ESDC Artificial Intelligence (AI) Strategy: Harnessing Responsible AI to better serve Canadians

June 9, 2025

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Executive summary

Artificial Intelligence (AI) is rapidly transforming governments and economies worldwide, and Canada is no exception. AI and intelligent automation have been consistent areas of innovation with the Government of Canada, demonstrating sustained leadership in the area over many years and continuing to be a leader in the AI space. Canada assumed the presidency of the G7 in 2025 and is positioning itself as a global leader in responsible AI governance and innovation, signalling a commitment to shaping the future of AI policy. A new mandate for the Government has stressed the need to harness the transformative power of AI to create opportunities and continue to build a better country for all Canadians.

However, rapidly evolving and accessible AI capabilities are creating both significant opportunities for economic growth, and generating new ethical and security risks. To face this challenge head on, the Government of Canada developed the AI Strategy for the Federal Public Service 2025-2027, to strategically and securely institutionalize the use of AI to modernize public services, increase operational efficiency, enhance service delivery, and build a competitive, tech-enabled economy. The recent appointment of the first-ever Minister of Artificial Intelligence and Digital Innovation also underscores this commitment with a focus on building Canadian-owned digital infrastructure, while ensuring ethical oversight and public trust.

Employment and Social Development Canada (ESDC) works to improve the standard of living and quality of life for all Canadians and is at forefront of realizing the potential of AI. As technologies and methods continue to evolve, the ethical and responsible adoption of AI solutions is helping ESDC achieve its mandate to serve Canadians. ESDC's vision for the future is to transition to an AI-enabled organization, whose employees are empowered to harness the power of data and leverage AI responsibly to generate insights, drive operational efficiency, and improve programs and services through a human-centric approach that upholds our commitment to human rights, inclusivity, fairness and transparency.

ESDC is no stranger to AI and intelligent automation and has successfully positioned itself as a leader in the development of AI and automation among other Government of Canada departments and agencies. However, the Department needs a clear blueprint to advance a deliberate, human-centric and business-value driven approach to AI adoption that will support the organization as it faces the twin challenges of the increasing complexity of client needs and unparalleled pace of technological advancement.

Building on the 2023-2026 ESDC Data Strategy and Government of Canada AI Strategy for the Federal Public Service 2025-2027 (henceforth the GC AI Strategy), the ESDC AI Strategy outlines the direction for AI adoption within ESDC. It focuses on driving action to deploy responsible AI solutions to meet business needs, providing a holistic view and approach to the evolution of ESDC's AI ecosystem; fostering responsible innovation through robust AI governance; enabling and empowering our workforce, integrating the right tools and technologies, and improving insights and efficiency across the policy to service continuum.

At ESDC, our mission is to build a stronger and more inclusive Canada by improving the quality of life for Canadians through our programs and services. AI offers a profound opportunity to support this mission, enabling us to deliver smarter, more responsive business solutions and services. ESDC's

AI vision is not just about technology—it's about using that technology to enhance our ability to leverage data and resources, including the knowledge and skills of people across our organization, to fulfill our mandate of supporting Canadians through every phase of their lives, from work to retirement and beyond.

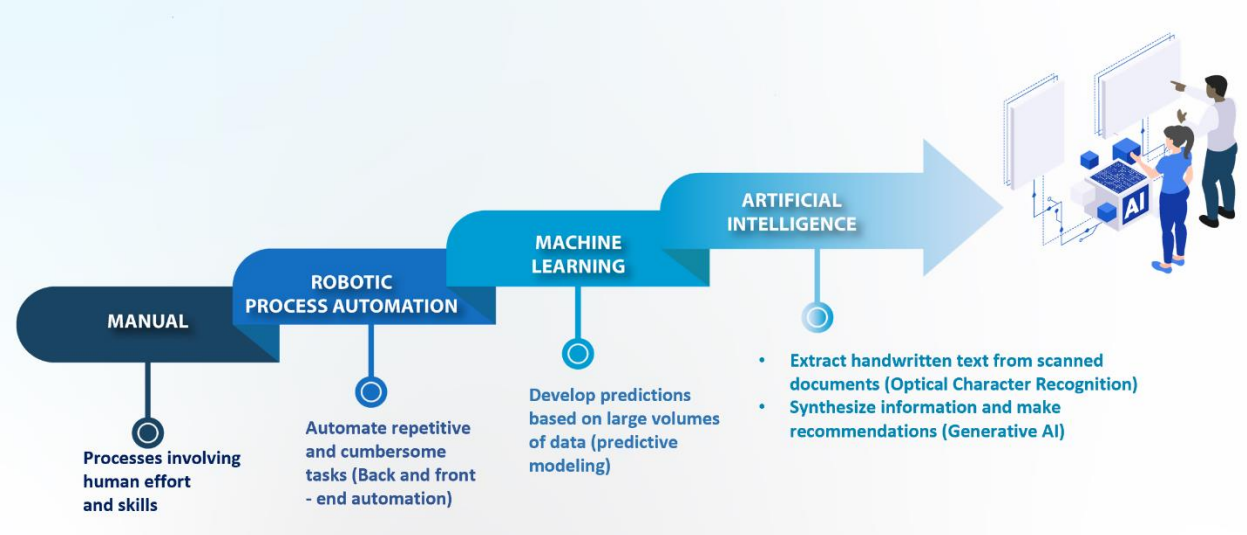
Introduction

What is Artificial Intelligence (AI)?

"An AI system is a machine-based system that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments. Different AI systems vary in their levels of autonomy and adaptiveness after deployment."
- Organisation for Economic Co-operation and Development (OECD), 2024

In other words, AI systems are machine-based systems that use direct or implied objectives to make conclusions. Based on the information the system receives, it can create predictions, content, or recommendations. After AI systems have been released for use, they vary in their levels of independence or adaptiveness.

The Government of Canada has recognized that rapidly evolving and accessible AI capabilities are creating significant opportunities for economic growth while generating new ethical and security risks. It is facing this challenge head on, embracing AI as a transformative force to modernize public services, increase operational efficiency, enhance service delivery, and build a competitive, tech-enabled economy. With the recent appointment of a dedicated Minister of Artificial Intelligence and Digital Innovation and the publication of the AI Strategy for the Federal Public Service 2025-2027, the GoC is laying the groundwork for responsible AI adoption to boost productivity and improve the quality and efficiency of government services.
AI is part of, and builds on, a continuum of analytical solutions that have been adopted within Employment and Social Development Canada (ESDC) to enhance how we serve Canadians. AI initiatives are being prioritized and scaled to support service delivery effectiveness and efficiency, administrative efficiency, human resources analysis, financial analysis, program impact, and development of policy insights.



AI is a not a single technology. Rather, it can be seen as a set of interconnected fields and subfields which includes a range of approaches and techniques that address and solve different problems. AI can range from Chatbots that provide instant responses to common inquiries to Robotic Process Automation (RPA) which fulfills administrative tasks using automated technologies, scripts and rules to Generative AI (GenAI) which generates new content based on prompts.

Harnessing the transformative power of AI

AI is fundamentally changing the way we work and interact on a global scale. When organizations explore and harness recent advancements in AI responsibly, they can enhance the ability of people to do more with technological and data assets.

For ESDC, AI has the potential to transform the way we use technology and data to increase efficiencies, inform decision-making, and transform and improve public policy and the delivery of programs and services to Canadians.

AI is not new to ESDC. ESDC has successfully positioned itself as a leader in the development of AI and automation among other Government of Canada departments and agencies.

ESDC is a leader in AI and automation in the Government of Canada (GC)

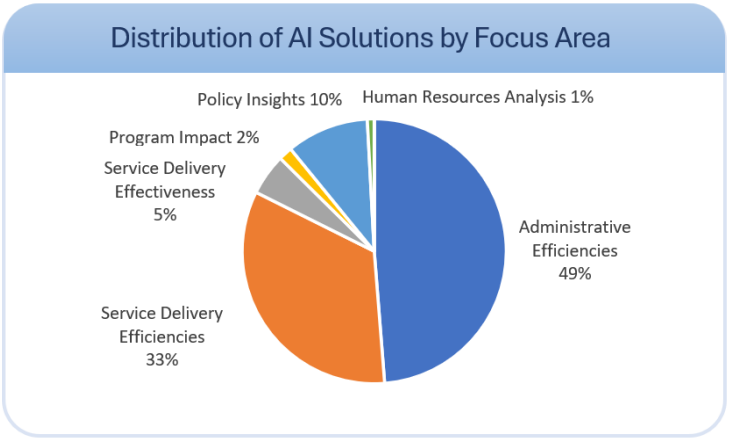
In 2020, ESDC received recognition from the International Social Security Association (ISSA) for "Using artificial intelligence to identify vulnerable Canadians."

In January 2017, guidelines for the Guaranteed Income Supplement (GIS) changed. As a result, a GIS recipient whose partner was admitted to a long-term care facility, would no longer be considered as ‘single’. This situation left one person to pay both household costs and long-term care facility expenses with less GIS support. The Minister of Families, Children and Social Development later reversed this decision and announced that the guidelines were to return to what they were prior to January 2017.

To allow quick identification of claimants that were denied the GIS and allow them to receive their benefits, a series of machine learning models were built to process millions of agents’ notes and then to validate those cases manually. This approach led to the identification of more than 2,000 of the most vulnerable Canadians and the issuance of their benefits.

ESDC has registered 102 AI enabled use cases[1] that leverage Machine Learning, Optical Character Recognition, Natural Language Processing, and Generative AI. Successful priority initiatives will be scaled up for enterprise use.

[1] As of May 21, 2025. Please note that this figure will be updated to correspond closely with the release date.



Private and public institutions are rapidly exploring the potential of AI technology and integrating it into their operations. The democratization of AI through interactive interfaces and tools, such as ChatGPT and DALL-E, has enabled wider access to AI, leading to increased expectations and concerns. ESDC must continue to mature its AI approach to remain a leader in adopting human-centric AI solutions.

Having the right training and tools are key to ensuring that all ESDC employees are equipped to leverage AI in their daily work. By taking a proactive and deliberate approach to embracing AI, ESDC can innovate, enhance efficiency, and make improvements across the policy-service continuum that result in better service to Canadians. Our AI Strategy positions ESDC to continue as a leader in this space and on our journey to AI maturity, defining our path and demonstrating clearly how AI is used responsibly to meet the evolving needs of the workforce and our clients.

Vision

ESDC's AI Strategy vision is to continue to transform ESDC into an AI-enabled organization, whose employees are empowered to leverage AI responsibly to generate insights, drive operational efficiency, and improve programs and services through a human-centric approach that upholds our commitment to human rights, inclusivity, fairness and transparency in serving Canadians.

Human-centred - Human needs and values are foremost in deciding where we adopt AI and how we integrate it into our work. These needs and values reflect the diversity of the clients we serve as well as the public servants seeking to use AI to enhance their ability to do their work.

Human-centred AI adoption focuses on areas including enriching human experiences; improving service quality and accessibility; promoting innovation and enhancing the capabilities of people across our organization by enabling them to leverage AI responsibly in a public service context; ensuring that investments in AI provide value for Canadians; and taking the time to communicate the changes that AI brings to our organization and our work.

Collaborative - We work together on AI adoption by aligning across ESDC business lines, and with our GC colleagues, Indigenous partners, and other stakeholders. This includes leveraging the cross-jurisdictional expertise from industry, academia, and civil society. Our approach is rooted in adaptive data and AI governance that supports innovation and horizontal collaboration while

upholding our commitment to a human-centric approach that respects human rights, privacy, security, ethics, inclusivity, fairness, and transparency.

Ready - We have the infrastructure, tools, data, people, and policies we need to mature as an AI-enabled organization. This includes maintaining and investing in the right technological infrastructure supports, and data practices needed to successfully execute and scale AI pilots. It also includes ensuring that AI solutions draw from trusted data that is appropriately managed and fit for purpose.

Responsible - Canadians and public servants trust that our use of AI is responsible, ethical, safe, and secure. We commit to responsible and ethical AI development that reflects the diverse experiences and needs of our clients, stakeholders, and work force. Our AI adoption is transparent and accountable. We ensure human involvement in critical decisions, clearly communicate, and explain how we use AI, and are proactive in identifying and mitigating AI-related risks.

Objectives

The Strategy outlines the direction of AI adoption within ESDC, drives action to deploy responsible AI solutions to meet business needs, and outlines the key metrics to define and measure success for AI adoption.

- **Provide a holistic view and approach to the evolution of ESDC's AI ecosystem**
  Develop and implement a unified and coordinated approach that aligns AI initiatives with ESDC's mandate and business priorities. This strategy will be fully supported by ESDC's data and technology strategies, ensuring that AI solutions evolve in an integrated, well-orchestrated manner across the department. Our AI Strategy will also align with broader Government of Canada direction, including the Digital Ambition, Federal Data and AI Strategies, GC Service Delivery Strategy, Treasury Board of Canada Secretariat (TBS) Guide on the Use of Generative AI and Directive on Automated Decision Making. This alignment will support a unified approach to responsible AI across the public service, as well as ensure that best practices developed and adopted by ESDC are brought to scale.

- **Foster responsible innovation through robust AI governance**
  To ensure transparency, fairness, and accountability while fostering an environment where innovation can thrive, the AI Strategy will drive the implementation of governance structures and processes designed to enable responsible, human-centric AI. Strong AI governance will build in the guardrails that ensure that our AI decisions provide consideration for elements, including human rights, privacy, ethics, security, and the use of trusted data.

- **Enable and empower our workforce**
  Equip ESDC employees with the right tools and training to leverage AI effectively in their work. This will ensure employees are prepared for the evolving digital landscape, enabling them to deliver better, more efficient services to Canadians and to develop the knowledge and skills needed to succeed in a rapidly evolving digital and service landscape.

- **Integrate the right AI tools and technologies**
  Assess, select, and adopt AI technologies that align with ESDC's goals and values, including the values and ethics that each of us uphold as public servants. We will prioritize solutions

that improve decision-making, enhance service delivery, and optimize operational efficiency across the department.

- **Improve insights and efficiency across the policy -service continuum**
  Use AI to generate deeper insights that improve policymaking, service delivery, and operational processes. By doing so, we will drive better outcomes for Canadians, ensuring that AI contributes to more efficient and effective services.

Outcomes

The Strategy will achieve the following outcomes:

- **Responsible adoption and use of AI by employees:** Cultivating a workforce that is both AI-aware and AI-ready through concentrated data and AI literacy efforts and access to secure spaces for AI related experimentation. Employees will be empowered with the knowledge and tools to leverage AI in a human-centered way, allowing them to focus on tasks that drive better outcomes for Canadians, while fostering a culture of continuous innovation.

- **Inclusion of AI in program services to enhance service delivery and increase operational efficiency:** Offering more responsive, accessible, and personalized services by embedding AI into service delivery. AI-driven insights will enhance efficiency, ensuring ESDC remains agile in meeting the evolving needs of Canadians, while maintaining fairness and transparency in line with national digital goals.

- **Increases in AI Maturity:** Streamlining operations, enabling greater productivity and cost savings. Through responsible automation and data-driven decision-making enhanced through AI, ESDC will optimize resource use and improve performance, supporting Canada's Digital Ambition by driving innovation that is human-centric and aligned with public service human values and operational excellence.

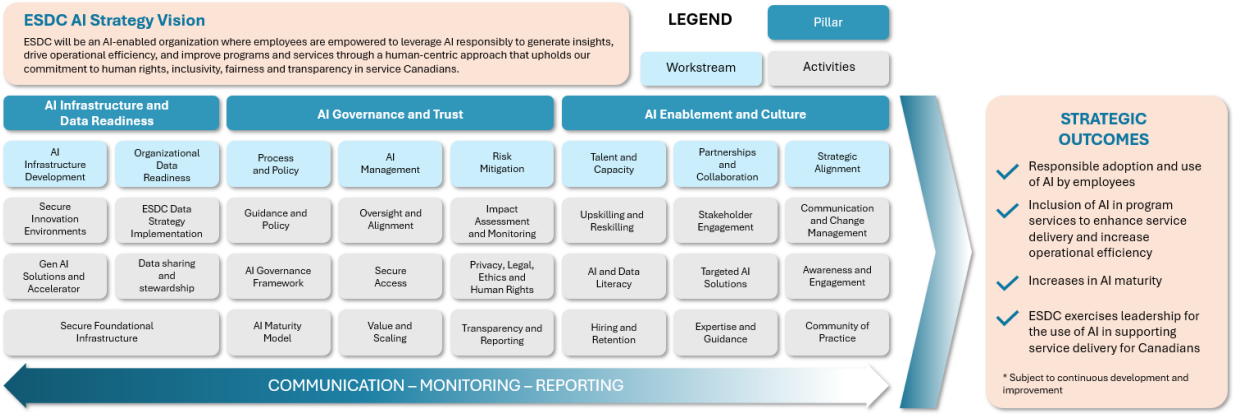
- **ESDC exercises leadership for the use of AI in supporting service delivery for Canadians**. Through the operationalization of the GC AI Strategy, development of human-centric AI policies and guidance, acquisition of data from other departments to enable more robust AI models and sharing use cases that improve the efficiency and effectiveness of service delivery, ESDC will exercise its leadership role in AI enabled service delivery for Canadians.

Framework

ESDC is facing rising challenges of the increasing complexity of client needs and unparalleled pace of technological advancement. In this context, AI tools and solutions, enabled by trusted data, have become crucial to enhancing the efficiency and effectiveness of program and service delivery, generating insights that will provide us with an in-depth understanding of clients, improving client experience, and ensuring that clients receive the benefits they are entitled to in a timely manner.

ESDC is invested in leveraging AI's transformative ability to adapt, and automate complex tasks, enabling employees and programs to deliver innovative, efficient, and high-quality services and operations in a responsible manner. The Department is dedicated to maturing its AI approach by building on lessons learned and scaling up data and AI capabilities. The AI Strategy Framework acts as a blueprint to advance a deliberate, human-centric and business-value driven approach to AI

adoption. The framework consists of three key components: AI Infrastructure and Data Readiness, AI Governance and Trust, and AI Enablement and Culture.



Secure AI infrastructure and organizational data readiness

Secure AI infrastructure and organizational data readiness are key enablers to support responsible, human-centered AI adoption. AI integration into government services has the potential to significantly improve service delivery efficiency and effectiveness, by analyzing vast amounts of data and offering data-driven insights in a short time span. However, the quality of data directly impacts the accuracy and reliability of AI predictions and insights - there is no good AI without good data. Without high-quality data, AI risks producing unreliable or inequitable outcomes.

Data used by AI must be fit-for-purpose – embedding respect for diversity, supporting fairness, and minimizing biases that could lead to discrimination toward historically under-represented populations and perpetuate current social inequities. Data must also be relevant, complete, consistent, enabled by privacy and security by design, and supported by responsible stewardship throughout the lifecycle of AI use to ensure meaningful outcomes that are aligned with ESDC's goals and values

The development and implementation of the **2023-2026 ESDC Data Strategy** is strengthening our ability to manage, find, understand, trust, share and use data as corporate and strategic assets. It is cultivating a culture of data stewardship and transparency, developing data that is fit-for-purpose and enabling employees to leverage data responsibly, ethically and innovatively. **Joint data strategies** are also being developed with key partners to establish strategic data linkages, address gaps in data availability and increase access to disaggregated data. Improved access, availability, and interoperability of data will increase the fitness for purpose of data across all dimensions of quality, further advancing the Department's ability to develop effective data-enabled AI solutions. By increasing enterprise data capacity, these Strategies act as key enablers for the success of the AI Strategy.

The availability and accessibility of secure infrastructure that protects the privacy of data and provides employees with a safe environment to innovate and experiment is essential to the development and scaling of successful AI initiatives and tools. ESDC has built strong foundational

infrastructure through the **Enterprise Data Foundation Platform (EDFP)** which provides employees with access to secured data for business intelligence and analytics to develop and deploy data driven products that support decision making. It also provides tools that allow employees to experiment with AI and advanced analytics within a secure environment. The EDFP embeds tooling and governance to support the testing and uptake of responsible AI, including detecting and mitigating bias, ensuring transparency, assessing and managing risk, and aligning with stewardship and privacy processes to manage data access.

AI-enabled analytics labs, one of the main components of the EDFP, provide secure environments to users for data and AI exploration and development. These environments can be used for experimentation, prototyping, learning, and debugging AI applications. It supports employees and developers to be empowered to assess AI models in a controlled environment, gain hands on experience with AI, and helps them gather feedback to integrate AI solutions in workflows. It also ensures that the AI tool meets the needs of clients and is ready to use.

ESDC is leading the charge for the development of enterprise GenAI solutions with the establishment of the **ESDC Virtual Assistant (EVA)** suite. **EVA Chat** is an internal facing chatbot, hosted on ESDC's secure cloud infrastructure and supporting employees with their work by providing quick answers, guidance, and tools for various tasks. **EVA Domain Assistant** allows teams to interact with data specific to their work. It provides reliable and relevant information based on trusted program sources, relying on curated documents provided by program areas to minimize risk of information leakage. The **EVA Accelerator Program** provides teams interested in exploring AI with a secure and controlled test environment in which to experiment with an AI tool that is supported by specialist prompt engineers and tailored to their business information and needs. It engenders responsible AI innovation by supplying a safe, internal, exploratory resource that provides opportunities to identify efficiencies, mitigate risks, and supports an accelerated path to AI solution production.

GenAI solutions: ESDC Virtual Assistant (EVA) Chat

Generative AI presents an opportunity to enhance productivity of all employees, and its popularity demonstrates a need for a tailored solution to enable employees to use AI tools responsibly and safely to support their tasks. ESDC has been leading the charge for the development of an enterprise GenAI solution.

In late 2023, through partnership with Shared Services Canada, ESDC's AI Centre of Enablement launched the beta version of the ESDC Virtual Assistant (EVA). This early version of EVA was built as an internal ChatGPT capability. Since then, EVA's scope and functionality have evolved to meet the needs of both the Department and prospective clients. Two variations of EVA have been developed, **EVA Chat** and **EVA Domain Assistant**.

Conservative ESDC projections indicate meaningful results from the use of EVA. If 1/10th of ESDC's workforce starts using EVA and it saves them 1 hour per week, approximately 4500 hours or 2.7% of time is repurposed for other work. Over the course of the year, 1 hour saved for only 10% of ESDC's workforce is 234,000 hours repurposed.

Currently, over 500 ESDC employees are piloting EVA Chat and 50 teams have expressed interest in becoming early adopters of EVA Domain Assistant. With the Department-wide launch in March 2025, EVA will bring AI to every ESDC employee, offering a more secure and accessible environment for AI use.

AI governance and trust

As AI continues to transform the way the Department leverages its data and technological assets, robust governance structures and processes are crucial to fostering innovation while maintaining transparency, accountability, fairness, and data security and privacy. Strong AI governance is also integral to engendering trust among Canadians, mitigating the risks of AI and enabling the development and use of safe and effective AI solutions.

ESDC supports a thoughtful and deliberate approach to AI adoption through governance structures and processes that demonstrate a commitment to ethical, responsible and human-centered implementation of AI. These structures and processes establish and ensure the application of rules and principles that guide who can develop AI tools/solutions, what kind of actions can be undertaken with AI, what kind of AI tools can be used and under what circumstances.

AI initiatives must adhere to ESDC's strategic goals and guidelines and meet thresholds for business value. AI governance will ensure that AI initiatives undergo rigorous evaluations to assess their feasibility and suitability and proactively identify and mitigate risks.

What it looks like – Evaluating AI

ESDC reviews AI tools for their feasibility, suitability and business value with a focus on scaling up those initiatives that can improve the efficiency and effectiveness of processes, programs and service delivery.

Several AI initiatives at ESDC show significant value for meeting business needs:

- **d@Scribe for Pensions:** This AI tool deploys OCR to enable robotic process automation (RPA) of forms of the Pensions Programs, starting with the Statement of Estimated Income. It will soon be expanded to other forms, rapidly multiplying the cost savings. The program has saved 5.8K hours in processing time for Program Services Officers and Service Canada Benefit Officers. It has led to an estimated $257K in annual savings from employees who can spend their time on more complicated tasks, which will result in an estimated savings of $1.28K over a five-year period.
- **d@Media:** This AI tool transforms unformatted news articles into synthesized newsletters by filtering and generating news summaries for analysts, standardizing the approach to mitigate the potential for subjective human judgement and providing clear, consistent and concise summaries. The program has saved 910 hours of various levels of Policy Analysts (EC-02, 04, 05, 07) time summarizing large volumes of articles. It has led to an estimated $61.4K in annual savings from using the tool which will result in an estimated $307K in savings over a five-year period.

AI can amplify biases and inequalities and create outcomes that do not align with the values, ethics, and priorities of ESDC. Embedding a human rights lens will ensure AI solutions are human-centric, safeguard the rights to freedom and equality, and maintain procedural rights that guarantee AI decision making processes are transparent. ESDC's AI governance structures and processes are in place and evolving to assess and address ethical issues, uphold ethical standards and promote fairness, while keeping in mind the need for innovation to be timely.

What it looks like – Ethical AI

The Record of Employment Comments (ROEC) project is an AI solution that supports the processing of Employment Insurance (EI) claims by automating the classification of comments entered by employers related to the Reason for Separate (RFS). The AI solution classifies comments with 99% accuracy and minimizes redundant information, reducing demand for manual officer review.

Prior to production, ESDC ensured that the solution followed the Directive on Automated Decision-Making guidelines in collaboration with the Artificial Intelligence Center of Enablement (AI CoE). The quality and impact of the system is monitored continuously following its deployment. The strict adherence to the Directive on Automated Decision-Making and AI CoE's support to meet regulations, ensures that the AI solution is deployed in a manner that reduces risks to Canadians and makes decisions that are accurate, consistent, efficient and interpretable.

The continued implementation of AI solutions across policy and program development, internal operations, service delivery, evaluation and reporting must account for the need to address public fear and mistrust of AI. Improving transparency and accountability is necessary to increase public trust as well as confront the potentially harmful ethical and equity implications of poorly managed AI exploration and use. The Government of Canada has made commitments to transparency through the Directive on Open Government, Open Government Partnership, National Action Plan on Open Government, and the GC Trust and Transparency Strategy. ESDC's AI Strategy will bolster public trust in AI adoption by engaging in rigorous processes for testing AI projects, and actively communicating how AI will be implemented in operations and service delivery.

It is also important for employees to trust that the adoption of AI solutions accounts for the impact on the workforce. Employees need to understand how AI will impact their tasks and affect their jobs, and to also have their concerns addressed. AI adoption requires the support of a workforce strategy for leaders and employees to support adoption of new tools, skills acquisition and development, and the transition to new ways of working. ESDC's AI Strategy includes the development of an organizational change management plan that focuses on employee readiness and reskilling/upskilling, health and wellness supports to enable positive transitions within an AI enabled organization, avenues to engage on AI (e.g. AI Executive Focus Group), and transparency in where and how AI will be implemented in service delivery (e.g. Enterprise AI Register).

Proper governance is essential to foster trust among Canadians, mitigate risk and enable development of safe AI solutions. A life-cycle approach will be embedded in AI governance and include socialization/ awareness to support the cultural shift required to operationalize AI Governance at enterprise levels.

Roles and responsibilities

AI adoption, implementation and scale up requires the coordinated efforts of multiple players across the Department. This begins with enabling collaboration between those who manage the enterprise level data required for AI solutions and those who manage and deliver the technical enterprise level IT and IM solutions to the department and clients. AI at ESDC is co-led by the **Chief Data Officer Branch (CDOB)** and the **Innovation, Information, and Technology Branch (IITB)** and is co-championed by the **Chief Data Officer (CDO)** and **Chief Information Officer (CIO)**. To support the

effective use of AI, CDOB and IITB work together to ensure the provision of high-quality data that is fit-for-use and managed through its lifecycle.

The **Responsible AI and Data Ethics Team (RAIDE)** in the CDOB ensures mechanisms are in place to address ethical issues that may arise throughout the life cycle of AI implementation and use. This team will also ensure that AI solutions embed a human-centric perspective.

IITB's **AI Centre of Enablement (AI CoE)** drives innovation and efficiency by enabling the effective and ethical use of AI. The AI CoE offers a range of AI enablement services to support departments and teams in harnessing the potential of AI. It also facilitates the piloting and scaling of AI projects, promotes access to AI tools and platforms, and fosters collaboration and knowledge sharing across the organization.

As the application of AI solutions to improve the efficiency of service delivery requires the use of client information, understanding and addressing privacy considerations is crucial. The **Privacy Management Division (PMD)** plays an important role in ensuring compliance with privacy regulations and security measures to protect personal information and safety of clients.

ESDC is committed to adopting and leveraging AI in alignment with legal frameworks and regulations that govern the technology that will enable it, the programs and services it will enhance, and environment in which will be implemented. **Legal Services** supports ESDC in ensuring legal and regulatory compliance related to AI adoption and use.

The **Integrated Services Strategy and Operations (ISSO) branch** and **Integrated Workload Workforce Management Team** are essential partners in ensuring ESDC's workforce and clients are equipped to use AI systems effectively. This includes providing workers with the requisite skills and guidance to interact with AI systems.

Maintaining transparency, trust, and accountability with both ESDC employees and clients is crucial to how AI is adopted and deployed by ESDC. The **Public Affairs and Stakeholder Relations Branch (PASRB)** ensures that clients and ESDC staff understand how AI solutions are being developed and used, provides consistent, inclusive and transparent messaging for employees and the public; and proactively assesses and addresses perception risks

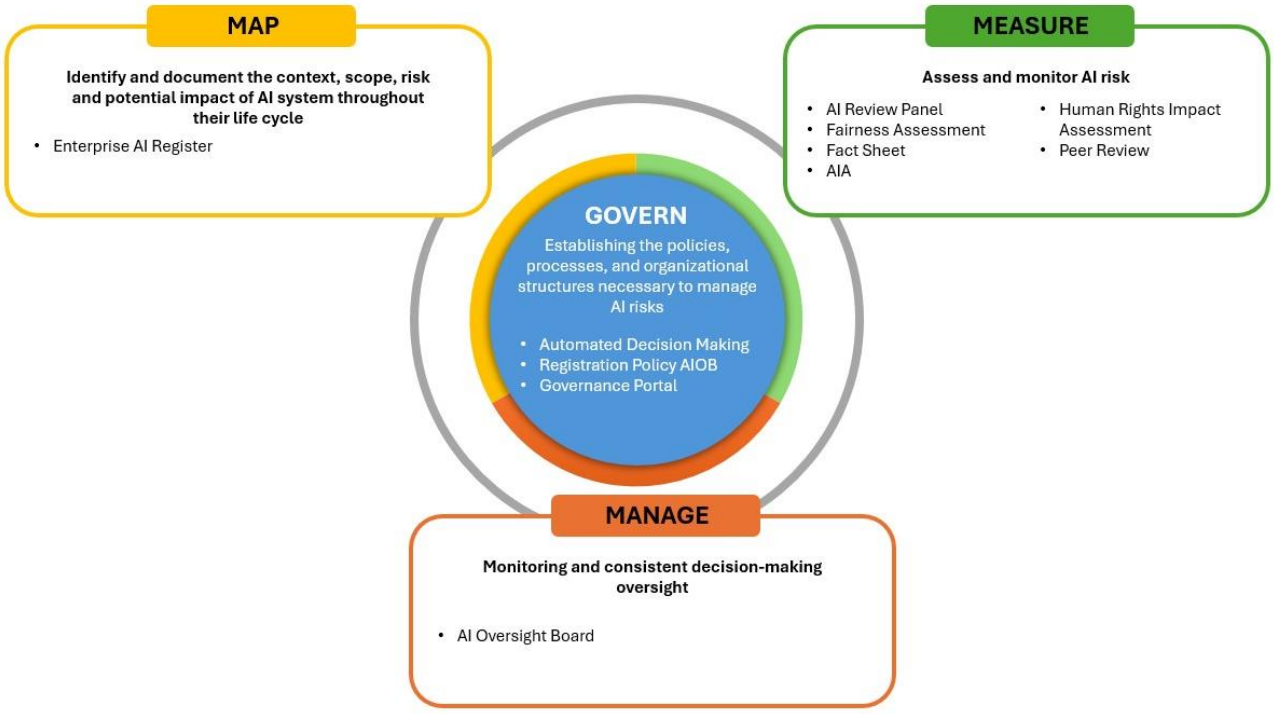
AI Executive Focus Group, co-led by IITB and CDOB, supports the development and implementation of ESDC's AI Strategy. The AI Strategy Focus Group complements the work of ESDC's AI Oversight Board and serves as the main forum for gathering and reviewing input on the development and implementation of ESDC's AI Strategy from across branches and regions. It also supports information sharing and keeping ESDC's stakeholders informed about key AI initiatives and relevant updates within the Government of Canada. The Focus Group provides an avenue for stakeholders and executives to share information, concerns and barriers related to AI implementation.

Benefits Delivery Modernization (BDM) and all **business lines** are crucial partners for identifying areas where AI solutions will bring value to enable ESDC to better understand and serve clients, and where savings might be reinvested to further accelerate the scaling of successful AI solutions. BDM supports the development and testing of AI solutions that improve client and employee experience and effectiveness of programs, service, and benefits delivery.

AI Governance structures and processes

Responsible innovation with AI requires governance and accountability, aligning with global standards to maintain public trust and ethical AI deployment. ESDC's AI Governance is comprised of frameworks, policies, tools and guidelines that ensure ethical and responsible management, and use of AI technologies thereby enhancing trust in AI models. The Department's **Enterprise Data Foundation Platform** integrates AI governance tooling and processes to optimize data use while ensuring compliance with ethical standards, regulations, and policies. By leveraging the governance infrastructure of our existing platform, ESDC has established guardrails to mitigate risks related to privacy, bias, ethical concerns, and public exposure, while providing secure spaces to innovate and experiment with AI.

AI Solutions undergo a rigorous intake, review, and governance process. In line with the **National Institute of Standards and Technology** AI Risk Management Framework, ESDC's AI Governance focuses on four key capabilities, namely, map, measure, manage and govern.



The **Enterprise AI Register**, a standardized searchable database, has been established to capture, assess, and monitor all departmental AI solutions from the onset. It ensures the proper governance of artificial intelligence solutions at ESDC, informs senior management of the use and adoption of AI, as well as allows for greater transparency and accountability. The establishment of the Enterprise AI Register aligns with and will contribute to efforts to establish a public register of GC AI systems as part of the implementation of the GC AI Strategy for the federal public service. An AI Governance Portal has been established that works in tandem with the AI Register to seamlessly integrate assessment documents related to AI initiatives undergoing review.

The **Directive on Automated Decision Making** is applied to all systems, tools or statistical models that are used to make or support administrative decisions or assessments. AI initiatives that include autonomous decision-making must comply with this directive to ensure they are deployed in a manner that reduces risks to Canadians and results in efficient, accurate, consistent, and interpretable decisions made pursuant to Canadian law. These AI initiatives are also required to complete the **Algorithmic Impact Assessment (AIA)**, a mandatory risk assessment tool, supporting the Directive on Automated Decision-Making. The tool is a questionnaire that determines the impact level of an automated decision-system based on many factors, including the system's design, algorithm, decision type, impact and data.

The **AI Review Panel** reviews risks and oversees the ethical, responsible, and transparent development and deployment of artificial intelligence technologies within ESDC. It ensures alignment with the AI Strategy throughout the lifecycle of an initiative, to ensure it adheres to the strategic goals and guidelines set by the organization, whether from a feasibility, business value, or a technical standpoint. It has the authority to approve low risk AI initiative adoption and escalation of high-risk AI initiative.

The **AI Oversight Board (AIOB)** has been established to oversee the adoption of responsible and ethical AI within ESDC. This decision-making committee is jointly chaired by the CDO and CIO and provides strategic AI advice and oversight, makes recommendations on proposed solutions with AI, raises awareness of new and emerging AI risks and challenges, and ensures alignment of AI-related activities with departmental and federal mandates, directives and regulations.

A **Human rights impact assessment** is conducted at the beginning of the design stage of the AI project lifecycle by the Responsible AI and Data Ethics Team (CDOB). This assessment ensures that the development team has evaluated the risks of the AI initiative to human rights, developed appropriate mitigation strategies, and that human involvement is aligned with the identified level of risk. Projects will be referred to the AI Oversight Board (AIOB) based on their associated risk levels. Those that fall within a higher risk profile will automatically escalate to the AIOB. For solutions that fall outside these profiles, escalation is at the discretion of the assessor.

CDOB provides a **Fairness assessment service** to procurers and developers of AI solutions to test the outcome of AI solutions, in terms of fairness and the potential disparate impact it can have on different population subgroups. AI solutions are assessed to ensure that they will not create or amplify discrimination, social biases, or vulnerability.

These governance processes work together to ensure AI initiatives are assessed, prioritized, delivered and monitored to support responsible and ethical AI adoption. To ensure a comprehensive and structured approach to governance, an **Enterprise AI Governance Framework** is under development. The Framework ensures the responsible and ethical use of AI by setting a deliberate path to maintaining standards, mitigating risks and adhering to legal and regulatory requirements. This Framework provides the foundation to balance our commitment to human rights with the drive to foster innovation, while ensuring transparency, accountability and fairness in AI use. Based on three foundational pillars of people, processes and tools, the Framework institutes a governance process that includes the procurement, development and utilization of AI within ESDC.

The **people pillar** focuses on establishing specific **accountabilities** for senior management related to data and AI solutions. It also defines operational **roles and responsibilities** in place to advance data stewardship and AI activities within the Department.

The **processes pillar** ensures oversight and guidance of the departmental use of AI and data solutions. This includes the **Enterprise AI Governance Model**, which will set the direction for and make decisions about AI use and implementation in ESDC, supported by the AI Oversight Board (AIOB) and AI Review Panel. The establishment of an **Enterprise Data Governance Office** will provide a centralized location to support and guide stakeholders, coordinate governance efforts related to data and AI, and collect data and report on success indicators.

The **tools pillar** focuses on developing and maintaining an **enabling infrastructure ecosystem,** including technology, infrastructure and tools that support the identification, evaluation, and monitoring of AI solutions within the department. This includes the Analytic Labs incorporated into the **Enterprise Data Foundations Platform (EDFP)**, which provide tools and resources to design, develop, and deploy data and AI solutions, ensuring they comply with regulatory standards and best practices. A suite of tools has been developed to support a comprehensive **AI Lifecyle Oversight Process**, which will enable oversight for each stage of the AI lifecycle, from conception to post-release monitoring. Notably, this oversight process will embed mechanisms for ongoing review and monitoring of AI projects to ensure they continue to align with the identified standards. A key part of this process is algorithmic auditing to ensure the fairness of AI solutions. Utilizing the Fairness Assessment Service and Ethical Review Service, AI solutions will undergo rigorous review to detect and address biases and disparities in developed AI solutions. Additionally, once released, the AI solution will continue to be monitored to maintain the accuracy, performance, and reliability of the AI solution in changing real world contexts and address data or concept drift over time.

ESDC has also developed guidance and policy to support employees in leveraging new capabilities and drive the effective and efficient implementation of AI tools:

- Departmental Policy on Information and Data Management which provides direction for the strategic integrated management of departmental information and data assets to improve client service experience and departmental operations.
- Directive on Data Management and Analytics for the Enterprise Data Foundations Platform which ensures that the EDFP is used and leveraged in compliance with the Departmental Policy on Information and Data Management.
- Guide on Mitigating bias and discrimination in AI solutions to ensure employees consider fairness, bias, privacy and security concerns when applying AI solutions in their roles.
- Data Accountability Framework which ensures that ESDC executives are aware of their data responsibilities and accountability toward data.

What it looks like – Integrity by design

ESDC prioritizes integrity by design in the development and deployment of AI systems and initiatives. That is, it ensures that AI systems are designed, developed, implemented and maintained in an ethical, transparent and accountable fashion.

The Integrity Services Branch's (ISB) role in assessing AI initiatives is to ensure that integrity is embedded from the design stage. This includes conducting comprehensive risk assessments to surface integrity and

security risks related to AI systems from design to deployment; implementing continuous monitoring of AI systems to identify and address any nascent risks or ethical issues; and ensuring AI initiatives comply with requisite standards, regulations, and security programs related to ethical practices and AI risk management.

As AI continues to evolve and AI governance matures at ESDC, it is important to keep several key considerations in mind. First, while AI has the potential to increase efficiencies and improve service delivery, it is not a solution for every problem. AI Governance will support ongoing and strategic review of current operations, processes, services and programs to identify and assess which areas can benefit from the implementation of AI solutions.

Second, AI solutions and tools are advancing rapidly, both nationally and internationally. This pace of innovation requires AI governance to be agile and flexible. AI governance must include structures and processes that put in place risk and ethics guardrails while also ensuring that these do not discourage innovation and/or cause AI adoption and implementation to slow down. AI Governance and processes must also gather and draw on subject matter experts to drill down into what is feasible in AI adoption and implementation while avoiding redundant structures and heavy administrative burden.

Finally, collaboration is critical in a rapidly evolving innovation space. ESDC must continue to chart out and leverage avenues to engage subject matter experts and partners to share expertise and lessons learned. This includes fostering partnerships with academic communities (e.g. Alberta Machine Intelligence Institute (Amii), Quebec Artificial Intelligence Institute (Mila), and the Vector Institute, Toronto) to review AI solutions and with other departments and levels of government to bring successful solutions to scale.

AI Enablement

Developing a culture of AI enablement and the capacity to attract and develop talent is crucial to the strategic implementation of AI in a rapidly evolving digital and service landscape. Culture and change management are integral to empowering ESDC employees and equipping them with the necessary training, resources, and tools to leverage AI effectively in their work.

It begins with **building capacity**, through **upskilling and reskilling employees**, so that ESDC's workforce and decision makers will be equipped and ready to use AI to deliver more efficient and effective services to our clients. It is vital to provide employees with targeted training and access to relevant tools to enable and empower them to use AI responsibly. The provision of multiple avenues to learn and engage with AI tools and solutions, such as communities of practice, training and events provided by ESDC and partners, is integral to building AI awareness and culture. Building capacity also includes identifying talent requirements, tracking gaps in capacity and skills, and strategically **hiring talent** to address these gaps.

As AI becomes more accessible and integrated in our workplaces, empowering employees with the knowledge and competencies to understand AI's risks and use data and AI responsibly, securely and ethically is critical to harnessing the potential of AI effectively. The **ESDC Data and AI Literacy Program** and **AI Learning Path** have been established to support the transformation and modernization efforts the Department is undertaking to ensure we have the right skills and talent in place to advance data and AI maturity.

ESDC is also engaging with key partners to develop **training resources** that enable employees to navigate and adapt to the fast-paced and evolving digital and technological landscape and prepare our transition to a data and AI-enabled organization. Resources include AI Toolkits and Primers, StatCan and Canada School of Public Service (CSPS) data and AI training and resources, and the Data and AI Literacy Champion Toolkit.

What it looks like – AI Learning Strategy

The College@ESDC, AICoE and CDOB co-developed the AI Learning Strategy, which provides employees with foundational knowledge and competencies in AI stewardship, data governance, and security and ethics. Designed as an evergreen framework, it enables employees and leaders to remain equipped to harness AI effectively in the context of the evolution of AI and advancements in organizational goals, policies and workforce requirements.

The AI Learning Strategy will be implemented over three years (2025-2028), addressing the diverse learning needs of the Department through the adoption of a multi-level approach. The approach begins with building awareness and a deep understanding of GenAI (foundational level), followed by deepening knowledge and enhancing skills, through practical application and collaborative learning (intermediate level), and moving to integration and application of new skills into daily tasks, transforming workplace culture (advanced level).

Aligning with the TBS Guide on the Use of Generative Artificial Intelligence, the Strategy focuses on five areas of action, including:

- **Building AI literacy and competencies** as well as awareness of AI initiatives to develop a workforce that is enabled to thrive in an AI-driven environment.
- **Ensuring human-centric and ethical AI** to build trust, reduce bias, encourage inclusivity, and create equitable access to AI technologies, while strengthening service delivery and respecting the diversity of stakeholder perspectives, needs and experiences. It also enables employees to determine where, when and how AI and data-driven solutions should be employed.
- **Integrating AI** into organizational processes, as appropriate, to improve operations, enable innovation, and enhance decision-making while **maturing the AI capabilities** of the Department to support the responsible use of AI.
- Employing AI to **automate repetitive tasks** and enable employees to focus on more complex tasks and **optimize processes**, improve client experience and support more effective and efficient service delivery.
- Supporting strong data **governance and accountability,** including implementation of oversight, guidelines and structures to generate more accurate and reliable AI insights, while ensuring the engagement of stakeholders.

By embedding these focus areas into performance objectives and training plans for employees, managers, and executives, the AI Learning Strategy delivers customized learning experiences, fostering systemic transformation and facilitating responsible AI integration within ESDC.

Offering a range of user-focused training, guidance, resources, and tools, along with learning paths customized to different levels of data and AI proficiency tailored to the organization's context, enables employees and decision-makers at all levels to build data and AI skills and competencies. By learning about data and AI, people and teams across the organization are better equipped to mitigate AI-related risks, strengthen their analytic and reporting capacity, and can be innovative and

creative in using AI in their daily tasks. Being AI and data literate helps employees use AI responsibly, build client and stakeholder trust, and deliver programs and services that meet the evolving needs of Canadians more efficiently and effectively. AI enablement efforts also support management and Human Resources related activities across departments and regions, including workforce planning, performance management, professional development, and talent management.

Resources that have been developed to support change management and AI enablement at ESDC include **AI@ESDC**, which is ESDC's "Front Door" to all things AI. Supporting department-wide awareness and engagement on AI adoption, this one-stop-shop provides information on AI tools, research, learning, guidelines, partners and services. It communicates the AI-related work being undertaken by the CDOB and IITB and charts the progress on developing AI foundations and culture for the enterprise. It acts as a service portal and a first step in the AI governance process, to support clients in accessing CDOB and IITB enabled products and services.

Data Community of Practice (CoP) provides an informal setting to increase data literacy through the sharing of tangible work practices. Informal regular meetings of the CoP break down silos and advance a data and AI-driven culture.

What it looks like – Empowering data and AI culture

A one-year Western Region and Territories (W-T) Data Literacy Measurement Pilot Project was undertaken in 2024 to advance data-driven practices within the organization through a collaboration between the CDOB and the W-T. It built on CDOB's broader initiatives to promote data and AI literacy, creating a foundation for a data-driven culture.

The Pilot focused on three foundational data competencies: Data Culture, Data Ethics, and Data Stewardship—which were chosen to enable the expansion and scaling of literacy measurement tools and initiatives across the organization. The primary objectives of the pilot included validating assumptions about data literacy needs, building and measuring data literacy in the W-T region, testing existing literacy tools and new measurement mechanisms, identifying scalable solutions for the broader organization, and setting up key performance indicators (KPI) to track progress on advancing participants' data literacy from Beginner to Intermediate levels, with a focus on competencies in Data Culture, Ethics, and Stewardship.

The curriculum for the pilot was shaped by the Data Consumer Learning Path from the Data and AI Literacy Program. It required participants to engage in at least three hours of learning and activities per month over the course of the year, including online courses, self-assessments, focus group discussions, data events, and hands-on virtual workshops for practical application of what they learn.

The pilot was successful and resulted in measurable improvements in participants' data and AI literacy across all competencies, with a total improvement of 31% across all three competencies when comparing the results at the start of the pilot and at the end, with Data Culture improving by 30%, Data Ethics by 29% and Data Stewardship by 29%.

Participants not only improved their data literacy but felt confident that they were able to tackle even complex problems and tasks on their own. They gained a deeper understanding of how data and AI are used within ESDC and the Government of Canada, acquired greater situational awareness, including knowledge of the latest data and AI direction and guidance, as well as a better understanding of the intersections of data into broader departmental priorities. They expressed feeling more confident working with data in a responsible manner, advocating for security, privacy, and ethics within their team.

AI adoption and implementation cannot be achieved in isolation. It requires collaboration among internal players and with external players to develop and deliver AI solutions, improve AI skills, advance data and AI maturity, provide training, shape AI governance and ensure that AI implementation is inclusive for employees and clients.

ESDC has a proven history of collaborating with partners and stakeholders to advance AI adoption. ESDC has engaged and actively consulted on the development of the GC AI Strategy and supporting policies and guidance, providing leadership on GC Data Strategies, and has been a key contributor to the development of guidance, including the **Algorithmic Impact Assessment (AIA)**.

Established partnerships with internal and external stakeholders will continue to be nurtured to share best practices and ensure that effective scalable AI solutions benefit not only ESDC but also our partners. For instance, ESDC leadership is working closely with the Chief Data Officer (CDO) Council to spearhead the establishment of a working group on AI and productivity. ESDC will also leverage relationships with partners (e.g. GC AI Strategy, Joint data strategies) to build new collaborations that will enable engagement with key populations and on key priorities (e.g. Indigenous partners and Indigenous sovereignty).

Intra-departmental collaborations are integral to advancing an AI and data-literate culture and workforce. The College @ ESDC is central to building data and AI capacity in the Department. Through its development and provision of AI related training and resources, the College @ ESDC will empower employees to grow their data and AI knowledge and skills and adapt to emerging technologies.

On-going consultation and partnerships with employee unions, employee networks (e.g. Black Employee Network, Employee Pride Network etc.), and centres of expertise (e.g., Gender-Based Analysis Plus Centre of Expertise, Accessibility Canada) are vital. ESDC will continue to build on ongoing engagement with these groups to understand and mitigate the impact of AI on employees, including the changing expectations of their day-to-day tasks, protection of their employment rights and outcomes for equity groups.

Inter-departmental collaborations are critical to leveraging AI to enhance the efficiency and effectiveness of service delivery and to tackle the complex challenges facing all government departments. Collaboration can support the elimination of silos in service delivery and enable the creation of common standards and improved data sharing. ESDC is well placed, through its current collaborations with other Government of Canada organizations, including Statistics Canada, Canada Revenue Agency (CRA), and Immigration, Refugees and Citizenship Canada (IRCC) to support the provision of more robust data and enable a collective development and scaling of effective AI solutions.

ESDC is collaborating with the **Canada School of Public Service (CSPS)** and **Statistics Canada** to advance employee data and AI skills and ensure that they succeed in a rapidly evolving digital and service landscape. To this end, ESDC has contributed to the development of 4 new CSPS courses and 3 new Statistics Canada courses. Additionally, ESDC is leveraging its relationships with other departments, through **joint data strategies** to share data and literacy resources and increase interdepartmental literacy and collaboration.

Established relationships with the **Canadian Centre for Cyber Security** are being leveraged to provide expert advice and guidance to ensure that AI solutions do not compromise the security of current systems. The **Data Science Network for the Federal Public Service (DSNFPS)** provides an important space to build capacity and expertise in relation to AI, share information and best practices on AI adoption, and showcase ESDC's AI initiatives.

Regular engagement with the **private sector** is crucial to the adoption and use of AI solutions. ESDC will continue to regularly engage with top AI service providers (e.g. Microsoft Azure, Google Cloud Platform, Amazon Web Services) to remain current with the latest AI developments. Regular engagements will also continue with consulting firms (e.g. Gartner, Info-Tech) on how best to promote responsible adoption of AI in the organization.

ESDC is also partnering with the **academic community**, to provide subject matter expertise in relation to AI. These include Alberta Machine Intelligence Institute (Amii), Quebec Artificial Intelligence Institute (Mila), and the Vector Institute, Toronto. Amii and Mila are embedded as subject matter experts and advisors in the AIOB and provide valuable insights to guide the journey toward impactful AI adoption.

As the department continues to build robust AI and data culture and enable employees through the implementation of the ESDC Data Strategy and AI Strategy, some additional steps are required to equip our workforce to meet the challenges and harness the opportunities that come with AI adoption. An organizational change management plan is needed to identify and address skills and talent roadblocks and support employees in adopting AI solutions in their day-to-day tasks.

Engagement with ESDC employees, including through skills surveys, will help establish benchmarks for talent needs and ensure the availability of the requisite skills and knowledge to support an AI-enabled organization, now and into the future. This would be followed by the development of a talent plan to fill gaps identified through the benchmarking exercise. Multiple efforts are already underway to capture the current landscape of data-related skills across the Department and address gaps. Following an ESDC-wide survey of the workforce within the department, the **ESDC Data Talent Pipeline Recruitment Initiative** has been developed to facilitate the identification and reconciling of skills and literacy gaps; and ensure the availability and retention of skilled professionals to drive data, analytics and AI initiatives. This initiative includes two recruitment strategies: 1) A **post-secondary recruitment pilot** to recruit data analysts and scientists and advance recruitment opportunities with universities. 2) Establish a **departmental recruitment plan** to create advertised data recruitment processes, assess recruitment needs and establish recruitment partnerships across ESDC branches and regions. It will also include conducting recruitment analysis for the Department to establish recruitment priorities.

AI: Opportunities and priorities

Opportunities

AI adoption encourages us to review our processes, systems, programs, and policy strategically to identify opportunities to gain efficiencies and improve effectiveness. These include:

- Collectively identifying common areas which affect all ESDC branches (e.g. staffing, procurement) and developing pilots to test tools and improve efficiencies in these areas with a view to scaling for the enterprise.

- Reviewing how governance and processes can be optimized to respond to the challenges of balancing innovation with privacy and security.
- Considering an asset-based approach to AI and how it can be leveraged to identify and remedy biases and systemic barriers built into ESDC services and programs.
- Identifying areas where there are inefficient processes and workflows that can be addressed through AI, with the intention of easing employees' workloads so that they can focus on higher-value tasks.

Priorities

Institutionalize Enterprise-wide AI Governance to advance organizational readiness for responsible and ethical AI adoption and use. Embedding AI Governance processes with other departmental processes will support the Department in managing AI risks, maintaining AI standards, and ensuring compliance with legal and regulatory requirements.

Evaluate ecosystem readiness to ensure enterprise capacity to support the development, implementation and use of AI and automation initiatives. This includes defining the needs of the Department and identifying gaps to develop an understanding of the current state of the AI ecosystem, and the steps that need to be taken to enable eco-system readiness.

Invest in priority AI-enabled projects and continue to develop the department's AI readiness over the next year. This includes expanding AI experimentation platforms and tools to support a broader range of AI use-cases; advancing AI use case development in priority areas and scaling successful initiatives; and completing evaluation of AI and automation eco-system readiness.

Scale up AI across the department by identifying new opportunities to scale or reuse solutions within ESDC; fully operationalizing responsible AI and advanced analytics to drive efficiencies and improvements across the Policy - Service continuum; and sharing solutions across the GC and with partners while reporting back to the TBS and Canadians on progress.

Advance ESDC's data maturity by measuring the uptake of the ESDC Data Strategy through the 2025-26 Annual Report, scaling successful projects, conducting data maturity assessments using the Data Maturity Model, and continuing to develop joint data strategies with other government departments. These efforts will ensure data is fit-for-use and support more accurate and reliable AI predictions and insights.

Align the AI Strategy with the ESDC Data Strategy, and overarching goals and priorities of the Department to ensure that AI initiatives and decisions are consistent with ESDC's strategic direction and commitments. This is crucial to supporting adherence to legal frameworks, regulatory requirements, and ethical standards, particularly those related to Equity, Diversity, and Inclusion (EDI) data and commitments.

Managing AI risks

AI adoption and use is not without risks. However, there are also risks to not advancing AI and automation maturity in ways that will enable ESDC to improve its delivery of cost-effective and inclusive programs and services to Canadians, particularly those who are most at risk of being underserved.

AI investments not yielding expected efficiencies and cost reductions

ESDC is prioritizing high-impact AI initiatives that provide measurable gains in relation to service delivery effectiveness and efficiencies, policy insights, administrative efficiencies, program impact, financial benefits, and addressing HR redundancies. However, there is some risk that AI investments may not yield expected results such as cost savings and improved efficiency and effectiveness of processes, programs and service delivery.

To mitigate this risk, ESDC is developing a Return on Investment and Efficiency Framework – a robust and transparent approach to measuring gains stemming from the implementation of AI and automation initiatives. Gains are being estimated in collaboration with business owners, focusing on tasks where AI and automation solutions supplant manual labor, thereby enhancing efficiency, reallocating resources, and reducing expenditures. Continuous interdepartmental collaboration will ensure the approach remains dynamic, offering decision-makers consistent, evidence-based evaluations of ESDC and GC AI and automation initiatives.

ESDC is also leading a sub-working group under the CDO Council on productivity and Return on Investment (ROI) to engage on and align with the GC wide focus on identifying and tracking metrics and indicators on what successful adoption of AI looks like and reporting on ROI. In addition, AI solutions assessed through the AI Solution Intake Process undergo a review for cost, feasibility, and ROI. This ensures that business owners are aware and receive guidance and support to imbed a focus on measurable gains in the development stages of AI solutions.

Limited access to data

ESDC has limited access to data on marginalized populations which hinders the organization's ability to evaluate their AI models for these populations. Additionally, legal requirements can place constraints on linking data and information creating challenges to developing and using data that is fit-for use. This risk is being addressed through the implementation of the ESDC Data Strategy and the establishment of joint data strategies with Statistics Canada, Immigration, Refugees and Citizenship Canada, and the Canada Revenue Agency. These strategies are advancing enterprise data maturity and enabling the sharing of data and information, which will facilitate data linkages and access to relevant data.

Public trust and ethical, privacy and legal concerns

Decisions made by AI tools may not be transparent and could result in biased outcomes for Canadians. Additionally, data used to train AI tools may be compromised, raising privacy and legal issues, and lead to damaging ESDC's reputation and a loss of public trust in government institutions. Governance processes and structures have been put in place to mitigate these risks. AI initiatives are assessed for risk through the Algorithmic Impact Assessment (AIA) and are reviewed through the Fairness Assessment Service (FAS) which ensures that they are not creating or amplifying discrimination, social biases, or vulnerability. AI initiatives also undergo Human Rights Impact Assessments at the beginning of the design stage and ethical reviews to address ethical concerns throughout the life cycle of AI implementation and use. Additionally, ESDC will mitigate these risks through transparent communication and reporting, including articulating the value of AI and its results.

What it looks like – Canadian Code of Values and Ethics and AI

ESDC has implemented policies and tools to support employees to improve their productivity while managing the risks of AI, such as amplifying bias, producing incorrect information, and risking security and privacy. The Directive on Automated Decision- Making, which builds on the Algorithmic Impact Assessment tool, helps employees identify, assess, and lower the risks of AI. ESDC has developed Generative AI in your daily work which further embeds the focus on the responsible use of AI by aligning with the FASTER principles of fairness; accountability; security; transparency; education; and relevance.

These guardrails cannot manage the risks of AI alone and must be guided by our values and ethics. Embedding the five core values in all AI initiatives, as outlined in the Values and Ethics Code for the Public Sector, will help us maximize our efficiencies and effectiveness while maintaining accountability and transparency.

- **Respect for People:** Following our focus on human-centric AI, ESDC will design and implement AI solutions that prioritize the dignity and rights of all individuals. This includes ensuring fairness in algorithmic decision-making and maintaining inclusive practices that consider the diverse perspectives and experiences of all Canadians and employees.
- **Integrity and accountability:** The Strategy prioritizes responsible AI and will ensure that our AI initiatives embed integrity by design principles to ensure that they are developed, implemented and maintained ethically and transparently. Canadians and public servants will be able to trust that AI is used safely and securely by ensuring transparency in how AI initiatives function and make decisions. Additionally, the provision of human decision-making and oversight throughout the lifecycle of the initiative will further support our commitment to integrity and responsible AI. A robust governance framework, developed and administered collaboratively across the department, will be established to monitor AI applications, allowing for accountability in decision-making and mechanisms for addressing potential biases or unintended consequences.
- **Excellence:** We are committed to achieving high standards in the development and deployment of AI technologies. Continuous improvement will be a guiding principle as we seek to enhance the quality of our services and ensure that our AI solutions deliver effective and equitable results for all Canadians.
- **Stewardship:** We will ensure the responsible use of public resources and data in our AI initiatives. Our approach will include ethical data management practices, prioritizing privacy and security, and aligning our strategies with the best interests of the public and environmental sustainability. The Strategy will ensure ESDC is ready, with the right data that is appropriately managed and fit for purpose, secure infrastructure that will ensure data privacy and security, strong policies and governance to support robust stewardship, and people who are trained to manage and use AI effectively and responsibly.

By integrating these values into our AI strategy, we aim to harness the potential of AI responsibly and ethically, ensuring it enhances service delivery to all Canadians while remaining aligned with the principles of the Canadian public service

Keeping pace with rapidly evolving technology and client expectations

A key risk facing ESDC is the challenge of keeping pace with rapidly evolving technology while ensuring that AI solutions are adopted responsibly. For instance, Generative AI tools offer significant advantages for supporting and improving operations and there is evidence that many ESDC users are already leveraging GenAI capabilities (e.g. translation tools like DeepL) without clear guidance. The use of new technology carries several risks including inaccurate or incomplete content, bias embedded in training data, intellectual property concerns, challenges with protecting information and overreliance on AI which could inhibit employee judgment and stifle creativity.

These risks are being mitigated by communicating clear guidance to ESDC employees such as the Guide on the use of generative AI and ESDC Values and Ethics. Employees also have access to training and resources that enable them to consider the risks of AI tools. Additionally, multiple governance structures and processes address these risks. The application of the Algorithmic Impact Assessment (AIA), at the design stage and prior to the production of an AI initiative, ensures that it is implemented as per the Directive on Automated Decision-Making. The AI Centre of Enablement (AI CoE) provides supports that can mitigate these risks. For instance, it assists business owners in implementing tools and techniques to prevent the misuse of AI, while offering specialized red-team testing services to ensure the security and integrity of AI deployments. High-risk AI initiatives undergo review through the AIOB which assesses these initiatives on several risk related areas. It also raises awareness on new and emerging AI risks, challenges and mitigation strategies.

To mitigate the risk that AI will not meet client expectations, ESDC will establish monitoring and feedback loops, embed strong performance measurement and communication processes, and set up the AI strategy to be evergreened to align with evolving client needs.

Limited internal AI capacity and talent

AI is transforming the way we work, requiring employees to acquire new skills and ways of thinking to use AI effectively in their daily tasks, support insights generation, and bolster business optimization. These risks are being mitigated through the development and implementation of targeted AI training and tools and providing employees with safe spaces to engage with AI tools and solutions (e.g. AI-enabled labs, ESDC Virtual Assistant (EVA)).

Additionally, ESDC may lack the talent, capacity and skills to enable effective implementation and uptake of AI tools. Leveraging talent pools both within and outside the Department (e.g. AI Institutes), monitoring skill gaps and evolving needs and updating recruitment strategies to keep ESDC's workforce competitive, would mitigate these risks.

Limited understanding and awareness of AI solutions and platforms

Employees may not be aware or understand AI solutions and resources available to them, which can lead to inappropriate use of AI and impact ESDC's ability to innovate and use AI to enhance efficiencies. This risk is being addressed through the development of resources. AI@ESDC has been established as a one-stop-shop and service portal to communicate AI related work, guidelines, and solutions and support governance. AI-enabled analytics labs and the EVA Accelerator Program have been created to provide a secure and controlled test environment to experiment with AI tools. Additionally, the ESDC Data and AI Literacy Program and AI Learning Path provide employees with the necessary information and training to understand and use AI solutions and platforms.

Legislative challenges

There is a need for policy and legislative agility to keep pace with the rapid evolution of AI and ensure that the uptake of innovative AI tools is balanced with ESDC's values and commitments to privacy, equity and transparency. Additionally, ESDC will actively engage in legislative review and the modernization of legislative frameworks, including work with other government departments and stakeholders to identify and address the changes required to support the responsible adoption and use of AI. ESDC will also continue to engage on the GC AI Strategy which aims to develop concrete

processes to review and revise specific policies, legacy instruments, guidance, tools and resources to reduce obstacles to AI adoption and respond to technological, legislative and social change.

Misinformation and fraud

AI generated misinformation and fraudulent requests can strain ESDC's investigative capacity and erode the integrity of ESDC's programs and benefits. ESDC will establish effective detection and verification systems to quickly identify malicious activity and ensure the authenticity of information. The Department is also mitigating this risk by actively integrating AI into fraud detection processes for various programs while simultaneously including human experts to complete reviews and make final decisions. This integrated approach supports accuracy, fairness, and ensures responsible AI use.

What it looks like – Assessing the Risks of AI initiatives at ESDC

A structured risk management approach, customised to the department's mandate, compliance obligations, and data sensitivity, is integral to driving the responsible use of AI, enhancing trustworthiness, and bolstering public trust.

To this end, ESDC is developing a Risk-Based Assessment Grid that will be applied to the development and deployment of AI initiatives at ESDC, particularly during the conceptual, planning and oversight phases. Embedding the "integrity by design" principle and building on current management and oversight principles, the Assessment Grid enhances preventative measures related to AI risks that are not addressed by existing risk management practices.

The Assessment Grid provides a standardized approach to consistently assess risk-levels of AI-enabled initiatives, from conception to approval. This proactive approach facilitates responsible AI generation, guides developmental activities, informs the oversight of initiative post-deployment. Each AI-based initiative will be assessed against multiple risk dimensions, including:

- Data Sensitivity
- Decision-Making Autonomy Impact
- Impact on Clients
- Algorithmic Transparency – Explainability
- Ethics – Bias and Discrimination Potential
- Cybersecurity Exposure
- Use of Third Party or Cloud Services
- Scalability, Interoperability and Integration Risk
- Public Trust and Reputational Impact
- Legal and Policy Compliance Complexity

The combined and weighted risk score across these dimensions will determine the risk level, level of oversight as well as require projects to adjust deliverables or develop additional documentation to account for risk exposure. Initiatives with high-risk exposure will be reviewed by the AIOB, which could result in regular ongoing oversight, adjustment of risk posture combined with periodic check-ins with AIOB, or de-escalation to continue development along the regular methodology and governance process, with or without regular AIOB check-ins.

Implementation

Governance

Action 1: Finalize the AI Governance Framework and AI Solution Intake Process

ESDC is finalizing its AI Governance Framework through collaboration with partners within and outside the organization. The Framework articulates concrete governance processes and department wide accountabilities, roles and responsibilities to guide the identification, testing, adoption, deployment, monitoring and evaluation of AI initiatives over their lifecycle. The Framework aligns with risk considerations; values and ethics; commitments to privacy, equity, and transparency; GC priorities; and ESDC's Data Strategy and Governance.

The AI Governance Framework includes:

- AI Governance processes and tools that address emerging needs, priorities and risk concerns.
- AI Governance processes embedded in other departmental process such as project and programme Management Practice, Software Approval and Procurement.
- Clear roles and responsibilities for governing AI adoption, use and implementation across the lifecycle of the AI initiative.
- Establishing plans and concrete spaces to engage subject matter experts and partners to identify what is feasible in AI adoption, identify areas that could benefit from AI adoption, and share expertise and lessons learned.
- Increasing transparency of AI solutions through the Enterprise AI Register's Dashboard, designed to encourage knowledge sharing and facilitate collaboration across teams. collaboration across teams.

The AI Governance Framework will support ESDC's efforts to institutionalize Enterprise-wide AI Governance for responsible and ethical AI.

The AI Solution Intake Process will be finalized, establishing standardized processes for the intake, triage, and assessment of all AI solution requests. It will connect potential users and use cases with in-house AI experts who can support the development of the solution. The Intake Process will optimize the delivery of AI-enabled solutions by enabling strategic investments in projects that offer the highest potential return on investment.

Action 2: Maturing governance structures

Support the maturation of ESDC's AI Oversight Board (AIOB) by finalizing the roles and responsibilities of its membership and the strategic framework for the systemic selection and endorsement of AI enabled initiatives, projects and solutions. Finalizing the AIOB's strategic framework will enable the transparent and robust assessment and prioritization of the most impactful AI initiatives.

Action 3: AI Implementation Roadmap

An AI Implementation Roadmap is in development to support the strategic implementation of the AI Strategy. This section outlines key areas of focus to inform the development of this Roadmap.

Data, Infrastructure and ecosystem readiness

Action 1: Ensure alignment to the ESDC Data Strategy, GC Data Strategy, GC AI Strategy, and IT, Digital, Departmental Investment Priorities and Risk Plans

The ESDC Data Strategy has established a strong foundation to enable the successful implementation of the ESDC AI Strategy by operationalizing enterprise data governance processes, building secure data infrastructure, and establishing a data maturity model. The AI Strategy will draw on and align with the Data Strategy implementation to support the strategic adoption, use and advancement of AI solutions across the department.

The implementation of the ESDC AI Strategy will also align with and build on key policy and strategic priorities including:

- AI Strategy for the Federal Public Service 2025-2027
- Employment and Social Development Canada Data Strategy 2023-2026
- 2023-2026 Data Strategy for the Federal Public Service
- Departmental Policy on Information and Data Management
- ESDC Code of Conduct
- Values and Ethics
- Canada's Digital Ambition 2024-25
- Government of Canada Service Delivery Strategy
- TBS Guide on the Use of Generative AI
- Directive on Automated Decision Making
- The Policy on Service and Digital
- The Directive on Digital Talent
- The Digital Standards Playbook
- The Policy on Government Security
- Departmental Risk Management Framework

Although AI can support efforts to combat climate change and advance the achievement of the Sustainable Development Goals, it can also have significant negative impacts on the environment. AI deployment at scale requires massive energy consumption which may contribute to the emission of greenhouse gases. AI also requires scarce minerals and produces electronic waste. The Government of Canada Guiding Principles for the use of AI in Government emphasizes the importance of environmental considerations in the effective and ethical use of AI, requiring departments to assess and mitigate the environmental impacts of the training and use of AI systems, and where appropriate opting for zero-emissions systems.

The Guide on the Use of Generative AI identifies best practices to address the environmental impact of GenAI systems including conducting an environmental impact assessment to develop or procure generative AI tools. The implementation plan for the AI Strategy will consider how ESDC can align its AI development, use and procurement with these requirements.

Action 2: Define ecosystem readiness and measures for AI maturity

Establish a clear understanding of the needs, gaps and health of the enterprise ecosystem to support the development of an AI-enabled and mature organization. To this end, a needs assessment has been conducted to understand the objectives, scope, and key performance indicators for AI and ecosystem readiness evaluation. This will be followed by the development of a tool to assess the

health and effectiveness of the AI ecosystem and inter-departmental collaboration to develop common measures of organizational AI maturity. Additionally, assessments will be completed to gauge the state of AI development, deployment and governance ecosystem as well as gaps in AI functionality requirements.

Action 3: Develop and maintain secure infrastructure

Develop and maintain secure infrastructure to provide safe spaces to innovate and support the effective and efficient development and deployment of AI solutions. To this end, ESDC is leveraging the Enterprise Data Foundations Platform (EDFP) and establishing the EVA Accelerator. This includes onboarding more than 25 labs to the EDFP and using information from multiple business lines in the EVA Accelerator to experiment with AI and develop AI systems.

Secure infrastructure will continue to be expanded to enable AI experimentation to support a broader range of AI use cases. This will include advancing EDFP activities, expanding the EVA Accelerator to program areas, and expanding access to cloud-based services. Additionally effective AI solutions will be migrated and/or deployed to the EDFP providing more opportunities for AI experimentation. Secure infrastructure will also be integrated with existing platforms to enable more seamless and user-friendly transition to AI use. This will include integrating the EDFP with Microsoft Fabric.

AI Enablement

Action 1: Benchmark talent needs and develop learning plan

In alignment with the GC AI Strategy related efforts, establish benchmarks for required and existing digital, data, and AI talent needs and skills requirements for ESDC. Based on these benchmarks and future needs of the Department, reassess and update current training and literacy resources (e.g. Data and AI Literacy Program, AI Learning) and develop new curricula to address gaps in the current skills of employees. Ensure training pathways are in alignment with broader GC AI training plans and establish a concrete schedule to review and update training resources to meet emerging needs. An AI literate workforce will fortify ESDC's data-driven culture, build public trust, and support more effective and efficient delivery of programs and services to Canadians. It will also support reporting on ESDC's technical and non-technical talent needs for AI adoption, as required by the GC AI Strategy.

Action 2: Develop a talent plan

Drawing on the established benchmarks, ESDC will develop a talent plan for AI related needs that cannot be addressed through retraining of current employees. The talent plan will include strategies to recruit talent from across the GC and outside the federal service, as well as to identify and overcome barriers to recruitment and retention. ESDC's talent plan will align with larger GC talent plan.

Action 3: Provide environments for AI learning and innovation

Continue to build policy and infrastructure that provide employees with opportunities to learn and experiment with innovative AI tools and to enable the ongoing development and scaling of successful AI initiatives and tools for enterprise-wide adoption. The provision of such environments will empower employees to assess and gain hands on experience with AI solutions, provide developers opportunities to gather and integrate feedback, ensure AI solutions are ready to use and meet the needs of the client, and support uptake of AI solutions. ESDC has made significant strides

in advancing the Enterprise Data Foundations Platform (EDFP), a key component of the organization's secure foundational infrastructure supporting data maturity and AI adoption. By the end of the 2025-2026 fiscal year, the EDFP will incorporate advanced AI capabilities, including secure generative AI, document processing, and advanced data and AI modelling. Additionally, employees will be able to access and utilize the Enterprise Data Lake, Enterprise Data Catalogue and Data Science and Machine Learning Platform, providing the necessary data related resources to support AI experimentation and innovation.

Action 4: Develop an Organizational Change Management Plan

Develop an organizational change management plan to support operational readiness for the uptake and use of AI through consultations with key stakeholders across the Department. The final organizational change management plan will provide a detailed description of the areas where AI will have impact; identify and address roadblocks to AI enablement and uptake; identify the resources and timelines required to help employees adopt AI related tools in impacted areas and acclimate to changes in their tasks; identify resources and timelines required to scale up successful AI initiatives; outline indicators and tools to track progress; and outline a communication plan to maintain trust and transparency. The plan will also include communications and supports to address employee concerns related to displacement and challenges of AI adoption and enablement. A clear organizational change management plan will provide transparency and concrete steps to support the Department and employees to transition towards an AI enabled organization.

Measurement, monitoring and scaling up

Action 1: Develop KPIs to measure success and track progress

In collaboration with internal and external partners, define outcomes of the AI Strategy and identify short-term, medium-term, and long-term indicators to measure success related to implementation and scaling of AI projects, uptake and impact of AI training on employees, and progress towards AI maturity. Ensure KPIs are aligned with Departmental priorities related to AI, Enterprise Data Strategy and Maturity and other commitments. The development of KPIs will enable ESDC to measure and monitor the Department's progress towards AI maturity and will inform regular ongoing updates to the AI Strategy.

Action 2: Implement and scale AI and automation initiatives and develop use cases

Develop existing and new AI use cases that showcase ESDC's leadership in leveraging its data and technological assets to ensure AI-enabled solutions are adopted in a deliberate, human-centric, and responsible way to maximize service delivery effectiveness and efficiencies. Developing AI use cases will support ESDC's efforts to demonstrate its leadership in AI and meet GC AI Strategy requirements for sharing AI use cases.

The Department is identifying new opportunities for scaling or reusing solutions within ESDC and sharing solutions across the GC and with partners. This includes scaling successful AI and automation initiatives and integrating them in business workflows, multiplying cost-savings and increasing efficiencies and improvements across the Policy-Service continuum.

ESDC is implementing and scaling data and AI initiatives across three areas, namely, document digitization, text classification and generation and EVA chat and domain assistant. Currently, six initiatives are being prioritized for horizontal scaling that address key departmental priorities, improve efficiencies, and generate cost savings. They accelerate information extraction, expedite

insight generation, and support employees to use GenAI securely in their tasks. These six initiatives include EI Jurisprudence, Smart Solutions for Medical Adjudication, eSIN Automation, SmartTagging, d@Scribe for Pensions, and d@Media.

ESDC is leveraging new Robotic Process Automation (RPA) initiatives and enhancing existing automations in key areas including the Canada Pension Plan, EI, and the Chief Financial Officer Branch (CFOB), supporting the optimization of operational efficiencies and ensuring the timely and accurate delivery of services.

Partnerships and collaboration

Action 1: Develop plan to engage internal and external partners

Develop a plan to engage key internal partners to identify ESDC processes, program and service delivery areas that will benefit from the implementation of AI solutions, empower employees to grow their AI knowledge and skills, and better understand and mitigate the impact of AI adoption on equity groups. The plan should also outline engagement with key external partners across the Government of Canada, academic community and in the private sector to leverage expert advice and share knowledge and best practices. Leveraging partnerships and developing collaborations will enable ESDC to build its AI capacity, infrastructure and initiatives in line with the latest innovations in AI while maintaining its responsible, human-centric approach.

Conclusion

The Strategy will guide the development of key products that support the uptake, implementation, and scaling up of AI solutions in alignment with the pillars of the Strategy. This will include:

- AI Roadmap identifying key milestones for AI implementation.
- Key metrics to define and measure success for AI adoption and implementation.
- AI Maturity Model to measure progress on AI adoption. This model will also align with the data maturity model being developed in relation to the ESDC Data Strategy.
- Costing, funding, and operating models to manage and address current and future AI-related needs.
- Training programs, tools and resources to enable ESDC employees to understand and use AI responsibly.
- Organizational Change management plans to support the transition to an AI-enabled organization.

As a department with a mandate to deliver inclusive programs and services that touch the lives of Canadians from coast to coast to coast, it is essential that we remain an AI leader, both in the Government of Canada and more broadly. By taking the time to set our clear path forward with the AI Adoption Strategy and by documenting and reporting back on our progress we can ensure that our efforts not only meet the current needs of the department and our clients but also set a strong foundation for future innovation.

Our focus will be on exploring opportunities and building on our successes. Finally, as we drive AI adoption forward, we must remain mindful of the critical foundations that support its success, including the implementation of the ESDC Data Strategy and advancement of the Department's state of data maturity. There is no good AI without good data.

All these components will position us to for success, helping ESDC to learn and grow on our AI journey and to demonstrate the benefits of responsible AI for the people we serve.

Annex 1: Glossary

Algorithmic Impact Assessment (AIA): A measure to evaluate AI solutions from an ethical and human perspective, ensuring responsible and transparent AI development and deployment.

Chatbots: AI tools designed to simulate human conversation using natural language processing (NLP) to respond to text and voice inputs, often used in customer service to handle routine inquiries and provide personalized support.

Enterprise Data Foundations Platform (EDFP) is a centralized data storage, sharing and manipulation space offered to the whole ESDC.

Generative AI (GenAI): A type of AI that generates new content, such as text, images, music, or other media, by learning patterns and structures from a vast amount of input data. It uses techniques like machine learning and deep learning, particularly neural networks, to produce innovative and original outputs.

Human-centered AI: Designing and developing AI systems that prioritize human needs and values. Such systems engender increased human productivity while supporting human self-efficacy.

Machine Learning (ML): A subset of AI where machines learn from data, enabling systems to improve their performance on specific tasks over time without being explicitly programmed for each scenario.

Natural Language Processing (NLP): A field of AI focused on the interaction between computers and humans through natural language, encompassing understanding, interpreting, and generating human language.

Responsible AI: An umbrella term for aspects of making appropriate business and ethical choices when adopting AI. These include business and societal value, risk, trust, transparency, fairness, bias mitigation, explainability, sustainability, accountability, safety, privacy, and regulatory compliance. Responsible AI encompasses organizational responsibilities and practices that ensure positive, accountable, and ethical AI development and operation.

Responsible AI principles include:

- Privacy and Security: Safeguarding Canadians' data, both in terms of privacy and security, by only leveraging it when reasonably justified by their best interest and in accordance with both legislative requirements, such as the Privacy Act, and ethical standards, like necessity and proportionality principle.

- Transparency: Working out in the open when feasible and ensuring Canadians have access to the relevant information around the functionality and limitations of AI solutions to feel empowered in their autonomy and to further engender trust in our institutions.
- Fairness: Adopting a societal perspective when leveraging AI to ensure equitable treatment and access for all Canadians; while also mitigating the reinforcement and amplification of systemic and social biases that risk further ostracizing at-risk Canadians.
- Accountability and Legal Compliance: Ensuring needs and best interests of Canadians are at the forefront of AI related decisions, guided by rigorous governance measures and aligned with policy mandates, best practices, and presiding regulations such as the Departmental of Employment and Social Development Act, Access to Information Act, and the Canadian Human Rights Act, among others. By design, these efforts incorporate human oversight to ensure accountability and ethical considerations in the deployment of AI solutions.
- Inclusiveness: Integrating inclusive principles and practices in the design of AI solutions while considering how their adoption can further marginalize already at-risk Canadians by exacerbating inequitable access to services and resources through the nature of their design, the limits of their reach, and their risk for biased outcomes.
- Explainability: Ensuring that Canadians understand the process, rationale, and impacts behind decisions made by AI solutions by embedding these measures in their design.

Robotic Process Automation (RPA) uses software to replicate human actions when interacting with applications and performing simple tasks like logging or copying data without altering back-end systems.