

DIGITAL FIRST

A CENTRAL BANK FOR A DIGITAL CANADA





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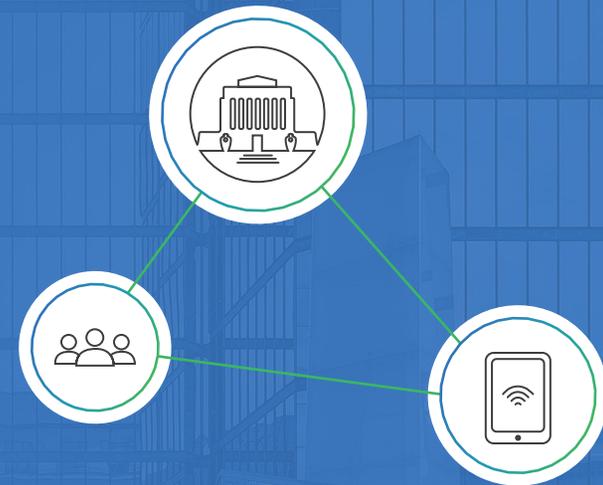
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Our Transformation Imperative

The world has gone digital, affecting every facet of our economy and society. At the same time, COVID-19 is disrupting our lives in profound ways. The impacts of both will play out for years to come. Together, they are challenging the Bank of Canada's capacity to achieve its mandate in an unprecedented manner. The need to pursue a comprehensive and accelerated digital transformation is clearer than ever.

The pace of change in society, technology and our environment is without precedent, and it's only going to move faster. To effectively promote the economic and financial well-being of Canada in a digital era, we must become a digital-first central bank in every aspect of our business. We must not only be able to keep pace, but to get ahead in key areas. To do this, we must transform how we work, learn, harness data and apply the best available technologies to deliver on the Bank's mandate.

Our digital transformation builds on well-established foundations. We take great pride in being recognized globally as a leading central bank. Maintaining our advantage and realizing the benefits of transformation will rely on strong leadership, broad engagement, accelerated individual and collective effort, and continuous, unified action—working together as one Bank.



From Exploring Digital to Doing Digital

As an enterprise, we have long been exploring what it means to be digital. There are numerous ambitious digital initiatives already underway. Nevertheless, the sum of our digital activity can still be characterized as “exploring digital.” Our goal is to move to doing digital by building the digital vision and capabilities of our leaders, teams and employees and by applying the lessons we are learning from the COVID-19 crisis. Doing digital is the next level of organizational maturity and an essential precursor to becoming digital. It will be a key focus for the remainder of this Medium-Term Plan (MTP) and throughout the coming MTP (2022-2024). We will build on the foundations of existing programs that are key enablers of our digital ambitions.

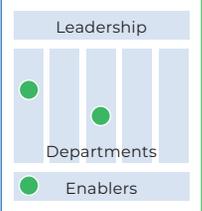
Digital Maturity Level

How this translates organizationally

Exploring Digital

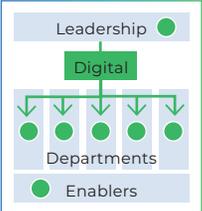
Leverage traditional technology to automate existing capabilities

No real change to the organization



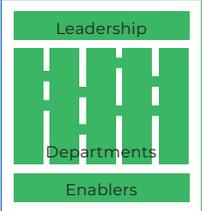
Doing Digital

Leverage digital technologies to **expand capabilities**—Largely focused around current business, operating, and talent models



Becoming Digital

Leverage digital **technologies**—**Becoming more synchronized and less siloed**—with more advanced changes to current business, operating, and talent models



KEY ENABLERS HELPING US DO DIGITAL

ENTERPRISE DATA AND ANALYTICS STRATEGY

The Enterprise Data and Analytics Strategy (EDAS) will increase and optimize the use of our most important digital resource: data. This strategy is already driving change across people, processes and technology to support the strengthened data and analytics capacity necessary to realize our digital ambitions. Major technology and service renewal initiatives will significantly enhance our data management, systems, analytics and data science capabilities. Foundational work is also underway to transform our data governance, literacy and culture.

IT SERVICES PEOPLE STRATEGY AND ORGANIZATIONAL EFFECTIVENESS

The Information Technology Services Department (ITS) has developed a Cloud First strategy, is transforming the Bank's technology to be more secure and resilient, and continues to implement modern tools – and retire legacy tools – to support a Digital First Bank. It is now redefining how it attracts highly-skilled digital workers in a competitive market and enabling its workforce to develop the skills needed to support a digital-first bank. ITS is also enhancing internal governance and automating key processes to support the digital transformation.

EVOLVING WORKFORCE INITIATIVE

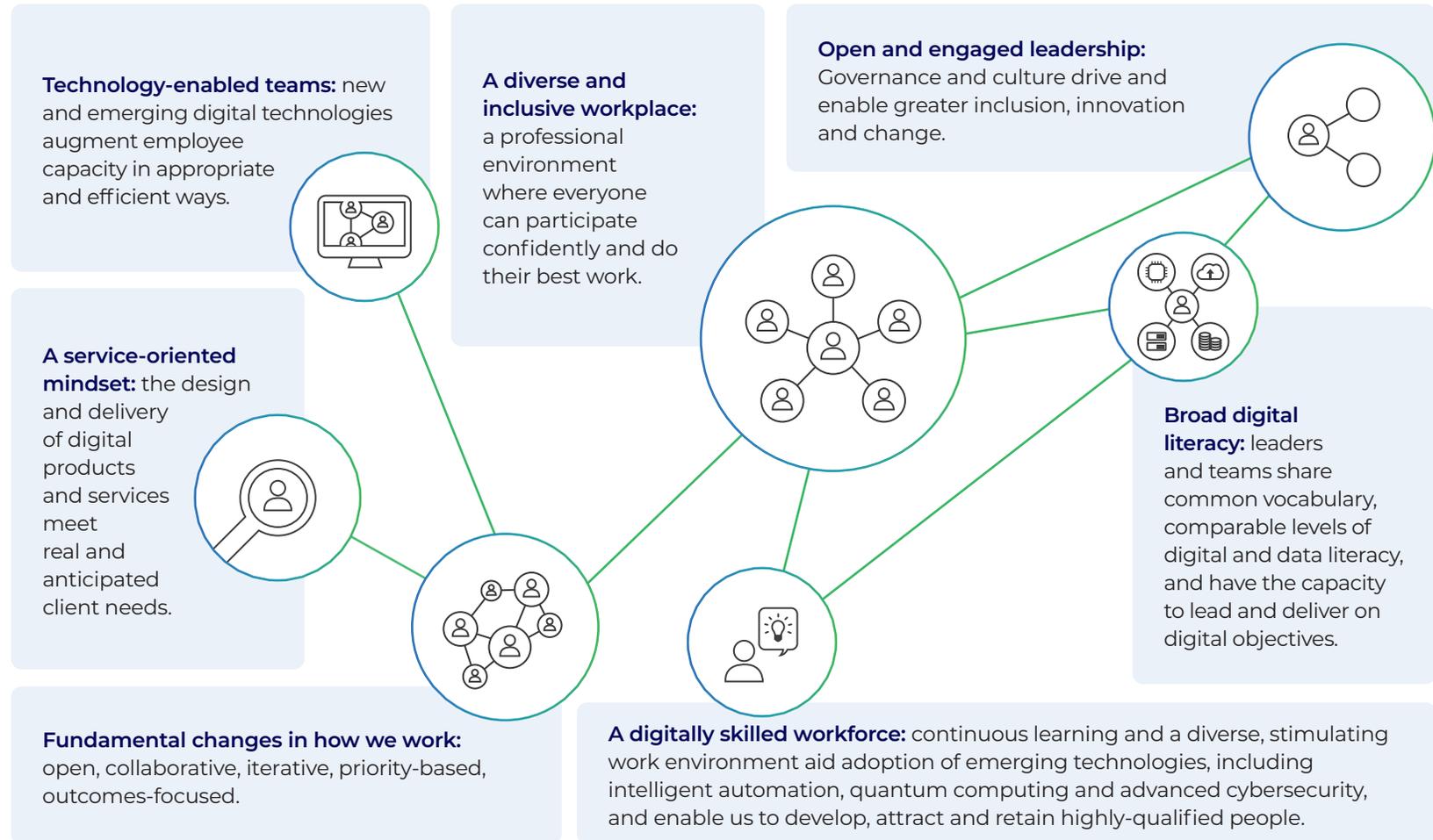
Human Resources led structured workshops with leaders in each department to explore the implications of modern trends on our work and the skills of our workforce. The insights gained are informing changes and helping prioritize investments in business processes, learning and technology. To support new ways of working and enhance digital literacy generally, HR launched employee and leader learning portals in spring 2020. Future iterations of these and other online resources are expected to be included in a new Learning Experience Platform (LXP) for employees.

OTHER DEPARTMENTAL INITIATIVES

Departments are undertaking digital initiatives to do their work smarter, faster and cheaper. These include using machine learning and big data, data visualization, robotic process automation, modernizing our data infrastructure for banking and financial market operations, conducting Proofs of Concept, and much more. The Bank has also long been making key investments in its digital infrastructure. For example, earlier investments to expand telework capacity proved invaluable in March 2020, when 1800 Bank staff moved to remote work in a matter of days to support COVID-19 containment measures.

What Doing Digital looks like

A successful digital transformation will deliver the following outcomes over the next two years:



For more details on what success will look like in practical terms, see [Envisioning our digital future](#) on page 17.

To realize these outcomes, our leaders and employees will need to prioritize and choose among what we must do, should do and should not do. This will require us to focus our transformation efforts.

Focusing our Transformation

The Bank's digital transformation will depend on a clear and structured approach, tied directly to our mandate. This Strategy represents a "North Star" to guide the efforts of our leaders and teams in pursuing the benefits of four business priorities. Each one is vital to our digital transformation and can contribute immediately to our mandate to keep inflation low and stable, provide currency that Canadians can have confidence in, and act as a responsible steward of public resources. In terms of governance, Digital First will also serve as an essential lens through which our leaders, committees and teams can focus their investments and efforts toward digital transformation.

DIGITAL FIRST BUSINESS PRIORITIES

These four priorities were set collaboratively by the Bank's senior leaders. They are designed to guide transformative change throughout the Bank, and they demonstrate a strong, mutual commitment to becoming a digital-first central bank.



ENHANCING ECONOMIC ANALYSIS
AND POLICY ACTION



IMPROVING DIGITAL COMMUNICATION
INSIDE AND OUTSIDE OF THE BANK



ACHIEVING OPERATIONAL
EFFICIENCIES



ADVANCING CENTRAL BANK
DIGITAL CURRENCY

DIGITAL FIRST BUSINESS PRIORITIES



ENHANCING ECONOMIC ANALYSIS AND POLICY ACTION

In order to remain the premier authority on the Canadian economy and conduct monetary policy effectively, the Bank's analytic capabilities must leverage the latest technology and data. This analysis must be effectively integrated into our policy decision-making processes.



IMPROVING DIGITAL COMMUNICATION INSIDE AND OUTSIDE OF THE BANK

Communication of data and analysis within the Bank must be designed with audiences in mind, taking full advantage of available technologies. This includes greater accessibility of data and analysis to a wider range of users to facilitate more efficient collaboration and decision-making. Advances here will also translate into better communication with external audiences.



ACHIEVING OPERATIONAL EFFICIENCIES

The Bank's business and enabling services must continue to strive for service efficiencies by adopting digital ways of working that are free of bias to strengthen internal collaboration, data-sharing and delivery of services in client-centred ways. Emphasis will be given to identifying and addressing challenges in areas where internal governance, manual processes and risk-evasive culture restrict the velocity at which ideas can be turned into realized benefits.



ADVANCING CENTRAL BANK DIGITAL CURRENCY

Canada's central bank is a global leader in exploring and experimenting with ways to meet the expected expansion of digital currencies across the global economy. It is essential that the Bank prepare itself from both a policy and currency perspective for this aspect of our digital future. It must also strive to keep a finger on the pulse of change by nurturing a capacity for foresight in global, social, digital and economic domains.

Getting enterprise results

There are many aspects of our digital transformation, as they relate to technology, people and processes, that will become more concrete as our journey unfolds. We can expect the following to be realized over the next few years, building on the actions we have already undertaken.



TECHNOLOGY:

Cloud first: Our data, tools and processes will continue to migrate to the cloud in a safe and secure manner. Cloud first is digital first.

Data: Data will be open and accessible to all by default, in data lakes or repositories when appropriate. It will be easier to get the data you need to make better decisions.

Standardized tools: We will streamline the acquisition and use of tools and applications, taking full advantage of enterprise-level platforms to deliver business solutions.



PEOPLE

Learning and resources: The Bank will provide employees with learning and resources to support them in the use of these new tools and data. 'The Bank of Canada Learning Academy' will create an individualized learning experience on a centralized platform that leverages internal and external content, resources and expertise.

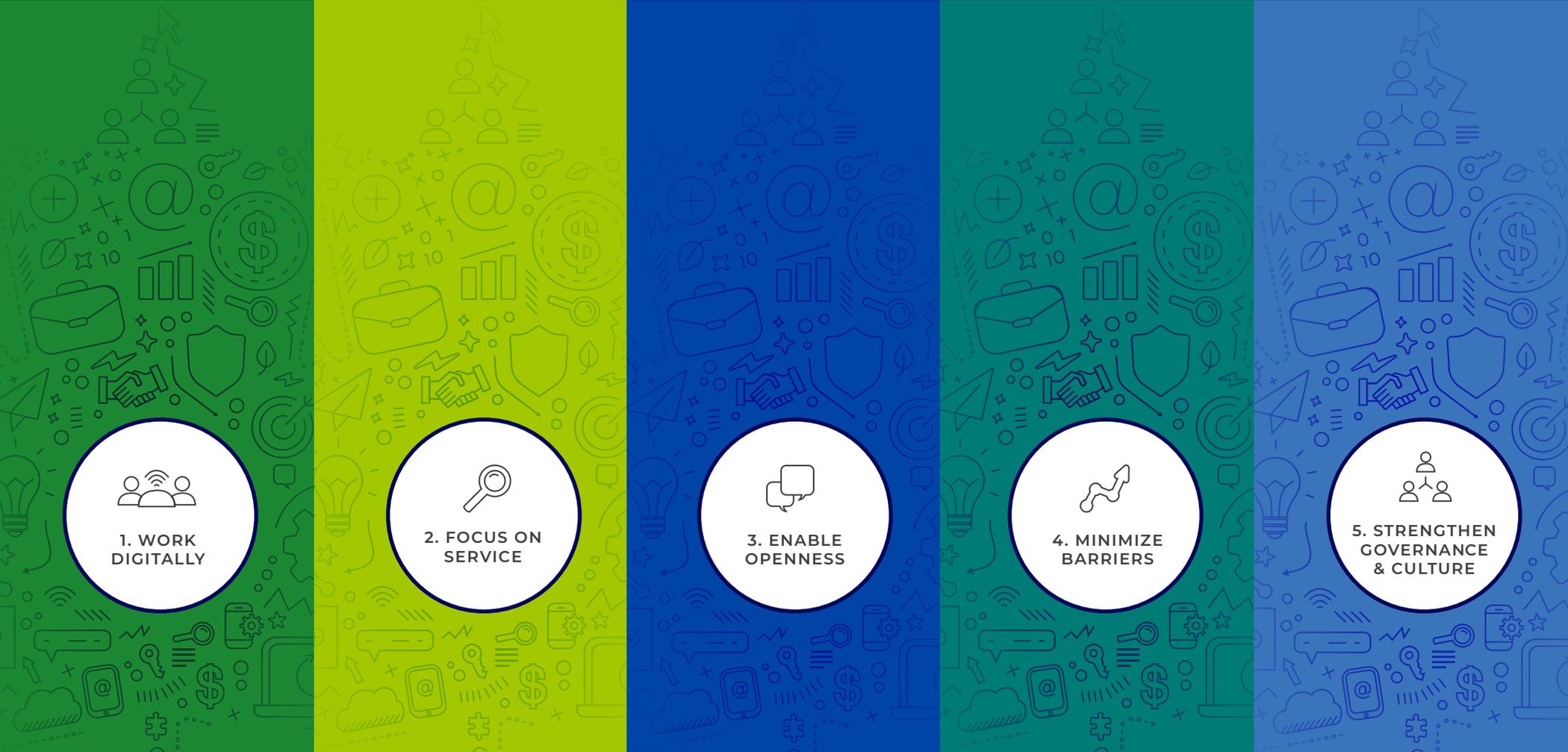


PROCESSES

Governance, prioritization and decentralization: We will formalize the Digital Transformation Steering Committee to oversee our collective transformation efforts and ensure focus on our core digital objectives. At the same time, we will encourage the decentralization of decision-making to teams working on the digital front lines – so they can be agile, lean and design-focused in their work. We will also continue to build on our data governance to develop a robust and enabling enterprise data governance framework and operating model.

Five Digital First Principles

In practice, our digital transformation will reach well beyond the four business priorities. To help us advance from exploring digital to becoming digital, our transformation will require a deliberate effort to promote and adopt the following five digital principles in all that we do. These five principles will help teams and individuals introduce and reinforce digital thinking and ways of working in their areas of responsibility. They also give concrete expression to what Digital First means and will guide departments' digital transformation planning and change agendas.





1. WORK DIGITALLY

Digital enterprises are defined by how they work. They are agile and collaborative and work in accelerated, iterative ways. Applying an agile mindset allows them to adapt processes and products on the fly, ensuring they meet specific client needs. Collaboration is a natural part of how they move projects forward iteratively, as opposed to waiting for perfection. They work in sprints to increase velocity and opportunities for team work and integrating complementary skills and perspectives from inside and outside of the organization. They also know their culture supports experimentation and accepts failing fast as part of an iterative process to ultimately succeed faster and at lower cost.

STRATEGIC ACTIONS

-  Adopt Agile, Lean, design thinking and social collaboration methods and tools across all departments
-  Build teams, based on end-to-end delivery and outcomes, rather than by departmental mandates
-  Emphasize diversity of skills and perspectives among team members
-  Create an environment, both culturally and technically, that grants people license to learn, fail, pivot and succeed even faster
-  Develop and launch a Bank of Canada online Learning Experience Platform that enables user-centred, AI-driven learning experiences and opportunities to collaborate across the Bank



2. FOCUS ON SERVICE

We must increase the value of our products and services from the receiver's (client's) perspective by simplifying and automating processes, minimizing client burden and delivering what is needed the first time. This approach favours identifying and resolving challenges collaboratively, with clients and stakeholders, to deliver client-centred products and services.

STRATEGIC ACTIONS

-  Apply user-centred design principles to products and services
-  Develop a bank-wide plan to identify corporate process pain points, prioritize and partner with problem owners to simplify processes and resolve issues
-  Improve and automate data tracking and visualization for key analytic and corporate administration processes
-  Create a Center of Excellence for intelligent automation to facilitate adoption of artificial intelligence tools, including chatbots and Robotic Process Automation (RPA)
-  Take steps to identify and counteract potentially harmful systemic biases in the design of digital solutions



3. ENABLE OPENNESS

Openness conveys trust and invites others to learn and gain perspective. It also provides the freedom to experiment and innovate beyond one's place in the organizational hierarchy. To this end, openness of data and approaches to working should be embraced. Data and information should be open by default and closed by exception.

STRATEGIC ACTIONS

-  Support leaders and employees to shift mindsets and create environments that promote openness and empower action
-  Draft an Open Data Strategy and create opportunities for information sharing
-  Work with senior leaders and leadership teams across the Bank to seize opportunities for collaboration and open information sharing



4. MINIMIZE BARRIERS

This element addresses two distinct types of barriers: organizational and ourselves. In every mature organization, barriers abound: between departments, in our office spaces, in policies, and in processes. They help people to act automatically; however, in a constantly changing world, automatic human responses can impede innovation and limit the velocity of work. Similar barriers exist in ourselves - our minds - subtly encouraging us to pursue the paths of least resistance. Bank of Canada tear down these barriers!

STRATEGIC ACTIONS

-  Make technology available to work and learn, anytime and anywhere
-  Make collaboration more organic, allowing teams to come together in ways that add the most value
-  Help teams and individuals challenge conventions, policies and practices based on previously accepted norms, even those outside their own areas of expertise
-  Partner with internal corporate service providers to enable policy and delivery adaptations that increase fluidity in how work is performed



5. STRENGTHEN GOVERNANCE AND CULTURE

Five Digital Principles

Governance and culture must become key drivers and enablers for digital initiatives. Transformative thinking among our leaders and employees and in relation to our processes is vital to realizing the changes envisioned. Our leadership must be focused on setting clear direction, accessing the experience and diversity of our workforce, and enabling action. Employees must be encouraged and empowered to think and act digitally.

Operational processes and norms must strive to shorten the time and distance between an idea and its benefit, seize the opportunities of digital first, and strike an appropriate balance between speed and safety. An effective review and "deregulation" of the Bank's processes is essential to our overall transformation success.

STRATEGIC ACTIONS



Decentralize decision-making and accountability to empower teams and enable more rapid decision-making



Conduct a systemic-review of the Bank's governance processes and act on recommendations to increase velocity



Build flexibility into the strategic planning process and funding frameworks for experimentation and scaling



Increase capacity in priority areas to work on digital solutions while maintaining continuity of operations



Support leaders and employees in pursuit of self-directed, continuous learning

A DIGITAL CULTURE THAT RESPECTS PRIVACY, ACTS ETHICALLY AND ELIMINATES BIAS

Reinforce importance of privacy, security and integrity with guidelines and policies

Design new processes and systems that resist systemic biases

Use data in responsible, ethical ways

Working in New Ways

To work in new ways, we will need to internalize our digital principles. We need to give ourselves and others permission to push boundaries and challenge the continued value of certain practices and norms. We want to expand our culture to foster new ideas, encourage safe and open debate and cultivate innovation through experimentation.

The impacts of the COVID-19 pandemic have made digital transformation more relevant and even more urgent. We now need not only work better remotely but should consider our remoteness as an opportunity.

- To work better remotely, we need to leverage existing collaboration tools, de-centralize and delegate decision-making, automate processes and ensure that data and information can be accessed easily by anyone, anywhere.
- To use remoteness as an opportunity means transforming our understanding of “being remote” from a disadvantage to a strength. We can change our business model to remotely employ staff from across Canada, overcoming potential barriers related to relocation and enhancing our diversity and inclusion of views, as we leverage a wider talent pool and lived experiences.

Digital transformation is part and parcel of adjusting to this new norm, providing the tools, infrastructure and license to learn, change, adapt and respond to a COVID-19 world.

The ability to realize the benefits of digital transformation depends on each of us embracing new ways of working, as

individuals and in teams. We must continue to approach our work with a mindset that prompts us to ask: “How could I do this better?” or “What could I change in our process to make this easier?” Working in new ways means that we must:

COLLABORATE

Collaborate across traditional domains and with non-traditional partners, internally and externally and sharing information and data more openly

INCLUDE

Create professional environments of openness, inclusion, flexibility and trust

EQUIP

Equip our people to learn and enhance their skills using new learning platforms

ENABLE

Enable change leadership from within the organization

Moving Fast. Following a Map.



The journey has begun. We're making way for new roads, paving and painting some we've travelled, and setting distance markers and guardrails on still others to enable us to advance quickly and safely. Our four digital transformation business priorities and five digital principles give us direction to proceed and the fundamental means to travel the road together.

Becoming digital is not, however, a destination we will arrive at, but rather an expression of our goal and a characterization of the journey ahead. To reach our goal, as leaders, we must be clear on what 'digital first' means to our work in every aspect of our business. As employees, we must challenge ourselves and be willing to think and work in new ways to continue to capably fulfill the Bank's mandate in a rapidly changing digital world.

The Bank's Digital Roadmap will require each department to map local routes, connections and intersections with others' maps. The Digital Roadmap we prepare in 2021 will not be linear. It will, in fact, reflect a complex network of roads and infrastructure needed to enable the velocity, efficiency and openness needed to transform our institution and realize our operational objectives and ambitions.

It Starts with you and it starts now.

The success of the Bank of Canada's digital transformation will depend on how we, as individuals and teams, come together to learn and work in new ways with the latest technologies. Our focused, unified pursuit to become digital-first will ensure the Bank can play its roles even more effectively in an ever-changing, digitally-enabled world.

We are proud of the important transformation initiatives already underway and the ways we are responding to operating in a post-COVID-19 world. Much of our work is ground-breaking and essential to realizing our digital business priorities. We are on a journey from exploring digital to doing digital. Our goal is to become a fully digital-first central bank.

Start now to consider what you can do, personally, to ensure the digital future does not outpace our ability to respond. Note your ideas and impressions. Share them with your team and leaders. If you need help getting started, reach out to the Digital Transformation Team.

The case for our digital transformation has never been more compelling. Our Executive Council and senior leaders are fully committed to seizing this opportunity to continue to fulfil the Bank's mandate in a digital world—both in stable, but especially in uncertain times. Digital First provides the impetus, invitation and permission to come together in new ways, as one bank, to realize our vision to be a trusted central bank for a digital Canada.

“

We need to challenge ourselves to look ahead and ask ourselves what we should be doing more of, and doing less of, if we are to be the most trusted source of economic and financial analysis...and a reliable pillar of our economic system.”

Tiff Macklem, Governor

Envisioning our digital future

This table illustrates the types of real, transformational changes we are striving for. Relevance and starting points will vary by department, and progress towards outcomes will be measured in relative terms.

TODAY	TOMORROW	Applicable Digital Principles	Desired Skills and Behaviours
Policy and research work are conducted by individual departments and researchers	Cross-bank partnerships enable multidisciplinary teams to be formed easily to assess data and reach well-tested conclusions	<ul style="list-style-type: none"> ● Work Digitally ● Focus on Service ● Enable Openness ● Minimize Barriers ● Strengthen Gov & Culture 	<ul style="list-style-type: none"> Openness and Curiosity Collaboration Innovation Influencing Broad Domain Expertise Deep Domain Expertise Agility and Adaptability Foresight Business Acumen Demand-driven analyses Design Thinking
Information products are developed and delivered as static products	Teams collaborate on products and share work in progress, iterating in short cycles and delivering dynamic, visualized data and services	<ul style="list-style-type: none"> ● Work Digitally ● Focus on Service ● Enable Openness ● Minimize Barriers ● Strengthen Gov & Culture 	<ul style="list-style-type: none"> Iteration & Prototyping Agility and Adaptability Audience engagement/ Client-Centricity Design Thinking Innovation Experimentation Visualization Story Telling Business Acumen Effective writing and communications

TODAY	TOMORROW	Applicable Digital Principles	Desired Skills and Behaviours
The degree of general digital literacy and competency is uneven throughout the workforce	All employees understand the implications of digital technologies on their fields and have the awareness and ability to optimize processes, outputs and productivity using digital technologies	<ul style="list-style-type: none"> ● Work Digitally ● Focus on Service ● Strengthen Gov & Culture 	<ul style="list-style-type: none"> Continuous self-driven learning Environmental scanning Innovation Technology awareness Business Acumen Domain Expertise Digital Literacy Automation Skills
Data are stored and managed in ways that render them unavailable or unknown to potential users	Data are actively shared and made openly available to all employees on common or widely-accessible platforms; new data sets are actively sought or created and shared	<ul style="list-style-type: none"> ● Work Digitally ● Focus on Service ● Enable Openness ● Minimize Barriers ● Strengthen Gov & Culture 	<ul style="list-style-type: none"> Openness and Curiosity Collaboration Data management Research priority awareness (not sure about this?) Business acumen Data architecture
Sharing and processing of data require substantial manual interventions	Time and manual effort spent on the intake, distribution and processing of data is minimized through automation; repetitive, manual data tasks are automated wherever possible	<ul style="list-style-type: none"> ● Work Digitally ● Focus on Service ● Enable Openness 	<ul style="list-style-type: none"> Digital literacy Innovation Collaboration Technology-based augmentation/automation Data engineering

TODAY	TOMORROW	Applicable Digital Principles	Desired Skills and Behaviours
Projects and work activities traditionally follow linear patterns	Project, research, task and operational teams work in agile ways, delivering iteratively and concurrently, benefitting from a diversity of views, experimentation and collaboration.	<ul style="list-style-type: none"> ● Focus on Service ● Minimize Barriers ● Strengthen Gov & Culture 	<ul style="list-style-type: none"> Openness and Curiosity Collaboration Design Thinking Innovation Iteration/Prototyping Agility and Adaptability Audience engagement Experimentation
Decision-making is concentrated among a small group of leaders	Leaders influence peers in collaborative efforts, delegate responsibility for decision-making, encourage collaboration and invite diverse views and new ideas	<ul style="list-style-type: none"> ● Focus on Service ● Enable Openness ● Minimize Barriers ● Strengthen Gov & Culture 	<ul style="list-style-type: none"> Openness and Curiosity Collaboration Influencing Humility Respect Leadership
Data literacy is uneven among departments and teams	The workforce understands the value of data and maximizes its use in decision-making, technology-enabled operations, production processes, and service delivery.	<ul style="list-style-type: none"> ● Work Digitally ● Enable Openness ● Minimize Barriers ● Strengthen Gov & Culture 	<ul style="list-style-type: none"> Continuous learning/Self learning Technology awareness Data literacy Leadership Business acumen
Analyses satisfy the needs of an individual department	Analyses are developed with their broader applicability to the Bank in mind and marketed for use by other departments	<ul style="list-style-type: none"> ● Focus on Service ● Enable Openness ● Minimize Barriers ● Strengthen Gov & Culture 	<ul style="list-style-type: none"> Openness and Curiosity Collaboration Design thinking Prototyping

WHAT WILL YOU ADD TO THIS LIST?

