





# **UNLOCKING CANADA'S AI POTENTIAL 2025**

# The AI revolution is taking hold in Canada

Al adoption<sup>1</sup> is accelerating rapidly across Canada, reshaping industries and redefining how businesses operate. In the past year alone, 160,000 businesses<sup>2</sup> in Canada began using Al – equivalent to an average of around three per minute in the last year. This brings the total percentage of Al-adopting firms to 48%, up from 36% a year ago, representing a growth rate of 33%. These businesses report that they are consistently using one or more Al tools in their business – including generative Al, predictive analytics, machine learning, and Al-powered customer service, as examples. This rate of growth exceeds that of previous transformative technologies, such as the global uptake of the internet in the early 2000s, when adoption peaked at 32% growth between 2001 and 2002. Now, over 650,000 businesses in Canada have adopted Al.

The benefits of AI uptake are clear to businesses:



**89%** of businesses that have adopted AI report increased revenue, with an average rise of **26%**.



**73%** have seen significant productivity gains, often from automation, customer-service improvements, or faster data analysis.

These efficiency gains are enabling businesses to redirect resources into:







Investing in employee training (41%)



Developing new products and services (38%)

Looking ahead, optimism remains strong. 81% of AI adopters believe AI will increase their growth in the next year, and 69% expect cost savings as a direct result of AI integration.

The Canadian Government <u>launched a national consultation</u> to define an AI strategy, focused on enabling responsible, inclusive, and high-impact AI adoption. This includes ensuring access to flexible AI ecosystems, where businesses can choose between local and global providers; fostering skills development through public–private partnerships; and investing in data and cloud infrastructure to help firms scale AI capabilities efficiently.

With world-class research hubs like MILA, Vector Institute, and Amii, and the Canadian AI Strategy launched in 2017 — the first of its kind globally, Canada has the foundations to propel AI-driven growth and develop a strong AI ecosystem.

This report sets out to explore the state of AI adoption across Canada, seeking to understand how businesses are implementing AI, where progress is strongest, and what challenges remain. It highlights the economic and productivity gains already being realized, while identifying the key levers needed to sustain momentum: accelerating advanced AI uptake, expanding digital skills, attracting investments, and maintaining flexibility within Canada's AI ecosystem. Together, these insights aim to inform how Canada can translate its rapid adoption into long-term, inclusive, and globally competitive growth.



# Key findings from this study:

- Al adoption among businesses in Canada is growing rapidly, up from **36%** last year to **48%** today demonstrating a year-on-year growth rate of **33%**.
- Now, over 650,000 businesses in Canada have adopted AI yet for most of these businesses (65%), their adoption remains at the most basic level, where they are using publicly available chatbots for routine tasks such as scheduling assistants and purchasing ready-made AI solutions.
- A lack of digital skills is the highest reported barrier, with half (51%) of businesses saying this restricts their AI adoption and expansion.
- 89% of Canadian Al-adopting businesses say they have seen an increase in revenue thanks to Al adoption, reporting an average 26% revenue growth.
- 84% of all businesses and 92% of startups believe AI will transform their industry in the next five years.

# Widespread but basic AI adoption

While almost half (48%) of businesses have adopted AI in Canada, celebrating adoption figures alone masks an underlying trend: looking deeper into how businesses are implementing AI, most Canadian organizations remain at basic levels of AI adoption.



**65%** of Canada's businesses remain focused primarily on more basic uses of AI and on incremental gains (such as driving efficiencies and streamlining processes), rather than innovation (such as developing new products or disrupting industries). These businesses are using publicly available chatbots for routine tasks such as scheduling assistants and purchasing ready-made AI solutions.



**20%** have advanced to the intermediate stage of AI adoption. These companies are moving beyond isolated applications and integrating AI across various business functions, resulting in efficiency improvements and more innovative approaches to customer experience.



Only **15%** of Canadian businesses have reached the most transformative stage of AI integration, where they are using AI for its most advanced purposes. These organizations are combining multiple AI tools or models for complex tasks and creating custom AI systems, which are transforming their operations comprehensively.

This trend underscores a critical divide in AI adoption – while AI is increasingly being widely used across businesses in Canada, a small segment of organizations has already harnessed the technology's most transformative potential. Most companies are still exploring AI's benefits, missing out on the deeper strategic advantages it can offer. To fully realize AI's promise, more businesses will need to move beyond experimentation and efficiency gains, and toward deeper integration and innovation.

Canadian innovators are already demonstrating how AI adoption can deliver real-world impact across industries. Fintech leader KOHO is harnessing generative AI on AWS to transform financial crime detection and reporting. Its AI solution, Kortex, has increased the speed of suspicious transaction analysis by 13x while improving accuracy and reducing analyst fatigue, enhancing the security of Canada's financial system and showing how AI can be used responsibly in financial services. In healthcare, <u>Jane Software</u> has built AI Scribe using Amazon Bedrock, an AI-powered clinical documentation tool that allows practitioners to spend less time on notes and more time with patients. The solution securely collects, transcribes, and documents consultations, helping thousands of Canadian healthcare providers deliver care more efficiently. Together, these examples highlight how Canadian companies are using AI to drive innovation, efficiency, and trust in key sectors of the economy.



# Canadian startups are emerging as leaders for AI innovation

Startups<sup>3</sup> aren't just using AI – they're beginning to build entirely new products and business models around it that would have been impossible just years ago. **65%** of startups say they are using AI in some way throughout their business:



Of these, only 41% remain at the basic stage of AI use.



**42%** of startups have AI at the core of their business proposition and operations, and **31%** are leveraging AI for its most advanced uses (compared to **26%** across Europe).



Furthermore, **39%** of startups are developing new Aldriven products and services.



**68%** of startups employ AI-specific talent, indicating a strong commitment to building and nurturing in-house AI expertise, ensuring businesses can develop, deploy, and refine AI-driven strategies.

This ambition is matched by optimism. **92%** of startups believe AI will transform their industry in the next five years. This positions Canada's fast-moving startup sector as a key engine of innovation and global competitiveness, capable of shaping the country's digital economy and reinforcing its status as a regional leader in AI-driven growth.



### Case Study: Voxelis is enhancing wildfire response across Canada



Canadian wildfire seasons are becoming longer and more severe, with over 7.8 million hectares burned across the country in 2025—the second-worst season on record. Vancouver-based <u>Voxelis</u> is changing the way agencies and crews are fighting wildfires with VoxVision—a lightweight, helicopter-mounted system designed specifically for wildfire operations. The device captures high-definition and thermal imagery, environmental readings and other real-time data, and processes it using AI and IoT edge computing from AWS, with native AWS cloud integration enabling rapid, secure transmission and coordination across air and ground teams. Capable of processing over 250 trillion operations per second, VoxVision delivers situational intelligence to improve drop accuracy, and crew safety resource allocation under rapidly changing fire conditions. With every aircraft generating real-time thermal and environmental insights, incident commanders can see where fire intensity is shifting, where air drops are most effective and where ground crews may be at rising risk.

VoxVision is replacing fragmented radio-based reporting with a coordinated, shared operational picture for a more connected, informed response to increasingly challenging wildfires.

### Large enterprises and SMEs represent great untapped potential

While adoption is now widespread, larger enterprises<sup>4</sup> and SMEs are not yet harnessing the most advanced uses of AI, presenting an untapped potential for Canada.

Half (50%) of large enterprises have adopted AI technologies, aligned with the national average for all businesses of 48%. However, most are currently not using them as deeply as startups, resulting in an emerging 'two-tier' economy between startups and their larger counterparts.



For **71%** of large enterprises, their AI adoption remains at basic levels, where they are focused on incremental gains, such as driving efficiencies and streamlining processes. While large enterprises are quick to enable localised productivity and efficiency gains, their younger, more agile startup counterparts are surging ahead with implementing AI's most sophisticated and transformational uses.



Only 17% of Canada's large enterprises have a comprehensive AI strategy, a roadmap that outlines how an organization will leverage AI. 12% are delivering a new AI-driven product or service by harnessing AI's deeper potential, less than a third of the proportion of startups (39%).

If not addressed, Canada risks developing a 'two-tier AI economy', with startups surging ahead in AI innovation while larger firms remain at more basic uses.

Additionally, SMEs are broadly in line with the national average when it comes to AI adoption (46%) and in its advanced uses. As with large enterprises, a significant majority (67%) of adopters remain at basic levels of AI adoption, while 13% of adopters are leveraging AI for its most advanced uses. As SMEs represent the majority of Canadian businesses, this represents considerable untapped potential.

By empowering businesses of all sizes to adopt and scale advanced AI solutions, Canada can accelerate productivity growth and digital progress across the majority of its business landscape. Moving beyond basic adoption for businesses of all sizes is key to unlocking the full benefits of AI for Canada's economy and society.

Recent <u>research</u> by the Telecom Advisory Service, on behalf of AWS, found that the economic contribution to Canada's GDP of cloud and cloud-enabled AI is significant, contributing \$34.7 billion in 2021. Looking ahead, the study finds that cloud and cloud-enabled AI have the potential to contribute \$394 billion by 2030.



### Case Study: Coveo is powering Al-driven personalisation for global enterprises



With over 750+ employees and 1,600 customers worldwide, <u>Coveo</u> (TSX:CVO) is a Quebec-based public company using AI and generative AI to help global enterprises like SAP, Nespresso and Dell deliver relevant, personalised experiences at every point-of-experience.

Powered by AWS, and using several AWS regions globally to ensure customers benefit from the lowest latency wherever they are, the Coveo AI-Relevance Platform unifies structured and unstructured data across systems to drive better business outcomes such as higher revenue, improved margins, faster case resolution, and higher customer satisfaction.

When LCBO wanted to improve its e-commerce experience and effectiveness, they turned to Coveo and it's AWS-powered AI search tools, resulting in a 58% increase in click-through rate, 2x increase in conversion rate with search and a 3% increase in customer experience scores.

With secure indexing and real-time context, Coveo ensures that the right content is always surfaced - wherever the data lives.

# Canadian businesses value a flexible AI ecosystem

Canadian businesses are increasingly focused on maintaining flexibility and choice within the AI ecosystem, recognizing that the ability to select providers which best suit their technology needs is key to ensuring innovation, competitiveness, and resilience. 82% report that having adequate choice between AI providers, both local and global, is essential to their adoption journey, with most describing this flexibility as *very* (42%) or *extremely important* (25%) to their AI adoption.

This growing flexibility in AI infrastructure, balancing local compliance with global innovation, positions Canada well to accelerate adoption. 71% of businesses aiming to scale internationally identify access to global technology leaders alongside strong domestic innovation as a key competitive advantage. Likewise, 68% say access to global cloud-computing platforms is vital for Canada's overall competitiveness, followed by digital-skills availability (59%) and regulatory alignment with major markets (52%).

Businesses in Canada tend to take a hybrid approach, using a mix of locally developed and globally sourced AI tools:



67% of businesses look both domestically and internationally to source their AI tools

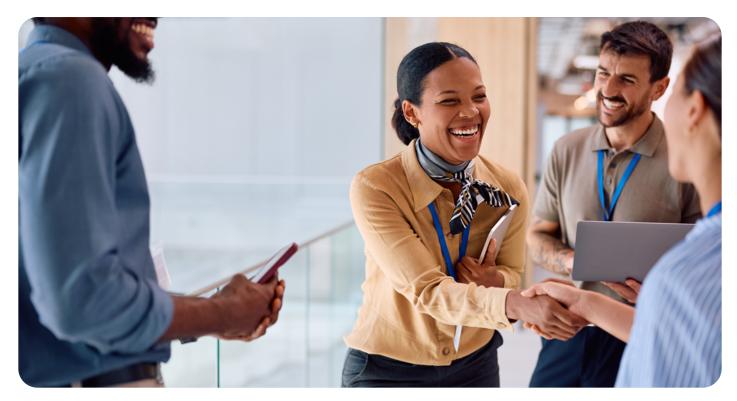


11% use only local AI tools, developed or hosted in Canada



20% only use global AI tools, developed or hosted by international providers

For firms relying primarily on global providers, 52% commend the technical maturity and advanced functionality of international platforms, 47% point to lower costs and faster deployment, and 39% value access to global AI research and innovation pipelines.



# Key barriers are holding Canadian businesses back

Four key barriers are restricting AI adoption and innovation in Canada:

#### **Skills**

Businesses across Canada identify that the skills gap is a crucial challenge to their AI adoption. A lack of skill was the highest reported barrier, with 51% of businesses saying it prevents them from adopting or expanding their AI use. Businesses expect that AI literacy will be important for 40% of jobs in the next three years and only 29% of businesses feel prepared with their current skillset.



Approximately 32% of employees have participated in digital training or upskilling in the past year.



As a result of the skills gap, businesses say they would be willing to increase a salary offer by **36%** to a candidate with strong AI skills.

#### Compliance

Canadian businesses are facing increasing compliance costs, estimating that \$36 out of every \$100 they spend on tech goes towards complying with national and international requirements for regulation including broad privacy and cybersecurity requirements.



This level of spending is higher than that of G7 and G20 several peers, such as Japan (\$22), Australia (\$30), and Korea (\$23). However, it remains below the European average of \$40, and lower than countries such as France (\$46) and Germany (\$44). Beyond standard regulations like privacy and cybersecurity, European firms also contend with additional frameworks such as the EU AI Act, which contribute to higher overall compliance costs.



A striking majority, **76%**, of Canadian businesses expect these compliance costs to increase further in the next 3 years. The Canadian government has indicated that AI regulation will become a legislative priority, signalling intentions to increase compliance requirements.

### Regulatory uncertainty

Across the world, businesses are facing growing regulatory uncertainty as new rules which risk being overreaching are considered for emerging technologies like AI.



Although Canada does not yet have AI-specific federal regulation, around the world, policymakers are actively exploring possible frameworks, and new rules are expected to take shape in the coming years. Against this backdrop, Canadian businesses are watching closely.



When asked about their concerns around the introduction of new regulation, businesses express worries about slowing innovation (56%) and an increase in compliance costs (50%), as well as a lack of legal certainty around AI use and deployment (46%). This demonstrates the critical importance of taking a pro-innovation approach, providing regulatory certainty to businesses as they consider these next technologies, and supporting international technical standards to promote interoperability. Japan's approach, exemplified by the <u>Hiroshima Code of Conduct</u>, shows how strong governance can be paired with lower compliance burdens to support responsible AI adoption.

# **Perceived costs**



**49%** of Canadian businesses cite perceived upfront costs as a key barrier to Al adoption.



Interestingly, 46% of businesses say they need a clearer understanding of Al's return on investment, yet 89% of Canadian business adopters have seen a significant increase in revenue from Al, with an average 26% revenue growth attributed to Al.



# AWS is supporting the digital transformation in Canada

### AWS has a long-term commitment to building resilient, high-performing cloud infrastructure across Canada:

- AWS launched its first <u>Canada (Central) Region</u> in Montreal in 2016, and launched its second Canadian Region, <u>AWS Canada West (Calgary) in 2023</u>, both comprised of three Availability Zones Between 2015 and 2022, AWS invested over \$2.57B in Quebec in building, maintaining, and operating the AWS Canada Central Region in Montreal. This investment added \$2.46B to the province's GDP and supported 1,705 full-time equivalent (FTE) jobs annually in Quebec.
- By 2037, AWS will invest \$24.8B in building and operating its Montreal and Calgary Infrastructure Regions, adding \$43.02 billion to Canada's GDP and supporting more than 9,300 FTE Canadian jobs annually.
- AWS is the first cloud services provider to open an Infrastructure Region in Western Canada, enabling customers to securely store and run workloads in Canada, with greater resilience and availability.
- In addition to these Infrastructure Regions in Quebec and Alberta, AWS also has AWS Edge locations across the country—enabling low-latency access and enhanced cloud performance.

### AWS's cloud is sovereign by design:

AWS customers have control over their data – including where their data is stored, how it's stored, and who has access to it. The same principle applies to AI workloads. AWS helps ensure that customer data remains protected and under the customer's control when using generative AI services — including inputs, outputs, and any fine-tuning data, through:

- The AWS Nitro System, the foundation of AWS computing systems, which is designed to enforce zero-operator-access by default to protect data from outside access (including AWS) during processing.
- Customer-controlled encryption keys.
- Compliance with global standards such as ISO/IEC 27001, which validates AWS's security management practices through independent third-party certification.

#### Partnerships with Canadian institutions advance research and innovation that address real-world challenges:

- The University of Alberta Artificial Intelligence Discovery Place (AIDP) powered by AWS, provides AI technologies for leading researchers to collaborate, advance research, and commercialise products and services to address industry, government and societal challenges across Alberta.
- Since 2020, the University of British Columbia Cloud Innovation Centre (CIC) powered by AWS, has successfully completed 67 projects to improve patient care, support the protection of marine habitats, accelerate the identification of unknown RNA viruses, and more. **20%** of these projects harness the power of generative AI tools.

#### Sustainability:

- Amazon is the world's largest corporate purchaser of renewable energy for five years in a row and has invested in four renewable energy projects in Canada, including solar and wind farms in Alberta.
- AWS's data centres in Montreal use no water for cooling 95% of the year and instead use free-air cooling.





# Unlocking the full potential of AI through four crucial actions

By thinking strategically about its investments, scaling on its existing strengths and infrastructure, and encouraging business uptake of AI through skills and funding, Canada can compete on a global stage and grow a generation of Canadian tech champions. AWS urges policymakers and industry leaders to take action to unlock AI's full potential across businesses of all sizes by taking four key steps:

### 1. Accelerate private sector digital adoption through investing in digital skills:

Streamline access to government funding by building industry-specific digital skills programs, as **40**% see AI literacy as crucial, yet only **29**% feel prepared. This mismatch highlights the need for targeted upskilling initiatives, including partnerships between government, industry, and educational institutions. Closing this gap is key to unlocking Canada's next wave of innovation, productivity, and growth.

#### AWS is working with Canadian businesses, government, and citizens to enable a digital workforce:

- Since 2017, AWS has trained over 300,000 Canadian workers with sought-after cloud and AI skills. AWS equips organizations and learners of all skill levels, roles and backgrounds with the knowledge and practical skills through programs such as AWS Skills Builder, AWS re/Start, AWS Academy and AWS Fiber Optic Fusion Splicing Certificate Program.
- The AWS Think Big Space at Centre Lasallien in Montreal, Quebec, is a dedicated science, technology, engineering, arts, and mathematics (STEAM) educational hub that welcomes all learners including those who have long been underrepresented and empowers them to pursue careers in these fields through a range of learning paths.

### 2. Make strategic decisions to scale strengths and invest in competitiveness:

Canada must focus its efforts on being competitive in the AI space. As well as maintaining and scaling Canada's strengths in research and development, government policy must also focus on greater commercialisation and business adoption. This will require addressing the key barriers that continue to limit AI diffusion in Canada, particularly around those which are often felt most acutely by SMEs. Targeted interventions, such as capital allowance programs, SME-focused subsidies, and investment in broad-based AI upskilling, could help close these gaps. Tackling challenges in tandem, while leveraging Canada's existing cloud infrastructure and world-class research base, will be critical to ensuring that Canada's innovators can scale globally and that Canada's AI competitiveness extends beyond its research labs into every sector of the economy. The ability to access leading technologies and to scale internationally through global infrastructure will be critical; the government should help Canadians take advantage of the existing infrastructure in order to support homegrown AI startups that will become the future champions.

# 3. Attract global investment to support the growth of Canadian startups:

Businesses report that funding is a key enabler of their growth and increases their adoption of AI. Canada must focus on attracting capital investment into the AI space - Canadian startups attracted <u>US\$15.3 billion in private investment from 2013 to 2024</u>, ranking behind the US, China, and the UK. In order to catch up with these global leaders, Canada must focus on becoming <u>a stable and attractive environment for global investors.</u>

A reliable, scalable energy infrastructure is increasingly decisive for AI investment, as power-intensive workloads demand a stable and sustainable supply. Expanding grid capacity and streamlining approvals will be essential to support AI infrastructure growth and appeal to global investors.

At the same time, modernising Canada's copyright framework will be critical to reducing uncertainty for AI developers. The current Copyright Act lacks clear provisions for text and data mining (TDM), creating barriers to AI training. Adopting explicit TDM exceptions, similar to those in Japan and Singapore, would provide the legal clarity needed to encourage AI research and investment domestically.

# 4. Increase public sector adoption of AI:

Prioritise digital transformation across industries such as healthcare and education, use public procurement to drive innovation, and create test-beds and cross-border exploratory projects using AI to deliver new services. **64%** of Canadian businesses say they are more likely to adopt and expand their AI use when the public sector leads, and **53%** of startups say that public sector adoption is crucial to their ability to scale, attesting that the public sector adoption of new technologies is crucial to increasing trust in these technologies.

### Conclusion

Canada's Al journey is shifting rapidly: adoption is accelerating across the country, delivering measurable gains in productivity, revenue, and innovation. As Canadian businesses adopt and scale Al, the priority now is moving from experimentation toward advanced, value-generating applications that drive long-term competitiveness.

Canadian businesses are also increasingly focused on maintaining flexibility and choice within the AI ecosystem, recognizing that the ability to select and switch between providers is critical for innovation, resilience, and cost efficiency. With 82% of firms saying provider flexibility is essential to their AI adoption, Canada's balanced ecosystem, combining local innovation with access to global AI and cloud technologies, is emerging as a strategic advantage. This hybrid approach enables businesses to stay compliant with domestic standards while leveraging the advanced capabilities and scalability offered by international partners.

To sustain this momentum and keep pace with leading AI innovators like the United States, Canada must continue investing in enabling infrastructure, fostering advanced AI skills, and ensuring regulatory clarity that supports responsible innovation. Coordinated action will be vital to closing AI innovation gaps, empowering businesses of all sizes, and ensuring that Canada can chart its own path as a hub of high-impact AI innovation.



### **Appendix**

### Methodology

The fieldwork for this study was undertaken by Strand Partners' research team for Amazon Web Services. This research has followed the guidance set forth by the UK Market Research Society and ESOMAR. For the purposes of this study, business leaders are defined as founders, CEOs, or members of the C-suite in organizations.

'Citizens' are nationally representative members of the public based on the latest available census.

For inquiries regarding our methodology, please direct your questions to: polling@strandpartners.com.

#### In Canada:

- We surveyed 1,000 members of the public, ensuring representation based on region, age, and gender.
- Additionally, we surveyed 1,000 businesses, representative by region, business size, and sector.

#### Sampling:

Our sampling process used a mix of online panels that are recognised for their validity and reliability. These panels are carefully curated to ensure diverse representation across various demographics. For the business leaders, the panels are selected with consideration for organisational size, sector, and position within the company. Our objective with the sampling strategy is to achieve an optimal mix that mirrors the actual distribution of our target populations in the respective markets.

#### Weighting Techniques:

Post-data collection, we applied iterative proportional weighting to correct any discrepancies or over-representations in the sample.

### Survey:

This study was designed with the objective of delving deep into the digital landscape:

- Usage Patterns: This survey gauges the evolving patterns of digital technology usage. We are particularly interested in examining the adoption and implementation levels of technologies, focusing on cloud computing and artificial intelligence.
- Perceptions and Attitudes: The survey seeks to unearth the prevailing perceptions and attitudes toward digital technologies, understanding the perceived benefits, challenges, and potential ramifications of both present and emerging tech solutions.
- Barriers and Opportunities: The survey scrutinises the predicted challenges and potential avenues that both businesses and individuals anticipate on their digital trajectory. This involves pinpointing challenges, from skill deficits to regulatory complications, and recognizing opportunities for growth, innovation, and market development.
- 'Size of the Prize': The survey shed light on the economic repercussions and growth prospects linked with digital transformation. By elucidating the 'size of the prize', we aspire to stress the importance of digital transformation and foster further investments and technology adoption

#### References

- 1. "Adopted AI" or "consistently use AI": a business that consistently uses at least one AI tool. This would not include businesses that experimented with AI once or twice, or ran a temporary pilot programme, for instance.
- 2. Calculated based on recent estimations of the total number of businesses, which was 1.36 million in 2024. Source: <u>The Daily Canadian business counts, December 2024</u>
- 3. A startup is a business founded in the last 2 years which provides a new product/service or innovation and is aiming for rapid growth in terms of employees and turnover.
- 4. A large enterprise is a business with 500 or more employees, founded 10 years ago or more.