessments of Canadian public sector cloud leaders

Source: Deloitte, *Accelerating to the cloud: Breaking through the cloud adoption plateau*, 2021

Where would you place your organization on the cloud journey?



Lessons from the front lines: uneven experiences

“We are, I'm going to say, 5% of the way there with a 10-year path ahead of us.”

Our most recent interviewees, however, were less bullish about their progress. Most fell in the foundation stage (79%), indicating that their cloud journey was still ahead of them. “We are, I'm going to say, 5% of the way there with a 10-year path ahead of us,” said one public sector cloud leader. Another admitted, “About 10 years ago, we were talking about cloud strategy and where we're going; 10 years later, we're still talking about cloud strategy and where we're going.”

Looking at the landscape more broadly, there are bright spots. The Government of Canada's Treasury Board of Canada Secretariat (TBS) is the first and only federal department to fully run on cloud technology, with Statistics Canada on track to be there by December 2022. “We have been very successful on our cloud journey,” said Paul Girard, TBS's executive director and chief information officer. “Two years ago, we migrated all our applications to the cloud—the first and only department to fully adopt cloud in the federal government. The value has been immense and has allowed us to operate at a whole new pace. We also realized added benefits of security and reliability from working with the cloud providers.”

Canada's adoption rate compared to other global jurisdictions

Perhaps not surprisingly, concerns around Canada's cloud maturity relative to other leading countries was a recurring theme in the interviews. As one cloud leader put it, “Canada's cloud adoption is five years behind that of the United States, the United Kingdom, and Australia.” It's difficult to get a true apples-to-apples dataset to test this hypothesis, but using total cloud spend as a simple benchmark, the United States spends three times as much as Canada on a per capita basis.⁹

“Canada's cloud adoption is five years behind that of the United States, the United Kingdom, and Australia.”

My take



Dominique Jean-Noël
*Senior director of enterprise
technology strategies at TBS*

“ To date, the Government of Canada has only migrated 10% of approximately 7,300 business applications to the cloud, so there is definitely more work to be done. Cloud adoption provides unprecedented opportunity for technological adoption; however, the public sector must carefully weigh risks and ensure sound privacy and security of data to maintain trust and public confidence.

To accelerate the adoption of cloud and new technologies, it needs to be done from a digital service delivery modernization perspective by simplifying business processes and replacing and updating old applications while prioritizing the adoption of SaaS solutions that will enable the Government of Canada to spend time on user-centric and value-added activities.



The background image is a landscape featuring a gravel road in the foreground, a green field in the middle ground, and a dramatic sky with a rainbow and glowing blue lines. The glowing lines are composed of small dots and curve across the sky, suggesting a digital or data theme. The sky is filled with dark, heavy clouds, with a bright rainbow visible on the right side. The overall mood is one of innovation and progress in a natural setting.

Cloud case studies in the Canadian public sector

Information Management and Technology Directorate (IMTD), Treasury Board of Canada Secretariat (TBS)



Organizational mission

IMTD provides digital and data solutions for TBS, other government departments, and the Canadian people. TBS is the central agency responsible for the management and administration of the government, specifically to oversee departmental operations and spending, to develop administrative policies in areas such as finance, human resources, and digital, and to act as the employer of the federal public service.



The initiative

The Workload Modernization & Cloud Enablement project decommissioned, modernized, and migrated the entire TBS portfolio of commercial off-the-shelf software applications, customized web applications, and infrastructure to commercial cloud services as part of an application modernization initiative announced in the 2018 federal budget. In June 2020, TBS became the first organization to have 100% cloud infrastructure in the federal government.



How the cloud helped

The migration took countless hours, but the dedicated team was able to accomplish the move to the cloud seamlessly and with no disruption to employees. The cloud, DevOps, and agile were the key ingredients to making TBS's solution development on par with the private sector in terms of delivery. GC-VATS was delivered in less than 20 days—a testament to the team's ability to provision new equipment in as little as a few days rather than having to wait months for new infrastructure.



The benefits

- Promoted and solidified partnerships by sharing reusable tools, documentation, and design patterns with other government departments and industry
- Automated secure infrastructure provisioning and application deployment, exponentially increasing the ability to deliver new functionality and tools
- Built a data science community of practice and a centre of excellence to promote intelligent data analysis and optimization through AI and cloud-native tools
- Eliminated technical debt by decommissioning more than 120 applications
- Gained unprecedented end-to-end security visibility into the environment, allowing for quick detection of threats
- Increased reliability by provisioning a robust, geo-redundant platform and implementing automatic failover technologies
- Optimized performance by introducing auto scaling and modern storage and computing configurations
- Realized cost efficiencies by only paying for the services being used, eliminating the need for up-front capital investments

Government of British Columbia, Ministry of Education and Child Care



Organizational mission

To implement Childcare BC, a ten-year plan to provide universal, affordable, accessible, quality, and inclusive childcare to every family that wants or needs it, with the goal of no family paying more than \$10 per day for licensed childcare when fully implemented.



The initiative

To transform the legacy Child Care Subsidy program into the Affordable Child Care Benefit and enable digital registration and renewal through a portal to reduce errors and improve processing time.



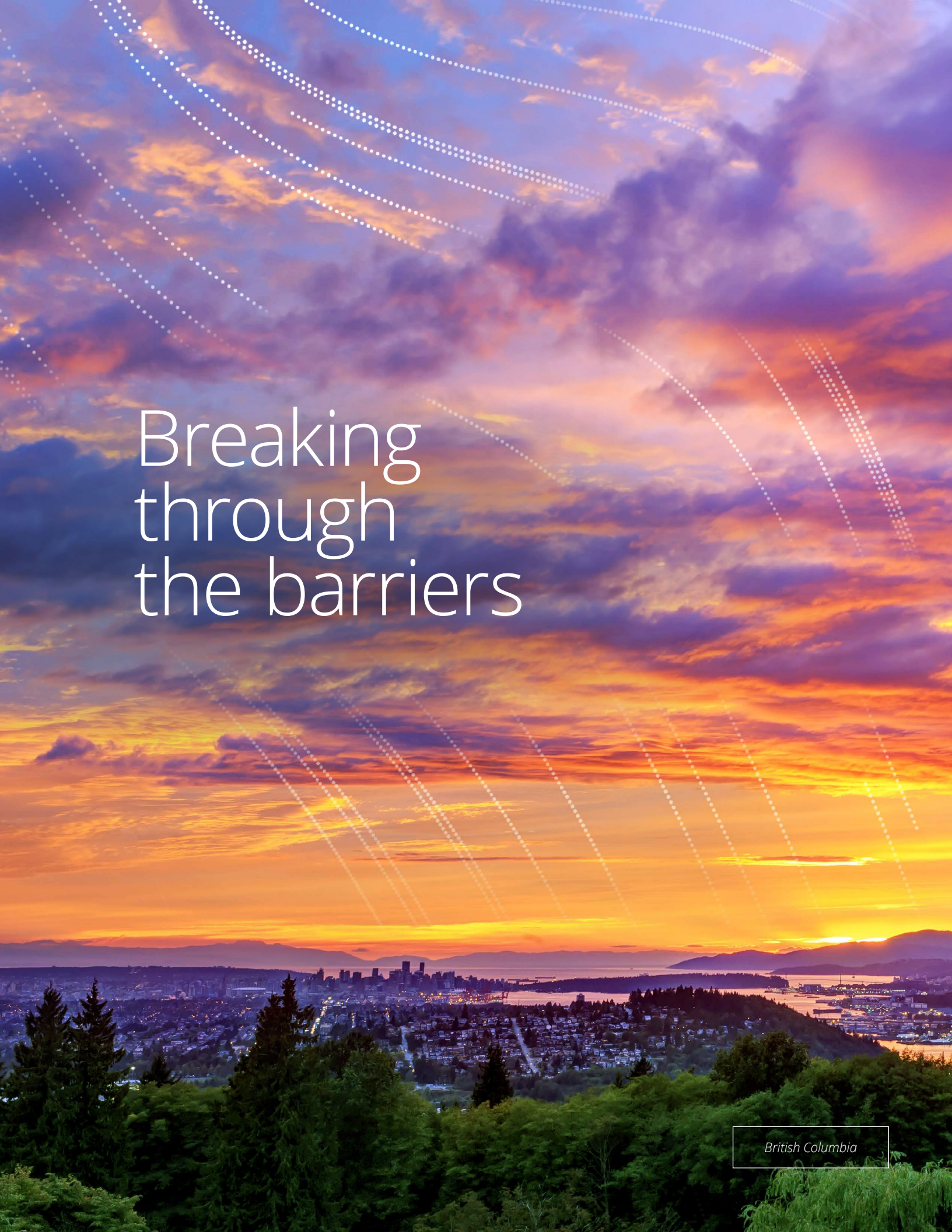
How the cloud helped

The cloud provided a platform and a digital channel for applications and renewals. The previous process included only paper options through mail or fax. The agile delivery of rapid, cloud-enabled technology allowed for more timely feedback and changes throughout the delivery cycle. Quick eligibility checks meant that clients no longer had to go through a burdensome process. Cloud-supported scalability increased the number of eligible families and spread the fluctuating volume of logins across the year.



The benefits

- Better user experience when applying for the Affordable Child Care Benefit
- Better worker experience in handling applications (happy-path application took 21 minutes in processing time from start to finish with little or no data entry required)
- Comprehensive and scalable cloud-based security model that satisfies global standards
- Full traceability of application process from initiation to completion

A vibrant sunset over a cityscape, likely Vancouver, British Columbia. The sky is filled with dramatic, colorful clouds in shades of orange, yellow, and purple. A grid of dotted white lines is overlaid on the sky, creating a sense of structure and connectivity. The city lights are visible in the distance, and the foreground shows lush green trees.

Breaking through the barriers

British Columbia

What's slowing progress in the Canadian public sector?

Given the enthusiasm we saw in our 2021 survey on cloud investment, it is imperative that we continue to learn from successful implementations delivered during the pandemic to push adoption in Canada. However, our 2022 interviews highlighted several persistent, systemic barriers across all levels of government that are stalling uptake.

Barriers emerged in four key areas: access to talent, financial management, security, and organizational alignment. Our interviews also revealed a cross-cutting challenge around effective leadership. While it may not be unique to the cloud, we repeatedly heard of the significant efforts required to drive change and new, innovative behaviours in the absence of dedicated focus and leadership to advance cloud adoption.

Let's examine each area.





Access to talent

“ [The younger generation recruits] want autonomy, purpose, and motivation. The early generations preferred the continuity and stability—the fact that ‘I’m here and have thrived in this environment; I’m stable.’ I think that with future generations, like the current one, you’re going to have to keep them challenged. ”

Brigadier General Milford H. Beagle Jr
United States Army

Competing in the war for talent

Organizations across Canada are feeling the pain of a constrained talent base. 60% of our 2021 survey respondents indicated they either agreed or strongly agreed that not being able to find cloud talent is a key barrier to getting there. This trend is amplified in the public sector, where challenges in hiring and a lack of cloud competencies were flagged as the top barriers to adoption. Our interviewees repeatedly shared specific concerns around government's ability to provide competitive compensation, adequate training, and the proposition to work with leading technologies to entice new talent.

While there is clearly a challenge in recruiting and retaining people with the appropriate skill sets for the digital age, the available data tells a complex story. In contrast to comments shared by our interviewees, the federal government's most recent *Public Service Employee Survey* revealed no indication of mass attrition of IT staff in comparison with non-IT staff. In fact, existing federal IT staff were slightly *less likely* to pursue a position outside the federal public service than public servants in other job categories.¹⁰ Anecdotally, it appears that top talent is not considering public sector jobs, but existing IT staff seem to be relatively stable. As they reach retirement age, we expect that the challenges of external recruitment will become an increasing threat to government's existing delivery models. There is certainly scope for further research into the motivations of existing and aspiring public servants with a digital interest.

Addressing the talent gap

Addressing the lack of talent and capacity is an issue for the public sector and the technology ecosystem at large. To tackle the gap, government leaders can begin with the four following considerations:

1. Plan to evolve the workforce

The first step in developing a workforce is to identify what skills you don't have enough of—or at all. Determine a strategy with an understanding of your gaps and how to fill them by building on your current foundation (long term), determining whether you need to bolster skills by borrowing from a systems integrator or hyperscaler (medium term), or buying the talent you need (short term). A recent [MIT Sloan Management Review and Deloitte report](#) revealed that 87% of executives consider their workforce as encompassing more than their employees. A change in mindset toward developing a workforce ecosystem—one that comprises both internal and external contributors—will be a prime feature in the future for successful organizations. In the context of the cloud, government leaders should look to shift their view on cloud talent from being a static target to be achieved toward an outcomes-based function driving continuous value. Accept and embrace that your needs will continue to evolve.

2. Change the nature of work

Build capacity by changing the work. Look at your current projects and prioritize them, gauging what really adds value. Support your teams by removing low-priority items and providing guidance and support. With low-value work a regular topic when it comes to automation, seek to build learning pathways that proactively steer your workforce away from these value traps and make work more human-oriented. Low-value work should be halted in favour of strategic priorities. Government leaders should reinforce new behaviours that promote teamwork and collaboration. Understand that teams are motivated to work on purpose-led initiatives and projects that are meaningful to them and that add value to and have a positive impact on their communities and society.

3. Hire and enable game-changing talent

Bring your cloud team up to speed by investing in talent that fills the gaps. Design roles to be more attractive by automating menial tasks and letting your teams create more opportunity for meaningful work. Bolster talent management approaches to include cloud learning pathways that are continually curated and updated within a training platform. Job architecture must evolve in line with work that becomes automated and new ways of working like agile and development, security, and operations (DevSecOps). Top new talent relishes the opportunity to work using agile best practices in purpose-driven, multidisciplinary teams. Government should grasp the exceptional opportunities to support and enable these new ways of working.

4. Borrow skills where needed

Governments often collaborate with ecosystem partners, including public cloud providers, system integrators, and other professional service providers to augment their teams with in-demand skill sets. Tap into these relationships to build capability, consider pairing existing staff with partners, and take advantage of the extensive training programs offered by the large cloud providers. Use open talent marketplaces to spend less time searching for talent by presenting the opportunity to learn and grow their skill sets and careers in a governmental unit.

Sharing the total value proposition of government work

As Kirsten Robinson, federal government leader at AWS, explained, "Investing in training builds new competencies and enables the adoption of innovative, modern digital programs. In an environment where the private and public sectors are competing for the best talent, government organizations must consider how developing digital skills and a digital culture can help attract the workforce of the future."

The public sector can also harness the cloud to offer a unique talent experience, differentiated from private sector companies. Fair compensation is important, but public sector organizations can typically offer prospective employees a stronger proposition on several fronts, including better work-life balance and a focus on well-being, access to benefits, flexible work arrangements, more modern tooling, agile approaches to delivery, and, crucially, [purpose-led work](#). Here too is the power of connecting the impact the cloud can have to improving access and the quality of government services to the next generation of talent.



Financial management

“ We need to do a better job articulating the cloud’s value to Canadians. ”

Lucie Loignon

Chief information officer at Environment and Climate Change Canada

Explaining the return on investment

There's a myriad of challenges that fit broadly under financial management, and many of our respondents lamented the complexity of articulating the cloud's return on investment (ROI) relative to on-premises solutions with leadership. This challenge can be particularly acute when legacy services continue to operate; while they may be brittle and risky, they are still functional. IT leaders sometimes struggle to secure even incremental resources to support modernization for an environment that may appear largely viable to leaders with limited background in digital operations.

IT leaders also face complexity in comparing the costs of the status quo with the costs of cloud adoption. Many costs can be unknown, either because of a lack of experience or difficulty predicting consumption; pricing can vary based on a host of variables, including maintenance fees, service outcomes, and availability and scalability requirements. Cloud decision-makers also sometimes lack clear data sources on cloud products, making forecasting a difficult and labour-intensive activity. These challenges mean there's no easy way to offer a definitive assessment of the costs associated with diverse hosting options.

In general, the narrative that moving to the cloud will be cheaper than on-premises hosting did not carry water with interviewees. There are transition costs and variable consumption costs that, in the medium term, are likely to be high. However, interviewees also identified scope for the greater overall value associated with using government's finite resources for such a move. With this assessment comes the imperative to align cloud investments with clear, measurable outputs

and outcomes. Some interviewees cited challenges in effectively measuring success, whether in talent attraction and retention through use of modern tools, or improvements in service delivery and quality. The ROI for cloud investments must go beyond what can be captured on a balance sheet and align back to how they are improving what government organizations are delivering and the benefits to both employees and the public.

The CapEx/OpEx conundrum

One of the best features of the cloud is its flexibility. Cloud providers usually deploy a pay-per-use fee structure where fees are based on the specific services an organization consumes. This is widely viewed as a benefit as it allows the organization to dynamically adjust to shifts in operations while paying only for what they need and use.

Financially, however, it implies a shift to lower capital expenses (CapEx) and higher operating expenses (OpEx). Closing or rationalizing an organization's on-premises data centre, and its associated infrastructure and equipment, lowers CapEx. The new fees the organization pays for the cloud provider's services it consumes increases OpEx. This is a paradigm shift that requires changes to an organization's capital structure and funding model. For many public sector organizations, this transition is not well understood, and operating budgets are typically constrained and under scrutiny. They also have limited flexibility to move funds between CapEx and OpEx funding envelopes or need to seek legislative approval before they can do so.

Several examples of outdated legislation surfaced in our research and interviews. Quebec's *Loi sur les cités et villes* (Cities and Towns Act) includes provisions that are obstructive to cloud adoption, such as the requirement to specify "the exact cost of a solution when it is negotiated"—not a fit for the variable pay-per-use fee structure described above.¹¹ As one of our interviewees noted, British Columbia's privacy laws now require extra steps to certify a vendor, acting as a disincentive to pursuing cloud solutions.

There is a need, according to Stephen Bull, senior assistant deputy minister at Service Alberta, to "educate treasury boards to start moving away from having tons of funding on the capital side to having more funding on the operating side." Another senior provincial technology executive shared that, with the cloud, "IT and finance leaders must work through complex questions about how to identify, manage, and amortize funding if you are using CapEx. And if you're using OpEx, you need to find a source of funds and then ensure that expenditures are being accounted for appropriately. Sometimes it isn't totally clear to technology leaders what kind of accounting guidance they should be following."

In the era of cloud computing, government has the opportunity to enhance collaboration between finance and technology teams to find solutions that balance compliance with accounting principles and cloud enablement.

Building the business case

Many of our interviewees also expressed challenges with the business case. "There has to be recognition that there's a hump when you must pay legacy on-premises costs, application modernization costs,

and cloud consumption costs," said Stéphane Blanchard, previous director general for Cloud Product Management and Services at Shared Services Canada. "Until you remove the first two of those, there are no savings." Organizations need to model the cost of cloud-based solutions to better understand the spending pattern over those solutions' full life cycle. New mechanisms, such as special purpose accounts and separate funding envelopes, should be explored to help remove disincentives in the funding model and absorb the one-time costs to modernize or migrate systems to the cloud.

The cloud is often viewed as an outsourcing play, transitioning operational accountability for the services an organization consumes to the cloud provider. While this is accurate, it can create the expectation that moving to the cloud will reduce operating expenses and provide an immediate payback. There are cost advantages, to be sure, but this is more about value creation than cost reduction.

In our experience, lift-and-shift transitions to the cloud are increasingly rare. Organizations are investing in the cloud to modernize their technology and improve the quality and velocity of service delivery. Capturing a complete financial picture requires quantifying both the incremental costs and value of the cloud as a transformation. This requires the right experience, close collaboration between IT and finance, and a solid understanding of the relationship between the organization's technology environment and its cost structure.

Many public sector organizations have more work to do here. As one interviewee noted, "Most government entities don't actually know how many applications they have. Without taking foundational steps to inventory your environment and implement the appropriate financial management discipline, you're flying blind."



Security

“ We can do a better job of security in the cloud than we do on premises.¹² ”

Richard Crowther

Head of defence digital service at the UK Ministry of Defence

Facing cloud security as both a driver and a challenge

Effective cyber-incident response in a cloud environment, which emerged as a concern in our 2021 research, is another area that government organizations are seeking to address to assure decision-makers that the cloud does not pose additional security risks. More specifically, collaboration with cloud vendors during a cyber event is new for several levels of government and must be tested and practised.

Public sector leaders in our 2021 survey identified cybersecurity as the top driver for a move to the cloud. Organizations are able to automate and integrate security into the end-to-end life cycle of such a move, from design to implementation and operations. Stephen Bull indicated that he would “rather have Protected C data—that, if compromised, could cause extremely grave injury to an individual, organization, or government—in the cloud with organizations who can spend a billion dollars a year on security than in some 40-year-old legacy systems that are constantly at risk of being targeted for a cyberattack.”

And yet, over half of public sector leaders (56%) characterized it as challenging or very challenging to convince decision-makers that the cloud is secure. The top three security concerns were incident response (35%), managing security across a multi-cloud configuration (32%), and the risks to data privacy or of a breach (29%).

Many areas of government in Canada are already making great progress addressing these challenges. Here are some examples that stood out in our research:

- All levels of government have adopted specific security requirements for cloud service providers to operate protected workloads.
- In the federal government, cloud hyperscalers and SaaS providers undergo security reviews by the Canadian Centre for Cyber Security and specific security guardrails are mandated as a baseline for all cloud-based initiatives.
- The Cyber Security Directorate of TBS, the organization responsible for cybersecurity policy and guidance in the federal government, conducts simulations to practice and test its incident response capabilities. In this year's simulation, it included Microsoft as a player to test the government's communications and processes when public cloud providers are involved in an incident response. The three major public cloud providers are investing heavily in local infrastructure to help ensure sensitive data is kept within Canada's borders and aid in understanding regional data requirements.

Many born-in-the-cloud projects leverage the discipline of DevSecOps—a practice of embedding security culture, practices, and tools into each phase of the development life cycle—to address security requirements early on and integrate security controls into the overall project. In doing so, security requirements are given the same weight and attention as functional requirements, with security architects part of the solution build and testing cycle. Breaking through legacy policy and legislative or compliance barriers, real or perceived, requires top-down leadership support of meaningful cloud security practices.

“ The biggest barrier is perception. ”

Busting myths and modernizing security

As one of our interviewees said, “The biggest barrier is perception. It's the perception that legislation, regulation, and policy are going to prevent you from doing this. When you really dig into it, there's not that many policy barriers, procurement barriers, or even regulatory barriers that would stop a large bulk of cloud adoption and IT modernization from moving forward. It's just a big concept and people have a hard time wrapping their heads around how to get started.”

In fact, many of our respondents cited that nowadays positioning the cloud as secure with leadership is no longer as much of an issue. Instead, challenges are emerging as organizations apply traditional security review processes and thinking to cloud deployments. Public sector security frameworks—for example, the

National Institute of Standards and Technology (NIST) and IT Security Risk Management: A Lifecycle Approach (ITSG-33)—are not conducive to the modern security principles discussed above. Respondents shared examples of security review processes being duplicated due to a lack of understanding, communication, and collaboration between project teams and public sector organizations. Confusion over who is responsible for security across cloud models (IaaS, PaaS, SaaS, etc.) can also cause replication of security work. One respondent shared an example of a major project where one workstream was dedicated to reassessing an approved vendor after it had already spent nearly two years working through the review process and gaining approval for use. This kind of unnecessary extra work contributes to the public service's inability to adopt rapid methods to secure the cloud, and often causes weeks or even months of delays and rework.



Organizational alignment

Breaking organizational silos

The cloud offers enticing capabilities to support specific department- and ministry-led projects. It's also a shared capability that's often managed by a central IT or infrastructure team, which thrusts that team into a very different role and interaction model. This can create tension in the operating model about how cloud services are delivered: which activities are centralized to achieve scale, and which are federated to achieve velocity and maintain proximity to department-level priorities? If this isn't optimized or well coordinated, the risk is duplication of effort across organizational siloes and a lack of clarity in delivery roles, which both impact delivery velocity. As one public sector leader candidly shared, "You'll have storage groups, network groups, business application services groups that don't talk to each other, and you'll have an enterprise architecture group that does not necessarily guide the plan. We're dysfunctional."

A successful cloud migration requires new ways of working that promote higher levels of integration and facilitate purpose-led mission teams. They include agile design and DevSecOps, which are less about speed and more about integrating, promoting flow, and iterating around a platform-based product that enhances innovation. Becoming a cloud-based organization is as much about having these integrator, human, and team-based skills as having the technical skills.

Activating shared services teams

Many government organizations in Canada work with large, shared services organizations to support their IT teams and infrastructure. This includes Shared Services Canada (SSC) at the federal level and provincial teams such as Le ministère de la Cybersécurité et du Numérique (MCN) in Quebec and the Office of the

Chief Information Officer (OCIO) in British Columbia. Put simply, building momentum for the cloud will require shared services organizations to deliver cloud services with the speed and agility that organizations need and expect.

The current funding model can disincentivize moving to the cloud. "If my department moves a workload that's currently running on SSC infrastructure to the cloud, we now start paying for it, but the funding remains with SSC," one public sector leader pointed out.

For large, complex public sector organizations, cloud adoption is a multi-year technology and business transformation that commands significant financial and management resources. The right elements need to be in place for shared services organizations to rapidly modernize their abilities and build trust with partner departments. It means aligning shared services leaders with ministerial or department leaders on a common vision and a clear, integrated operating model to plan, fund, and govern the move to the cloud.

Collaborating and sharing with other levels and areas of government

Some challenges to adoption are unique to the public sector. In at least one important respect, government is uniquely positioned to respond to these challenges because it faces few of the competitive pressures and imperatives found in the private sector. Since its remit does not include putting anyone else out of business, government can take advantage of opportunities to share its experiences, insights, and best practices, not only among other public sector organizations but also with private industry.

The federal government has already taken steps toward greater collaboration by introducing its official digital standards, including an imperative to work in the open by default and to collaborate widely. The Canadian Digital Service within TBS also has a mandate to support public servants to improve how services are delivered.

“ To truly accelerate cloud adoption in government, the business needs to be made accountable. ”

Tiffany Belair

Director general of the Canada Revenue Agency

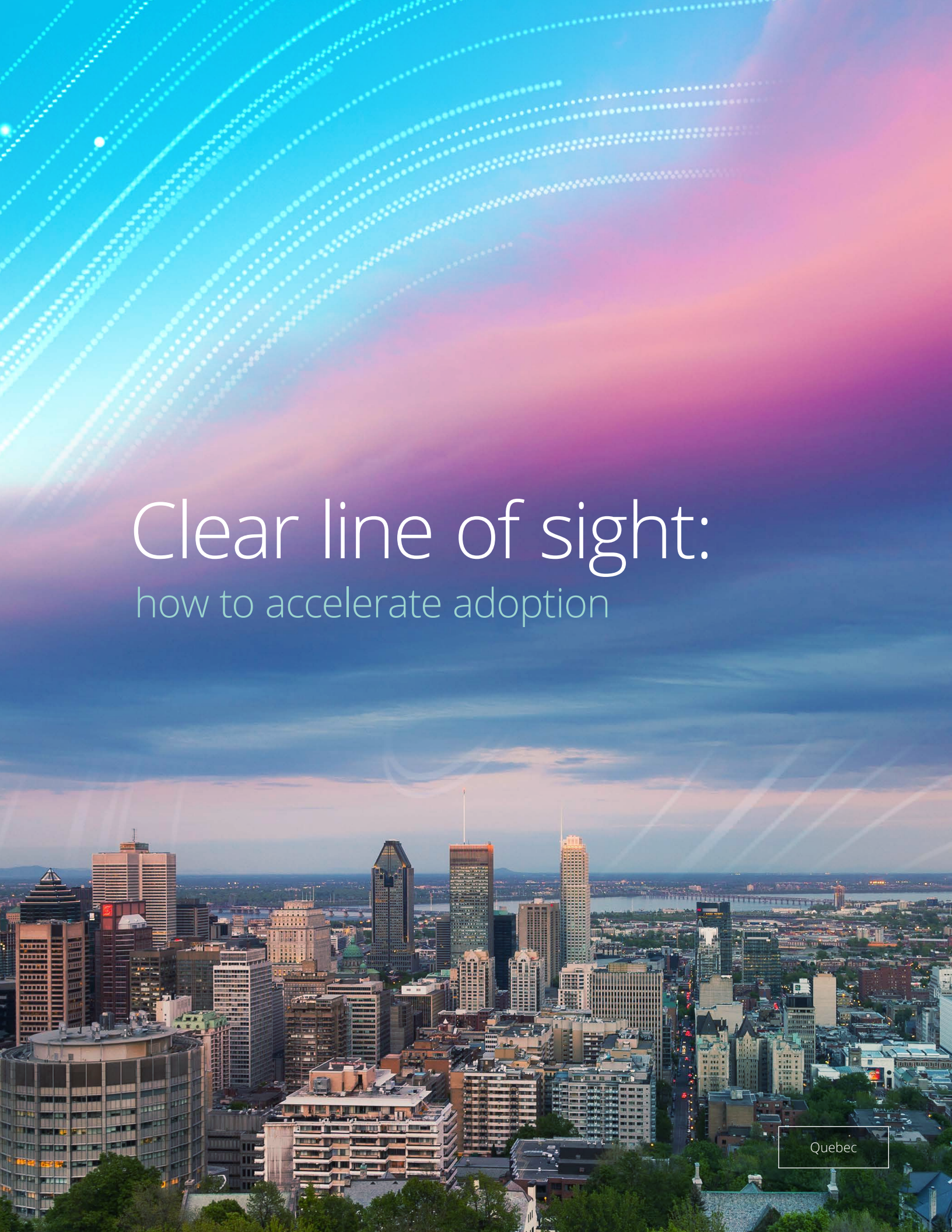
Getting alignment and making leaders accountable

One theme that emerged in our research transcends all areas: the importance of [enterprise-level leadership](#) for sustainable, inclusive digital modernization. Some of the cloud leaders we interviewed perceived a relative lack of business stakeholder involvement as a major barrier. One stated that, “Education, at the executive sponsorship level, is one of the challenges.” Another said that most of the cloud adoption they had seen was driven by software vendors, illustrating a reactive approach.

“To truly accelerate cloud adoption in government, the business needs to be made accountable,” explained Canada Revenue Agency Director General Tiffany Belair. “Currently, government leaders are measured solely on delivering their business program and not on contributing toward adopting the cloud or modernizing government. Cloud success will only be realized with bold vision and ensuring that business leaders are also measured.”

Interviewees recognized that digital teams are doing their best to deliver modern services with limited resources. The leaders of the programs that they help enable do not consistently engage them early enough in program and service planning, nor do they systematically take accountability for the digital tools that are required for success. If the cloud is truly an enabler of government missions, business and program leaders have a critical role to play in securing resources for the effective design, delivery, and maintenance of digital tools. More engagement with digital teams will facilitate sound decision-making on the journey to the cloud.

In the private sector, [some leading CEOs](#) are now aligning executive compensation with outcomes related to digital transformation to combat the friction that it has been causing. If a move to the cloud hasn't been aligned to the business and its strategy, government adoption will likely continue to be on a project-to-project basis. We heard numerous anecdotes about public sector leaders faced with service imperatives that were much more difficult to address without appropriate resourcing or the agency to help design services around digital best practices. As the broader digital ecosystem pivots to cloud adoption (and the ecosystem and next generation of talent follows), all levels of government are at risk of being either left behind or forced to eventually catch up.



Clear line of sight:

how to accelerate adoption

Quebec

Conditions for cloud acceleration

Canadian public sector leaders are committed to getting to the cloud. The value is well understood. It's not about technology, it's about improving access to and the quality of government services for the people of Canada. The urgency of the COVID-19 pandemic temporarily lifted many of the institutional and systemic barriers slowing down cloud adoption and helped demonstrate what's possible.

We've shared several examples to demonstrate the art of the possible, surfacing the key barriers to progress from our primary research and sharing perspectives on how to break through them. So, if we agree on the vision of the cloud as an enabler for government, what will it take the fast-track the journey from here?

The following three considerations and their corresponding steps are aimed to help accelerate government cloud adoption. They were assembled and validated with input from government leaders we spoke to from across Canada and Canadian and global government cloud leaders at Deloitte.



Set the direction

- Align on the vision and path forward
- Declare the intention
- Establish the operating model



Create enabling conditions

- Remove legacy policy and legislative barriers
- Manage the enterprise
- Fix the funding model
- Modernize security capabilities



Align for the future

- Ensure the business is made accountable
- Bolster the talent value proposition
- Activate the ecosystem
- Creating a culture is just the beginning

1

Set the direction

Align on the vision and path forward

Defining and communicating a vision to achieve the mission to move to the cloud will help sustain focus and commitment to the multi-year journey ahead. Other practical actions to take in this effort include:

- Implement principles for hosting and application development in the cloud that departments can then customize for their specific business context—then align these principles to develop a business case.
- Fund products, not just projects.
- Consider the risks of inaction.
- Invest in tool innovation (as well as business innovation)—modernization requires tooling for new initiatives.
- Find ways to achieve standardization, even within a department.

Declare the intention

Canada has committed to net-zero emissions by 2050. What is Canada's bold, measurable goal for cloud transformation? Set the bar and communicate it from the top down.

Establish the operating model

Align on accountabilities for implementation, break siloes, rationalize duplicate efforts, and take ambiguity out of the delivery model.

2

Create enabling conditions

Remove legacy policy and legislative barriers

Systematically review all policy, legislative, and compliance barriers. Take the friction out of the system and track them until they've all been removed.

Manage the enterprise

Shared services teams at all levels of government must build trust and earn the right to be a true cloud delivery partner. They also have an opportunity to play a more strategic role in working with government departments on cloud adoption. Practical actions to consider:

- Invest in improving capabilities for shared services teams on enterprise architecture. Immature practices can undermine cohesive strategies, especially when looking to scale more broadly.
- Improve communication about what's available in the tech stack—many lack a line of sight on the available options.
- Understand the current state. Many of our respondents didn't have a cohesive view of the workloads or how apps interact with one another at an enterprise level.
- Consider the cloud's impact on digital credentials. While it doesn't necessarily add complexity for identity, it does increase availability and improve distribution.

Fix the funding model

Think about the incentives Canada has created to stimulate investment in clean energy. What are the equivalent mechanisms for the move to the cloud, and how can the disincentives be removed systematically?

Modernize security capabilities

Prioritize security right from the beginning of development processes, identify and mitigate cyber risks, create stackable security controls, and avoid rework to secure the cloud more quickly and cost effectively.



Align for the future

Ensure the business is made accountable

The cloud is an enabler and catalyst for innovation, but IT can only do so much without alignment with the business and its strategy. Getting such alignment and holding the business accountable for cloud success will help clear the path forward.

Bolster the talent value proposition

Compensation isn't everything. Align the IT team on the mission, demonstrate commitment to cloud technology, and support progress on modern delivery approaches and flexible ways of working.

Activate the ecosystem

Government departments at every level should establish robust, organization-wide relationships and collaborate across government cloud providers and other partners to augment and build capability and to capture opportunities for innovation.

Creating a culture is just the beginning

The cloud is not a destination and developing a cloud culture is the beginning (not the end) of the journey. Start with developing new ways of working that are relevant for a cloud platform, analyze the new roles required to power a cloud-fluent operating model, and develop the associated skills that will, combined with those new ways of working, start to transform the culture from the inside out. Continue to refine, evolve, and adapt.

Conclusion



Ontario

Our survey respondents and interviewees had strong convictions about the benefits the cloud offers all levels of government and the people they serve. With a few notable exceptions, public sector organizations across Canada remain in the early stages of their cloud journey. Despite the brief acceleration during the pandemic, a range of specific barriers, tied together by a general lack of cloud culture and mindset, continue to impede progress.

Addressing the challenges encountered by our respondents will require systemic change and action in the coming years—and an understanding that effectively adopting and adapting to the cloud will be a multi-year, iterative transformation. However, we believe that by working together, government organizations can seize their unique opportunities—particularly as non-competing entities open to collaboration and networking—to address these cloud challenges head on and strategically accelerate adoption.

We also continue to believe that all areas of government collectively moving to the cloud can advance societal programs and progress, deliver reimaged talent experiences, and contribute to a more resilient Canada. If leaders are willing to take the plunge and adapt to these changes, they will unlock countless benefits. If they let themselves continue to be impeded by the same challenges and pitfalls, they will not be able to capitalize on the momentum of the pandemic and will ultimately be left behind.

Join the conversation

We believe cloud transformation can become a reality at all levels of government across Canada. We look forward to the responses and feedback from government leaders and invite you to join us for the next phase of our research and roundtable workshops.

Endnotes

1. Itopia, "[5 Problems the Public Sector is Tackling with Cloud Computing](#)," October 22, 2020.
2. Haris Elias, "[Cloud computing – the future of public sector analytics?](#)" TechHQ, October 6, 2020.
3. Billy Mitchell, "[The FBI is looking to the cloud to stop the next terrorist attack](#)," FedScoop, November 28, 2018.
4. AWS, "[City of Detroit Makes Travel Safer and More Efficient Using AWS-Based Alerting Solution](#)," Amazon, 2020.
5. AWS, "[University of Newcastle Digitises Its Student and Researcher Experience on AWS](#)," Amazon, 2021.
6. AWS, "[The Impact of AWS in Canada: Accelerating Canada's growth](#)," Public First, 2022.
7. AWS, "[Sustainability in the Cloud](#)," Amazon, 2021.
8. Caroline Golin, Nick Pearson, and Devon Swezey, "[A policy roadmap for achieving 24/7 carbon-free energy](#)," Google Cloud Blog, April 14, 2022.
9. Gartner Research, "[Forecast: Enterprise IT Spending by Vertical Industry Market, Worldwide, 2019-2025, 2Q21 Update](#)," September 30, 2021.
10. Treasury Board of Canada Secretariat, "[2020 Public Service Employee Survey](#)," Government of Canada, 2020.
11. Ministère du Travail, de l'Emploi et de la Solidarité sociale, "[C-19 - Loi sur les cités et villes](#)," Publications Québec, accessed May 10, 2022.
12. Rich Crowther, "[More secure in the public cloud](#)," Defense Digital, November 20, 2020.

Acknowledgements

We'd like to extend our sincere thanks to everyone we interviewed as part of our research, including **Caroline Cameron** (formerly of the Department of National Defense), **Dominique Jean-Noel** (Treasury Board of Canada Secretariat), **Jason Sohm** (Royal Canadian Mounted Police), **Mark Levene** (Treasury Board of Canada Secretariat), **Stephane Blanchard** (formerly of Shared Services Canada), **Todd Cain** (Canadian Food Inspection Agency), **Alex MacLennan**, **Fraser Marshall**, and **Genevieve Lambert** (Government of British Columbia), **Hong Chung** (Government of Manitoba), **Jean-Denis Martin** (Government of Quebec), **Liz Mackenzie** and **Rick Provenzano** (Government of Ontario), **Phil Fournier** (Government of New Brunswick), **Stephen Bull** (Service Alberta), **Richard Grenier**, **Gervais Thibault**, and **Miguel Cobo** (City of Montreal), **Trevor Johnson** (City of Vancouver), **Tyler Gooch** (City of Winnipeg), **Brian Faust** (Salesforce), **James McCabe** (Microsoft), **John Cousens** (Google Cloud), **Kirsten Robertson** (Amazon Web Services (AWS)), and **Terry Gunning** (DXC Technology). The authors would also like to thank everyone that participated and provided their invaluable insights in our validation workshops. Thank you for your candor and generous insights—we're counting on you for great, modern services across the public sector in Canada!

The authors would also like to thank their Deloitte colleagues who contributed to this research, including **Doug Bourgeois**, **Karin Wiens**, **Megan Brister**, **Jamie Sawchuk**, **Rob Masse**, **Gareth Kingston**, **Diana Kearns-Manolatos**, **Joe Mariani**, **Stephen Harrington**, **Emily Boudreau**, **Matthew Day**, **Brad MacInnis**, **Renee Prichard**, **Steve Aubin**, **Nicole Baker-Dufresne**, and many others. Finally, a special thank you to the core research support team: **Christian Ierullo**, **Allan Kirkpatrick**, **Anne Flamant**, **Marwan ElKhodary**, **Danah Azizi**, **Vincent Chen**, **Sanket Sodhani**, and **Lorie Humeniuk**.

Contact

Jaimie Boyd

Partner
National Digital Government Leader
jaiboyd@deloitte.ca
250-888-3354

Christine Cederberg

Partner
Federal Government Cloud Transformation Leader
ccederberg@deloitte.ca
613-595-6050

Kevin Young

Partner
National Cloud Transformation Leader
keyoung@deloitte.ca
416-643-8367



Government cloud services

See your mission through the cloud

The cloud enables innovation and agility, positioning you to deliver on your mission. Deloitte helps government and public sector organizations to advance their missions by driving digital modernization through the cloud. We bring deep experience to guide and support you as a trusted collaborator so you can deliver with confidence.

Learn more at deloitte.ca/cloud



This publication contains general information only and Deloitte is not, by means of this publication, rendering accounting, business, financial, investment, legal, tax, or other professional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your business. Before making any decision or taking any action that may affect your business, you should consult a qualified professional advisor. Deloitte shall not be responsible for any loss sustained by any person who relies on this publication.

www.deloitte.ca

About Deloitte

Deloitte provides audit and assurance, consulting, financial advisory, risk advisory, tax, and related services to public and private clients spanning multiple industries. Deloitte serves four out of five Fortune Global 500® companies through a globally connected network of member firms in more than 150 countries and territories bringing world-class capabilities, insights, and service to address clients' most complex business challenges. Deloitte LLP, an Ontario limited liability partnership, is the Canadian member firm of Deloitte Touche Tohmatsu Limited. Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee, and its network of member firms, each of which is a legally separate and independent entity. Please see www.deloitte.com/about for a detailed description of the legal structure of Deloitte Touche Tohmatsu Limited and its member firms.

Our global Purpose is making an impact that matters. At Deloitte Canada, that translates into building a better future by accelerating and expanding access to knowledge. We believe we can achieve this Purpose by living our Shared Values to lead the way, serve with integrity, take care of each other, foster inclusion, and collaborate for measurable impact.

To learn more about Deloitte's approximately 330,000 professionals, over 11,000 of whom are part of the Canadian firm, please connect with us on [LinkedIn](#), [Twitter](#), [Instagram](#), or [Facebook](#).

© Deloitte LLP and affiliated entities.

November 2022 | Designed and produced by the Agency | Deloitte Canada. 22-6036615