

Trust in New Frontiers:  
**Putting AI  
Governance  
into Practice**

[CPAOntario.ca](https://cpaontario.ca)





# Our Mandate

We are a community of over 100,000 CPAs and over 20,000 students across the province committed to innovation, ethics and upholding the highest standards of the profession.

The professional accounting profession is a provincial responsibility governed by the Chartered Professional Accountants of Ontario Act, 2017 and the Public Accounting Act, 2004.

Through this legislation and delegated authority from the government, CPA Ontario is the regulatory body responsible for overseeing CPAs and accounting firms in Ontario.

Like our Provincial, Territorial, and Bermudian (PTB) CPA body partners across Canada, the critical work we do protects the public, enables us to advance the profession and enables CPAs to lead business and society forward.

Going forward, we will continue to work in collaboration with our partners across the country as one CPA designation to deliver on these important responsibilities that government has entrusted to us:

**Shape The Future of The Profession** by attracting the next generation of talent and seizing opportunities for innovation.

**Govern and regulate CPAs and accounting firms in Ontario** which includes compliance and disciplinary processes.

**Ensure the CPA pipeline meets market demands** through recruitment activities within PSIs and high schools, and by supporting new entrants to Canada.

**Educate and assess CPA students** by delivering a world-class professional education program.

**Facilitate common entry into the profession** by working with our PTB CPA counterparts.

**Grant CPA designations and public accounting licenses** while maintaining the rigour and high standards that set the profession apart.

**Enhance the skill and knowledge of members** through professional development and thought leadership.

**Support standard setting within Canada** and at the international level.

**Enable mobility of CPAs** through agreements with PTBs as governed by provincial laws.



# Foreword

The question of trust is at the heart of the debate surrounding artificial intelligence and its impact. And as the use of AI becomes even more commonplace in business and society, that question of trust is also at the core of how CPAs will respond to the challenge of AI.

CPA Ontario has been actively engaging with CPAs, industry experts and academic leaders to explore the application, and implications, of AI. Our 2019 research paper *Evolving Alongside Artificial Intelligence* explored what AI could mean for the profession. It was a look over the horizon and at what the future could bring.

But since 2019, the future has arrived faster than anyone could have realized. In a recent survey, almost half of 300 global public company CEOs and institutional investors reported that they are already using AI in their operating models.

The potential applications of AI can have a real and transformational effect. On the other hand, the risks are just as real. Over 80 per cent of surveyed Canadian companies had concerns about the ethical risks associated with this technology.

To realize the true potential of AI, we must put integrity, the protection of the public and building of trust at the top of our priority list. *Trust in New Frontiers: Putting AI Governance into Practice* is the next stage in the AI evolution for CPAs. From implementing standards to developing internal controls, this paper lays out how CPAs have the skills and the ethical mindset needed to build trust in AI.

So this is a call to action for all CPAs to join us in charting this new frontier. To pursue the skills, tools and education you need to play this important role in a rapidly changing profession and a rapidly changing world.

Trust is the bedrock of our profession, and it is the key to unlocking the economic potential of AI. For the record, this paper was researched, written and reviewed by humans. But one day, very soon, the question of whether generative AI was used in the writing of this paper will no longer matter.

Carol Wilding, FCPA, FCA  
President & CEO



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# 1. Introduction

Among the many factors currently disrupting businesses, few are likely to be as pervasive as AI. Emerging technologies such as AI, machine learning and large language models are everywhere. And though they may seem like science fiction, their impact on business and society is very real. While users rush to capitalize on generative AI, cautious voices, from regulators to technology companies, are raising alarm bells. Among CPAs and business, there is as much excitement as there is trepidation. In a 2023 survey of accountants across Canada, 89% said AI will positively impact the accounting profession<sup>1</sup> while in a another survey from Deloitte, 86% of companies in Canada had concerns about the ethical risks associated with the technology.<sup>2</sup>

The full extent of risks associated with the new and dynamic AI ecosystem remains unknown, making it a monumental challenge to develop rules and regulations to manage them. Calls for greater transparency are intensifying, but building trust in AI systems will take the mobilization of entire industries and a fundamental shift in how society thinks about—and governs—data.

As experts in transparency and disclosure, chartered professional accountants are uniquely equipped to bridge the trust gap in AI. In the absence of agreed-upon standards, CPAs can apply their technical skills and Code of Professional Conduct to help build governance frameworks that support responsible AI innovation. In doing so the profession will enable organizations to navigate the uncertainty around

AI risks with confidence and integrity so we can realize the enormous productivity benefits that the technology can bring.

## 2. The promise and perils of AI

AI's scalability and potential for autonomy are opening new avenues for innovation daily, and eager investors are pouring billions into AI-related businesses. The Canadian federal government is investing too, pledging \$2.4 billion in public funds in April 2024 to support adoption and infrastructure for AI in the economy.<sup>3</sup> AI systems are already embedded throughout the public and private sectors and used, sometimes unknowingly, by consumers, governments and businesses worldwide. In a global survey of 300 global public company CEOs and institutional investors, almost half (48%) indicated that they are already using AI in their operating models and this trend shows no signs of slowing.<sup>4</sup>

We hear of new use cases for AI almost every day. In capital markets AI models are being used to improve prediction accuracy for high-frequency trading<sup>5</sup> and in healthcare machine learning has sped up drug development.<sup>6</sup> Governments are employing it to improve communication and engagement with citizens<sup>7</sup>, and companies are increasingly using AI to streamline decision-making. AI is even getting a seat at some board tables.<sup>8</sup> The impacts are widespread and constantly shifting.

1 A Tech-forward Future: Accounting in Canada in 2023, Intuit.

2 Impact and opportunities: Canada's AI ecosystem – 2023. Deloitte.

3 Prime Minister of Canada Justin Trudeau, "Securing Canada's AI Advantage", April 7, 2024. <https://www.pm.gc.ca/en/news/news-releases/2024/04/07/securing-canadas-ai>.

4 CEO and Investor Outlook Survey, 2023. Teneo.

5 Ontario Securities Commission. "AI in Capital Markets: Exploring use cases in Ontario," 2023. <https://oscinnovation.ca/resources/Report-20231010-artificial-intelligence-in-capital-markets.pdf>.

6 Katie Palmer and Brittany Trang. "DeepMind touts AlphaFold's new skill as protein-folding AI models face off," (October 31, 2023). <https://www.statnews.com/2023/10/31/protein-folding-structure-ai-deepmind-alpha-fold-rosettafold>.

7 OECD. "Global Trends in Government Innovation 2023," 15 May 2023. [https://www.oecd-ilibrary.org/governance/global-trends-in-government-innovation-2023\\_0655b570-en](https://www.oecd-ilibrary.org/governance/global-trends-in-government-innovation-2023_0655b570-en).

8 Ian Robertson, "Soon, artificial intelligence will be running companies – Rise of the robo-director," Globe and Mail, May 19, 2023. <https://www.theglobeandmail.com/business/commentary/article-artificial-intelligence-robo-director-companies>.



Concerns about the risks that come with AI—from discrimination and bias to the misuse or deliberate ‘poisoning’ of data to make AI systems malfunction<sup>9</sup>, lack of explainability, and the spread of misinformation—are also making headlines. Other as-yet-unknown risks are expected and will need to be anticipated. Most recently, concerns around copyright infringement are gaining attention, and being litigated in some jurisdictions. But consideration of the strategic intellectual property (IP) risks posed by rushing to adopt AI has received far less attention. Analysis by Sherpa Technology Group points to a surge in patenting AI ‘chokepoints’ that are designed to capture customers in “unavoidable technology moats” and “turn would-be competitors into licensees or afterthoughts”.<sup>10</sup> It’s not only the usual suspects in ‘big tech’ using IP ownership to secure a strategic advantage in the AI economy, companies in telecommunications, automotive, finance, healthcare and even consultants are patenting IP too. For unsuspecting AI adopters, basing business models and productivity enhancing processes on potentially patented technology could create liability risks down the track. As AI’s adoption increases and its use drifts into unforeseen areas, how the technology works and is put to use inside organizations will come under increasing scrutiny.

**“There is a global race underway for AI patents and Canada is not playing the game, keeping us very vulnerable economically.”**

Jim Balsillie FCPA, FCA  
Chair of the Council of Canadian Innovators

For years, AI was an incoming but distant blip on the accounting profession’s radar. In our 2019 paper “Evolving alongside artificial intelligence”<sup>11</sup> we examined how AI was likely to affect the profession. Since then, AI has shot into focus. The catalyst was the release of generative AI tools in 2022 that use AI models to generate text, images and other media at scale.<sup>12</sup> The mass adoption of ChatGPT (Open AI’s content-generating AI chatbot)<sup>13</sup> marked an important turning point. Suddenly, figuring out how to govern AI became an immediate priority for business and society. “The biggest challenge is the veracity of the data,” explains Andrew Kwong FCPA, FCA, a Partner and the Ontario Risk Advisory Regional Market Leader at Deloitte. “The pace of change is huge,” he says. “It’s evolving faster than the assurance models can keep up.”<sup>14</sup>

The unprecedented pace of AI’s evolution and adoption is heightening both the fears and excitement surrounding the technology.<sup>15</sup> The tech industry’s continual inability to explain how AI outcomes are generated has eroded public confidence. Many worry that AI’s development is outpacing our ability to understand, control and govern it.<sup>16</sup> A 2024 survey by Telus found that the majority of Canadians worry about the governance of AI and over three quarters believe it should be regulated.<sup>17</sup> Mass adoption of AI has also sparked new environmental risks users will increasingly need to consider. According to scientific journal Nature, generative AI uses significantly more energy than traditional

9 National Institute of Standards and Technology, “NIST identifies types of cyberattacks that manipulate behavior of AI systems”, January 4, 2024, U.S. Department of Commerce, <https://www.nist.gov/news-events/news/2024/01/nist-identifies-types-cyberattacks-manipulate-behavior-ai-systems>

10 Cooper Veit, Michael Poppler, Viraj Deokar and Jess Dyroff, “The AI patent gold rush — fortunes hinge on IP control”, IAM Media.com, January 3, 2024 <https://www.iam-media.com/article/the-ai-patent-gold-rush-fortunes-hinge-ip-control>

11 CPA Ontario, “Evolving alongside artificial intelligence,” December 2021. <https://www.cpaontario.ca/insights/thought-leadership/evolving-alongside-artificial-intelligence>

12 Kim Martineau, “What is generative AI?” IBM, April 20, 2023. <https://research.ibm.com/blog/what-is-generative-AI>

13 OpenAI, “Introducing ChatGPT.” <https://openai.com/blog/chatgpt>.

14 Interview with Andrew Kwong FCPA, FCA, and Preeti Shivpuri, May 2023.

15 Andrew Chow, “How ChatGPT managed to grow faster than TikTok or Instagram,” Time, February 8, 2023. <https://time.com/6253615/chatgpt-fastest-growing/>;  
Billy Perrigo, “Microsoft’s Bing revamp shows the AI arms race is just getting started,” Time, (February 8, 2023). <https://time.com/6253984/microsoft-bing-google-ai-race/>

16 Canadian Broadcast Corporation. “With ‘superhuman’ artificial intelligence looming, Canada needs law now: AI pioneer,” (February 5, 2024). <https://www.cbc.ca/news/politics/ai-pioneer-canada-needs-law-to-regulate-ai-now-1.7105463>

17 Telus, “2024 AI Report: The power of perspectives in Canada,” [https://downloads.ctfassets.net/fltupc9ltp8m/56EhZvxRhA1rYVQXhSm91y/dca8b613cd097018f07cde3b53cd1103/2024AIReport\\_EN\\_01252024.pdf](https://downloads.ctfassets.net/fltupc9ltp8m/56EhZvxRhA1rYVQXhSm91y/dca8b613cd097018f07cde3b53cd1103/2024AIReport_EN_01252024.pdf)

search engines and its data centres require huge additional volumes of water to cool down AI processors.<sup>18</sup> While businesses may be excited to capitalize on the opportunities AI offers, they must take precautions not to lose the trust of already wary stakeholders.

Some feel that the strengths of AI—supporting creativity and freeing workers from menial tasks—are being “sidelined in favour of shoe-horning the technology into money-making machines for tech giants,” Margaret Mitchell, Chief Ethics Scientist at AI-development platform Hugging Face told Time magazine. Mitchell, a founder of Google’s Ethical AI Group, was allegedly fired for expressing concern over censorship within the firm.<sup>19</sup> But nearly three years later, her concerns still echo among the AI development community. In March 2024, more than 100 AI researchers signed an open letter asking generative AI companies like OpenAI, Anthropic, Meta and Google, to allow researchers access to their systems following concerns about improper safety protocols and a lack of rigorous testing.<sup>20</sup> As AI models continue to gain adoption, concerns over ethics and transparency are likely to grow louder.

While many are sounding alarms, others in the scientific community caution against the risk of mass hysteria.<sup>21</sup> A 2023 report by the Center for Data Innovation highlights that “tech panic cycles” have occurred in the past and that “exaggerated and misleading concerns about

[generative AI’s] potential to cause harm have crowded out reasonable discussion about the technology.”<sup>22</sup> A cool-headed and pragmatic approach to strengthening AI governance would do more to restore public trust in emerging technologies and support an industry that Bloomberg predicts will grow to US\$1.3 trillion by 2032.<sup>23</sup>

### 3. Calling on CPAs to boost trust in AI

Companies and governments are stepping up efforts to build trust in AI, with varying success. The establishment of AI ethics committees,<sup>24</sup> responsible AI guidelines and chief ethics officer roles<sup>25</sup> can build the foundations for trustworthy AI governance, but they only go so far to embed ethical practices and value-based norms within an organization’s culture.<sup>26</sup>

Governments in Canada and elsewhere are eager to regulate for responsible AI. In June 2022, Canada’s federal government tabled the Digital Charter Implementation Act (Bill C-27), which seeks to revise rules on data privacy, consumer protection and AI. Since passing its second reading in the House of Commons in April 2023<sup>27</sup>, the bill and its three components—The Consumer Privacy Protection Act, the Artificial Intelligence and Data Act (AIDA) and the Personal

18 Kate Crawford, “Generative AI’s environmental costs are soaring - and mostly secret”, Nature, February 20, 2024. <https://www.nature.com/articles/d41586-024-00478-x>.

19 Billy Perrigo, “Time100 AI – Margaret Mitchell,” Time, September 7, 2023. <https://time.com/collection/time100-ai/6309005/margaret-mitchell-ai>.

20 Nitasha Tiku. “Top AI researchers say OpenAI, Meta and more hinder independent evaluations,” Washington Post, (March 5, 2024). <https://www.washingtonpost.com/technology/2024/03/05/ai-research-letter-openai-meta-midjourney>.

21 Timandra Harkness, “The cynical hysteria around AI,” UnHerd, June 2, 2023. <https://unherd.com/2023/06/the-cynical-hysteria-around-ai>.

22 Patrick Grady and Daniel Castro, “Tech Panics, Generative AI, and the Need for Regulatory Caution,” Center for Data Innovation, May 1 2023. <https://www2.datainnovation.org/2023-ai-panic-cycle.pdf>

23 Bloomberg, “Generative AI to Become a \$1.3 Trillion Market by 2032, Research Finds,” June 1 2023. <https://www.bloomberg.com/company/press/generative-ai-to-become-a-1-3-trillion-market-by-2032-research-finds>.

24 Reid Blackman, “Why you need an AI ethics committee,” Harvard Business Review, July–August 2022. <https://hbr.org/2022/07/why-you-need-an-ai-ethics-committee>.

25 Sarah Hallam, “The rise of the chief AI ethics officer,” The Org, April 5, 2023. <https://theorg.com/iterate/the-rise-of-the-chief-ai-ethics-officer>.

26 Robert Gianni, Santtu Lehtinen, and Mika Nieminen, “Governance of responsible AI: From ethical guidelines to cooperative policies,” Frontiers in Computer Science, Sec. Human-Media Interaction 4, 2022, May 24, 2022. <https://doi.org/10.3389/fcomp.2022.873437>.

27 Alex LaCasse, “An update of C-27 since its reintroduction in Parliament,” May 23, 2023. <https://iapp.org/news/a/an-update-of-c-27-since-its-reintroduction-in-parliament>.

Information and Data Protection Tribunal Act— are awaiting parliamentary review of proposed amendments.<sup>28</sup> Most relevant to the governance of AI are suggested amendments to AIDA requiring an accountability framework encompassing the roles and responsibilities of anyone supporting or managing an AI system, policies for identifying and managing risks related to it, data protection procedures and employee training protocols.<sup>29</sup> For CPAs involved in supporting organizational AI and data governance, these rules may become a baseline for their oversight assuming the Bill makes it into legislation.

At the provincial level, Ontario’s government is also weighing in, with a list of principles for the ethical use of AI.<sup>30</sup> A significant question for policymakers and regulators is how to balance robust governance and controls with flexibility to account for uncertainty, innovation and change in these emerging technologies.<sup>31</sup> Early AI adopters are already trying to walk this tightrope. Financial institutions and large companies were among the first adopters of algorithms and AI tools. These companies are accustomed to managing the risks and gains of new technologies within a heavily scrutinised and highly regulated environment. But a 2023 report by the Ontario Securities Commission and EY found that while using AI tools to enhance their products and services, capital markets participants are struggling to navigate the governance landscape associated with them.<sup>32</sup> As AI becomes ubiquitous across the economy, smaller, often less equipped organizations will no doubt be joining them up on the highwire.

As policy and regulatory responses are being

debated, strong leadership is essential to establish good governance and help businesses navigate the uncertainties surrounding AI. “AI is not only a technological issue,” says Niraj Bhargava, Founder and CEO of NuEnergy.ai, an AI governance third-party solutions provider. “It is a governance issue for organizations, audit and risk committees and boards.”<sup>33</sup>

In today’s data economy, the traditional controllership role many CPAs perform managing company assets and risks is evolving. The controllership function is broadening out to encompass AI and other intangible assets. This is a critical moment for CPAs. They are ideally placed to help businesses build and maintain trust as they adopt generative AI, Erin Kelly CPA, CMA, President and CEO of Advanced Symbolics, told us in 2023. “There are no experts in the early days, only explorers, and you tend to find small, supportive communities who are learning and sharing together.”<sup>34</sup>

Given the growing importance of AI, future-oriented experts connected to the accounting profession have been calling on CPAs to reposition themselves in the intangible economy and apply their technical skills and Code of Professional Conduct to AI governance. “In high-risk AI, digital controllership is required, and CPAs will be needed there,” says Michel Girard, a Senior Fellow at the Centre for International Governance Innovation (CIGI).<sup>35</sup> Similarly, in the area of standards and certification, “CPAs provide a trusted methodology and approach to controls,” argues CEO of the Digital Governance Council, Keith Jansa. “I see a real opportunity for the

28 GowlingWLG. “Bill C-27 timeline of developments,” February 2, 2024.

<https://gowlingwlg.com/en/insights-resources/articles/2024/bill-c27-timeline-of-developments/>.

29 Champagne, F., Minister of Innovation, Science and Industry to Lightbound, J., Chair of the Standing Committee on Industry and Technology, September 26 2023.

30 Government of Ontario, “Beta principles for the ethical use of AI and data enhanced technologies in Ontario,” January 7 2023, updated September 14 2023. <https://www.ontario.ca/page/beta-principles-ethical-use-ai-and-data-enhanced-technologies-ontario>.

31 “Policy paper: A pro-innovation approach to AI regulation,” Office for Artificial Intelligence, Government of the United Kingdom, March 29, 2023. <https://www.gov.uk/government/publications/ai-regulation-a-pro-innovation-approach/white-paper>.

32 Ontario Securities Commission. “AI in Capital Markets: Exploring use cases in Ontario,” 2023.

<https://oscinnovation.ca/resources/Report-20231010-artificial-intelligence-in-capital-markets.pdf>.

33 Interview with Niraj Bhargava, May 2023.

34 CPA Ontario, “How AI, like ChatGPT, impacts the role of CPAs.” <https://www.cpaontario.ca/insights/blog/how-ai-chatgpt-impacts-role-of-cpas>.

35 Interview with Michel Girard, December 2022.

profession to strengthen digital governance, ensuring organizations navigate the digital landscape with confidence.”<sup>36</sup>

Supporting this fast-paced industry will take agility, vision and a willingness to take calculated risks. CPAs are uniquely positioned to usher the accounting profession into new areas of growth and responsibility. “There is an imperial opportunity for the profession here,” suggests Jim Balsillie FCPA, FCA, Chair of the Council of Canadian Innovators. “Moving in quickly and systemically will reposition the profession in a good way.”<sup>37</sup> If they don’t lean in soon, CPAs will be passing up a significant opportunity to tap into the AI governance market.

## 4. Applying the CPA’s toolkit along the AI value chain

### Expanding the scope of risk impact assessments

Despite the growing use of AI and awareness of the risks involved, business leaders are still struggling to anticipate and mitigate those risks. A survey published by KPMG in June 2023 reported only an estimated 6% of executives had a dedicated team to evaluate AI risks and implement mitigation strategies, while 47% were still in the initial stages of risk assessment.<sup>38</sup> Given the speed of change, the demand for AI governance is gathering momentum quickly, and executives

will need to elevate the priority of AI governance issues. Until they do, rapid adoption paired with lagging controls will hinder business leaders’ ability to build trust in the new technology. Developing strong controls for AI requires a solid risk assessment framework. That means recognizing the full range of AI’s possible impacts. Some software that use AI, like video games or spam filters, are less likely to pose a threat to individuals or public safety than higher risk uses such as AI in robot-assisted surgery, recruitment, law enforcement or border control.<sup>39</sup> Yet even lower risk use cases carry liability risks, as Air Canada learnt the hard way in February 2024. A customer took the airline to court for receiving incorrect information from its AI chatbot.<sup>40</sup> Air Canada was unsuccessful in arguing that the chatbot was a separate legal entity, and therefore not their responsibility, and was required to reimburse the customer.<sup>41</sup> Beyond legal penalties, AI snafus like these carry significant reputational costs too. On the higher risk side of the AI harm scale, airports began testing AI models designed to identify weapons and other safety threats.<sup>42</sup> A failure in this setting would be catastrophic and requires much more significant oversight.

Distinguishing between risk levels is of critical importance for developing regulatory standards as well. The EU’s AI Act, which is further ahead than other jurisdictions, provides different levels of guidance depending on the severity of possible risks. It appears that Canada may follow Europe’s lead here by classifying general-purpose and high-risk AI systems, with more stringent regulation of the latter.<sup>43</sup> Getting risk assessments right is not only important for avoiding harms, but

36 Interview with Keith Jansa, May 2023.

37 Interview with Jim Balsillie FCPA, FCA, June 2023.

38 KPMG, “Generative AI: From buzz to business value,” June 2023. <https://kpmg.com/kpmg-us/content/dam/kpmg/pdf/2023/generative-ai-survey.pdf>.

39 European Commission, “Regulatory framework proposal on artificial intelligence.” <https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai>

40 Krishi Chowdhary, “Chatbot Mistake Costs Air Canada Hundreds of Dollars in Compensation,” TechReport, (February 26 2024). <https://techreport.com/news/chatbots-mistake-costs-air-canada-hundreds-of-dollars-in-compensation>.

41 Ibid.

42 Liberty Defense, “Liberty Defense Announces Agreement with National Safe Skies Alliance for Test and Evaluation at Port of Oakland,” January 25 2024. <https://libertydefense.com/news/liberty-defense-announces-agreement-with-national-safe-skies-alliance-for-test-and-evaluation-at-port-of-oakland>.

43 Champagne, F., Minister of Innovation, Science and Industry to Lightbound, J., Chair of the Standing Committee on Industry and Technology, September 26 2023. <https://www.ourcommons.ca/content/Committee/441/INDU/WebDoc/WD12600809/12600809/MinisterOfInnovationScienceAndIndustry-2023-10-03-e.pdf>.

also for Canada's economy. Big tech companies have expressed concern that without clarity on the distinction between high and low risk AI, Canadian compliance costs will see them doing less business here.<sup>44</sup>

## Trust in AI toolbox: Resources and tools for CPAs

### COSO ERM: Working with existing risk management tools

The enterprise risk management framework of the Committee of Sponsoring Organizations of the Treadway Commission (COSO ERM) is already widely used by publicly traded companies and accounting and financial firms to establish internal controls and integrate them into business processes. A useful tool to help organizations understand and prioritize risk, it also ensures that they operate ethically, transparently and according to established industry standards. CPAs can apply lessons from this framework to help gauge a firm's preparedness for AI-related risks and identify gaps in an organization's ability to address concerns.<sup>45</sup>

Disclosure of material risks is important to investors too. As AI adoption increases, calls for more transparency and accountability around AI are getting louder. "Big investment houses are aware that AI touches every interest around them," says Charles Radclyffe, Founder of EthicsGrade, an AI-driven platform for rating environmental, social, and governance (ESG) performance. "They need some guarantee that their portfolio companies are abiding by responsible AI guidelines."<sup>46</sup>

Radclyffe adds that investors such as HSBC, Fidelity and Hermes Investment Management<sup>47</sup> have reported on what investors should expect from AI and asked companies to be "transparent about tracking methods in the full value chain and to disclose how they measure the robustness of data governance and the fair and safe use of AI." Shareholder scrutiny of company AI governance practices ramped up in the 2024 proxy season. In the United States, shareholder proposals demanding more transparency on the use of AI were lodged at Apple and Disney annual general meetings.<sup>48</sup> Such calls for greater transparency point to a growing awareness among stakeholders about the importance of identifying, assessing and disclosing material risks associated with AI.

As disclosure experts, CPAs should prepare for the possibility that they will be tasked with reporting on AI risks.<sup>49</sup> This will require understanding how AI systems work, how they might fail, the impact failures could have, and how to communicate these risks effectively. Brushing up on these technical areas will allow CPAs to apply their skills to new kinds of risk assessments.

<sup>44</sup> Global News. "Canada's proposed AI law too vague, Big Tech executives say," February 7 2024. <https://globalnews.ca/news/10280005/canada-ai-law-big-tech>.

<sup>45</sup> Keri Calagna, Brian Cassidy, and Amy Park, "Realize the full potential of artificial intelligence," COSO, September 2021. <https://www.coso.org/Shared%20Documents/Realize-the-Full-Potential-of-Artificial-Intelligence.pdf>.

<sup>46</sup> Interview with Charles Radclyffe, September 2022.

<sup>47</sup> Hermes Investment Management, "Investors' expectations on responsible artificial intelligence and data governance," April 2019, <https://www.hermes-investment.com/uploads/2021/10/4f7c68d220b2d3e1b1c89fa0be3d9906/investors-expectations-on-responsible-artificial-intelligence-and-data-governance.pdf>

<sup>48</sup> Ibid.

<sup>49</sup> Ravit Dotan and Daram Pandian, "AI-related ESG risks: What investors need to know," UN PRI, September 13, 2022. <https://www.unpri.org/pri-blog/ai-related-esg-risks-what-investors-need-to-know/10479.article>.

## The need for internal controls

As the policy debate rages on, developing solid internal controls can reassure stakeholders that information about the uses and risks of AI are accurate and verifiable. “Even without standards in place, you can define your own internal controls from a risk mitigation point of view,” says Mardi Witzel, CEO of PolyML and a member of the CPA Ontario Council.<sup>50</sup> “Explainability of AI models, fairness and bias, model performance—these and other factors all need controls.”

CPAs are often the custodians of financial data and involved in maintaining robust governance and control frameworks, says Cathy Cobey FCPA, FCA, a pioneer of AI responsibility and EY’s Global Responsible AI Co-lead. This gives them an edge in understanding how AI systems transform data and what kinds of controls are needed to ensure their outcomes are safe, trustworthy and reliable. “As AI permeates across every operational area in organizations,” says Cobey, “there is an opportunity for CPAs to leverage their expertise to improve operational efficiency and build trust in AI systems.”<sup>51</sup>

Internal controls are particularly relevant in a booming AI start-up economy—the sort of environment where governance structures are usually developed at a later stage of company growth.<sup>52</sup> Paul Nagpal, Chief Operating Officer at the CFO Centre, sees value in building those structures early on. “It is important to ensure that you have the right governance processes and controls, not only to attract angel investors and VCs at the beginning, but at every stage of growth too. Without the governance in place you may lose potential investors as the risks of using data and models inappropriately can be high.”<sup>53</sup>

In fast-growing industries, CPAs’ governance expertise is a necessary precursor to responsible innovation.

**“We should look at it from a risk and opportunity lens. Nobody is doing AI controllership and governance in a systematic way.”**

Jim Balsillie FCPA, FCA  
Chair of the Council of Canadian Innovators

Filtering through data to identify and communicate issues effectively is a core element of the CPA skillset. Professional accountants can expand the scope of their practice into new areas of controllership to enhance governance in the innovation economy. Supporting this expansion is a key objective of CPA Ontario’s Innovation Leadership Accelerator program, which equips CPAs to champion the growth of Canada’s scale-up economy along robustly ethical lines.

## Contributing to industry standards and certifications

Beyond establishing and monitoring internal business processes around AI, CPAs are integral to setting standards and ensuring they are adhered to. CPAs are well-versed in the application of standards and recognize their importance in putting AI regulation into practice.<sup>54</sup> Which is fortunate because there are multiple efforts underway to develop and agree on standards for managing AI risks. This may make identifying which standards to apply a challenge, but the greater question is how to take those standards beyond technical considerations to effectively address the behavioural issues related to AI.<sup>55</sup> Niraj Bhargava of NuEnergy.ai points out that while many hundreds of AI frameworks, principles and guidelines are available globally, they

50 Interview with Mardi Witzel, December 2022.

51 Interview with Cathy Cobey, May 2023.

52 Michael Robinson, “Canadian startups need to focus on corporate governance to grow and thrive,” University of Calgary, December 9, 2020. <https://ucalgary.ca/news/canadian-startups-need-focus-corporate-governance-grow-and-thrive>

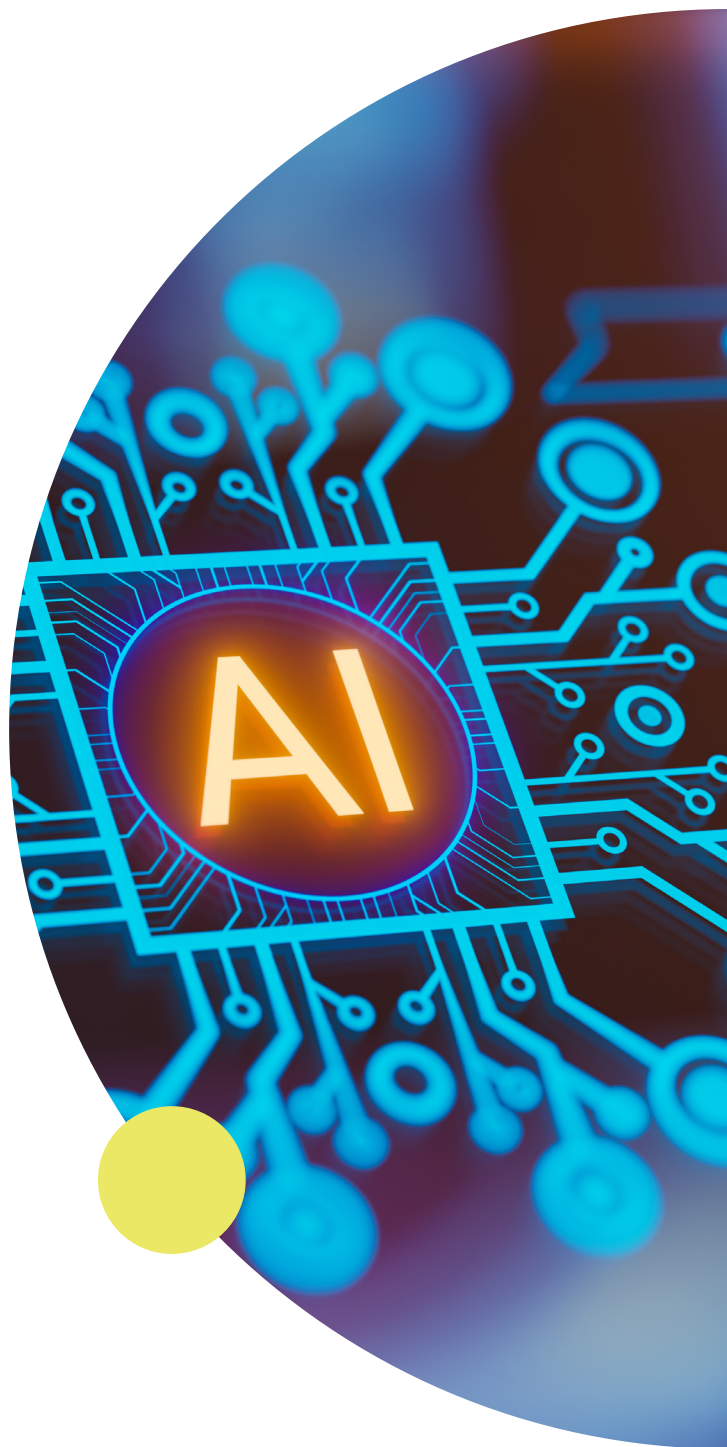
53 Interview with Paul Nagpal, June 2023.

54 Hadrien Pouget, “What will the role of standards be in AI governance?” Ada Lovelace Institute, April 5, 2023. <https://www.adalovelaceinstitute.org/blog/role-of-standards-in-ai-governance>.

55 Tom Wheeler, “The three challenges of AI regulation,” Brookings Institution, June 15, 2023. <https://www.brookings.edu/blog/techtank/2023/06/15/the-three-challenges-of-ai-regulation>.

generally take a bird’s-eye view rather than providing practical, implementable processes.

The overwhelming plethora of voluntary standards and frameworks for AI, with little consensus on which to use, is reminiscent of the emergence of ESG reporting over the past two decades. The notorious ‘alphabet soup’ of ESG reporting was finally harmonized by the ISSB into two sustainability standards in 2023.<sup>56</sup> Yet, in the ‘alphabet soup’ days many CPAs were skeptical about whether ESG disclosures fell within their remit. Since then, professional accountants have embraced their role as ‘warrior accountants’, and the profession has invested heavily in training and capacity-building to devise ESG reporting and assurance practices. The trajectory of ESG standardization may provide a glimpse into what the up-and-coming world of AI standards will hold for CPAs.



<sup>56</sup> IFRS, “ISSB issues inaugural global sustainability disclosure standards,” June 26 2023. <https://www.ifrs.org/news-and-events/news/2023/06/issb-issues-ifrs-s1-ifrs-s2>.

# Trust in AI toolbox: Resources and tools for CPAs

## A principles-based approach to responsible AI: standards, frameworks and roadmaps

Standards and certifications for responsible AI are evolving quickly. Checks and balances are being created for the entire lifecycle of AI, from design and development to implementation and disclosure, so that companies can demonstrate internally to board members and externally to regulators that processes and oversight are in place. While a global set of standards for AI disclosures are not a current reality, CPAs can look to voluntary standards such as:

- ISO standards such as ISO/IEC 42001 on AI management systems<sup>57</sup>, the 2024 update of ISO/IEC 38500<sup>58</sup>, which covers IT governance, and ISO/IEC 38507<sup>59</sup> pertaining specifically to governance implications of using AI. The latter provides guidance to a wider community, including policymakers, assessors and auditors on ways to adapt governance and organizational policies to the use of AI.
- Canada’s Digital Governance Council (DGC) standards provide guidance in several areas such as cybersecurity, blockchain, AI, privacy and procurement.<sup>60</sup> They are a good starting point for CPAs looking to lay the groundwork for AI governance assurance in their organizations.
- UNESCO’s 2021 “Recommendation on the Ethics of Artificial Intelligence” has been adopted by all 193 member states. It offers a framework for organizations to carry out ethical impact assessments in key “policy action areas” like human rights and fundamental freedoms.<sup>61</sup>
- Financial services and securities regulatory guidance on AI, such as IOSCO guidance for market intermediaries and asset managers<sup>62</sup> and OFSI’s 2024 Revision of E-23 – Model Risk Management, updates guidance on risk management for digitization and model use to include new and emerging risks posed by AI and machine learning throughout model lifecycles.<sup>63</sup>
- The COSO ERM (described earlier) is also widely used by governance and audit professionals to think through the risks of AI and realize the technology’s full potential.

57 ISO, “ISO/IEC 42001:2023, Information Technology—Artificial intelligence, management system,” December 2023. <https://www.iso.org/standard/81230.html>.

58 ISO, “ISO/IEC 38500:2024, Information Technology—Artificial intelligence, governance of IT for the organization,” February 2024. <https://www.iso.org/standard/81684.html>.

59 ISO, “ISO/IEC 38507:2022, Information technology—Governance of IT, Governance implications of the use of artificial intelligence by organizations,” April 2022. <https://www.iso.org/standard/56641.html>.

60 Digital Governance Standards Institute, “Find a Standard,” 2024. <https://dgc-cgn.org/standards/find-a-standard>.

61 UNESCO, “Recommendation on the ethics of artificial intelligence,” November 2021. <https://unesdoc.unesco.org/ark:/48223/pf0000381137>.

62 IOSCO. “The use of artificial intelligence and machine learning by market intermediaries and asset managers,” September 2021. <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD684.pdf>.

63 OFSI. “Draft Guideline E-23 – Model Risk Management,” July 2024. <https://www.osfi-bsif.gc.ca/en/guidance/guidance-library/draft-guideline-e-23-model-risk-management>.



CPAs can help protect the value of AI by verifying that principles such as transparency and explainability are applied along the entire AI lifecycle, not just at the point of disclosure. Deloitte's 2023 report on audit committee responsibilities emphasizes that good governance is end-to-end oversight, which encompasses understanding how risks are identified, monitored, assessed, controlled and disclosed.<sup>64</sup> Undertaking this task means developing robust reporting procedures and strong internal controls.

Industry standards will be particularly critical as more companies procure AI products and services at scale and directly from the internet. Many organizations may just be starting their digital transformation or have nascent data governance frameworks, and employing AI tools can have data risks that companies are underprepared for. Implementing standards can help organizations to identify, assess and manage risks. Ensuring compliance with these standards is one way CPAs can play an integral role in laying the foundation for good governance of AI.

Demand for AI testing, certification and assurance is building, and Keith Jansa of the Digital Governance Council sees a clear opportunity for CPAs to lean in. "CPAs know how to assure controls that are in place and provide independent judgment in relation to those controls," he says. "Given that skill set, I would love to pull CPAs into our organization's programs to issue an audit report and advise whether to issue a certification or not." As AI governance standards take shape, CPAs can enforce their professional and ethical codes to protect the public interest and develop best practice in new areas of digital governance.

## The emergence of AI audit and assurance

To truly inspire trust, the establishment of robust standards must be followed by critical verification and assurance. AI assurance is essential to support the development of trustworthy AI, and should be on the radar of anyone developing, implementing or procuring AI systems.<sup>65</sup> An emerging field, AI assurance aims to give insight into how systems perform, how they are governed and whether they work as intended.<sup>66</sup>

**"The question of whether we need assurance is just amplified with generative AI. It's an immediate need in 2024. The genie is already out of the bottle."**

Niraj Bhargava, Founder and CEO,  
NuEnergy.ai

Right now, CPAs can weigh in on questions that have yet to be answered. "The difficulty in the AI space is identifying what is being assessed," says Ryan Hagemann, Co-Director at IBM's Policy Lab. "What exactly are we auditing? Do companies have internal mechanisms for teams deploying this technology? Or are we auditing the systems and models themselves as to whether they achieve a level of fairness and bias mitigation?"<sup>67</sup> For now, experts and practitioners agree that AI assurance techniques are limited to assessing whether the right oversight or policies are in place, or if an AI system performs in line with predetermined criteria, adds Hagemann.

John Ruffolo FCPA, Founder and Managing Partner at Maverix Private Equity, agrees that while "there is no better person than consulting firms and CPAs to adjudicate on objective processes and controls," there is no obvious arbiter when it comes to making a moral

64 Deloitte. "2023: The year of the risk-centric agenda," January 2023. <https://www2.deloitte.com/us/en/pages/center-for-board-effectiveness/articles/2023-the-year-of-the-risk-centric-agenda.html?id=us:2em:3na:acb:awa:boardef:011123:mkid-K0172319&ctr=cta2&sfid=0031O00003NPLNEQA5>.

65 Department for Science, Innovation and Technology. "Portfolio of AI assurance techniques," June 7 2023. <https://www.gov.uk/guidance/cdei-portfolio-of-ai-assurance-techniques>.

66 Centre for Data Ethics and Innovation, "AI assurance guide." <https://cdeiu.github.io/ai-assurance-guide/trust>.

67 Interview with Ryan Hagemann and Joshua New, May 2023.

judgment.<sup>68</sup> CPAs are well equipped to apply their trust toolkit to the technical aspects of AI governance, controls and assurance, but are unlikely to view their role as extending to judging the ethicality of AI where issues like bias and fairness are involved.

Assuring AI is made all the more challenging as further service providers move into the field and competition heats up. AI assurance does not currently carry the same weight and credibility as financial and accounting assurance, says Professor Efrim Boritz FCPA, FCA, Director of the Centre for Information Integrity and Information Systems Assurance at the University of Waterloo and holder of the Ontario Chartered Professional Accountants Chair in Accounting.<sup>69</sup> “When [CPAs] provide an audit, examination or assurance, we control what that means through our standards and education and so forth. The minute you get outside the financial statement, it’s a free-for-all.”

**“AI is similar to the internet. It will be transformative, and we all need to understand the role it will play across organizations.”**

Annie Veillet, Partner and National Data Analytics and AI Lead, PwC Canada

Ongoing education is critical for CPAs looking to take advantage of the coming market for AI assurance. To compete, CPAs will need greater exposure to both the technical and ethical aspects of AI systems. Without that preparation, they will lose market share to others who are more ready to meet the demand. “If your job is to oversee the material elements of the organization and this is a material force, then you need to update your skills or get someone else to do it,” says Jim Balsillie of the Council of Canadian Innovators.

## Trust in AI: Resources and tools for CPAs

### Where to start when considering the provision of AI governance assurance

AI assurance may seem like uncharted territory, but CPAs are already trained to uphold their code of ethics across other non-financial areas.<sup>70</sup> Additionally, guidance is emerging specifically for auditors working in technology-related scenarios.

- Under the Canadian Standard on Assurance Engagement (CSAE 3000 and CSAE 3001), CPAs can perform assurance engagements beyond financial statements<sup>71</sup> and “obtain limited or reasonable assurance for AI system developers or users.”<sup>72</sup> Formal standards and controls will enable CPAs to apply their knowledge and expertise to support compliance in this emerging area.
- The International Ethics Standards Board for Accountants’ (IESBA) recently released technology related revisions to the Code of Ethics, effective December 15, 2024, to support professional accountants as they take advantage of the opportunities created by current and emerging technologies.<sup>73</sup> They also created a Technology Task Force that provides non-authoritative guidance for accounting professionals seeking to apply their Code of Ethics in various situations involving new and emerging technologies.<sup>74</sup>

68 Interview with John Ruffolo FCPA, June 2023.

69 Interview with Efrim Boritz FCPA, FCA, CISA, June 2023.

70 Michel Girard, “A two-track approach for trustworthy AI,” CIGI, June 2022.

71 Deloitte, “CSAE 3000, Attestation engagements other than audits or reviews of historical financial information.” <https://www.iasplus.com/en-ca/standards/assurance/other-canadian-standards/csae-3000-attestation-engagements-other-than-audits-or-reviews-of-historical-financial-information>.

72 CPA Canada, “Building a risk management framework for trustworthy AI.” <https://www.cpacanada.ca/en/foresight-initiative/data-governance/mastering-data-risk-management-for-trustworthy-ai>.

73 IESBA. “Final Pronouncement: Technology-Related Revisions to the Code,” April 2023. <https://www.ethicsboard.org/publications/final-pronouncement-technology-related-revisions-code>

74 IESBA. “Applying the Code’s Conceptual Framework to Independence: Practical guidance for auditors in technology-related scenarios,” July 2023. [https://ifacweb.blob.core.windows.net/publicfiles/2023-07/IESBA\\_APESB\\_Applying\\_the\\_Code\\_s\\_Conceptual\\_Framework\\_to\\_Independence\\_0.pdf](https://ifacweb.blob.core.windows.net/publicfiles/2023-07/IESBA_APESB_Applying_the_Code_s_Conceptual_Framework_to_Independence_0.pdf).

## 5. Sharing risk and responsibility in multidisciplinary teams

Developing trustworthy AI is a collective responsibility, in which CPAs will play a pivotal role. In the past year, AI developers have made impressive gains in aligning AI models with human values,<sup>75</sup> but there is no guarantee that the models will perform well in all situations. Beyond the world of tech, many more minds are needed to think through the worst-case scenarios involving AI and develop the measures needed to avert bad outcomes and build confidence in the technology.

**“Responsible AI cannot just fall entirely on the shoulders of data scientists. It requires a combination of different skill sets ... the risk and controls mindset, the ethics mindset and the tech mindset.”**

Preeti Shivpuri, Executive Director,  
Data and Analytics, Deloitte

When developing governance frameworks, “CPAs should be at the design table as a challenger,” says EY’s Cathy Cobey. “They can bring a different perspective and are good at coming up with what could go wrong scenarios,” she says. Hence there is a need for more collaboration between disparate disciplines with different skills and strengths. “We need CPAs to work closely with technical teams, not only to challenge them but also to educate them on why certain controls are beneficial... ultimately everyone wants the AI systems to be doing the ‘right thing’,” says Annie Veillet, a Partner and the National Data Analytics and AI Lead at PwC Canada.<sup>76</sup>

CPAs’ insights can be particularly useful when commercial pressures threaten to sideline ethics. The CPA Code of Professional Conduct is a valuable moral compass as AI adoption is happening faster than risk assessment frameworks can evolve. Such a strong ethical code can provide a reliable foundation as teams develop trustworthy AI solutions.

Professional accountants in other jurisdictions are also looking at applying their codes of ethics to address the trust gap around AI. Furthest ahead is the Institute of Chartered Accountants in England and Wales, which recognized as early as 2018 the need to update its code of ethics to reflect the implications of technological change like advances in AI.<sup>77</sup> Making sure that CPAs’ codes—the fundamental principles for the profession—stay robust and relevant will also become more critical as accountants extend their use of data.<sup>78</sup>



75 HBR, “Bring Human Values to AI,” March 2024. <https://hbr.org/2024/03/bring-human-values-to-ai>.

76 Interview with Annie Veillet CA, June 2023.

77 ICAEW, “New technologies and their implications on the code of ethics,” May 25, 2018. <https://www.icaew.com/technical/trust-and-ethics/ethics/ethics-and-new-technologies/new-technologies-and-their-implications-on-the-code-of-ethics>.

78 ICAEW, “New technologies, ethics and accountability,” 2019. <https://www.icaew.com/technical/technology/technology-and-the-profession/new-technologies-ethics-and-accountability>.

## 6. Conclusion: Leaning into AI ambiguity

CPAs are well positioned to develop a robust governance architecture for AI while businesses navigate uncertainty and the rules and regulations directing the use of the technology are being developed. CPAs' technical know-how and ethical judgment are valuable resources for businesses large and small that are seeking advice in ill-defined regulatory environments. Positioning CPAs as champions of AI governance will require a shift in focus from compliance to innovation, and an openness to engage with the unknown using the tools accountants know best.

Professor Boritz recalls that “many CPAs were unwilling to provide blockchain audits because they didn't have the capabilities, knowledge or competence.” That is an honest stance. But Boritz cautions against taking the same approach to all emerging technologies. For professional accountants, the work of building trust in AI systems starts with trusting their skills and ability to protect the public interest in this emerging area. Taking advantage of this opportunity could propel the profession into exciting new spaces.

### Where to start: Resources for CPAs

CPA Ontario offers a wide range of professional development resources to help CPAs stay up to speed and develop their AI governance capabilities. CPAs can engage in:

- Courses on mastering digital technologies and governance
- On-demand sessions covering topics such as ChatGPT, using AI in practice, balancing innovation and regulation, and how generative AI impacts the accounting profession
- The Innovation Leadership Accelerator, in partnership with Jim Balsillie and John Ruffolo, which offers an immersive learning experience for those looking to apply their CPA skills to innovative pursuits.

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