

Ethical Leadership in an Era of Complexity and Digital Change

PAPER 1

Complexity and the professional accountant:
Practical guidance for ethical decision-making

June 2021

ABOUT CPA CANADA

Chartered Professional Accountants of Canada (CPA Canada) works collaboratively with the provincial, territorial and Bermudian CPA bodies, as it represents the Canadian accounting profession, both nationally and internationally. This collaboration allows the Canadian profession to champion best practices that benefit business and society, as well as prepare its members for an ever-evolving operating environment featuring unprecedented change. Representing more than 220,000 members, CPA Canada is one of the largest national accounting bodies worldwide. cpacanada.ca

ABOUT IFAC

IFAC (the International Federation of Accountants) is the global organization for the accountancy profession dedicated to serving the public interest by strengthening the profession and contributing to the development of strong international economies. Comprised of 180 members and associates in more than 130 countries and jurisdictions, IFAC represents more than 3 million accountants in public practice, education, government service, industry and commerce.

Over four decades, IFAC has represented the global profession and supported the development, adoption, and implementation of international standards that underpin the contributions of today's global accountancy profession. IFAC has maintained a long-term approach to building and strengthening a global accountancy profession that supports transparent, accountable, and sustainable organizations, financial markets, and economies. ifac.org

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ICAS is the global professional body for Chartered Accountants. We educate, examine and lead, enabling excellence whilst always working for the wider public good. All 23,000 ICAS members have earned our world-class CA designation of Chartered Accountant, the qualification that's shaped an international business community spanning industries and continents, full of local heroes and corporate leaders. And we continually foster the bonds between our members, so CAs at all stages of their careers can learn from shared experience and connect their ambitions to success. For further information please visit icas.com

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This paper is the first of four thought leadership pieces developed by Chartered Professional Accountants of Canada (CPA Canada) to build on a collaborative exploratory paper and global roundtable event held jointly with the Institute of Chartered Accountants of Scotland (ICAS) and the International Federation of Accountants (IFAC), entitled *Ethical Leadership in an Era of Complexity and Digital Change*.

The [exploratory paper](#), a [summary](#) of the event, and an [on-demand recording](#) are available on the IFAC Knowledge Gateway and on the International Ethics Standards Board for Accountants (IESBA) technology initiative's focus page. The paper was also informed by diverse stakeholder views gathered through the IESBA's broader [technology initiative](#).

This post-event series of papers more fully investigates the key themes presented in the exploratory work, and leverages the event delegate discussions and recommendations, to offer practical guidance for professional accountants, professional accountancy organizations, educators and employers, as our profession evolves to address changing stakeholder needs while continuing to meet our public interest responsibilities.

The other papers in the series, released throughout 2021, cover the following interconnected, but distinct, topics:

- technology is a double-edged sword
- identifying and mitigating bias and mis-/disinformation
- mindset and enabling skills

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Part I: Complexity in context

A call to action

Professional accountants (PAs) have an ethical responsibility to act in the public interest.¹ In a complex world where values drive decisions and diverse stakeholder groups have a significant voice, this responsibility for ethical leadership presents opportunities as well as challenges. For the profession to increase its relevance and value, we need to collectively hone our skills and ensure that our perspective aligns with stakeholder needs. Similarly, standards must continue to evolve to meet the needs and expectations of society.² Professional Accountancy Organizations (PAOs) need to be bold and forward-looking to encourage and support current and aspiring PAs through this evolution.

1 See, for example, International Federation of Accountants (IFAC), *2020 Handbook of the International Code of Ethics for Professional Accountants* (New York: IFAC) [IESBA Code] at 100.1 A1 (<https://www.iesbaeacode.org>); Chartered Professional Accountants of British Columbia (CPABC), *Code of Professional Conduct* (Vancouver: CPABC, October 2020) [CPABC Code] at 4 (<https://www.bccpa.ca/member-practice-regulation/act-bylaws-code-of-professional-conduct>); and Institute of Chartered Accountants of Scotland (ICAS), *ICAS Code of Ethics (including International Independence Standards)* [ICAS Code] at R100.1 (<https://www.icas.com/professional-resources/ethics/icas-code-of-ethics>). Note that the professions in Canada are provincially regulated, so the Code of one of the larger jurisdictions is referenced for illustration. The Codes of other provincial bodies are substantially equivalent with respect to the elements referred to.

2 See, for example, International Ethics Standards Board for Accountants (IESBA), *Revisions to the Code to Promote the Role and Mindset Expected of Professional Accountants: Fact Sheet*, online: IESBA <<https://www.ethicsboard.org/publications/iesba-fact-sheet-role-and-mindset-professional-accountant>>, which explains recent changes to the IESBA Code: “The IESBA’s Role and Mindset Revisions aim to reinforce the importance of the profession’s public interest responsibility by stimulating professional accountants to better demonstrate the role, mindset and behavioral characteristics expected of them, thereby allowing them to meet public expectations in their various roles and fields of endeavor.”

Setting the stage – the need to identify complexity

In general usage, the terms “complex” and “complicated” are frequently used interchangeably, but they are not the same, and the distinction matters. Certain tools and approaches are specifically designed to solve complicated problems, whereas a different set of tools and approaches are needed to effectively manage complex problems. Failing to distinguish between complicated and complex elements, and therefore selecting the wrong tools and approaches for the situation, will result in suboptimal decision-making. For example, choosing processes to find a discrete solution rather than focusing on managing dynamic elements. If such decisions involve navigating complex ethical challenges, the consequences of failing to make the appropriate distinction can be particularly harmful.

The distinction between “complicated” and “complex” can be explained as follows³:

Complicated problems can have many causes that are interacting, but they can be broken down and addressed piece-by-piece. Outputs are predictable and proportionate to inputs and the resulting problems are solvable. Problems can be challenging to solve – indeed they may be more difficult to solve than some complex problems are to manage – but once solved they tend to remain solved, and the formula, algorithm, tool or approach can be readily applied the next time with predictable consequences. Consider, for example, the problem of sending a satellite into orbit. This is unquestionably challenging, but solving the underlying elements relies on stubbornly predictable physical laws.

Complex problems and systems, in contrast, include factors that are not just interconnected, but are also both dynamic and interactive in ways that are difficult or impossible to predict. The multiple interrelated causes cannot easily be broken down using a “divide-and-conquer” problem-solving approach, but must instead be *managed* holistically. Small changes in inputs can have a disproportionately large impact on outputs, and interactions between elements can lead to unexpected synergies. Complex systems can be influenced but

³ See, for example: Rick Nason, *It's not complicated: The art and science of complexity in business* (Toronto: University of Toronto Press, 2017) [Nason]; Roberto Poli, “A Note on the Difference Between Complicated and Complex Social Systems” (2013) 2:1 *Cadmus* J 142, online: World Academy of Art and Science <<https://www.cadmusjournal.org/files/pdfreprints/vol2issuel/reprint-cj-v2-i1-complex-vs-complicated-systems-rpoli.pdf>> [Poli]; Gökçe Sargut & Rita Gunther McGrath, “Learning to Live with Complexity” (September 2011) *Harvard Bus Rev* <online: <https://hbr.org/2011/09/learning-to-live-with-complexity>> [Sargut & McGrath]; Eric Bonabeau, “Understanding and Managing Complexity Risk” (Summer 2007) *MIT Sloan Mgmt Rev*, online: MIT Sloan <<https://sloanreview.mit.edu/article/understanding-and-managing-complexity-risk/>> [Bonabeau]; Cynthia Kurtz & David Snowden, “The New Dynamics of Strategy: Sense-Making in a Complex and Complicated World” (2003) 42:3 *IBM Sys J* 462, online: IEEE <<https://ieeexplore.ieee.org/document/5386804>>.

not controlled, and interventions in one area often lead to unforeseen effects in another. Cause and effect relationships can only be fully understood and explained in retrospect. Because of the ambiguity and lack of explainability, the rules, processes and algorithms that might be effectively applied to complicated problems fall short here. It is, however, important to acknowledge that complex systems might well contain complicated elements that can – and should – be identified and solved, a point we'll return to later.

Consider examples from within our domain:

- Calculating the tax liability for a multinational corporation or preparing consolidated financial statements after an acquisition can be complicated.
- Tax planning for a multinational corporation or successfully merging the cultures of two organizations is complex.

In the former, well-established methodologies and templates guide our work, whereas in the latter, ambiguity and the grey areas of jurisdictional tax law and a multitude of human elements create greater uncertainty and unpredictability of outcomes.

History shows what happens when complexity is not managed effectively. Gerard Seijts et al describe the 2008 financial crises as being born of complexity.⁴ They explain how the increased diversity of players and the massive interconnectedness of systems created more ambiguity. Coupled with rapid change, this led to an inability to effectively manage risk.

In the context of emerging technology, veteran business writer Theodore Kinni suggests that: “A technological disruption like blockchain is a complex problem. A competitor with an innovative business model – an Uber or an Airbnb – is a complex problem. There’s no algorithm that will tell you how to respond.”⁵ Expanding on Kinni’s blockchain point, it might be argued that blockchain as a technology is complicated, whereas predicting its impact on the economy or any given industry, or integrating the technology within an organization’s extant processes, is complex.

Importantly, “complex” does not mean “more complicated.” The difference is one of type, not of degree. As a result, “collecting more data or developing better theories will not transform complex systems into complicated ones.”⁶

4 Gerard Seijts, Niels Billou & Mary Crossan, “Coping with Complexity” (May/June 2010) *Ivy Bus J*, online: *Ivey Business School* <<https://iveybusinessjournal.com/publication/coping-with-complexity>> [Seijts et al].

5 Theodore Kinni, “The Critical Difference Between Complex and Complicated” (June 2017) *MIT Sloan Mgmt Rev*, online: *MIT Sloan* <<https://sloanreview.mit.edu/article/the-critical-difference-between-complex-and-complicated/>>.

6 *Poli*, *supra* note 3 at 143.

Although distinguishing the complex from the complicated is an essential skill, Prof. Roberto Poli cautions that “Decision-makers commonly mistake complex systems for simply complicated ones and look for solutions without realizing that ‘learning to dance’ with a complex system is definitely different from ‘solving’ the problems arising from it.”⁷ Prof. Rick Nason delves deeper into this point, saying that whereas we manage complexity instinctively in our social interactions, for instance responding to the moods of others and applying empathy, “with business situations and problems, we seem to automatically switch into complicated thinking mode.”⁸

Similarly, the distinction between complex and complicated is not sufficiently reflected in professional training. Aspiring PAs are generally educated to find answers to complicated problems through formulaic approaches. We often think of building professional skills and judgment as a progression from simple problems, to complicated ones and then finally to solving complex problems. But if we understand the nature of complexity, “complex” problems or systems are not “solved.” Thus, we might do a disservice to the profession – and to those relying on us – if we claim to provide “solutions,” rather than helping those who rely on us to develop methods for managing complexity to drive sustainable success. Innovation author Dave Gray quips, “When you make the complicated simple, you make it better. But when you make the complex simple, you make it wrong.”⁹

Our increasingly complex world

Complexity has always been part of the business environment. Professors Gökçe Sargut and Rita Gunther McGrath note that:

*Business life has always featured the unpredictable, the surprising and the unexpected. But complexity has gone from something found mainly in large systems, such as cities, to something that affects almost everything we touch: the products we design, the jobs we do every day and the organizations we oversee.*¹⁰

⁷ *Ibid* at 142.

⁸ Nason, *supra* note 3 at 91.

⁹ Dave Gray, “Complicated vs. Complex” (2009) Communication Nation, online: Communication Nation <<http://communicationnation.blogspot.com/2009/11/complicated-vs-complex.html>>.

¹⁰ Sargut & McGrath, *supra* note 3.

In the digital age, there is a level of interconnectedness in social, economic and geopolitical systems that didn't exist in the past. Social discourse has a larger and more impactful voice through social media. Massive amounts of data are being collected and used to automate decision-making. Author and journalist Tim Maughan warns that:

*The reason so much of the world seems incomprehensible is that it is incomprehensible. From social media to the global economy to supply chains, our lives rest precariously on systems that have become so complex, and we have yielded so much of it to technologies and autonomous actors that no one totally comprehends it all.*¹¹

This threatens our ability to apply professional competence and due care, a fundamental principle within most codes of professional conduct.¹²



Acting professionally and in the public interest is not a clear-cut proposition.



In addition, many of the “big” issues facing society, such as the pursuit of sustainable growth, managing and mitigating climate change, embracing disruptive technologies and striving for social equality, raise questions of values that have broad ethical implications. Furthermore, as sociopolitical viewpoints become more fractured and, more problematically in some regions, divisive, the assumed homogeneity of “acting in the public interest” breaks down. Objectivity, another fundamental ethical principle,¹³ is challenged in the face of divergent views on how resources should be managed and distributed, what is fair, how to balance the economy and the environment, and – in the extreme – what is the truth? Acting professionally and in the public interest is not a clear-cut proposition.

¹¹ Tim Maughan, “The Modern World has Finally Become Too Complex for Any of Us to Understand” (November 29, 2020) OneZero, online: Medium <<https://onezero.medium.com/the-modern-world-has-finally-become-too-complex-for-any-of-us-to-understand-1a0b46fbc292>>.

¹² IESBA Code at R113.1; CPABC Code at 203; ICAS Code at R113.1, *supra* note 1.

¹³ IESBA Code at R112.1; CPABC Code at 202.2; ICAS Code at R112.1, *ibid*.

Corporations no longer exist solely for their shareholders. As the impact of other stakeholders becomes increasingly important, changing social and political environments drive increased public expectations on businesses and on PAs. Yet at the same time, profits remain essential to business, in order to fuel investment, growth, innovation, staff retention and ultimately long-term success. Finding and communicating an appropriate balance is an important exercise for all profit-oriented businesses. Historically, 'profit' has been defined solely in terms of financial results, but perhaps that definition will be re-thought in the new stakeholder-inclusive context.

The important decisions facing organizations today are often in domains that are beyond our traditional competence as PAs and outside our comfort zones. Our profession is one traditionally driven by numbers and metrics, but systems scholar Donella Meadows explains that "Living successfully in a world of systems requires more of us than our ability to calculate. It requires our full humanity – our rationality, our ability to sort out truth from falsehood, our intuition, our compassion, our vision and our morality."¹⁴

This has been highlighted during the COVID-19 pandemic. Employers, clients and other stakeholders around the globe have called on PAs to help them navigate change and – in some cases – pivot to survive. Determining the best way to manage has meant learning to "dance with" a myriad of interconnected and unpredictable factors at play, related to the virus' behaviour, decisions of various governments, supply chain impacts and public response (such as consumer demand shifts and compliance with health protocols). The future viability of some industry sectors or players is uncertain and some business models are at significantly more risk than others. Adaptability is essential.

Complexity is also impacting our core areas of expertise. The heightened focus on Environmental, Social and Governance (ESG) reporting, initiatives to promote Equity, Diversity and Inclusion (EDI), and other non-financial areas of performance are leading to new leadership challenges and opportunities as well as new types of reporting and related assurance. For example, the UN's Sustainable Development Goals were adopted by all UN Member states in 2015, and the profession has called for improved disclosures in this regard as countries attempt to achieve goals set for 2030.¹⁵ Estimates that are prevalent in financial and non-financial reporting, and that are opined on through

14 Donella Meadows, "Dancing with Systems", online: Academy for Systems Change, <<http://donellameadows.org/archives/dancing-with-systems>>.

15 IFAC, "Urgent Call for Improved UN Sustainable Development Goals Disclosures" (January 17, 2020) IFAC, online: IFAC <<https://www.ifac.org/news-events/2020-01/urgent-call-improved-un-sustainable-development-goals-disclosures>>. Note: An overview of the UN Sustainable Development Goals can be found at: <https://www.undp.org/content/undp/en/home/sustainable-development-goals.html>.

assurance processes, involve assumptions about how interwoven economic and geopolitical systems impact many different variables, and these impacts are unpredictable.

Although much of the global attention with ESG reporting has been placed on the environmental component, social and governance issues are equally important. As multinational corporations engage in ESG, these organizations may, for example, endorse tax disclosure strategies¹⁶ describing the complexity of the transactions as businesses evolve in a world of complex business structures brought about by the borderless ecosystem of e-commerce. Disclosure is viewed as a mechanism to highlight that these organizations do not encourage or promote tax evasion and do not adopt aggressive tax strategies that are deemed “unacceptable” by the general public.¹⁷



16 Deborah L Paul & T Eiko Stange, “Tax and ESG” (February 22, 2020) Harvard Law School Forum Corp Gov, online: Harvard <<https://corpgov.law.harvard.edu/2020/02/22/tax-and-esg/#more-127066>>.

17 Jasmine M Fisher, “Fairer Shores: Tax Havens, Tax Avoidance, and Corporate Social Responsibility” (2004) 94:1 Boston U Law Rev 337.

Part II: Views from the field

During the roundtable event and other global outreach discussions,¹⁸ several key themes have emerged.

PAs' broadening role

- The role for PAs with respect to sustainability, social justice and climate change is increasing, and our ethics principles and core competence can help shape our clients' and organizations' decision-making in these areas.
- Many PAs report being more frequently asked to take on roles or contribute to discussions that are outside of the traditional bounds of the profession and include more significant elements of uncertainty (for example, strategic or quasi-legal decisions, procurement, data management, etc.).
- A key element of this expanded role was seen to be an expectation to use their inherent position of trust to lend credibility to data and information.

Values are in the spotlight, and codes of professional conduct provide consistency

- When facing complex situations, values interact from different perspectives in determining how we perform our roles. We have values as individuals while also being expected to espouse the values of the organization for which we work. The values of external stakeholders and society at large add another influential layer.

¹⁸ See, for example, IFAC, *IESBA Technology Working Group Phase 1 Final Report* (December 2019) IFAC, online: IESBA <<https://www.ethicsboard.org/publications/iesba-technology-working-groups-phase-1-report>>. Note also that IESBA's Technology Task Force explored issues around complexity in the professional environment through a global survey conducted in late 2020 (<https://www.ethicsboard.org/news-events/2020-10/iesba-seeks-stakeholder-input-key-ethical-questions-arising-technological-developments>).

- Codes of ethics and professional conduct provide useful frameworks for reconciling sometimes conflicting value systems. As PAs, we are bound by principles that include acting with integrity, maintaining objectivity and applying due care. Additionally, we commit to acting in the public interest and promoting an ethical culture in our organizations.
- In addressing difficult ethics decisions, PAs follow a systematic approach to determine the best actions to take. This typically involves identifying the challenges or threats to complying with fundamental principles articulated in their code of ethics, and evaluating and addressing threats as appropriate.¹⁹
- More than just sets of requirements, codes of ethics and professional conduct provide PAs with a competitive advantage over providers of accountancy services that are not professionally designated.

The stakes are high

- PAs report a sense of increased importance of avoiding mistakes, as the consequences seem to be greater than ever. With greater complexity comes increased uncertainty and risk, and for many organizations, it seems that one misstep can mean the difference between failure, barely surviving, or thriving, whether operationally or reputationally.
- At the same time, it is getting harder to gain comfort over information, both because of the technical competence needed and because of complexity and the vastness of available information expected to be evaluated.
- Gaining comfort over the validity of data and information impacts PAs both inside of and external to the organization, including internal and external auditors.



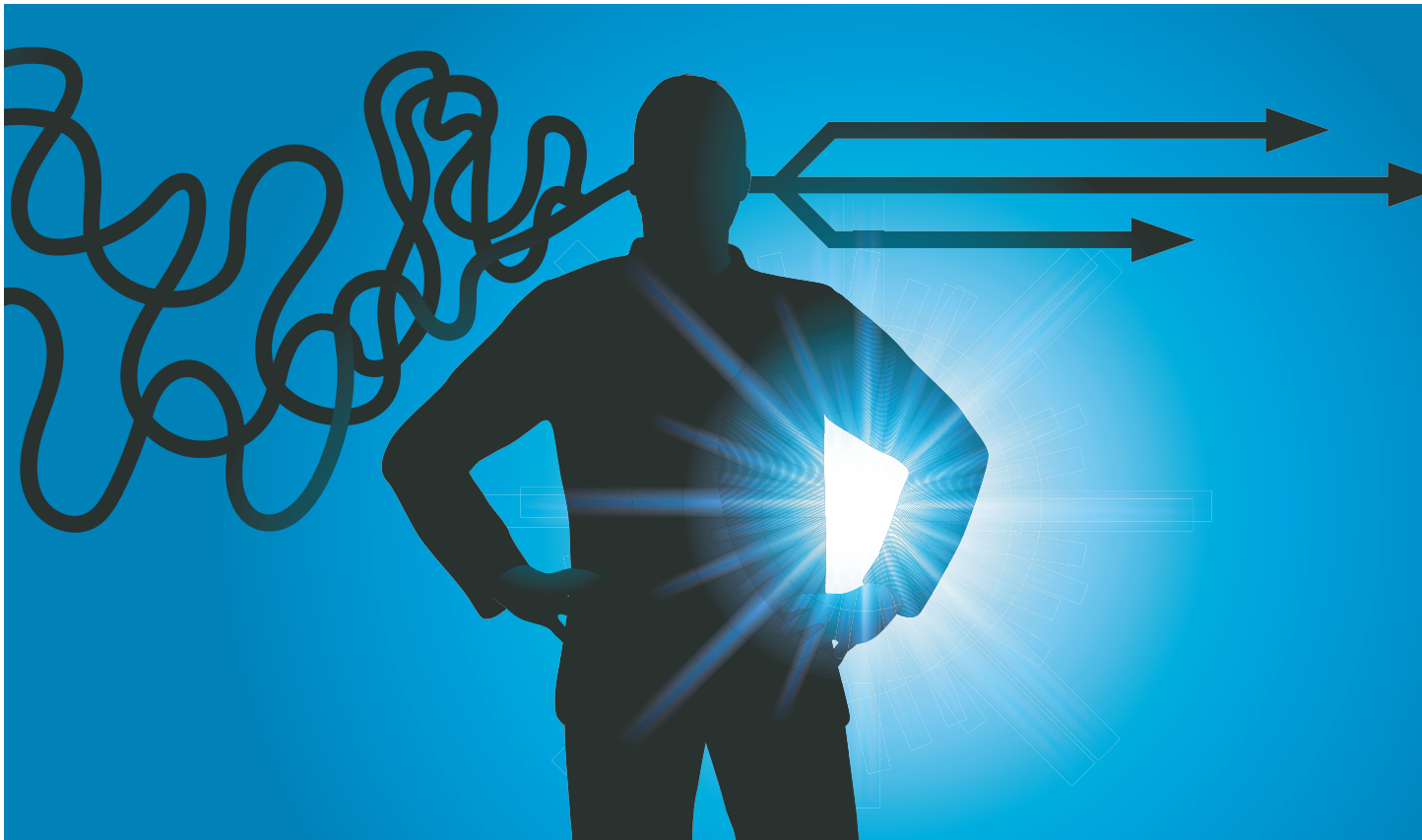
Many of the skills we typically used to call on principally for strategic planning are now needed for daily decision-making.



¹⁹ IEBSA Code at R120.3; CPABC Code at page 7; ICAS Code at R120.3, *supra* note 1.

Essential skills are shifting

- The skills required to successfully manage complexity reflect a shift in the balance of competencies that PAs call upon. Technical skills are still necessary, but helping our organizations thrive requires that we fully leverage our enabling competencies such as critical thinking, skepticism, ethical reasoning, risk management, change management and communication, and that we employ techniques such as iteration, adaptation and collaboration with more diverse stakeholders and experts.
- Many of the skills we typically used to call on principally for strategic planning are now needed for daily decision-making.



Part III: Managing complexity for ethical leadership

As ethical leaders, PAs help organizations navigate complex ethical and strategic challenges and opportunities. But managing complexity requires a shift in mindset. Rather than leaning heavily on rules and detailed analysis, we need to focus on identifying complexity, evaluating its implications and resultant threats, and implementing appropriate safeguards where possible to mitigate threats and provide a solid footing for growth and progress.

Because complex situations often include ethical implications, PAs should include in their assessment a consideration of how compliance with ethical principles might be threatened.²⁰ For example, is there uncertainty over how to respond in a way that recognizes public interest obligations? Is ambiguity or rapid change threatening confidentiality or the ability to apply adequate professional competence and due care?

Prof. Rick Nason summarizes as follows: “Consciously managing complexity in a business context is broadly a function of four different strategies or tactics:

1. Recognize which type of system you are dealing with.
2. Think ‘manage,’ not ‘solve.’
3. Employ a ‘try, learn and adapt’ operating strategy.
4. Finally, and perhaps most importantly, develop a complexity mindset²¹ that emphasizes creativity and thinking differently.

Building on the broader strategies and drawing on the expertise of multiple authors, best practices for managing complexity include:²²

²⁰ *Ibid.*

²¹ Nason, *supra* note 3 at 91.

²² See for example, Nason, *supra* note 3; Seijts et al, *supra* note 4; Tim Hogarth, “Complex vs Complicated: Which Problem Are You Solving? (Part 1)” (February 28, 2018) TD Lab, online: Medium <<https://medium.com/td-lab/complex-vs-complicated-which-problem-are-you-solving-211a55ca9251>>; Theodore Kinni,

- distinguishing those elements within a situation that are complicated and should be solved in a more isolated way, from those that are complex and must be managed more holistically (but be careful not to assume that a complex system can simply be broken into parts – remember that complex systems have synergies and unpredictable interactions)
- setting a tone at the top that demonstrates ethical leadership, open communication and creative thinking
- structuring teams to facilitate collaboration with others who bring different skills, expertise, creativity and perspectives
- distributing leadership to empower grass-roots collaboration
- using visuals and stories to build understanding and promote different ways of thinking
- facilitating real-time communications
- critically evaluating data sets for relevance and bias
- identifying and challenging assumptions and preconceptions²³
- harnessing technology to iterate and simulate more quickly
- testing ideas, experimenting with contexts, and evaluating the outcomes of those experiments to synthesize improvements for the next iteration
- taking small, but deliberate steps to make incremental progress and contain the potential costs of failure
- recognizing and acknowledging inherent uncertainties around predictions
- resisting the temptation, or our own biases,²⁴ to explain away unexpected outcomes
- considering how incentives are structured to motivate appropriate actions
- using increased transparency (both within the team and with stakeholders) to mitigate a lack of understandability and explainability
- incorporating systems thinking, recognizing how elements are interconnected and/or interdependent, the effects of synergies and emergence, etc.
- thinking “playbook” of flexible and adaptive strategies not “rulebook” of steps to follow

When talking about complexity, we often hear reference to “unknown unknowns.” Esade Business and Law School provides guidance that “to address these uncertainties, we have to broaden our gaze, examine things we

“Smart Leaders Know the Difference Between Complex and Complicated. Do You?” (July 19, 2017) Inc., online: Inc. <<https://www.inc.com/theodore-kinni/smart-leaders-know-the-difference-between-complex-.html>>; Bonabeau, *supra* note 3.

23 IESBA’s Role and Mindset revisions highlight the importance of being aware of one’s own bias and mitigating their impacts – see *supra* note 2.

24 *Ibid.*

are not inclined to question, speak to people with whom we do not usually interact, and, above all, instill in our partners an attitude open to discovery and experimentation.”²⁵

Consider Google, for example, where several successful projects have resulted from the policy allowing engineers to spend up to 20 per cent of their time on projects of their own choosing. No approval is needed from management, and there are no negative repercussions if a project turns out to be unviable.²⁶ Similarly, Nason encourages us to learn from ants, whose enviable success lies in part from their practice of assigning some colony members to randomly roam in search of food.²⁷ Supporting ongoing unstructured environmental scanning can not only manage, but also leverage, complexity in the business environment.

25 Koldo Echebarria, “Leadership After Covid-19: Learning to Navigate the Unknown Unknowns” (March 30, 2021) Forbes, online: Forbes <<https://www.forbes.com/sites/esade/2021/03/30/leadership-after-covid-19-learning-to-navigate-the-unknown-unknowns/>>.

26 *Seijts et al*, *supra* note 4.

27 *Nason*, *supra* note 3.



Part IV: Practical implications for the profession

How well are we currently managing and messaging complexity?

Numerous PAOs are actively considering whether our traditional approaches still provide the best possible service for clients, employers and other stakeholders. Internal and external clients turn to us for answers, and we brand ourselves as “problem solvers.” For example, we present financial statements as being a fair representation of financial performance and position, and provide risk disclosures and careful explanations in audit reports. But despite careful phrasing, an expectation gap remains – most readers expect that published financial statements are “correct” without understanding the impact of materiality, and the important inherent uncertainties, judgments and estimates.

In our control and monitoring roles, we tend to choose metrics to measure performance that by necessity focus only on key elements. Similarly, financial models necessarily limit the ability to consider all applicable factors. By scoping out that which we cannot reliably estimate, are we inadvertently causing elements to be hidden or overlooked and therefore not considered in business decision making? Is this tendency to try to scope out “noise” threatening the objectivity of our decision-making, or the application of due care? To this point, behavioural scientist Ruth Schmidt warns that “When situations lack a single right answer, trying to reduce unwanted variability by eliminating noise can inadvertently eliminate useful information as well.”²⁸

²⁸ Scientist <<https://behavioralscientist.org/the-benefits-of-statistical-noise/>>.

For professionals, complex problems are the norm, and complicated problems solvable by algorithms are increasingly becoming the realm of machines, such as AI systems. So although training future PAs to solve the complicated remains essential as a foundation to provide appropriate oversight, we must also ensure that existing and aspiring PAs have the tools to manage complexity, and the skills and judgment to recognize when to use them.²⁹ This shift is difficult to achieve, however, because the enabling skills are harder to objectively assess for certification purposes.

The way forward

Discussions with our event delegates and other outreach participants offer the following concrete steps that PAOs and individual PAs can take to better manage complexity and continue to earn our position as trusted advisors and ethical leaders.

For PAOs:

- Acknowledge complexity and actively engage stakeholders in broader conversations around trust and ethics in a complex world and how these drive opportunities and expectations.
- Message consistently to stakeholders to help reduce expectation gaps. For example, better reflect the level of assumptions, judgement and estimates that are contained in information outputs, including financial statements.
- Establish intra-professional and cross-professional alliances to connect initiatives and explore common obligations for acting in the public interest, and to leverage the perspectives of other professions that have distinguished more clearly between complicated and complex (such as engineering and medicine).³⁰
- Ensure that education, training, and practical experience for aspiring PAs – and continuing professional development for established PAs – effectively develop and assess enabling competencies, including the skills needed

29 See, for example, recent amendments to IFAC's International Education Standards that reflect the increasing demand for accountants skilled in information and communications technologies and place further emphasis on professional judgment, professional skepticism and other skills and behaviours. Available at <<https://education.ifac.org/index.html>>.

30 See, for example, Jon A Schmidt, "Complicated + Complex = Wicked" (July 2015) Structure, online: National Council of Structural Engineers Associations <<https://www.structuremag.org/wp-content/uploads/2015/06/C-InFocus-Schmidt-July151.pdf>> at 9; James Rogers, "Have we gone too far in translating ideas from aviation to patient safety? Yes" (2011) Brit Med J 342, online: British Medical Association <<https://doi.org/10.1136/bmj.c7309>>.

to recognize complex situations and develop appropriate responses (e.g., emphasizing that formulas, algorithms and models are essential tools, but have inherent limitations that shouldn't be overlooked).

- Facilitate professional development and other guidance resources to support PAs in their learning and growth with respect to managing complexity, ethical leadership, social responsibility, etc.
- Be purposeful to distinguish complex from complicated in member communications, to reinforce interpretations.
- Work with standard setters³¹ as they evolve the standards that apply to reporting, assurance and professional conduct to recognise the shift in societal needs, bearing in mind that principles-based standards can be impeded if they become bogged down with detailed rules.

For individual PAs:

- Be aware of the differences between complicated and complex, and ensure appropriate approaches are applied for each (e.g., don't try – or claim – to solve what can only be managed).
- Think in a more integrated fashion, factoring in different directions and perspectives (ethical, social, technological, multistakeholder, etc.), and challenge others in your organization to do the same.
- Upskill technical competence to be able to have meaningful conversations regarding risks, opportunities, assumptions, values and so on with IT professionals and engineers.
- Recognize that stakeholders need us to look to the future and help them forecast, estimate and navigate, rather than just measure the past.
- Practice humility – be comfortable recognizing and admitting that we don't have all the answers, and always be ready to ask more questions.
- Strive for self-awareness of your own biases and aim to mitigate them, for example through engaging with a more diverse group of decision-makers.
- Consistently bring an inquiring mind³² and/or professional skepticism³³ to challenges and set expectations that this is normal and healthy to manage stakeholder expectations and build relationships.
- Engage, consult and work more collaboratively with others in and out of the profession, to move forward as partners in innovation and connect initiatives.

³¹ For example, at the international level, initiatives such as IESBA's Role and Mindset, Technology, and Tax Planning projects, and their regional and national equivalents.

³² *Supra* note 2.

³³ As required by the *International Standards on Auditing*, ISA 200, available at: <https://www.ifac.org/system/files/downloads/a008-2010-iaasb-handbook-isa-200.pdf>.

- Have the moral courage³⁴ to be ethical leaders and see the long-term impact. To do this, we need to guide our organizations to resist short-term thinking that can lead to pressures and misaligned incentives.
- Be prepared to turn down a job or engagement if you're not the best professional for the role.

Closing thoughts

Modern disruption affords the profession the opportunity to recognize the significance of complexity and to respond to the need for fundamental change to evolve with the global business environment. The profession brings a great deal of knowledge and expertise, but we need to recognize how to frame and shape these for the digital age.

Tim Hogarth, former VP, Innovation and Framework Strategies at TD Bank, warned that “existing knowledge and expertise aren’t irrelevant – but in truth they cannot be relied on with the same confidence as we embrace unpredictable outcomes of disruptive technologies.”³⁵

By learning to adapt, balancing control with creativity, acknowledging the limitations and uncertainties inherent in the work we produce and the recommendations we make, and communicating these limitations to stakeholders, we can add more value and increase trust in the profession. And by adding a complexity mindset to our approaches, the profession will adapt to the evolving environment and build the next generation of competent ethical leaders.

³⁴ ICAS, *The Power of One: Moral Courage* (2e, November 2020) ICAS, online: ICAS <<https://www.icas.com/professional-resources/ethics/resources-and-support/moral-courage>>.

³⁵ Tim Hogarth, “The Shift from Experts to Experiments (Part 2)” (February 28, 2018) TD Lab, online: Medium <<https://medium.com/td-lab/the-shift-from-experts-to-experiments-977e3043f5c4>>.



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