Modernizing how we design services for Canadians — and the systems that support them

The federal government's struggles with technology as a core competency, particularly as it underpins service delivery, are no secret. The gap between Canadians' expectations and their federal service experiences is growing. Ageing IT systems and infrastructure make it hard to implement policy changes, cost taxpayers more every year to maintain and deal with the fallout when they fail, and increasingly threaten the delivery of critical services to the public.

The main impediments to changing this reality are not technological. They are our **reluctance and inability to revisit service models, processes, rules, sunk costs, and organizational structures** largely established in an analog, slower-moving era. Linear, rigid processes of program approvals, service models, and IT implementation became deeply entrenched; they worked well with the monolithic, administrator-focused mainframe systems of the era. With systems and services functional for many years but progressively under-funded and -maintained, and with change imperatives and user needs persistently crowded out by other constraints ("the urgent over the important"), neither the technology nor the practices evolved towards the user-centricity, interoperability, and rapid iteration that define digital leadership today. The work of "digital transformation" is modernizing government's culture, processes, business models, and technologies to respond to Canadians' needs and expectations in the Internet era. **The hard part isn't the technology — it's how we do things in government.**

There is no silver bullet for this problem. But an increasingly well-tested playbook exists for changing the trajectory of the Government of Canada's (GC) digital transformation. It is playing out in a diverse set of countries. Their experiences teach us that people with a particular set of skills and experiences in modern service delivery, working differently than large public organizations are used to or comfortable with, on a focused set of priorities can have an outsized impact and deliver more reliably than traditional approaches. The service delivery practices associated with this playbook have **three critical advantages**:

- They **can be introduced gradually**, alongside in-flight approaches, at low cost — and then scaled up as they bear fruit (and win converts).
- They are **designed to deliver incrementally better services early and frequently** — with continuous engagement of the people government serves. This means that while changing some of the fundamental ways that government works is very difficult and takes time, meaningful progress can be made and demonstrated while that happens.
- They **create modern service models and technology systems that are adaptable, resilient, and secure**. Stabilization efforts for existing systems, where required, are critical in the short-term. But to escape the cycle of perpetual IT crisis management and disappointment, systems must be designed and adapted so that they do not become new legacy problems in a few years.

Change won't happen overnight, but the value proposition for a very different approach is clear: significantly reduced risk of project failure; reduced spending (eventually); increased ability to respond quickly to government initiatives and policy changes; **progressive replacement of the legacy systems** most at risk of failing and impacting people's lives — including addressing the most immediately at-risk systems; and the delivery of **easier to use, more reliable, more secure services and benefits to**

Canadians. Nothing short of significant changes to the current approach to technology and service delivery in government will achieve these results — and ensure that, in several years, we do not simply face the same (or worse) challenges with respect to legacy systems and the services they support.

Why the status quo is not working

While some characterize the Public Service as risk-averse, it is more accurate (if over-generalizing) to say that it is *change*-averse. Status quo risks — significant, in the digital realm — are often tolerated as the "devil we know," if they're accounted for at all. This helps to explain our continued struggles with the lessons of major IT failures. We have not yet changed, at any substantial scale, how we make decisions about technology, how we manage service design and delivery, or how we hire and procure. Specifically:

- Boiling the ocean: We continue to invest in complex, large-scale, multi-year IT projects that we know are almost certain to fail (a major Standish Group study of thousands of IT projects found only 6.4% of those over $10M succeed; 52% were over budget, behind schedule, or didn't meet user expectations; 41.4% were abandoned or re-started);
- Counterproductive process incentives: We have largely maintained governance and oversight mechanisms — ironically, intended to guard against project failure — that, on the whole, incentivize placing large bets on "big bang" solutions; create lock-in based on up-front planning, making it difficult to adapt to feedback and learning; reinforce sunk cost fallacies instead of encouraging people in deep holes to "first, stop digging"; and prioritize compliance and milestone tracking over measuring and improving outcomes for people;
- Not knowing what good looks like: We ask executives without the requisite expertise to challenge, oversee, and steer technology, service design, and procurement decisions — one reason that misleading "everything is fine" dashboards and agile and design "theatre" (going through the motions only) continue to flourish; and
- Poorly aligned procurement and talent practices: We spend approximately $6B on IT procurement each year, with a significant percentage going to large, established IT companies whose differentiating factor is the ability to "capture" departments and their IT contracts, not a track record of delivering better public services. Even when these companies have invested in agile practices, our procurement approaches tend to prevent using them. In addition, we have not yet made the federal government an employer of choice for most top digital professionals.

What good looks like: changing how we deliver services based on proven methods

Governments around the world have had success at having real impact for citizens and reducing IT spending relatively quickly (see annex for examples). The countries — and companies — getting the best results have changed how they design services and build and buy software in common ways: a set of principles and methods commonly referred to as "agile". Digitally-savvy governments on every continent have adopted the techniques that companies like Shopify, Google, Mozilla, Amazon, and Slack use to design software we use every day. These organizations:

- Relentlessly put the needs of the people they serve above their own institutional needs and constraints. Unlike traditional technology projects, with "business requirements" rigidly defined

before work begins, agile product development teams start with research with real users, to understand their needs, and continue testing through every stage of developing and operating a service. They are willing to take a completely fresh look at their service models, *and the policies that underpin them*, and to make fundamental changes if they will yield significant public value. Digital teams get government out of the proverbial "ivory tower" and build services that meet people where they are. The gap to close tends to be greatest at the federal level. Putting users' needs first in practice is hard; it requires changes that include **shifting authority towards front-line and implementation staff**, away from the centres of government and of departments.

- **Use iteration and modularity, not planning, to achieve scale:** Size of budget is a poor proxy for importance and creates perverse incentives. Smaller steps and incremental, modular approaches allow for learning and course-correction — and avoid "lock in" to particular vendors.

- **Make frequent, small changes to services and software:** Companies like Shopify and Amazon update their live services dozens or hundreds of times per day. Most major federal services are updated a few times per year. Frequency means improvements reach users more quickly, creates less risk, and are easier to undo — and creates a feedback loop for continuous improvement.

Canada need not be an exceptional case. Countries that have successfully adopted modern service delivery approaches span a wide range of population sizes, economies, geopolitical situation, and types of government. The **common success factors** have been:

- **Setting clear priorities.** The top jurisdictions have not tried to do everything at once. They have set priorities, publicly, to create focus and accountability. Both the United Kingdom and Ontario, for example, named a limited number of high-priority services to transform.

- **Hiring and developing for digital skills, and trusting and empowering teams.** The countries getting better results for their citizens are bringing digital service expertise into government from the private sector to work hand-in-hand with, and coach up, existing public servants. Small, nimble, multi-disciplinary teams are dedicated to individual services, with the tools, access, and air cover they need to do the job. Those teams — not discrete IT "projects" — become the locus of government funding for service delivery.

- **Building centrally-delivered "platform services"** which give departments ready-made, plug-and-play building blocks for common needs like login, digital identity, notification, payment, and document submission. These allow departments to stand up services that help people faster, deliver a more consistent experience for citizens across services, and save work from being duplicated across government. The United Kingdom's Notify platform has sent almost 600m notifications to users of more than 1300 services, while the U.S. Web Design System ensures mobile-friendly, accessible, time-saving online visits for tens of millions of Americans a month.

- **Providing leadership from central agencies of government** for all of the above**.** This helps clear the paths needed for teams to succeed, including prioritizing outcomes for the public above hewing to the existing rules, silos, and processes that are often the root causes of continued failure — and fighting solution-first instincts ("we need a portal"). It also underpins the **necessary — and often difficult — changes to policy, process, and practice** that make it easier for modern service delivery to spread and scale. While some changes will not be grounded in formal rules

(e.g., addressing habits and custom, myth, etc.), the ones that are — touching areas like how funding is decided and administered, hiring and compensation, privacy, and procurement — will require substantial senior support.

We cannot expect to continue to apply the same ways of working that have led to present failures and get different results

Efforts to "keep the lights on" for the ageing systems that underpin vital services are critical — and multi-faceted. They can encompass patching systems with updates, preventing and reacting to outages, implementing policy changes made by the government, and more. For existing IT shops, all of this competes with the work of modernization.

Worse, most efforts to modernize large federal services like passports and social benefit programs are set up as separate **"projects" based largely on the same approaches that have contributed to their decay**: complex, expensive plans that don't allow for course correction and reinforce "lock in" with established, large-scale IT vendors with mixed track records. Fear of failure — exacerbated by central agency and political expectations and the spectre of audits and other evaluations seen as assigning blame, not providing counsel — encourages this setup and promotes diffuse rather than clear ownership. Churn makes it all worse: the people who launch these 5- and 10-year plans are almost never there long enough to account for their success or failure.

To build the modern replacements for legacy systems and move away from a cycle of IT failure, two things must happen: space must be made for modernization to happen concurrently with stabilization, with protected time and resources; and it must be done by empowered teams using modern practices.

- Doing this incrementally — building **new services in modular pieces that progressively replace system components** — mitigates risks to legacy systems during these efforts.
- **"Empowering a team" is no trivial task.** This means shielding it from traditional reporting and oversight structures, funding mechanisms, and ownership stakes across IT and program silos. It means ensuring access to program and IT experts with corporate knowledge, to legacy systems and data, to modern infrastructure and tools (e.g., cloud), and most importantly, to the users of a service. And it means accepting that the team may conclude that no amount of technology and design can fully simplify how the public experiences a complex web of policies or benefits.
- **Political and senior leadership plays a vital role** in providing this protection and access, including by ensuring wherever possible that policy decisions are made with a clear view of implementation implications for existing systems.

One of the advantages of agile methods is that they deliver concrete results early and often — and by working in incremental steps, they reduce risk and cost. Investing in a new path for services can be relatively inexpensive, and can draw from existing resources poorly deployed. Redirecting a tiny portion of the roughly $6B in annual IT spending that is mostly allocated to large IT projects — statistically the most likely to fail — would provide the initial resources needed to establish multidisciplinary teams and recruit digital expertise to take on a limited number of high-priority services.

Steps to begin delivering better services to Canadians

To begin delivering improvements to services that meet Canadians' expectations in the near-term, and at the same time set in motion the necessary changes to replace legacy systems in a sustainable, affordable way, the following steps are recommended:

- **Prioritize a list of federal services** — based on factors like transaction volume, impact on people's lives, potential to help underserved populations and communities, and mandate commitments — and commit publicly to improving them and reporting openly on progress. This would be consistent with the commitment to set "ambitious new goals to make sure that people are more satisfied with the service they receive from government". This list may differ, at least in part, from another important list: that of IT systems requiring stabilization in the short term, some of which may support multiple services (e.g., the Global Case Management System or GCMS).
- **Recruit, deploy, and empower small teams of professionals** with experience delivering elsewhere to work on these priority services.
    - **Charge those teams with engaging Canadians directly** to understand their needs and finding the right starting point for service improvements that can deliver the greatest impact for the public, rather than trying to improve everything at once.
    - **Fund these teams initially as a "hedge"** against the corresponding major IT project already in flight, reallocating a very small percentage of planned spending, just enough to carve out roughly $2M per year for a team for its first year.
    - **Explicitly give permission to diverge from administrative policy requirements** that hamper effective service delivery: outdated project management reporting requirements; procurement practices that block the use of commercial software-as-a-service; years-long security authorization processes; and non-legislative restrictions on data sharing.
    - Properly empowered — reporting to a single service owner (no running services by committee); with timely, responsive access to service users, systems, data, and institutional knowledge; and shielded from traditional IT governance — these **teams can begin to show results, including working prototypes, in months, not years**.
- A small amount of funding could also be used to **task a handful of teams with developing the common building blocks** that make it easier for all departments to serve Canadians better and more consistently. International experience shows these platform services work best when they are adopted by departments voluntarily, because they meet their needs, not imposed on them by internal monopoly providers to achieve efficiency through conformity.
- **Put experts in the room where decisions are made.** From Chief Digital or Service Officers at departmental executive tables in major service departments, to digital advisors for Deputy Heads and in key central agency roles, a relatively small handful of additional expert hires would help reshape digital decision-making at the federal level. These experts can make evidence- and experience-backed judgements to inform decisions about services, systems, and procurements.

- **Prioritize evidence of better outcomes,** not evidence of meeting project requirements and deadlines. Require concrete evidence of research and testing with end-users and outcomes-based metrics for all new project proposals, including Cabinet and Treasury Board proposals.

- **Make a direct appeal to Canada's world class tech industry for talent** to contribute to Canada as a digital nation – and for greater involvement of SMEs from Canada's rich design and technology industries in government service delivery work, diversifying from the hold of established public sector IT vendors. Australia's Digital Transformation Agency launched a procurement marketplace for digital products and services which has awarded 60% of its AUS$500M in contracts to SMEs.

Taken together, these are steps in the right direction, not a panacea. They are about **incrementally introducing modern methods alongside existing practices**, and scaling them up as they gain traction by delivering better outcomes. **Changing how government funds, oversees, and procures technology and services will require significant will and persistence.** Even empowered teams often fight battles of inches to make progress. And the governments finding success in this space are not without their setbacks — small and large. But we know that staying the course will not produce different, better results. If backed by clear, committed support from leadership, the introduction of experienced talent and modern methods will make the government better at designing services — and at building and buying technology. Those methods can start to generate results quickly, but most importantly, they will **ensure we are not facing the same service and technology challenges in several years as we do today**.

Annex: Selected examples of service modernization and digital transformation

- The United Kingdom redesigned the Carers Allowance Service, a welfare benefit program for those caring for someone with substantial care needs. They reduced the time to complete the service by more than a third, reduced ineligible claims by 41%, and helped staff process an extra 40,000 cases a year.
- California rebuilt their food stamps system from a 100 question application that took 45 minutes to an 8 minute experience on a mobile phone. More than 2 million Californians were eligible and not claiming benefits, and so far 1 million have been served by GetCalFresh.
- The United Kingdom introduced spending controls on IT in 2010: capping IT contracts at £100 million, imposing maximum lengths for certain contract types, and forbidding automatic contract renewals. This saved more than £350M per year ($630M CAD).
- The United States initially fixed the disastrous healthcare.gov (Obamacare) website, which crashed immediately when launched, with a dozen experts who were able to fix the service to meet demand from Americans seeking health coverage in a few months.
- Ontario launched a new online environmental registry in just a few months, using user-centred design and agile development practices. It operated as a public beta for half a year alongside the previous system, before the older system was taken offline in April 2019.
- Nova Scotia redesigned its online license plate renewals after conducting extensive research with users. This included making the service more user-friendly, and letting people print their online receipt and use it as a permit confirmation until their renewal stickers arrive in the mail.