The Agentic AI Opportunity

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Executive Summary

Agentic AI describes digital “agents” capable of taking initiative and handling multi-step tasks independently (such as collecting information, drafting responses, or performing simple actions), with human oversight. Unlike conventional AI, which only responds to prompts, agentic AI proactively plans steps to reach objectives and manages sub-tasks without constant direction.

Agentic AI will likely fundamentally change the operation of Government. Given the recent emergence of this technology, ESDC has an opportunity to embrace the Agentic opportunity and proactively prepare for a future where social outcomes are improved through embedding Agentic AI to augment our people in improving service delivery to Canadians/clients, while reducing the operating expenses of delivering better outcomes.

Agentic AI must be introduced purposefully through a phased, results-driven approach: prepare people, launch targeted pilots in service delivery and compliance, measure outcomes, and scale while strengthening data and infrastructure.

This paper captures the benefits of agent autonomy—speed, efficiency, and actionable insights—while managing change responsibly and upholding our commitment to Canadians. By embedding continuous improvement and expanding automation and personalization across service channels, we will boost client satisfaction, gain efficiencies.

The paper is inspired by the Agentic State vision-paper published in October 2025 by the Global Government Technology Forum in Berlin.

Agentic AI as an Enabler for ESDC Strategic Goal

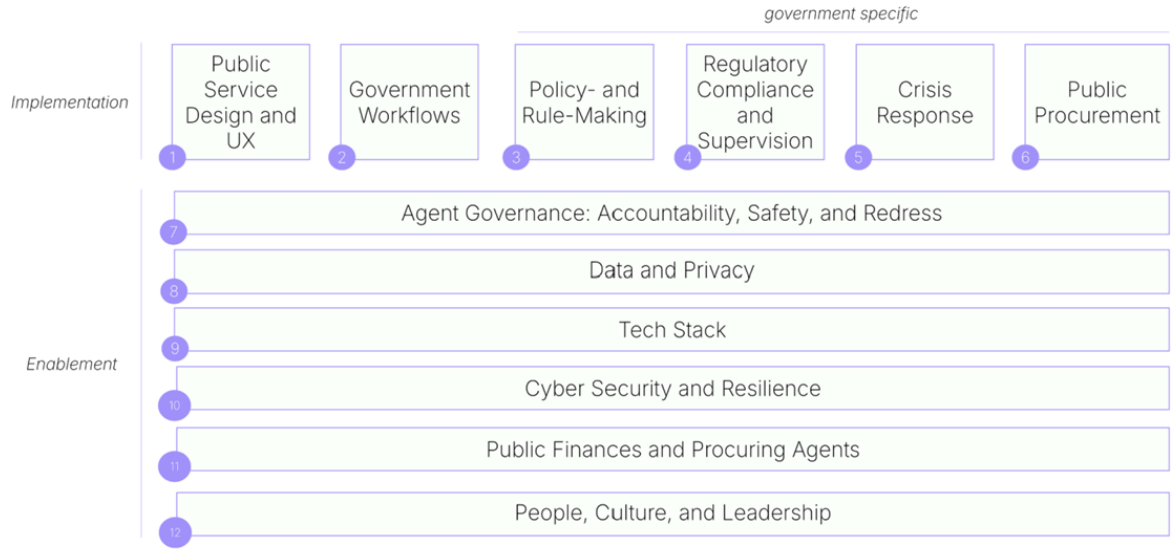
Agentic AI describes digital "agents" capable of taking initiative and handling multi-step tasks independently (such as collecting information, drafting responses, or performing simple actions), with human oversight. Unlike conventional AI, which only responds to prompts, agentic AI proactively plans steps to reach objectives and manages sub-tasks without constant direction. It works towards set goals and delivers results for human review and approval, ensuring final decisions remain with people while providing several advantages:

- **Faster, Around the Clock Service:** AI agents can handle standard inquiries and routine cases around the clock. This leads to quicker service delivery and reduced backlogs – for example, straightforward benefit claims could be processed automatically overnight, improving response times for clients.
- **Better Decision Support**: Agents rapidly gather data and evidence, helping employees make more informed and consistent decisions. An agent can compile relevant case precedents or analyze data patterns in seconds, enabling evidence-based decisions (e.g. in adjudications or policy analysis) with greater consistency.
- **Efficiency and Capacity Gains**: By automating repetitive multi-step workflows, agentic AI frees up staff hours and resources. Routine verifications or data entry tasks can be done by AI, allowing employees to focus on complex issues. This efficiency helps us meet higher service demand within existing resource levels. Over time, automating high-volume tasks can translate into notable cost avoidance (fewer overtime hours, etc.) while maintaining quality.
- **Personalized, Proactive Service**: Agents enable a shift from one-size-fits-all to tailored service delivery. They can adapt to each client's situation in real time – for instance, providing proactive reminders or assistance based on a client's history. This means more personalized support, improving client satisfaction and inclusiveness.

Impact of Agentic AI in the operation of Government

The Agentic State is a white-paper published by the Global Government Technology Centre in Berlin and the World Bank. It is built on the contributions of senior public service leaders across the globe including USA, Australia, UK, UAE, Ukraine, Singapore and Estonia.

The Agentic State describes the potential impact of Agentic AI on 12 functions of Government. These layers are shown below:



The *Agentic State* vision paper explores the impact on each of these layers in detail. The following is a summary of the potential impact:

Layer	From (current state)	To (agentic state)
1. Public Service Design & User Experience	Services are fragmented across departments, rigid workflows, digital portals replicate paper processes.	Hyper-personalised, anticipatory, self-composing services; government interactions flow around citizens' lives (agents orchestrate across departments, via any channel)
2. Government Workflows	Back-office workflows are manual or basic digital versions of paper; bottlenecks, siloed, static approval chains.	Self-orchestrating, outcome-driven workflows: agents integrate across departments, allocate resources, optimise in real time.
3. Policy- & Rule-Making	Policy often static, slow to adapt; rules and regulation change slowly; decision-making human-centric.	"Living laws" and adaptive policy: agents help continuously update rules, optimise policy outcomes, negotiate within markets or systems.
4. Regulatory Compliance & Supervision	Compliance is periodic, after-the-fact, reliant on humans; supervision lags.	Real-time compliance and supervision: agents monitor continuously, intervene, escalate only complex cases.
5. Crisis Response	Crisis management is human-led, slow cycle, many manual components and delays.	Machine-speed coordination: agents detect weak signals, simulate scenarios, orchestrate cross-system responses in real time.
6. Public Procurement	Procurement is slow, input-based, bureaucratic, monolithic vendor engagements.	Outcome-based procurement, agents auto-tender/negotiate/contracts; procurement becomes agile and results-focused.
7. Agent Governance	Weak or emerging governance frameworks; human-centric accountability, few models for autonomous agent oversight.	Governance designed for agentic systems: legal/ethical frameworks for agents, accountability, redress, auditability built-in.

8. Data & Privacy	Data siloed, governance reactive, consent burdensome, privacy frameworks not built for agentic autonomy.	Data treated as strategic fabric: fine-grained consent, federated/agent-accessible, privacy-safe, enabling agentic action.
9. Tech Stack	Stacks built around human-user interfaces, process automation; monolithic systems; limited orchestration of autonomous agents.	Modular, elastic architecture: hybrid compute, reusable digital public infrastructure (DPIs), agents embedded into state tech stack.
10. Cyber Security & Resilience	Security for human-driven systems; resilience focused on traditional threats; not designed for autonomous agent ecosystems.	Security & resilience designed for agentic ecosystems: real-time threat detection, agent-to-agent trust, fallback/offline modes, resilient compute.
11. Public Finance & Buying Agents	Finance models and budgets built around human workloads, fixed input-cost models, procurement of services or hardware.	Finance models aligned to outcomes and agentic services: pay-for-outcome, dynamic budgeting, buying agent services rather than inputs.
12. People, Culture & Leadership	Public sector culture oriented around compliance, process, human decision loops; workforce skills aligned to existing bureaucratic model.	Culture that supports human-agent collaboration: leadership focused on strategy/outcomes, workforce reskilled for agentic oversight, human judgement elevated.

The full paper can be read at The Agentic State - Vision Paper.

How Agentic intersects with ESDC's priorities

Agentic AI can support ESDC in achieving its strategic vision of improving the standard of living and quality of life for all Canadians. It must do this by providing services more efficiently and effectively, as set out by the Government.

- **Federal Mandate:** Calls for improving public sector productivity through scaled AI and outcome-based management. Departments are directed to "deploy AI at scale, focus on

results over spending." Agentic AI supports this by increasing efficiency and accelerating service delivery.

- **Budget 2025 – "Modernize and Save":** Emphasizes automation and proactive service to drive savings. Agentic AI enables automatic benefit processing, real-time adjustments, and better use of AI and data infrastructure.
- **ESDC Digital Strategy:** Focuses on client-centric, data-driven, adaptable services. Agentic AI supports personalization, requires strong data systems, and equips employees with advanced tools.
- **ESDC AI Strategy:** Sets a clear vision for ESDC to be an AI-enabled organization where 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 service to Canadians. The ESDC AI Strategy sets clear principles that can guide the implementation of Agentic to ensure it mitigates risks and executes in a human-centred, collaborative and responsible way.

Governance & Safeguards for Agentic

Clearly, semi-autonomous agents may pose signficant risks that require proactive mitigation and management. The following safeguards underpin the successful deployment of any AI model, and are critical for the management of Agentic solutions. A number of these safeguards are already being put in place by CDOB.

- **AI Review Panel Oversight:** All significant Agentic AI projects are reviewed for ethics, privacy, and compliance before deployment.
- **Human-in-the-Loop:** Agents can recommend actions but cannot finalize benefit or service decisions; human review is mandatory.
- **Defined Scope & Auditability:** Agents operate within predefined tasks and data access, with all actions logged for transparency and audit.
- **Policy Compliance & Transparency:** Follows Government of Canada guidelines for Responsible AI, includes Algorithmic Impact Assessments, informs clients when AI assists decisions, and trains employees on oversight.

Organisation Paradigm Shifts

The scale of change that Agentic may bring to the organization requires significant focus and leadership. The impact is more than technological augmentation – it requires a fundamental consideration of Governance, decision making and organization structures.

This is defined in the following paradigm-shifts

Paradigm	From	To	Description
Decision Making	Rule-Based Decision Making	Outcome Optimisation	Bureaucracy applies predetermined rules to specific situations. Agentic systems optimise toward defined outcomes within constraint boundaries, potentially discovering approaches that no human rule-writer anticipated. When an agentic system finds a more effective way to achieve policy goals, bureaucratic rule-compliance can prevent adoption of superior approaches.
Organisation Structures	Hierarchical Authority	Network Coordination	Agentic systems operate through networks of specialised agents coordinating across organisational boundaries. Traditional hierarchies cannot provide the real-time oversight and coordination these systems require. A tax compliance agent might need to interact with agents from regulatory agencies, financial institutions, and international organisations — outside traditional bureaucratic chains of command.
Job Roles	Specialised Roles	Adaptive Capabilities	Functional specialisation of government bodies creates deep expertise within narrow domains but struggles with cross-cutting challenges. Agentic systems can dynamically reconfigure their capabilities based on task requirements, potentially making rigid role specialisation a barrier to effective human-AI collaboration.
Planning Cycles	Periodic Planning and Decision-Making	Continuous Learning and Iteration	Traditional bureaucracy rewards accumulated experience within established procedures. Agentic systems require human partners who can adapt continuously, learn new technical skills, and be comfortable with emergent rather than precedent-based decision-making.

Critical Success Factors for Agentic AI

A purposeful approach is required in order for ESDC to move towards the Agentic AI opportunity. To support the future outcomes, ensure good governance and embrace the paradigm shifts required, the following critical success factors require focus and attention.

1. **Upskill and Engage the Workforce:** Invest in training and digital upskilling for employees to work effectively with AI. Staff need to understand AI capabilities and limitations and develop skills for human-AI collaboration. This ensures employees can supervise agents appropriately and use their outputs to maximum effect. A more AI-savvy workforce is critical for an "agentic" work environment.
2. **Embed Outcome-Based Management:** Cultivate a culture of managing by results and continuous improvement. This means setting clear outcome metrics (e.g. accuracy and client satisfaction) for AI-enabled processes and continuously monitoring them, adjusting processes as data indicates. This principle will help get the most value from agentic AI and maintain accountability for performance.
3. **Strengthen Data & IT Infrastructure:** Agents require quick, secure access to high-quality data and the ability to interface with multiple systems. We should use allocated Budget 2025 funds to improve data integration, ensure real-time data availability where needed (with proper governance), and upgrade systems for compatibility with AI workflows. This may involve accelerating cloud migration, API development, and data quality initiatives. Treating data as a strategic asset will underpin the success of agentic AI and other analytics across ESDC.

4. **Continuous Oversight and Improvement:** The AI Review Panel will monitor agent performance and feedback, using this insight to refine protocols, address issues, and inform future deployments. Senior leadership will be kept updated and strategies adjusted, as necessary.

5. **Transparency and proactive communication:** Publishing ideas, plans, successes and failures in the public domain is essential in ensuring clients and employees are aware of where ESDC is implementing AI. Clients should be given clear guidance and choices on the use of AI within their services.

A Framework for Experimentation

Given the potential significance of the opportunity, it is important that implementation is purposeful, balancing risk and reward in a proactive manner. ESDC requires a 'test and learn' framework that enables it to identify opportunities, quickly establish viability, implement the most promising concepts in a controlled manner and scaling when risks are suitably mitigated. This framework may include the following stages:

1. **Identify opportunities and establish quick proof of concepts:** Establishing the ability for the organisation to identify opportunities to learn how Agentic AI may impact the organisation and establishing quick proofs of concepts to test hypothesis and establish potential value.

2. **Launch High-Impact Pilots:** Where hypothesis are proven, implement pilots that will deliver value in either developing capability, increasing learning or achieving operational efficiency. Pilots are designed with clear success criteria (e.g. % reduction in processing time) and executed with full human oversight to evaluate effectiveness and risks. Early wins will build confidence and momentum.

3. **Increase Autonomy Gradually:** Begin with supportive roles and grant greater autonomy only as agent performance proves reliable. This includes gradual and managed integration of AI agents into client-facing channels (web portals, call centers) to handle routine queries, and into internal workflows (claims processing, document analysis) to automate as many steps as appropriate. This ensures we scale what works and retain control at every stage.

4. **Scale Successes:** Use results from pilots to expand into areas with the highest ROI, integrating agentic AI into BDM and other key initiatives. The goal is to mainstream AI assistance in everyday operations, so that most routine work is automated and clients experience faster, more tailored service

Concluding thoughts

Agentic AI has the potential to disrupt the key functions of bureaucracies in a way that the public service has not experienced since the advent of the computer. Current approaches to digitising paper-processes are insufficient to prepare the organisation for the impact of this change.

ESDC should proactively consider the potential impact of Agentic AI on its core functions, and establish a vision for its future operating model that considers the increased role of AI in augmenting its workforce and engaging with citizens to achieve better outcomes for Canada.

Annex – Summary of Agentic Impact on ESDC

Dimensions	Strategic Area	Agentic AI Impact	Effect on Mission Acceleration
Operations	Service Delivery	Personalized, proactive, automated	Faster more inclusive services
	Internal Workflows	Automated, outcome-driven, efficient	Reduced admin burden
	Data Governance, Management and Operations	Real-time, privacy-safe, interoperable	Evidence-based decisions
	Crisis Response and Resilience		
Regulations and Governance	Compliance & Reporting	Continuous, risk-based, minimal disclosure	Lower risk, higher trust
	Policy & Rulemaking	Dynamic, adaptive, data-driven	Rapid policy implementation
Foundations	Leadership	Upskilling, hybrid teams, transparent KPIs	Empowered workforce
	Workforce and Culture		
	Tech Stack	Modular platforms, outcome-based funding	Resource optimization
	Public Procurement		